

Final Technical Report Global Partners II Program

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IDRC Project Title: Global Partners: University of Saskatchewan
Small-Grant Program of Research Exchanges

Countries/Regions: Mexico, Trinidad and Tobago, Brazil, Nicaragua, Argentina, Chile, Belarus, Ukraine, Poland, China, Uganda, Ethiopia, Mozambique, Sri Lanka, Malawi, Tanzania, South Africa, India

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1. Synthesis

The Global Partners program was established to promote partnerships and developments between the University of Saskatchewan (U of S) and partner institutions in developing countries.

More specifically to:

- Promote the development of scholarly capacity
- Build on faculty resources at partner institutions
- Offer the U of S international exchange opportunities and exposure to diverse cultures
- Create long-term cross-cultural relationships
- Knowledge dissemination within IDRC's thematic priorities
- Assist with the sustainability of U of S research linkages
- Promote inter-faculty teaching and curriculum development
- Monitor and review the performance of the program

The program's seed funding was not intended to cover the full costs of the activities but was meant to be supported by cash and/or in kind contributions from the U of S. These funds would support faculty and student travel, accommodations, meals and incidentals, while visiting partner institutions for the purpose of relationship development.

2. General Statistics

- Competitions: 3
- Project applications received: 48
- Grants awarded: 35
 - i. Grants to U of S lead researchers: 24
 - ii. Grants to U of S students: 11

3. Communication and Marketing

It was the objective of the program manager and the International Research Office (IRO) to provide information on the Global Partners II funding opportunity a wide audience in a timely manner to allow researchers and students ample time to respond. In addition to established communication channels that include the International Research Office website, Research Services Listservs, Research News, Paws E-Bulletin, On Campus News and College and Research Facilitators distribution lists. The IRO team contacted researchers directly.

In order to examine the effectiveness of the communication strategies, applicants were asked how they heard about the Global Partners II Program. Research Services Listservs, mailing lists, and the IRO website were apparently the main source of information on the Grants Program. Moreover, IRO team meetings with individual researchers and research groups was one of the most effective mediums for publicizing the Grants Program and attracting high-quality applications. Following Rounds 1 and 2, a program review was completed and suggestions from

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researchers were incorporated when moving to the next round. For example, in Round 3 students from partner institutions were eligible to apply.

4. Project Implementation

i. Competition Guidelines Development

A committee was formed to create guidelines, establish standards and criteria, and to select successful proposals. The committee consisted of experts from a variety of disciplines and representatives from research administration units. Program criteria were developed and included in the Call for Proposals.

ii. Selection Process and Criteria

The IRO team worked with applicants to make sure their proposals met program requirements, fell within program scope, and proposed a well-defined and feasible workplan with appropriate budget. After a proposal was submitted, applicants received an acknowledgement within one day of submission and were informed when the results could be expected.

All complete proposals received by the cut-off deadline were sent in electronic format to committee members. A meeting was then held where each committee member presented their ratings and recommendations, followed by discussion and final decisions on which proposals would be supported and the funding amount for each proposal. There was mutual respect and honest exchange of views and ideas between committee members. The committee assessed proposals by merit, based on the program selection criteria outlined below. Committee members were encouraged to make notes as they were reviewing each proposal that support and explain their rating decisions. These observations were brought forward at the committee meeting and formed the basis of the final selection discussion.

Criteria:

- a) Strengthening of international research partnerships and consolidation of emerging research networks
- b) Relevance of proposed research activity
- c) Consistency with IDRC thematic priorities for the region
- d) Sustainability
- e) Gender
- f) Student involvement

iii. Project Initiation Training

The IRO issued a letter of grant offer to the successful applicants outlining funding terms and conditions, and requested confirmation via email if they accepted the terms and conditions. All grant recipients attended a project initiation training session delivered by the IRO to ensure understanding of obligations and responsibilities, including IDRC guidelines for technical and financial reporting. Recipients were directed to the appropriate unit regarding ethics and safe travel abroad responsibilities. The IRO scheduled individual meetings with recipients who could not attend the project initiation training session to accommodate their schedule.

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iv. Issues

A few recipients had to back out of their award commitment for various reasons. For example one of the student recipients changed educational institutions. Those funds were placed back into the program reserves for redistribution.

v. Reporting and Financial Management

Recipients were required to submit technical and financial reports following the term of their project. A reminder was sent to each recipient prior to the end of their project, along with reporting templates and due dates.

The IRO worked together with U of S Financial Services to set up two funds for each grant recipient; 71% from the IDRC contribution and 29% from the U of S contribution. Following the term of each project, the IRO collaborated with U of S Financial Services to close each account.

5. Successes

Mama Kwanza (Mother First), Tanzania

Dr. Pammla Petrucka and her team received GPII support during round 3 of the program for a health cooperative initiative in Tanzania. This project is derived from consultations and participation of the on-ground partners. For approximately 16 months, the on-ground partners plus the University of Saskatchewan and Regina Qu'Appelle Health District representatives have contributed to conceptualization and opening of the Mama Kwanza Clinic to address health needs of at risk women and children. Green Hope Organization, the local NGO, initiated a Mama Kwanza clinic in July 2010 (operating smaller health centers for more than 3 years) in anticipation of leading development and implementation of the MKHI model. Based on historical involvement in working with Most Vulnerable Children and Most Vulnerable Women, this group has highlighted social, health, and economic needs of these target groups.



Mama Kwanza Clinic, Tanzania

In November 2010 a brief survey was conducted with nearly 80 users of the Mama Kwanza Clinic to determine their future program and service needs as well as preferred future for maternal child health. These beneficiaries, along with key stakeholders in the municipal and regional health sector, highlighted sustainable RMNCH health services including alternatives to affordable health care and more pre and post-natal programs.

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As a direct result of GPII support Dr. Petrucka and her Canadian and Tanzanian team were successful in receiving 2.6 million dollars under CIDA's Partnership Program to continue their work with the Mama Kwanza initiative.

Collaborative Research Training, Mozambique

GPII recipient Dr. Ron Siemens furthers his collaboration with Lúrio University (UniLúrio) in Mozambique on a project entitled "Community-Based Research in Mozambique: Expanding Health Sciences Teaching in Nampula" supported through the IDRC's Small Grants for Innovative Research and Knowledge-Sharing program with a grant of \$60,000. Our U of S brings together several of its own departments and units with collaborating universities and organizations elsewhere in Canada, to develop and pilot the community-based research (CBR) curriculum with its UniLúrio counterpart. Partnerships have been developed between UniLúrio and its local Nampula community, and students of the course will be implementing CBR projects with the community partners.



National Wildlife Health Centre, Sri Lanka

GPII recipient Dr. Ted Leighton and the University of Peradeniya in Sri Lanka together were awarded \$873,200 over four years for "Building Research Excellence in Wildlife and Human Health in Sri Lanka" with the U of S



receiving \$269,500 and the University of Peradeniya \$603,700 from IDRC. This project undertakes foundational research on the ecology and human



dimensions of pre-eminent public health and socio-economic risks at the human-wildlife health interface, and uses research to develop new national capacity to manage these risks in Sri Lanka, a South Asian country at high risk for emerging infectious diseases.

Capacity Building of a Human Nutrition Graduate Program, Ethiopia

In addition to Dr. Pammla Petrucka's success, the GPII program supported a number of faculty members at the University of Saskatchewan to enhance their international activities and strengthen team building contributing to major successes. These large-scale international projects

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also provided opportunities for students to gain research skills, experience diverse cultures, and enrich their lives. For example, partnering with Hawassa University in Ethiopia, Dr. Carol Henry leads a team composed of key team members Drs. Gord Zello and Susan Whiting from the College of Pharmacy and Nutrition and Drs. Bunyamin Tar'an and Fran Walley from the College of Agriculture and Bioresources that secured \$1.6 million funding support in total through the IDRC/CIDA Canadian International Food Security Research Fund. This project entitled “Improving nutrition in Ethiopia through plant breeding and soil management” is testing, adapting, and promoting a whole food strategy in three agro-ecological zones of Southern Ethiopia. It combines innovative agricultural practices with human nutrition programs to boost crop yields, increase the soil’s nitrogen-supplying “power,” and improve household nutrition. This team also received support through the CIDA/AUCC “Students for Development” program to provide learning opportunities and experience for Canadian and Ethiopian students while addressing food security, nutrition and community health issues.



Childhood Asthma – an international research initiative, Ukraine, Belarus, Poland

Building on the childhood asthma project supported by GPII,



Drs. Josh Lawson and Donna Rennie were able to strengthen and advance the international collaboration between researchers in Canada, Belarus, Ukraine, and Poland with a grant of \$24,148 through the CIHR Planning



Grants program.

Revitalizing and Strengthening Public Health and Research Networks in Latin American and Caribbean Countries

Receiving support from World Health Organization, Public Health Agency of Canada, and IDRC/AUCC ‘s Canada-Latin America and the Caribbean Research Exchange Grants program (LACREG), GPII recipient Dr. Jo-Ann Dillon was able to further develop capability and public health strategies in Latin American and Caribbean countries to minimize the impact of antimicrobial resistance in *Neisseria gonorrhoeae* (Ng).

Ecohealth, Gender, Goats, and Governance in Rural Uganda; Capacity Building in Integrated Management of Trans-boundary Animal Diseases and Zoonoses;

Assessment of caregivers’ attitude towards HIV/AIDS testing and to disclosure of status of HIV-at-risk children in rural Uganda

Building on relationships developed by the above GPII projects, Drs. Claire Card and Adil Nazarali along with Dr. Bruce Reeder have partnered with Mbarara University of Science and

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Technology in Uganda on a project entitled “Community Partnership for Food Security and Health” to educate international transdisciplinary youth teams on food security through placements in rural underserved communities. This project was awarded \$122,490 through the CIDA/AUCC “Students for Development” program.

6. Project Outlines – Rounds 1, 2, & 3

Round 1: April 2009 – June 2010

Title: Plant Diversity, Conservation and Sustainability (Mexico)
Award: \$10,000
Start/End: April 2009 – June 2010
Principal Researcher: Hugo Cota-Sanchez
College: Arts & Science
Partner Organization: Universidad Autonoma de Sinaloa, Los Mochis , Sinaloa - Mexico
Project Description: A project to further develop a partnership with the Universidad Autonoma de Sinaloa, with interests in conservation, biodiversity and distribution of plants, in particular cacti & other related rare species in northwestern Mexico.
Student Involvement/Opportunities: Training of highly qualified personnel is a top priority of this proposal. In fact, my Ph.D. student, Ms. Deusa Santos-de-Abreu, is already involved in this project and proposal. She is investigating an unusual phenomenon in plants, vivipary, with an emphasis in the cactus family and will submit her proposal to this Global Partners II program. There are also another two graduate students: Mr. Bardo Sánchez from the UAS (already involved in biodiversity studies in the islands of NW Sinaloa) and Ms. Violeta Bautista-Alvarado, who is already admitted to the UofS and will start her MSc program under my supervision in May 2009 and will investigate aspects addressed in this proposal.

Title: Strengthening the Promotion of Healthy Lifestyle Behaviors towards Reducing the Risk of Obesity Among School-Aged Children (Trinidad & Tobago)
Award: \$10,000
Start/End: April 2009 – June 2010
Principal Researchers: Carol Henry, Susan Whiting, Brenda Kalyn
Colleges: Pharmacy & Nutrition, Education
Partner Organizations: University of West Indies, T & T Ministry of Education
Project Description: The goal is to integrate collaborative health and education research to inform health-promoting school policy and practice
Student Involvement/Opportunities: Graduate students at the U of S and UWI have been involved in all aspects of project design and implementation, research exchanges and knowledge dissemination from the beginning of the partnership (2006) to date. Every effort will be made to continue this trend.

Title: Sustainable Rural Agriculture (Ethiopia)- Capacity building for the Human Nutrition

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Graduate Program in Ethiopia
Award: \$10,000
Start/End: May 2009 – April 2010
Principal Researchers: Gord Zello, Mike Grevers, Carol Henry, Susan Whiting
Colleges: Agriculture & Bioresources & Pharmacy and Nutrition
Partner Organization: Hawassa University
Project Description: This project is a new initiative that has been developed from work initiated by the partners that seeks to increase the capacity of HU to deliver the Masters of Applied Human Nutrition program in order to enhance nutritional practices in Ethiopia through well-developed and harmonized nutrition programs
Student Involvement/Opportunities: Graduate students are an integral part of this collaboration. Jennifer Wright's (JW, new UofS MSc student) thesis research will include working with HU and the hospital there in investigating new and practical nutritional therapies to combat infant diarrhea. She is also enrolled in an interdisciplinary SLSC 898.3 course "Study Abroad in Ethiopia for UofS Graduate Students" that is being offered through the C of A&B.

Title: Feasibility Study for Partnership in Graduate Gender Studies Research Exchange between the University of Saskatchewan and Lanzhou University in China
Award: \$10,000
Start/End: April 2009 – June 2010
Principal Researcher(s): Diana Relke, Marie Lovrod
College: Arts & Science
Partner Organization: Lanzhou University
Project Description: Building on an existing relationship with Lanzhou University, initially established by members of the Sociology department, this project seeks to explore the feasibility of enhancing and deepening that relationship with a focus on graduate studies exchanges in the field of Women's and Gender Studies.

Title: Gender, Health & Fair Trade (Nicaragua)
Award: \$10,000
Start/End: April 2009 – June 2010
Principal Researchers: Lori Hanson
College: Medicine
Partner Organization(s): Fundacion Entre Mujeres, La Asociación de Desarrollo Social de Nicaragua (ASDENIC), CafeNica, Movimiento de Mujeres Flores del Café, CaNica
Project Description: This participatory research planning phase bring partners together to discuss a long-term action and research agenda, structured around a discussion of the findings of an environmental scan as well as to support ongoing research training and student involvement
Student Involvement/Opportunities: Alejandra Ganem-Cuenca: Global Partners II project; Jannie Leung: Global Partners II project.

Title: Revitalizing and Strengthening Public Health and Research Networks in Latin American and Caribbean Countries: Emerging Antimicrobial Resistance in Neisseria Gonorrhoeae - Implications for Disease Control

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Award: \$7,500
Start/End: April 2009 – June 2010
Principal Researcher: Jo-Anne Dillon
College: Arts & Science
Partner Organizations: Instituto Nacional de Enfermedades Infecciosas - Argentina, Caribbean Epidemiology Center – Trinidad, the Chilean Public Health Institute – Chile.
Project Description: A program for monitoring gonococcal antimicrobial susceptibility (GASP-Phase1) was established in the 1990s in countries across Latin America and the Caribbean, directed by Dr Dillon. Since 2000, the GASP network has not gathered proactive data on antimicrobial resistance. The WHO has requested that these international collaborations be revitalized in view of the importance of antimicrobial resistance as an international, significant public health issue. The extent of the problem and molecular epidemiology of gonorrhoea in Latin America and the Caribbean will be ascertained through the revitalization and expansion of the GASP network co-ordinated and directed by Dr. Dillon at the University of Saskatchewan (GASP –Phase 2).
Student Involvement/Opportunities: It is anticipated that one to two graduate students will be recruited from the partner's institutes to complete more advanced studies at the U of S based on the isolates collected locally. Alternatively, a U of S student may be engaged to complete some of the work should other candidates not be found.

Title: Ecohealth, Gender, Goats and Governance in Rural Uganda
Award: \$7,500
Start/End: April 2009 – June 2010
Principal Researchers: Claire Card, Adil Nazarali, Carol Henry
Colleges: Western College of Veterinary Medicine, Pharmacy & Nutrition
Partner Organizations: Faculty of Veterinary Medicine at Makerere University, Foundation for AIDS Orphaned Children (FAOC)
Project Description: To use an ecohealthy approach to empower women from HIV/AIDS infected households through: sustainable agriculture and restoration of the environment; better food and water security; improvements in human health; policy advocacy for the land rights for women; and access to microcredit.
Student Involvement/Opportunities: Pharmacy & Nutrition student – field experience

Title: Gender, Health & Fair Trade (Nicaragua)
Award: \$5,000
Start/End: April 2009 – June 2010
Principal Researchers: Alejandra Ganem-Cuenca, Jannie Leung (Graduate Students)
College: Medicine
Partner Organization(s): Fundacion Entre Mujeres, La Asociación de Desarrollo Social de Nicaragua (ASDENIC), CafeNica, Movimiento de Mujeres Flores del Café, CaNica
Project Description: Alejandra Ganem-Cuenca project: to examine how gender equity is understood, experienced and articulated in fair trade cooperatives; to identify ways that participation in and experiences of fair trade differ for men and women at the cooperative and household level; to identify health outcomes of fair trade for men and women; and to examine

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whether or not particular cooperative structures and organization influence the first 3 objectives.

Jannie Leung project: to develop social indicators to measure, monitor and evaluate how participation in fair trade cooperatives in Nicaragua affects community health, food security and other aspects of social development through a gendered lens.

Round 2: April 2010 – June 2011

Title: Strengthening Long-Term Capacity for Research on Poverty Reduction and Policy Development in Western Ethnic Minority Region (China)
Award: \$15,000
Start/End: April 2010 – June 2011
Principal Researcher: Li Zong
College: Arts & Science
Partner Organization: Northwest University for Nationalities, Lanzhou, China
Project Description: The project is to collaborate with Northwest University for Nationalities in Lanzhou, China, to build long term capacity for policy relevant research on poverty and ethnic equality in a region of western China with a large ethnic minority population. The project also includes training opportunities for young policy researchers and graduate students as a means to respond to China's national policy of developing the West and reducing regional poverty.
Student Involvement/Opportunities: both Chinese and Canadian graduate students, particularly female graduate students will have an opportunity to acquire training and knowledge in social policy research methods and social policy development.

Title: Canadian Support for the Belarus, Ukraine, Poland Asthma long-term Study (BUPAS)
Award: \$10,000
Start/End: April 2010 – June 2011
Principal Researchers: Donna Rennie
Colleges: Nursing
Partner Organizations: Medical University of Silesia, Poland
Project Description: The purpose of the partnership is to work collaboratively at an international level. The Canadian role is to provide expertise in conducting epidemiological studies of asthma in children. BUPAS will assess the prevalence of asthma in children ages 6 to 14 years in Belarus, Ukraine and Poland. A platform will be developed for population-based screening for childhood asthma in the future.
Student Involvement/Opportunities: Team members have trained two PhD students, five Master's students, and two post-doctoral fellows in recent asthma epidemiology studies. Students at collaborating universities will participate in a two-year international study abroad under CCHAS's CIHR Strategic Training Initiative in Health Research (STIHR) program for graduate education, which provides training in rural and agricultural health.

Title: e-clean, e-safi: An Appreciative Inquiry Informed Approach to e-waste through Joint African Intra-regional and International, Situational and Stakeholder Analysis (Uganda)
Award: \$10,000

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Start/End: April 2010 – June 2011
Principal Researchers: Pammla Petrucka
Colleges: Nursing
Partner Organization: Mekerere University, Kampala, Uganda
Project Description: This project will be to conduct a situational scan on contextual and conceptual aspects of e-safi (e-clean); to explore the perceptions of stakeholders regarding e-safi; and to identify promising practices of e-safi within and outside the partnering sites.
Student Involvement/Opportunities: a doctoral student participates in all aspects of the project including work on tool development, data collection/analysis, and reporting.

Title: Exploring Collaboration and Capacity Development between the School of Nursing and Midwifery, the College of Nursing and Hawassa University (Ethiopia)
Award: \$10,000
Start/End: April 2010 – June 2011
Principal Researcher: Philip woods
College: Nursing
Partner Organization: Hawassa University
Project Description: The main objectives of the project are to meet and explore opportunities for partnership, align College of Nursing faculty research interests with the capacity development requirements of the School of Nursing & Midwifery, Hawassa University, and to develop a strategic approach to the potential partnership, identifying specific projects and deliverables. Discussions will embrace professional practice, academic programming (including curriculum and delivery methods) and research.
Student Involvement/Opportunities: The College of Nursing has a focus and support for global health, including international placements and exchanges for both undergraduate and graduate programs. The Ethiopian School of Nursing & Midwifery is interested in developing a graduate program and their visit here will include dialogue with our graduate students.

Title: Collaborative Research Training in Nampula (Mozambique)
Award: \$10,000
Start/End: April 2010 – June 2011
Principal Researchers: Ronald Siemens
College: Medicine
Partner Organization: Universidade Lurio, Mozambique
Project Description: This project will strengthen the collaboration and increase the capacity of Universidade Lurio in teaching and training Mozambican medical students in community-based research. It will also increase the pediatric teaching capacity of Universidade Lurio faculty.
Student Involvement/Opportunities: Research data gathering will include the entire class of Universidade Lurio medical school and six Canadian medical students.

Title: A National Wildlife Health Centre for Sri Lanka: A Preliminary Assessment of Need, Value and Feasibility
Award: \$10,000
Start/End: April 2010 – June 2011

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Principal Researcher: Ted Leighton
College: Western College of Veterinary Medicine
Partner Organization: University of Peradeniya, Sri Lanka
Project Description: The project is for a preliminary assessment of the need, value and feasibility of establishing a national wildlife health center in Sri Lanka as a first step toward establishing a program to develop capacity in Sri Lanka to direct and manage diseases in wildlife and their implications for environmental conservation, domestic animal health and public health. Additional objectives include a meaningful scientific exchange at the Canadian Cooperative Wildlife Health Center (CCWHC) for a member of the faculty of Veterinary Medicine and Animal Science, University of Peradeniya, and to provide a formative experience in International Research for a French veterinary student at the National Veterinary School in Lyon, France.
Student Involvement/Opportunities: The project includes a French graduate student on exchange at the Western College of Veterinary Medicine, and aims to include 1 to 2 graduate programs for U of S students.

Title: Advancing Biodiversity Conservation and Sustainable Management in the Canadian Prairies and Ukrainian Steppes by Enhancement of International Research Partnerships (Ukraine)
Award: \$10,000
Start/End: April 2010 – June 2011
Principal Researcher: Vladimir Kricsfalussy
Colleges: School of Environment and Sustainability
Partner Organizations: M.G. Kholodnyi School of Botany, National Academy of Sciences of Ukraine (Kyiv); Luhansk Taras Shevchenko National University (Luhansk)
Project Description: The project is to establish the Temperate Grassland Ecology Group in Ukraine and Canada, to develop a platform for exchanging expertise and information between partner institutions, and to initiate joint research programs between partner institutions. The proposed research activities will address problems and solutions for biodiversity conservation, invasion of exotic species and management of grasslands in human-altered landscapes.
Student Involvement/Opportunities: A U of S PhD student will assist in hosting Ukrainian partners in Canada during their visit to the grasslands of Saskatchewan, contact administrations of national and provincial parks in Canada, and travel to Ukraine as part of the research team. To Ukrainian PhD students will also participate; the first will assist in hosting Canadian partners in Ukraine, contact national parks and reserves in Ukraine

Title: Transcultural Youth Orientations to Place and Implications for Environment-related Education Policy & Practice (South Africa)
Award: \$5,000
Start/End: April 2010 – June 2011
Principal Researchers: Marcia McKenzie
College: Education
Partner Organization: Rhodes University, Artworks Youth Education, Umthati Indigenous Food Security Training Project

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Project Description: The project is to study and consider how data collection and analysis needs to be modified for cross-cultural contexts. A pilot test will be done in the urban South African context of Grahamstown, with youths ages 14 – 19 in collaboration with two community-based groups: Artworks Youth Education, and Umthati Indigenous Food Security Training Project. Narrative or life-history methods of data collection offer an opportunity to explore youth's histories and memories in relationship to place and culture.



Student Involvement/Opportunities: PhD student, Jean Kayira's research in Malawi, is part of the larger proposed study. If additional funding is approved, this will be used to fund a research assistant in South Africa to coordinate and extend the pilot study. In the larger study we anticipate engaging students as research assistants in all aspects of the research, including ethics applications; design; ongoing literature review; data collection, transcription, and analysis; and the communication of results through publications and presentations. We will provide active mentoring for them throughout the process and will consider them central to the team.



Title: Doctoral Research Seminar and Field Work on Exploring Indigenous Ecological Knowledge in a Junior Farmer Field and Life Skills School in Malawi (Africa)

Award: \$5,000

Start/End: April 2010 – June 2011

Principal Researchers: Jean Kayira (Graduate student)

College: Education

Partner Organization: Rhodes University

Project Description: I intend to work with youth, Elders, youth guardians and instructors to explore the possibilities of Indigenous Ecological Knowledge (IEK) in furthering youth learning in relation to culturally appropriate environmental sustainability. (*see photo above)

Title: Impact of the Indian Forest Act on the Tribal People of Samrانيا (India)

Award: \$5,000

Start/End: April 2010 – June 2011

Principal Researchers: Vijayalakshmi Kalagnanam (Graduate student)

College: Agriculture & Bioresources

Partner Organization: BAIF Development Research Foundation

Project Description: The Government of India introduced The Scheduled Tribes (Recognition of Forests Rights) Bill, 2005 which recognizes forest rights of Forest Dwelling Scheduled Tribes (FDSTs) who have been occupying the land prior to October 25, 1980. The project will provide a procedural framework for assessing the impacts of past, current and future management systems. This will involve a village-level analysis of the socio-economic and cultural impacts of forest use in an historical and regional context by examining the cumulative impacts of past policies and the potential effects of the change in the Forest Act.

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Title: Collaboration of Nutrition Graduate Students Through Research for Improved Health in Ethiopia
Award: \$5,000
Start/End: April 2010 – June 2011
Principal Researchers: Jennifer Wright (Graduate student)
College: Pharmacy & Nutrition
Partner Organization: Hawassa University
Project Description: The objectives of this project aim to provide innovative nutrition graduate student research opportunities in the areas of food security, nutrition, health promotion and disease prevention at Hawassa University. The objectives are to continue the on-going D-lactic acidosis research study, started in 2009, in collaboration with HU graduate student (Biniam Amare), HU (Dr. Kassahun) and ARH (Dr. Yifru); and to work in collaboration with nutrition graduate students (recruited by HU and UofS partners) at HU to develop a survey to determine the prevalence and incidence of diarrhea in Awassa and surrounding areas (e.g., urban & rural Ethiopia).

Title: Shared Threats, Shared Solutions: Linking Grassland Conservation in Saskatchewan Canada and the Steppe Prairies of Southeastern Ukraine
Award: \$3,000
Start/End: April 2010 – June 2011
Principal Researchers: Allison Henderson (Graduate student)
College: School of Environment and Sustainability
Partner Organizations: National Academy of Sciences of Ukraine; Luhansk Taras Shevchenko National University
Project Description: Allison Henderson will: 1) assist in hosting Dr. Myroslav Shevera and Oksana Kucher during their visit to the native grasslands of south-western SK and, 2) travel as part of Dr. Vladimir Kricsfalussy's research team to the Kyiv, Luhansk, Donetsk, and Kherson provinces of Ukraine. The objectives of the proposed activities are: 1) to foster establishment of a strong research collaboration between Canadian and Ukrainian partners and, 2) to develop mutually-beneficial and effective conceptual and methodological frameworks for a Ukrainian/Canadian grassland ecology research project.

Round 3: March 2011 – July 2012

Title: Capacity Building in Integrated Management of Trans-boundary Animal Diseases and Zoonoses
Award: \$8,000
Start/End: March 2011 – July 2012
Principal Researchers: Claire Card, Douglas Freeman
College: Western College of Veterinary Medicine
Partner Organizations: Makerere University, North Dakota State University, Veterinarians without Borders
Project Description: The University of Saskatchewan has been involved in East African in a

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community based project on sustainable agricultural production funded by an NGO, Veterinarians without Borders, and because of this work is one of the North American partners in a research and development group which is focused on integrating global disease surveillance through a One World One Health strategy in the Eastern and Central Africa (ECA) region (Uganda, Kenya, Tanzania, Rwanda, Ethiopia, Somalia, Burundi, the Sudan, the Democratic Republic of Congo, Central African Republic). The group has worked together for the past 2 years and has formed the Africa-US (AFRUS) Integrated Disease Management (IDM) Higher Education Partnership. The Group led by North Dakota State University-NDSU (in North America) and Makerere University in Uganda-MAK (in ECA) has linked together multiple North American Higher Education Institutions (HEIs) (Michigan State University, USA, Columbus State University, USA, Washington State University, USA, Kansas State University, USA, University of Minnesota, USA, University of Saskatchewan, Canada), East and Central African (ECA) HEIs (University of Nairobi, Kenya; Sokoine University of Agriculture, Tanzania; Mekelle University, Ethiopia; Umutara Polytechnic University, Rwanda; Sheikh Technical Veterinary School, Somalia) the Ministry of Agriculture, Animal Industry & Fisheries (MAAIF), Uganda; Non-governmental Organizations including Africa Field Epidemiology Network (AFENET); Conservation Through Public Health, Uganda; and Terra Nouva, Eastern Africa.

In the inception plan for Capacity building in Integrated Management of Trans-boundary Animal Diseases and Zoonoses (CIMTRADZ) MAK and NDSU are named as the lead institutions, but preliminary meetings involved full participation of all partners. A large research network (AFRUS-IDM) has been formed with many participating institutions (see above). The Joint Responsibilities include the development of Centres of Excellence at MAK for ECA and at NDSU for North America that coordinate and manage capacity building for surveillance, risk assessment, policy development, communication and response to transboundary-, emerging-, zoonotic-and production-limiting diseases that affect animal health, public health and food security.

Student Involvement/Opportunities: Expected outcome is to have Higher Education Institute (HEI) Graduates that are well connected with the community reality and are able to function as development change agents and as IDM and one health practitioners in society.

Title: Research and Training Program Development for Capacity Building and ongoing collaboration in East Africa

Award: \$10,000

Start/End: March 2011 – July 2012

Principal Researchers: Chary Rangacharyulu, Ralph Deters, Alex Moewes, Nick Ovsenek

Colleges: Arts and Science, Medicine

Partner Organization: Nelson Mandela African Institute of Science and Technology

Project Description: The Nelson Mandela Foundation focuses on the creation of strategic networks and partnerships, and directs resources, knowledge and practice to add value and demonstrate new possibilities. NM-AIST is actively seeking to develop international partnerships and strategic networks for growth and development. The University of Saskatchewan (UofS) has a chance to get in on the ground floor and become a foundational partner. AUCC posted an announcement about NM-AIST seeking Canadian collaborators. The UofS, prompted by Dr. Rangacharyulu quickly responded requesting more information.

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Following several email communications, an on campus meeting where a number of faculty enthusiastically committed to participate, and mutual expressions of interest, NM-AIST has invited the UofS to Arusha to further discuss collaborative opportunities.

Student Involvement/Opportunities: All researchers involved will be engaging graduate students in their work, developing student exchange programs and supporting co-supervision of students. Our students would have access to a whole new environment, climate, culture, health patterns and disease range. African students would have access to our resources and equipment and would be equally exposed a new environment with a whole new span of health, communication and environmental management related information.

Title: Factors Influencing Dietary Practices of Indigenous/Aboriginal Peoples in Saskatchewan, Canada and Northern Brazil

Award: \$10,000

Start/End: March 2011 – July 2012

Principal Researchers: Carol Henry, Hassan Vatanparast, Candace Wasacase-Lafferty

Colleges: Pharmacy & Nutrition, School of Public Health, Arts and Science, Advancement

Partner Organizations: Universidade Federal de Pernambuco - Centro Acadêmico de Vitória, Wanuskewin Heritage Park

Project Description: The partnership between the University of Saskatchewan, Department of Nutrition, Wanuskewin Heritage Park and the Universidade Federal de Pernambuco - Centro Acadêmico de Vitória is being developed in recognition of the important role that food and nutrition play in the health and well-being of indigenous food secure households. The two Universities have established an interest in developing a partnership. Given the focus of this study, it is fitting for Wanuskewin Heritage Park to build on its existing and long-standing relationship with the U of S to now join these two academic partners to explore the unique relationship between food and Indigenous peoples of the world.

Student Involvement/Opportunities: Graduate students at the UofS will be involved in all aspects of project design, implementation, research exchanges and knowledge dissemination.

Title: The Influence of Climate Change on Soil Characteristics and Green Structures and Their Impact on Ecosystem Services in Dar es Salaam, Tanzania

Award: \$8,000

Start/End: March 2011 – July 2012

Principal Researcher: Anthony Kimaro

College: Agriculture and Bioresources

Partner Organization: Institute of Human Settlement Studies (IHSS), Ardhi University (ARU) – Tanzania

Project Description: This proposal will strengthen the established collaboration through a research on climate change effects on urban agriculture and the livelihood of small-scale urban farmers in Tanzania. The research will also provide a basis for the long-term research collaboration. Outputs from the proposed research and training activities will also generate information on the resilience of agricultural systems for enhancing food supply and environmental sustainability under the changing climate. This information fits very well within the existing research program in Africa, such as the Canadian International Food Security Research Fund and the AfricaAdapt program on climate adaptation, funded by IDRC and

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CIDA.
Student Involvement/Opportunities: The graduate student for the study is currently a PhD candidate on climate change, urban structures and ecosystem services at the ARU in Tanzania supervised by Dr. Shemdoe. This study is relevant to him because it will advance his research capacity at PhD level and strengthen his findings both in terms of training and various interactions while at the UofS.

Title: The Influence of Climate Change on Soil Characteristics and Green Structures and Their Impact on Ecosystem Services in Dar es Salaam, Tanzania
Award: \$5,000
Start/End: March 2011 – July 2012
Principal Researcher: Graduate Student Deusededit Kibassa (working with Anthony Kimaro)
College: Agriculture and Bioresources
Partner Organization: Institute of Human Settlement Studies (IHSS), Ardhi University (ARU) – Tanzania
Project Description: This proposal will strengthen the established collaboration through a research on climate change effects on urban agriculture and the livelihood of small-scale urban farmers in Tanzania. The research will also provide a basis for the long-term research collaboration. Outputs from the proposed research and training activities will also generate information on the resilience of agricultural systems for enhancing food supply and environmental sustainability under the changing climate. This information fits very well within the existing research program in Africa, such as the Canadian International Food Security Research Fund and the AfricaAdapt program on climate adaptation, funded by IDRC and CIDA.
Student Involvement/Opportunities: (Student project) Mr. Kibassa is currently a PhD candidate on climate change, urban structures and ecosystem services at the ARU in Tanzania supervised by Dr. Shemdoe. This study is relevant to him because it will advance his research capacity at PhD level and strengthen his findings both in terms of training and various interactions while at the UofS.

Title: Childhood Asthma: Development of an International Research Initiative
Award: \$10,000
Start/End: March 2011 – July 2012
Principal Researchers: Joshua Lawson, Donna Rennie
Colleges: Medicine, Nursing
Partner Organization: Medical University of Silesia, Katowice, Poland
Project Description In 2008, Dr. Zejda from the Medical University of Upper Silesia in Katowice, Poland, attended an International Symposium hosted by the Canadian Centre for Health and Safety in Agriculture (CCHSA), an interdisciplinary research center in the College of Medicine at the UofS. Dr. Zejda and colleagues from Belarus and Ukraine were interested in addressing the rising problem of childhood asthma in Eastern Europe. In 2010, Dr. Rennie received funding from the Global Partners II initiative, for a project entitled Canadian Support for BUPAS (Can for BUPAS). In September 2010 Dr. Lawson and Dr. Rennie visited Poland to work and meet with the BUPAS team members. Collaborators from UofS and BUPAS centers discussed the project status regarding data collection, issues with their research and their future

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educational needs to which the Canadian partners could contribute. The need for collaboration with the Canadian researchers through consultation and training was made very clear as it was important to each center to improve the ability to complete independent research and enhanced training in epidemiology and childhood asthma. The Belarus, Ukraine, Poland Asthma Study (BUPAS), a project examining the prevalence of childhood asthma in Eastern Europe. Canadian involvement in BUPAS was to foster international collaboration to address the limited research capacity and to support asthma research in Eastern Europe. Objectives of the Canadian involvement are: 1) to provide methodological and analytic support for BUPAS and subsequent studies; 2) to assist in the dissemination of study results; and 3) to support opportunities for further international research collaborations between our groups, including student exchanges.

Student Involvement/Opportunities: Part of the proposed process for increasing research capacity while at the same time strengthening collaborations on specific projects will be to conduct workshops and training with the BUPAS collaborators. In organizing and running these workshops and training sessions, we will invite members of the university community including researchers, faculty, graduate students, and residents to take part.

Title: Situated Gendered Labour Analysis in China's New Economy: Generational Migration, Stasis and the Politics of Resiliency

Award: \$10,000

Start/End: March 2011 – July 2012

Principal Researcher: Marie Lovrod

College: Arts & Science

Partner Organization: Lanzhou University

Project Description: The project builds on previous internationalization investments by the Department of Sociology and Women's and Gender Studies at the University of Saskatchewan. The project provides a critical expansion of partnership potentials, building from the previous feasibility study, by launching a modest three-part joint research project to bridge a period when both institutions are developing graduate Gender Studies programs, and Graduate Studies at the University of Saskatchewan undertakes joint degree protocols.

Student Involvement/Opportunities: Training for participating students in feminist qualitative research methods provides a rare opportunity in China, where centrally prioritized quantitative studies are the norm. As part of course preparations, students will review alternative economic growth measurement models discussed in the feminist political ecology literature, including debates about localized development of "genuine progress indicators" (GPI) as a way to focus research results and test GPI development potentials in the region.

Title: Regional Perceptions of Gendered Employment Discrimination and Income Inequities in Rural China

Award: \$5,000

Start/End: March 2011 – July 2012

Principal Researcher: Graduate Student Yaping Zhou (working with Marie Lovrod)

College: Arts & Science

Partner Organization: Lanzhou University

Project Description: As indicated in Dr. Lovrod's primary application, women have fewer

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employment opportunities than men; rural residents experience income employment discrimination and fewer opportunities than urbanites. My work links to the larger project between the University of Saskatchewan and Lanzhou University in establishing joint graduate programming because it recognizes the devaluation of reproductive labour under contemporary development regimes and the impact on socio-economic resiliencies as bound up in social constructions of gender and diversity.

Student Involvement/Opportunities: This is a student project.

Title: Assessment of Caregivers' Attitudes towards HIV/AIDS Testing and to Disclosure of Status of HIV-at-risk Children in Rural Uganda

Award: \$10,000

Start/End: March 2011 – July 2012

Principal Researchers: Adil Nazarali, Carol Henry, Claire Card

Colleges: Pharmacy and Nutrition, Veterinary Medicine

Partner Organization: Foundation for Aids Orphaned Children (FAOC)

Project Description: The partnership central to this research includes the University of Saskatchewan (UofS), University of Mbarara and the Foundation for Aids Orphaned Children (FAOC). This partnership had humble beginnings in 2006 and has since allowed short-term reciprocal exchanges, internships and co-created research and development projects. New aspects at this juncture are expanding the depth and breadth of the research dialogue and association between these partners, and introducing the School of Public Health as a research partner. This project represents another step in solidifying this partnership and enhancing its sustainability potential.

Student Involvement/Opportunities: Graduate student involvement in this project is an integral component of the work. As a full member of the research team, this project will serve as a multi-faceted learning and practicum experience for a graduate student.

Title: Assessment of Caregivers' Attitudes towards HIV/AIDS Testing and to Disclosure of Status of HIV-at-risk Children in Rural Uganda

Award: \$5,000

Start/End: March 2011 – July 2012

Principal Researcher: Graduate Student Eisha Grant (working with Adil Nazarali)

College: School of Public Health

Partner Organization: Foundation for Aids Orphaned Children (FAOC)

Project Description: This research project is aimed at using qualitative interviews to explore in-depth caregivers' attitudes towards HIV/AIDS testing, treatment, and disclosure of status to HIV-at-risk children in Isingiro district of rural Uganda. Caregivers will be interviewed in their homes as well as at a HIV clinic in Mbarara. Semi-structured interviews will be conducted with 15 participants selected using a stratified sampling method based on location within particular villages. The interviews will provide valuable information on the broad topics of barriers to HIV testing, test-seeking behavior and disclosure attitudes and encourage the participants to freely express their ideas. This project will address several gaps in addressing the issue of children orphaned due to HIV.

Student Involvement/Opportunities: (Student project) As a member of the research team, Ms.

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Grant will contribute to the satisfactory completion of all study objectives.

Title: Mama Kwanza (Women First) Health Cooperative Initiative

Award: \$8,000

Start/End: March 2011 – July 2012

Principal Researchers: Pammla Petrucka, Sandra Bassendowski, Marie Dietrich-Leurer

College: Nursing

Partner Organization: Green Hope Organization

Project Description: This project is derived from consultations and participation of the on-ground partners. For approximately 16 months, the on-ground partners plus the University of Saskatchewan and Regina Qu' Appelle Health District representatives have contributed to conceptualization and opening of the Mama Kwanza Clinic to address health needs of most at risk women and children. Green Hope Organization, the local NGO, initiated a Mama Kwanza clinic in July 2010 (operating smaller health centres for more than 3 years) in anticipation of leading development and implementation of the MKHI model. Based on historical involvement in working with Most Vulnerable Children and Most Vulnerable Women, this group has highlighted social, health, and economic needs of these target groups. In November 2010 a brief survey was conducted with nearly 80 users of the Mama Kwanza Clinic to determine their future program and service needs as well as preferred future for maternal child health. These beneficiaries, along with key stakeholders in the municipal and regional health sector, highlighted sustainable RMNCH health services including alternatives to affordable health care and more pre and post-natal programs.

Student Involvement/Opportunities: A Doctoral student participates fully in all aspects of the project including work on tool development, data collection/analysis, and reporting.

7. Round 3 Project Reports

Capacity Building in Integrated Management of Trans-boundary Animal Diseases and Zoonoses (CIMTRADZ) – Dr. Claire Card

Extent to Which Project Objectives were Met

The objectives included:

1. Establish Centres of Excellence that promote integration in Higher Education Institutions through programs, services and information on integrated disease management of trans-boundary diseases and zoonoses

The Centres of Excellence formed included North Dakota State University (NDSU) and Makerere University. The two Universities have a joint Master's degree and a graduate certificate in international infectious disease management and biosecurity <http://www.ndsu.edu/vetandmicro/students/current/graduate/infectious-disease-management/>.

There was a joint summer course International Animal Production, Disease Surveillance and Public Health, and that involved CIMTRADZ and US AID Respond funded East African students, NDSU students and Ugandan students (June - July 2012)

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Currently diagnostic capacity is being examined and there have been 2 meetings (Inception meeting Jan 30 – Feb 4; International) and with East Africa stakeholders to increase capacity. We currently have working groups that I am participating in that have developed a tool and are performing a gender audit on the diagnostic disease infrastructure. This includes a determination of the location, size and functional capacity of the veterinary diagnostic laboratories and their gender composition.

In addition there is now an AFRUS-IDM network with a terms of reference and board that shares information and makes decisions for the implementation of Capacity Building and Integrated Disease Management in Trans-boundary Diseases and Zoonoses. The research team participated actively in building up the experiential learning component of the summer course by providing funds for field work expenses. We are also actively engaged in developing on-line educational materials on the One Health concept of International Infectious and Trans-boundary Disease Management.

An International Infectious Disease Boma (primarily a student event with many workshops and lectures) and an international summer conference on Integrated Management of Trans-boundary Disease for Inclusive Economic Growth which was held in Kampala. I was involved as a member of the conference committee and a speaker at the Boma and conference. The “Boma” is an African concept where elders frequently imparted wisdom to the youth often around a campfire where meat was roasted.

2. Develop a partnership program between the University of Saskatchewan with AFRUS-IDM network focused on quality education and research

Dr. Card is a member of the Executive of AFRUS-IDM. Dr. Card has presented lectures at both conferences on “One Health.” The WCVM’s Associate Dean of Research Dr. Baljit Singh recently visited Uganda to discuss opportunities for collaboration and exchange. Dr. Card had the opportunity along with Dr. John Kaneene from Michigan State to assess some aspects of Makerere University’s Diagnostic laboratory capacity. A website was created see <http://afrusidm.org>. Dr. Card is working with Dominic Travis on developing on line educational materials on “one health” case studies.

3. Include the University of Saskatchewan in the AFUS IDM network to provide strategic guidance in community development and public service in integrated disease management of trans-boundary diseases and zoonoses

Dr. Card is an active participant in this network. She was worked in Uganda since 2006 and has a background in community engagement. She has also participated in the Gender Audit of the programs and infrastructure related to the College of Veterinary Medicine and Bioresources at Makerere University. She was an active participant in the inception meeting (Jan 29 – Feb 3 2012), the International Boma, and the International Infectious and Trans-boundary Disease Project (July 9- July 13, 2012).

Insights Gained into the Canadian and International Research Community Constraints and/or Challenges Encountered (Lessons Learned)

It was very interesting to participate in the discussions of the original members of the grant team that submitted the USAID proposal and their African partners. The USAID funding was limited after review to focus on the Ugandan objectives, with a diminished role for the other east African partners. The North American members held either bimonthly or month conference calls, with the Ugandan contacts and sometimes with the East African partners. The challenges for the

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African partners were often technical in nature, (having cellular coverage), internet availability and internet connectivity issues, and time zone availability (8 – 9 hours difference).

In the USAID grant the main Uganda PI was the Dean of the Faculty of Vet Med (FVM) at Makerere University. The main communication contact was also the Dean, however the Dean's busy schedule often precluded his participation. Another barrier was the movement of the funds from NDSU to Makerere through a subcontract award. This meant that funds were not available for compensation of the Dean for his time or for the hiring of support staff for the project. NDSU was a new Higher Education and Development (HED) USAID recipient and was learning the financial matters as they went along. This was problematic from an accounting standpoint, as professors are considered full time employees of Makerere and thus could only be compensated for overtime (overload work). Only one person was assigned to work with the North American partners from Uganda. It also meant that the project objectives and implementation of the objectives were delayed as a consequence. From the North American partners' viewpoint the idea of working on an academic project without additional compensation was considered routine, however in Uganda there were clear expectations of compensation for work on the grant.

There were cultural differences in the perception of time, and of urgency or need to meet deadlines. This became evident in participating in the planning of the International Boma, and the planning of the Summer Conference activities.

The North American partners also observed some difficulties in understanding the power dynamic between the NDSU PI who was an associate professor and the Dean of FVM. There did not appear to be an equal or peer to peer relationship.

While the main objectives of the Global Partners Fund proposal was to assist with the involvement of the University of Saskatchewan in this consortium, the involvement was as a partner in the HED USAID grant. From the perspective of Best Practices for this type of consortium a consideration might be to have an Ugandan faculty member twinned with a North American partner faculty, rather than relying on the PI and or a communications person for finding partners for implementation. An internal audit on financial matters is important. Cross training of financial officers would also be helpful. Understanding the expectations of the developing country faculty members and determining how compensation may be provided to them is important. A consideration for the future is to plan on having some contingency funding available ahead of the UDAID institutional funds moving, so the project doesn't stall waiting for the funding to work its way through the system.

Potential for Future Research Cooperation and Expected Outcomes (Next Steps and New Opportunities)

The potential to work together on a number of research areas is present. The need for capacity building and quality control of some aspects of the veterinary diagnostic laboratory were determined. Specifically the Gender Specialists from Women's Studies were sought out as collaborators to assist with the development of a gender auditing tool that was used to meet some of the main grant objectives. The meeting provided a great opportunity to get to know a diverse

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number of stakeholders in Uganda from government, public health, and higher education. It also was a place for the East African community members to network and share ideas.

The University of Saskatchewan was awarded the NSERC CREATE grant through the efforts of Dr. Baljit Singh, a grant which has a significant degree of overlap with the HED USAID grant. The target areas of study include food safety, infectious disease control and public policy. The NSERC CREATE grant involves the U of S collaborating with the Free University of Berlin in Germany and Guru Angad Dev Veterinary and Animal Sciences University in Punjab, India, to provide graduates of the program exposure to international research environments. Dr. Singh invited students from Makerere University to participate and apply for the graduate degrees. Dr. Singh stated *“Through this program, we will use integrated, experiential learning to train students in multiple disciplines so they can use their diverse knowledge to be creative in solving public health and food safety issues.”* The initiative specifically targets the private and public sectors’ urgent need for highly qualified professionals to manage complex public health threats such as emerging zoonotic diseases (transmissible between animals and humans) and food-borne illnesses. The program’s first students will begin training in September 2012. Qualified applicants can enter the program as undergraduate students, or they can enroll in existing, thesis-based MSc, PhD or postdoctoral programs at the U of S and at partnering universities in Germany and India. The federal CREATE program is designed to improve the mentoring and training environment for Canada’s future researchers by improving communication, collaboration and professional skills, as well as experience in academic and non-academic environments. Many Ugandan students contacted me after the July conference to discuss graduate education.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

Benefits to myself

It is of great interest to me to work with the Higher Education institutions on meeting the needs of a diverse pool of University graduate and undergraduate students. This is also an opportunity for cross-cultural learning for myself and an insider’s view of the expectations set for faculty from developing country partners. The trans-disciplinary area called “one health” is an area that I work and instruct in. Therefore I was able to provide information to students and fellow colleagues on “one health/ecohealth” approaches to problem solving in workshop and lecture formats. This was also a great opportunity for myself to network with a large number of US institutions many of whom we have a lot in common with, and who work on similar task. This will assist us in putting together great teams of people for future efforts. We met many African partners and learned about their institutions. We had an overview of the US AID efforts in this regard (RESPOND, PREDICT, IDENTIFY) and how they operate. We met the in country staff and their colleagues in the USA.

Benefits to the International Partner

The international partners at Makerere benefitted from having many of the North American partners speak at the inception meeting, delivering short course content in the international boma, and speak at the summer conference. Therefore they were provided with knowledge transfer, networking opportunities, and opportunities for students to apply for graduate studies. The capacity of the College of Veterinary Medicine and Biosecurity and the domestic situation in disease surveillance was evaluated.

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Benefits to the U of S

As a result of this activity the faculty of the University of Saskatchewan have had the opportunity to more fully understand the USAID mandate and the US government agencies, and to collaborate more closely with their North American and Ugandan colleagues. There was also the opportunity to network and to develop relationships with a diverse pool of stakeholders such as the Ugandan government, Ugandan NGOs, and international faculty in Uganda. An understanding of the diagnostic and surveillance capacity in Uganda is important in the formulation of domestic Canadian policy, and the identification of future directions for research and grants.

Development for Capacity Building and On-Going Collaboration in East Africa – Dr. Chary Rangacharyulu

Executive Summary

We have been supported for the project of "Development for Capacity Building and On-Going Collaboration in East Africa". We initiated this project to collaborate with the Nelson Mandela African Institute of Science and Technology (NM-AIST) in their mission to build premiere Post graduate institution of Science and technology in Africa. During this year, we made significant progress in our aim to put the name of University of Saskatchewan as a pioneering partner of the NM-AIST in efforts to build knowledge infrastructure in East Africa in the fields of advanced science and technologies. Our current focus is on health, energy and sustainability, three main areas of vital importance in East Africa where there is a lack of expertise. It is quite heartening that educators and researchers are highly motivated to allow us to collaborate with them in their efforts to move forward in this regard. In the last one year, our interactions have been strengthened and extended to include the Green Hope organization, post-secondary institutions besides the NM-AIST and the Tanzanian Atomic Energy Commission. The University of Saskatchewan and the NM-AIST have formalized these links by signing a Memorandum of Agreement in April 2012. Our colleagues from U of S are in constant collaborations with the NM-AIST colleagues and we are offering short intensive courses for the post-graduate students and university faculty of Tanzania. We will be receiving two graduate students at U of S thanks to the Commonwealth Scholarship awards. We are very optimistic that our strong beginnings will lead to lasting collaborations with tangible results in science and technology areas.

Extent to Which Project Objectives were Met

I am very pleased to report that, so far, the results exceeded our expectations. Whenever one starts a new project on a continent we have not been familiar with, there is always a trepidation. We became lucky in some ways. Unbeknownst to us, Dr. Pammla Petrucka was already working in Arusha, Tanzania with Green Hope on public health. She and through her the Green Hope became strong partners to our efforts. In April 2012, NM-AIST and U of S signed the MoA of cooperation between the two institutions. Dr. Petrucka has now established collaborations with researchers of NM-AIST. Prof. Rangacharyulu delivered two seminars and he is offering an intensive short course on Concepts of Nuclear Radiation – theory and experiment to post-graduate students of NM-AIST and also professors of universities near Arusha. He has established strong links with the Tanzania Atomic Energy Commission (TAEC),

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which is also linking with NM-AIST. It is expected that two NM-AIST graduate students will work with Dr. Petrucka and Dr. Buckingham (both of U of S) on public health related projects, thanks to a Common Wealth Scholarship. Dr. Rangacharyulu has a NM-AIST Ph.D. student working with him on nuclear instrumentation. We are also engaged in the development of Nuclear science and technology curriculum development in their institutions.

Insights Gained into the Canadian and International Research Community

It became very clear from the very beginning that there is a lot of good will on both sides. It is also clear that we supplement and complement on our strengths. The academic and research community of NM-AIST and Tanzania Atomic Energy Commission were mostly trained overseas in Asia, Europe and North America. While they have the background, they are short on resources. They are ambitious, they know their students and society. This is very helpful for us as we would like to work with them on topics that are relevant to their society and educational systems employing methods with which they will be comfortable, while moving forward. We quickly realized that we have a lot to learn from each other. There is a sense of mutual respect and common goals to strive for.

Constraints and/or Challenges Encountered (Lessons Learned)

There is always a constraint of distance and timing. The schedules of academic years do not always overlap. It is difficult for people on either side to leave behind what they are doing to collaborate with their distant partners. The internet addresses this problem to some extent, though not completely. Also, the shortage and unreliability of electrical power in Tanzania compounds this problem because, if we want to conduct distance education in real-time, there is no guarantee that our partners will be able to join. The intermittent nature of power outages causes a problem. This is a problem also for sophisticated laboratory experiments which require uninterrupted power.

Potential for Future Research Cooperation and Expected Outcomes (Next Steps and New Opportunities)

We are already taking next steps with two graduate students from Arusha coming to U of S. Professor Petrucka has already established collaborations. Also, Professor Rangacharyulu is delivering an intensive short course. He is also co-supervising a Ph.D. student in nuclear technologies. He is being asked to help develop a postgraduate nuclear science and technology program. He is quite excited about that opportunity. We are also making links with NM-AIST material science groups with those on our campus. This will bring their researchers to Saskatoon to collaborate on frontier technology projects at the Canadian Light Source.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

I believe that we have started something, which if we follow it through, will result in a lasting collaboration between frontier institutes in East Africa and U of S. We will be remembered as those who joined African researchers and educators as they are just beginning to get going on a long journey of modernization of their science and technology education and research. The fact that we get involved in education, research and public health will make a strong presence of U of S in several areas and our presence will be strongly and positively felt in a conspicuous ways. I

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am quite thrilled and thankful to the Global partners fund for providing me with the opportunity to take a lead on this project, one which is very close to my heart.

Elders, Keepers of Traditional Food Knowledge: addressing food security and restoring health – Dr. Carol Henry

Background: The promotion of healthy nutritional patterns is a priority in the Brazilian public health agenda, as in Canada, and is a fundamental component of actions aimed at ensuring the human right to food, promoting food and nutrition security, health, and quality of life, and preventing non-communicable diseases such as associated with nutrition (e.g. obesity, diabetes, hypertension, and cardiovascular diseases). Brazil and Canada are two nations representing developed and developing countries with different pace in nutrition transition: a shift from traditional, high-fiber, low-fat foods to foods with high energy density and low micronutrient content, rich in sugar, saturated and hydrogenated fats and salt and poor in fibers in addition to increased physical inactivity; the latter described as accelerated. These factors in addition to economic, social and cultural changes have led to increased lifestyle diseases. Indigenous populations in both countries are more at risk of the health consequences of this transition.

There is increasing interest in the role traditional food knowledge play in addressing food security and wellbeing at the academic and policy levels. There are also concerns that the potential loss of elders in the natural cycle of life may mean that traditional food knowledge will not pass on to generations that follow, raising some anxieties about the demise of cultural and traditional knowledge associated with the food and lifestyles of indigenous peoples. Traditional food knowledge can fade within households and communities as regional food systems and cultures change with pressures from global industrialization, urbanization and cultural homogenization. The resulting losses in cultural heritage, have only recently reached academic and policy attention. Few initiatives in Canada or Brazil have seriously considered the role of elders as keepers of traditional food knowledge.

Approach: This collaboration is design to build on and extended the work and relationships previously established by members of the team. In Canada, this included established relationships with the Wanuskewin Heritage Park and the Onion Lake Cree First Nations, including the Onion Lake Health Unit in Saskatchewan. In Brazil, a relationship between members of the Ryerson University-Brazil team with the Cinta Vermelha-Jundiba community in Araçuaí, Minas Gerais has flourished since 2006. **Phase 1** included community consultations with the Onion Lake Community, Saskatchewan, Canada. **Phase 2** took place in Brazil. Members of the UofS/RU research team will travel to Brazil to visit the Pataxó and Pankararu peoples of the CVJ village in June 18-24, 2012. Members of the UofS team participated in observations and dialog with the Onion Lake community, while the UofS// Ryerson team travelled to Brazil for meetings with the CJV community and Brazil researchers. **Phase III** (fall2012) consist of further parallel discussions and dissemination of lessons learned from the trip to Brazil with the Onion Lake community this fall. These initial observations and dialogue will help to strengthen further collaborations with the community.

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Objectives: This study sought to (1) describe the role of traditional food knowledge (TKF) in enhancing nutrition, food security and health among Indigenous adult sample population in Saskatchewan, Canada and Northern Brazil; (2) describe the food patterns of an adult sample of the two indigenous populations; (3) Create close partnership with community leaders (3), and recommend communication channels and strategies for intervention programs.

Extent to Which Project Objectives were Met: The objectives of the project were met during the project implementation period. The project team visited The Onion Lake community in during February-March, 2012. Several meetings were held with various stakeholders, including members of the community (in teacher training), and the staff at the Health unit. In June, 18-30, the Canadian team (UofS, UofR, and Ryerson) visited Brail and spent time meeting the members of the Cin-ta Vermelha-Jundiba Indigenous group. We have begun the relationship building.

During the visits to each community (Onion Lake and the CVJ) the team explored ways in which synergies between traditional food knowledge and mainstream food knowledge and practices (agriculture, hunting, fishing, and gathering, and / or herding, food preparation) could contribute to enhanced food security, healthy eating and wellbeing. We found that the two communities shared a long history of food traditions; practices that help define their culture. In Brazil, we participated in a traditional ceremony, where the community came together and shared some of their food culture with us. Children as well as adults participated, the voice of the children was considered during each phase of preparation and consumption. It was also interesting to observe the role and place given to the elders and mothers in that community. Everyone was allowed voice in the conversations that ensued. A goal of the team is to link both communities (Canada & Brazil) through face-to-face meetings and other tele-communication media, especially so that elders from each community may share of the specific food traditions, including skills in food preparation; creating new learning and insights for healthier sustained behaviours. With additional funds it is expected that this dialogue will take place during a preconference workshop, hosted by the University of Saskatchewan at Wanuskewin as part of the 2013 Native American and Indigenous Studies (NAISA) Annual Meeting, June 13-15, 2013, hosted by the University of Saskatchewan.

Insights Gained into the Canadian and International Research Community

As indicated above, meeting with and working with the Brazil team was very insightful. We had the opportunity to observe how local knowledge about food has been persevered by the CJV group, and passed onto the youth and children. We observed cooking practices, the constraints of growing enough food (produce) for sale and consumption to become more food secure, much of the constraints is a result of the semi-arid conditions and poor soil. We observed how the youth within such communities can make a difference in transferring knowledge gained from the mainstream schooling to help meet the production demands of the community. We also heard from youth enrolled in sustainable food and agriculture program in Brazil, the challenges they have in attracting trust from families to move to innovative methods to preserve land and resources and produce high quality products. Although youth empowerment programs might be in place, the active presence of parents in the process might allow building that trust. From our experience we believe that there are opportunities for further strengthening of relationship between the teams of both regions. In the Onion Lake community some of the local practices are

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already dying out, linking both communities may provide opportunities of learning from each other in areas such as the use of media as a way of advocacy, for improved lifestyle, and preservation of local knowledge.

The Onion Lake Cree Nations Onion Lake Cree Nation (OLCN) straddles the border between Saskatchewan and Alberta in Treaty 6 territory, Saskatchewan. The population of the Cree Nation is approximately 5000 citizens. The community is located on fertile, rolling hills, prime for agricultural use, and has proven production from oil and gas fields. Consequently, the community has entered into several long-term economic sector partnerships with the goal of sustainable development of its natural resources, a process which is guided by community and strong governance mechanisms based on Cree Worldview.

Located in the semi-arid, north-eastern region of the State of Minas Gerais, in the municipality of Araçuaí in the Jequitinhonha River Valley, the Cinta Vermelha-Jundiba (CVJ) village is home for two ethnic indigenous peoples. The Pataxó and Pankararu peoples originated from the Brazilian Northeast. Similarities in their histories include numerous expulsions from their traditional lands by various economic interests such as commercial plantations, mineral exploration, and building of dams. The group of Pataxó and Pankararu individuals who founded the CVJ village in 2005 came from that tradition. Today, they propose to restore both their culture and the natural environment of their new home. Food is at the center of their plan. This project sought to investigate two communities as parallel case studies to inform each other and the larger communities through sharing of local/ indigenous food knowledge and new initiatives that can be transposed to the different sites.

Constraints and/or Challenges Encountered (Lessons Learned): The project is at the early relationship/ partnership building stage; we believe that there is much to be gained from this relationship long-term as we seek to understand the role of elders in addressing nutrition and food security within their communities.

Potential for Future Research Cooperation and Expected Outcomes (Next Steps and New Opportunities): Gantt chart (describing activities in proposed project)

Activity	Months (March 2012- June 2013)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Community consultations & capacity building -Canada Visited Onion Lake Cree First Nations Met community leaders/ members Presentation/ participation in the University of Saskatchewan led- Classes													
Continued consultations the community groups in SK and in Brazil-identify opportunities to pursue joint project													
Proposal Writing- seek funds to further collaboration (SSHRC partnership grant)													
NAISA conference, Connecting Communities- through food share With additional funds-preconference workshop –including visits of CJV													

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community to Canada													
Community consultations- Brazil,													
Visited the Cinta Vermelha-Jundiba (CVJ)village													
Community forum with leaders, dialogue and observations													

Conclusions and Thoughts on the Benefit of the Global Partners II Program

The Global Partners II Program was important as it provided an opportunity of faculty researchers, staff, and community partners to come together with the extent of strengthening collaborations to pursue a common goal. It provided “seed” funds for this endeavor that will also the partnership to pursue larger external funding to pursue continued collaboration of the team.

It offered the opportunity for new learning. Despite the major challenges of a globalized food industry, there are personal and community benefits to gaining and relearning traditional food knowledge and practices. From this experience, researchers gained valuable insights that will be passed onto students in their individual classes, and to community partners. The sharing of cultural life skills engages communities as they learn about, and from each other. The community exchanges we participated in encourage capacity building at all levels. We also believe that education and communication strategies are required to encourage use of traditional food knowledge and practices.

The influence of climate change and floods in soil toxic elements concentrations in food producing green spaces in the city of Dar es Salaam – Dr. Anthony Kimaro and Graduate Student Deusdedit Kibassa

Executive Summary

Urban soil contamination with industrial effluent and other pollutants is a critical problem in most cities, but research in this area in most African cities is limited. To fill this gap, this project assessed the suitability of soils in green spaces for food production in Dar es Salaam based on the levels of toxic elements and in comparison with the minimum allowable limits of toxic elements in the soils. It also evaluated whether frequent floods due to climate change may influence the distribution of soil toxic elements in green spaces. Soil samples from selected green spaces in the Dar-es-Salaam city, Tanzania were collected. The samples were analyzed for Zinc (Zn), Chromium (Cr), Cadmium (Cd), Lead (Pb) and Copper (Cu). The highest value of Cu (8.98 mg/kg), Zn (57.10 mg/kg) and Pb (33.70 mg/kg) were observed in Tazara mchichani, which may reflect pollution from various manufacturing industries surrounding the area including steel, iron, food processing and detergents. Bunju had the lowest Cu and Zn levels in the soil, averaging 1.92 mg/kg and 13.53 mg/kg respectively while Kigogo darajani had the lowest Pb concentrations of 6.88 mg/kg. High and low values of Cr were observed in Tegeta and Temeke Wailes with the mean concentrations of 15.29 mg/kg and 3.66 mg/kg respectively. The Cd level

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was high in Temeke Wailes, Kigogo Darajani and Tegeta with mean concentration value of 0.26 mg/kg, while the lower amount of Cadmium was observed at Tazara chichani with mean concentration of 0.15 mg/kg. Toxic elements concentrations in the six sites were within the permissible limit suggesting that the sites may have no serious health risk concerns for food production. Flood did not seem to influence toxic elements distribution as frequently flooded areas had moderate levels of toxic elements in the soils. Results of the nutrient analysis are still being processed and will be included in the manuscripts to be submitted for publications as detailed in this report.

The implementation of this project has also strengthened the emerging collaboration between Ardhi University and University of Saskatchewan (UofS) in the areas of urban agriculture and agroforestry. The research on urban soil pollution and climate change was conducted by Deudedit Kibassa, the PhD candidate at Ardhi University, under the supervision of Drs. Riziki Shemdoo and Anthony Kimaro. His project was mainly funded by the Global Partner Program with the in-kind support from both Professors. The Global partner funds also covered the cost of air ticket for Augustine Osei from UofS to conduct his M.Sc. research on carbon pools in rotational woodlots in Shinyanga, Tanzania. The funds also supported Dr. Kimaro's visit to Ardhi University during Kibassa's fieldwork. These exchange visits supported by the project were crucial to strengthen the collaboration and provided an opportunity for the first face-to-face meeting with our partners in Tanzania. It is anticipated that in future, this collaboration will be expanded by developing joint proposal to include more students and Professors from both Institutions.

Extent to Which Project Objectives were Met

This project had two main components, one related to research and another to strengthening partnership between the University of Saskatchewan (UofS), Canada and Ardhi University, in Tanzania. The research objectives of the project were: 1) to characterize soils in food producing green spaces to quantify the levels of toxic elements and nutrients and assess suitability of these spaces for food (vegetable) production and 2) to assess whether climate change induced floods have any influence on the concentrations of toxic elements in green spaces in the Dar-es-Salaam City, Tanzania. These objectives were accomplished thorough fieldwork in Dar-es-Salaam, Tanzania and laboratory work at Ardhi University and UofS. Mr. Kibassa collected soil samples from various green spaces in the Dar-salaam City in the summer of 2011 under the supervision of Drs Anhtony Kimaro of UofS and Riziki Shemdoo from Ardhi University. Toxic element analysis was done at Ardhi University while nutrient analysis was conducted at UofS. Mr. Kibassa also had an opportunity to present preliminary results of his work in a seminar organized by his Canadian supervisor (see attached power point file of the seminar presentation). Overall this project has successfully quantified levels of toxic elements and nutrient status in soils of major foods producing green areas of Dar es Salaam. However, the influence of floods on the concentration of such toxic elements was minimal. With exception for soils in Tegeta which had high levels of Cadmium concentrations, the levels of toxic elements in soils from other green spaces were low than critical levels suggesting that these areas do may not have health risk if used for food production.

The visits made by Dr. Kimaro to Ardhi University during fieldwork and by Mr. Kibassa to UofS for laboratory work as well as Kibassa's seminar presentation had strengthened the collaboration

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between these institutions. This was the first face-to-face meeting since the UofS-Ardhi University collaboration began in July 2010 through the AUCC/CIDA funded student for development program (SFD). Besides planning for Kibassa's fieldwork and trip to Canada, it was noted that there is the need to expand further this collaboration by developing a joint proposal for a much bigger project that will also involve more students and professors from both Universities.

Insights Gained into the Canadian and International Research Community

Mr. Kibassa gave a public seminar at the University of Saskatchewan, which was organized by his Canadian supervisor, Dr. Kimaro, and the coordinator for seminar series in the department of Soil Science, Dr. Diane Knight. In addition to discussing preliminary results of this project, the seminar increased awareness on tropical agriculture and agroforestry issues among students and Professors at the UofS. This seminar, together with Kibassa's interaction with the UofS community during his stay in Saskatoon, generated interest for other students to work in Africa. Consequently, Augustine Osei, the M.Sc. student from the Department of Soil Science at UofS, decided to conduct his research in Tanzania under the supervision of Dr. Kimaro. Augustine's air-fare to and fro Tanzania for research in July 2012 was supported by this project. Cost for fieldwork was covered by the generous support of Dr. Kimaro's PhD supervisor (Prof. Vic Timmer) as detailed in the attached contract that was signed to transfer the funds to Dr. Shemdoe. Augustine's research quantifies above-and belowground pools in planted and natural woodlots in Shinyanga, Tanzania (Plate 1) to evaluate the potential for these woodlots to offset carbon emission and reduce forest degradation and deforestation.



Deusdedit Kibassa (PhD Candidate at Ardhi University in Tanzania) and Augustine Osei (M.Sc. Candidate at University of Saskatchewan in Canada) conducting fieldwork in Dar-es-salaam and Shinyanga regions respectively in Tanzania. These students were partially supported by the Global Partner Program.

Besides seminar presentation, other information outlets to reach the international research community planned for this project include journal publications and conference presentations. The following manuscripts are under preparations and will be submitted for publications by the end of this year: 1) Soil toxic elements concentrations in food producing green spaces in Dar-es-

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Salaam, Tanzania and 2) Soil Fertility Status and Carbon pools in Food Producing Green Spaces in Dar-es-Salaam, Tanzania. Whenever the opportunity arises, these manuscripts will be presented in national and international conferences to share the knowledge widely with a research community.

Unlike previous projects under this program, our project involved a student from African partner to conduct research in his country and travel to Canada for advanced laboratory work and accessing literature. This approach provided international exposure to Mr. Kibassa and it was an important part of capacity building at Ardhi University since the student is also a staff member and PhD Candidate at his home University.

Constraints and/or Challenges Encountered (Lessons Learned)

The study had a provision for a student from Ardhi University to visit Canada and conduct soil analysis and give a public seminar. The following challenges were encountered during the implementation based on this approach:

Obtaining a visa to Canada was a challenge and it took longer than expected, about two and a half months. This unexpected delay necessitated to conduct part of the laboratory analysis at Ardhi University to meet the deadline indicated in the visa application form. Given that the funds could support Mr. Kibassa for only one month in Canada, analysis of some samples in advance was also necessary to ensure that the work is completed in time and the student could give a public seminar at UofS as expected.

Living costs in Canada was too high for the ceiling amount for students under this program. Following arrangements for home-based accommodation in Tanzania for Dr. Kimaro, it was possible to save some money and request to use it for supporting Mr. Kibassa's stay in Canada. The home-based accommodation in Tanzania and access to student residence in Canada by Mr. Kibassa also relieved some money which later was spent to support a student from UofS to travel to Tanzania for his M.Sc. research.

The major limitation for participating African student to travel to Canada is that funds available can only support the student for not more than a month. This period may be too short to complete planned activities unless advanced work has been conducted.

Potential for Future Research Cooperation and Expected Outcomes (Next Steps and New Opportunities)

The current project is a result of the collaboration between Drs. Anthony Kimaro and Riziki Shemdoe of Ardhi University which was established through the AUCCA/CIDA funded internship to Kristopher Navok from the UofS. Kristopher worked for three months in the summer of 2010 and he was co-supervised by these Professors. Mr. Kibassa, the student who was supported by this project, had an opportunity to visit Canada to conduct laboratory work and give a seminar based on the preliminary results of his project. This visit increased awareness of the emerging collaboration to both student and Professors within and outside the Department of Soil Science. Consequently, this summer (July – August 2012) one M.Sc. student from Department of Soil Science conducted his M.Sc. research in Tanzania under the supervision of Drs. Kimario and Shemdoe. This project paid for air-fare and cash contribution from Dr. Kimaro's fund supported the living and field costs (See the attached money transfer from Prof. Vic Timmer, a former PhD supervisor of Dr. Kimaro). Dr. Kimaro and Shemdoe are committed

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to expand this collaboration through developing joint projects as well as revising curriculum review for Ardhi University whenever opportunity arises. This will open room for more students and Professors from UoF and Ardhi University to participate. The immediate step to kick start this process is to develop joint publications based on the results from this project and develop a joint research project in response to any call involving north-south collaborations between our institutions. It is anticipated that two manuscripts will be submitted for publication by December 2012.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

Urban soil contamination with industrial effluent and other pollutants is a critical problem in most cities, but research in this area in most African cities is limited. This study is one of the early works to advance our understanding on the extent and possible effects of urban soil pollution on the levels of toxic elements in green spaces and their implications on food production in Tanzania. The Global partner program also provided an opportunity to strengthen the UoF-Ardhi University collaboration that was initiated in July 2010 as detailed in the text. The collaboration was strengthened through partial support of research work by two students, one M.Sc. student from UoF and another from Ardhi University. In addition to developing my experience in supervising graduate students in Canada and abroad, their research will generate publications with significant contribution to science and hence advancing the careers of the students (Mr. Deusdedit Kibasa and Mrs. Augustine Osei) and their supervisors (Drs Anthony Kimaro and Riziki Shemdoe). The project supported by this program also fit very well within the growing interest in tropical agriculture at the College of Agriculture and Bioresources. Recently the UoF, through this college, has established itself as a leader in research in agriculture within and outside Canada. For instance, the Department of Soil Science has attracted large international projects involving Canadian and African partners. These include the IDRC-funded Sahel project which I was leading prior to the start of my leave-without pay and two other IDRC-funded projects in Ethiopia under the Canadian International Food Security Fund. The study funded by the Global Partners Program has expanded this effort by focusing on urban agriculture, the area not covered by current IDRC-funded projects.

Childhood Asthma: Development of an International Research Initiative – Dr. Joshua Lawson

Executive Summary

This technical report has been written to describe the work completed for funding received from the Global Partners II Round 3 initiative. The funding for this round was used to support a collaboration between researchers at the University of Saskatchewan and universities in Eastern Europe. Researchers from Canada, Belarus, Poland, and Ukraine have formed the partnership. The collaboration began in 2009 and funding from the Global Partners initiative has been used to establishment a research and training program that focuses on pediatric asthma. The research program is based on a study of the prevalence and risk factors of childhood asthma in order to better understand the diagnosis, management, and etiology of the disease. The training component has been designed to provide epidemiologic training to researchers and health professionals in Eastern Europe as a way of increasing research capacity in the region.

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The majority of the current funding from the Global Partners II initiative supported the travel by Dr. Josh Lawson and Dr. Donna Rennie to each center (Belarus, Ukraine, and Poland) in order to conduct training workshops and complete hands-on work with the BUPAS research project analysis and dissemination. These objectives were met as we had successful meetings with researchers and university officials at each center and were involved in several research outputs since our meetings in September 2011. We were also able to conduct several training sessions.

While we faced a number of challenges, each was a learning experience that has aided in how we communicate and work with our colleagues from Eastern Europe. This experience, through the support of the Global Partners II initiatives, has proved immensely beneficial and has resulted in funding from CIHR for the continuation of our collaboration through a planning grant which we hope to use to develop a research proposal to be submitted to CIHR for research operating funds. We are very grateful for the support of the Global Partners II funding and feel that without it, we would not have been able to establish this international network.

Extent to Which Project Objectives were Met

In 2009, Dr. Rennie and Dr. Lawson, researchers from CCHSA in the College of Medicine were invited to provide research support for a project entitled: The Belarus, Ukraine, Poland Asthma Study (BUPAS), a project examining the prevalence of childhood asthma in Eastern Europe. Canadian involvement in BUPAS was to foster international collaboration to address the limited research capacity and to support asthma research in Eastern Europe. Overall objectives of the Canadian involvement have been: 1) to provide methodological and analytic support for BUPAS and subsequent studies; 2) to assist in the dissemination of study results; and 3) to support opportunities for further international research collaborations between our groups, including student exchanges. More specific to the current project funded by the Global Partners II Round 3 initiative we requested funding to provide travel for Dr. Lawson and Dr. Rennie to each of the BUPAS centres in order to conduct workshops, training, and on-site, hands-on, research support in alignment with the aforementioned specific objectives of the Canadian collaborators. The Canadian role would be to continue to provide expertise in conducting epidemiological studies of asthma in children and to provide consultative support and workshops in research processes including data management, analysis and dissemination. It was also the Canadian collaborators' roles to help train the European collaborators in the methods of good epidemiologic research and evidence based medicine.

As a result of the funding we received from the Global Partners II Round 3 initiative we were able to meet our objective for the project. Between September 6, 2011 and September 22, 2011 we visited each of the three centers involved in the BUPAS collaboration (Grodno, Belarus; Ternopil, Ukraine; and Krakow, Poland). We were also able to meet with potential future collaborators in L'viv, Ukraine. With the exception of meetings in Poland, where we have met on multiple occasions and have a strong collaboration, at each center we met with multiple researchers as well as university and health care officials in order to gain approval for future work. In each case, continued and future collaborations were approved.

With regard to teaching and training of our Eastern European collaborators, we provided lectures and training in each country including attendance, speaking, and session chairing at the scientific

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conference “Childhood asthma: Epidemiology and Prevention” in Krakow, Poland. Dr. Lawson gave a lecture on “Good epidemiological practice” at each center while Dr. Rennie gave a lecture on “Environmental epidemiology – goals, principal methods and applications” at each center. Dr. Lawson also gave a lecture on “Sport and research” in Grodno, Belarus. As seen by the topics covered, we covered the material we had planned.

With regard to research, we met with each of the groups and discussed data analysis and dissemination. From the collaboration, the following research outputs have been produced since our meetings in September 2011:

Shpakou A, Brozek G, Stryzhak A, Neviartovich T, Zejda J. Allergic disease and respiratory symptoms in urban and rural children in Grodno Region (Belarus). *Pediatr Allergy Immunol.* 2012;23:339-46 [Dr. Rennie and Dr. Lawson are listed in the acknowledgements section.]

Fedortsiv O, Brozek GM, Luchyshyn N, Kubey I, **Lawson JA**, **Rennie DC**, Zejda JE. Prevalence of childhood asthma, rhinitis, and eczema in the Ternopil region of Ukraine – results of BUPAS study. Accepted by *Advances in Medical Sciences*. 2012

Brozek G, **Lawson J**, Farnik M, Zejda J. Underdiagnosis of childhood asthma: A comparison of survey estimates to clinical evaluation. Under review by *Pediatric Allergy and Immunology*.

G. Brozek, J. Zejda, O. Fedortsiv, A. Shpakou, L. Hryshchuk, A. Strizhak, **J. Lawson**, **D. Rennie**. Belarus Ukraine Poland Asthma Study (BUPAS) – Prevalence of asthma, respiratory symptoms and allergic diseases in children. To be presented at the European Respiratory Society Annual Congress, Vienna, Austria, September 2012

Based on the accomplishments from the meetings and training held in September as well as the output that has been produced, we feel we have met the objectives that were to provide training and research support, especially with regard to analysis and dissemination. We also feel we have strengthened our collaboration and set the stage for future research through our meetings with university officials and researchers.

Insights Gained into the Canadian and International Research Community

Through the work that we have completed, we have a much better understanding of the protocol of working with each of the centers that were involved in this research. With this knowledge, our planning could be adjusted accordingly. In addition to this, by visiting these centers and gaining a better understanding of the strengths and weaknesses of each location as well as the regional culture both in the research settings and in the general population, it allows us to better design and interpret our research.

Constraints and/or Challenges Encountered (Lessons Learned)

We encountered several challenges through our work from the Global Partners II Round 3 initiative. These include:

Lack of funding and resources available for research in Eastern Europe. There is very little money available for completion of research in the region. Also, it is difficult to obtain funding from Canadian sources to complete the research. This makes it difficult to advance a program of research that could have large implications for public health. In addition to the lack of funding,

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there are few people available and trained to complete health research in the region. Those who do complete this research have minimal time allotted to it due to heavy teaching and clinical loads. Finally, the focus of health research in the region has been on communicable diseases despite an increasing prevalence of communicable disease. As part of our collaboration with colleagues in Eastern Europe, it is our objective to aid in the training in this discipline and help build research capacity in the area.

The process of collaboration is much different than in Canada. The academic system in Eastern Europe is much more hierarchical than in Canada. Because of this, it is necessary to get approval for research and collaborations from a number of university authorities prior to completing the research. For example, meetings had to be held with the university Rectors followed by department heads and some affiliated organizations prior to being able to complete the research. This makes the research more time consuming and difficult to conduct. The language barrier can lead to difficulties in communication.

Potential for Future Research Cooperation and Expected Outcomes (Next Steps and New Opportunities)

There is a great deal of potential for future research cooperation. Thanks to the Global Partners Programs we have been able to develop a strong collaboration with our Eastern European colleagues. This has resulted in a number of research outputs. We also have support from all administrative levels at the universities with which we are collaborating to continue our research and training programs. Finally, we were fortunate to have received a CIHR Planning grant in the most recent competition (February 2012) with funds to support a September 2012 meeting in Krakow with collaborators from each of the four countries (Belarus, Ukraine, Poland, and Canada). The objective of this meeting will be to develop the framework of an operating grant that we will submit to CIHR to support the research we wish to conduct. While university support and a strong collaboration are necessary for a research program to be successful, we do require money in the form of operating funds. We hope that through the meeting we have in September, we will be able to address this challenge and continue our work.

Our long term goal is to receive funding for an operating grant in order to carry out research that could aid in the understanding of the etiology of asthma as well as proper clinical management of the disease.

Conclusions and Thoughts on the Benefit of the Global Partners II Program (to you, to your international partner and to the U of S)

The Global Partners II program has been very beneficial to our international collaboration. Through this most recent grant in Round 3 as well as an earlier grant in Round 2, we have managed to develop strong ties with our collaborators in Eastern Europe. Without this funding, I believe that Canada would have minimal involvement in this important project. For ourselves, we have been able to generate hypotheses, research ideas, and teaching methods that contribute to our own programs. For our colleagues, we have assisted and helped lead in the research process regarding pediatric asthma including data analysis and dissemination as well as trained potential researchers and health professionals, hopefully building research capacity in the region. For the University of Saskatchewan, we have helped develop international networks between

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universities and through presentations here at the U of S and abroad, have helped in the internationalization of research and teaching.

The activities and outcomes from these activities would be beneficial to each of the study centers including Canada as well as being useful on a more global level as we try to determine the reasons for the geographic variations in asthma prevalence. The long term impact of this outcome would be the contribution of knowledge that could influence the understanding of asthma etiology as well as the development of future interventions to reduce asthma morbidity.

Other outcomes of these activities are the strengthened collaboration between the four centers and increased research capacity. For the European collaborators, this includes enhanced knowledge of childhood asthma and experience in population based research focussed on childhood asthma greatly improving research capacity in Eastern Europe especially in epidemiology of non-communicable disease, an understudied area in this region. For the Canadian researchers, it allows for increased exposure to studies of childhood asthma that may help explain the associations with specific exposures such as agricultural or environmental contaminants, social policies, or health practices that may account for current trends in asthma prevalence.

Situated Gendered Labour Analysis in China's New Economy: Generational Migration, Stasis and the Politics of Resiliency – Dr. Marie Lovrod and Graduate Student Yaping Zhou

Executive Summary

The purpose of this ongoing partnership project between the University of Saskatchewan and Lanzhou University in Gansu province, China, is multi-layered. In a world where resource, social and economic development continues to unfold with measurable gendered differences persisting and/or emerging along a range of vectors in every sector, the importance of enhancing capacities to conduct qualitative as well as quantitative analysis in order to better understand the impacts of such changes and to make relevant policy recommendations is high. Yet, in both China and Canada, broad-based gender-sensitive analysis still faces obstacles, including access to relevant training, persistent public perceptions of “normative” yet ultimately constraining gender injustices, and the effects of diverse socio-economic positioning, which renders the enlargement of shared evaluative lexicons challenging, yet vital in ensuring balanced and sustainable approaches to economic partnerships, and overall sufficiency and resiliencies in the face of system corrections in socio-economic and natural environments.

For the past several years, the Department of Sociology at the University of Saskatchewan has been developing relationships with several universities in North Western China, in part, because there are geographic similarities affecting the respective universities involved and, in part, because there has been similar attention paid to development lags in both provinces, relative to the more diversified economies in the coastal and more central regions of both nations. The overall purpose of these long-term efforts has been to develop sustainable capacity for community-based policy research on social inequities in western China and by extension, in immigrant communities in Canada. For this particular assessment of gendered labour in China's new economy, Lanzhou University and the University of Saskatchewan have been partners.

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As part of this initiative, both institutions have been working to developing graduate programs in Women's and Gender Studies, with the expectation that our emerging partnership will support faculty and students from both universities in contributing to better informed and more nuanced gender-based analyses of development policies and practices within our respective communities and across borders, as relations between China and Canada continue to evolve.

The objectives of the program have been met. International exchange visits by colleagues from both institutions have taken place. A small qualitative study involving professors from both institutions and graduate students from Lanzhou University and the University of Saskatchewan has been completed, including a joint feminist methods/ethics class with participating graduate students, designed to support the study. Arrangements for co-participation by faculty from both institutions in a future conference at the University of Saskatchewan have been made. Yaping Zhou completed research toward the successful defense of his dissertation and completion of his Ph.D. in Sociology, and investigation into virtual learning opportunities has begun.

Extent to Which Project Objectives were Met

As indicated above, overall project goals were met, and continue to unfold. We were able to exchange faculty visits at each institution, and to engage in modest field work projects in each locale. Unexpected learning opportunities have also enabled new dimensions of learning to materialize. For example, Vice-Dean Zhang invited Professor Lovrod and Yaping Zhou to attend a family wedding in Xining, capital of Qinghai province, where a niece was marrying into a traditional Mongolian family. It was a privilege to be part of this family event, which also helped to illuminate some of the complex social dynamics that are shaping gendered and inter-generational social relations in North West China. At the wedding, we met the principal of a school that prepares students to study abroad. Clearly, this effort to support inter-cultural exchanges represents an important dimension of contemporary Chinese foreign policy.

Although it was not possible to bring Vice-Dean Zhang to the Women's Worlds conference in Canada, we have been able to direct those funds and some additional resources to support her return to Saskatoon with Vice President of International Relations, Dr. Chen, for participation in a conference entitled: "Social Issues and Policy Challenges of Western China: Lessons Learned and Lessons Borrowed," being organized by Professors Peter Li and Li Zong through the Sociology Department for August of 2013. Yaping Zhou was able to complete his dissertation research, and Professor Niu and Professor Lovrod were able to develop a targeted applied methods course for graduate students participating in our study.

Together, we visited five Canadian community-based organizations with commitments to gender justice, where Vice-Dean Zhang engaged with both community leaders and local participants in the program. Vice-Dean Zhang was particularly interested in the provisions for immigrant women through International Women of Saskatoon, resources invested in "safe-house" programs for domestic violence survivors, and the evidence of inequitable policies affecting the lives of Indigenous women who have found ways to move forward from street involvement at AIDS Saskatoon. In Gansu Province, in addition to several cultural visits, the situated gendered labour analysis was completed with eleven qualitative interview participants and a focus group with nineteen village women, and the town leader in Gansu Province.

Vice-Dean Zhang was able to outline how students at Lanzhou University have been permitted to engage in taking electronic courses with foreign institutions, and Professor Lovrod has begun to

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investigate technologies for synchronous learning environments, which may enable students in both locations to collaborate in future projects and courses.

Insights Gained into the Canadian and International Research Community

Several important insights have emerged from this exchange. Partners on both sides have appreciated the opportunities to clarify assumptions about normative expectations in each culture. For example, when Vice-Dean Zhang visited Saskatoon, she was surprised to learn that federal relations with Indigenous peoples continue to require improvements. Canada's international reputation as committed to equitable social relations had not prepared her for the insights shared by Indigenous program participants at AIDS Saskatoon, nor our translator, a doctoral candidate in Sociology, who had limited familiarity with this type of programming in China. By the same token, Vice-Dean Zhang was impressed with the efforts of International Women of Saskatoon to build economic bridges for new immigrants, by focusing on women as the centre of family well-being.

In China, Dr. Lovrod was very impressed with the considerable investments made by graduate students in the research project, and also by the rigorous discussions of cross-cultural research ethics practices. Students were very pleased to learn how to develop a "stake-holders" map of the research project, but worked hard to articulate the differences in psychic orientation between older generations from rural villages, who continue to carry a deep consciousness of collective well-being, while younger generations are revising their views, based on their engagements with the "new" economies evolving in China. For example, we spent considerable time revising our oral history instruments in order to ensure that questions would not be misunderstood by villagers.

It was clear that while younger generations are critical of the effects of the Cultural Revolution in their communities, those who lived through, for example, the abandonment of foot-binding as a gendered practice, or the commitment to the establishment of localized health practitioners, feel that their sacrifices are now bearing fruit for new generations. Although several elderly women were raising grandchildren while their own children were working in cities, most were pleased with the improvement in their economic status. The majority indicated that they had "enough" economic security for themselves, and wished that their children and grandchildren would enjoy any emerging prosperity arising from the "new" economy, which had introduced, for example, access to some social security benefits. The village we visited was one of the lucky ones, not far from a university and a city, which provide employment to several villagers.

It was also encouraging to see that the women of the village are influencing future plans by seeking to establish a village square where they can engage in traditional dances and facilitate village communications.

The result, that elder generations have accepted limited improvements in their own lives in order to facilitate future generations was borne out by the research conducted by Yaping Zhou, who found that a willingness to accept social inequities as part of the "great surge forward." Nevertheless, he concludes that if permitted to persist and fester, such inequities can destabilize economies in the long run.

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Constraints and/or Challenges Encountered (Lessons Learned)

What has emerged over the course of the Global Partners II Program has been additional evidence of a strong willingness to continue to work together on both sides of the evolving partnership, as well as a deep recognition of the particular challenges each institution faces in actualizing this vision. For example, owing to a central concern regarding potential political unrest in China, there was a question during the Lanzhou portion of the study, as to whether or not the Canadian partner would be permitted to participate in research visits to a local village. This challenge was alleviated, based on constructive institutional relations between administrators at Lanzhou University and local political leadership, as well as the limited focus of our research projects, which evaluated perceptions of the impact of China's economic development among women and their effects on women's relationships.

By the same token, translating the community-based model of Canadian supports for gender-justice practice into a comprehensible format for visiting Chinese scholars was both challenging and illuminating. Because Chinese feminists have been working diligently to develop collective responses to the effects of domestic violence, for example, our colleague from Lanzhou was able to raise important questions about the reach and effectiveness of the local Canadian model. The long-standing impact of colonial policies in the lives of Indigenous women here was particularly striking to our visiting partner, as was a brief visit to our "snow mountains," which represent a profound and vital natural resource to our Chinese visitors.

Although professors on both sides of this partnership have been working to develop their language capabilities, part of our work together has also been conducted in translation, with bilingual graduate students supporting the research projects. This has been a powerful learning experience for all of us, both because the good will has been remarkably effective in advancing our shared work, and because the participating students have been able to articulate powerful questions of their own in relation to our common projects. Nevertheless, it is clear that bilingual fluencies in Chinese and English can only enhance our future endeavors together.

Potential for Future Research Cooperation and Expected Outcomes (Next Steps and New Opportunities)

In addition to the relationship-building that has been supported through this project, changes at the University of Saskatchewan, including the establishment of a Confucius Institute to support cross-cultural learning and ongoing investments in international exchanges have been helpful developments, external to this grant, that extend potentials for future collaborations among partnering institutions. Lanzhou University also offers language instruction in Chinese to foreign students, who find economic changes a strong incentive to participate.

Also, as a result of this collaboration, Professor Lovrod is currently investigating the possibility of a longer-term visit by Professor Niu, who teaches the Sociology of Gender as a specialist in Psychology, with an interest in poverty reduction strategies.

Owing to access to some additional funds from the IDRC, we have also been able to secure travel for Vice-Dean Zhang and Vice-President of International Relations, Chen, to participate in a conference entitled: "Social Issues and Policy Challenges of Western China: Lessons Learned and Lessons Borrowed," being organized by Professors Peter Li and Li Zong through the Sociology Department for August of 2013. In addition, Women's and Gender Studies will

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continue to partner with Sociology at the University of Saskatchewan to support the establishment of a more formal institutional partnership with Lanzhou University.

Therefore, through mutual visits, joint publication, conference collaborations and shared research interests, the two universities have laid the foundation for an ongoing relationship.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

The rationale for the partnership building project toward graduate program capacity in Women's and Gender Studies at both the University of Saskatchewan and at Lanzhou University is fully consistent with IDRC thematic priorities, particularly as it supports increased capacity for diversity-sensitive qualitative gender research in both China and Canada. Research outcomes will be used to build knowledge that supports gender justice within and across borders, with a focus on fostering more equitable social and economic policy. The study on elderly women provides pilot level work on public governance, equity and health while the partnership infrastructure will enable use of information and communication technologies for educational development, and the support of modest, sustainable development toward sufficiency in China and Canada.

This project has benefitted partners in several ways:

Graduate students at both institutions have benefitted from the exchange of expertise between scholars from both institutions, particularly in relation to the practices of qualitative research. Participating faculty members have already collaborated on publications, with future collaborative publications expected.

Both universities continue to advance their efforts to establish graduate programming in Women's and Gender Studies, and to develop practices for cross-cultural feminist solidarities and ethical qualitative research methods with a view toward poverty reduction and addressing migration issues precipitated by global economic development.

Capacities for knowledge transfer in both directions continue to evolve. The project has enabled the participating graduate student to present his work at international conferences on poverty reduction and international immigrant integration practices.

Because the University of Saskatchewan has committed to international collaborations, this program has provided invaluable opportunities to actualize academic cooperation where the possibility would not otherwise have been as directly facilitated. Faculty members at both institutions have opened a conversation that allows us to pursue policy-relevant qualitative feminist research to support gender equity in relation to poverty reduction, regional and international migration and the processes of social integration.

Assessment of Caretakers Attitudes towards HIV Testing and Disclosure of HIV Status to At-Risk Children in Rural Uganda – Dr. Adil Nazarali and Graduate Student Eisha Grant

Executive Summary

International Research Office, University of Saskatchewan July 2013

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Globally by 2011, over 34 million people were living with Human Immunodeficiency Virus (HIV), with over 7,000 new infections daily and about 5000 deaths from Acquired Immuno-deficiency Syndrome (AIDS). Estimates indicate that ten percent are children under the age of fifteen years are infected with HIV with majority of the infections result from mother- to -child transmission, while 17.1 million Children have been orphaned by HIV, with around 14.8 million of these children living in sub-Saharan Africa, mostly being cared for by elderly relatives. In Uganda, estimates indicate that HIV prevalence among adults is increasing, with 2.2 million children under the age of 15 orphaned.

Caretakers' of these orphaned children have various social and economic challenges but mostly HIV-testing of the children and disclosure of HIV status to adolescents. The goal of this study was to interview primary caregivers of HIV positive children to identify trends as to what age the children are when caregivers choose to disclose, methodology of disclosure, and experiences and challenges related to HIV testing, barriers to HIV services, and the disclosure process.

HIV/AIDS testing and disclosure of status especially to at-risk children most often is not simple due to different factors socio economic, cultural or stigma related. Local attitudes towards testing and treatment of HIV positive children in impoverished rural families has not been described and there was a concern that orphaned children would react negatively to finding out their HIV positive status.

Therefore this study was done in two parts- development of a research tool that required pre-testing for validity purposes and second part measuring the caregivers' attitudes towards HIV/AIDS testing, treatment and disclosure which is important at household and individual level.

The research tool was found valid to the research topic; linkages were made between the research students, clinicians at the Mbarara University ISS Clinic and the community. Data was collected regarding the caregivers' attitudes towards HIV/AIDS testing, treatment and disclosure to orphaned children. A possibility of linking results from this study and future research or collaboration was further discussed.

Extent to Which Project Objectives were Met

The two broad objectives of this study were: To pretest the validity of the research tool and; to interview caregivers' regarding their attitudes towards HIV/AIDS testing, treatment and disclosure of orphaned children. Most of these objectives were met successfully.

Objective 1: Pre-testing research tool

The questionnaires were adapted to fit the cultural context of the community through field testing. Two rural communities that were similar to the study site were chosen to pre-test the tool.

The clarity of the questions asked were verified through various research methodologies- Key Informant interviews with community leaders and elders, in-depth interviews and focus group discussions with caretakers' of HIV orphaned children was done. To avoid selection bias, both sexes were interviewed during the pre-testing exercise.

We estimated the amount of time required to complete the questionnaire per interview/household to be forty-five to sixty minutes.

Gaps were identified in the initial research tool and additional information to support the instrument was found.

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The final research tool was refined to meet the second objective of this study.

Objective 2: To interview caregivers' regarding their attitudes towards HIV/AIDS testing, treatment and disclosure of orphaned children

A study guide was developed in order to train research assistants on how to conduct the study.

Two research assistants and 1 translator/ transcribe were trained on how to conduct the interviews which are qualitative in nature.

Data was collected during the interviews both written and audio.

Audio data was transcribed and validated.

Data analysis and reporting will be done later by the principal investigator.

It is expected that the results of this study will be shared with the colleagues at Mbarara University ISS Clinic and Community through Knowledge Translation piece component of this study.

Insights Gained into the Canadian and International Research Community

During the pretesting phase of this study various insights were drawn both to us and the community at large.

Community Engagement and Entry - This was an important aspect in our research as it ensured buy-in and participation from the research community. It was important to brief the head of the ISS Clinic and local leaders about our proposed study before the actual data collection. During the briefings, appropriate staff members were identified, who motivated patients attending the ISS Clinic to participate in our study as we were laying foundation structures throughout our study. The involvement of staff members from the ISS Clinic and FAOC facilitated good collaboration for support and data collection.

Significance of Culture and cultural context in HIV testing and Disclosure – Understanding local culture was crucial in this study. In Uganda, culture plays a vital role in the health of the individual, the family and community especially where the values of the extended family and community significantly influences the behavior of the individual. Even though the orphans are mostly taken care of by elderly relatives such as grandmothers, the role of other relatives in the care of the child should not be underestimated. The behavior of the caretaker in relation to the orphaned children and community is one major cultural factor that had implications on HIV testing and disclosure.

Through this research we gained insight on the importance of cultural identity – Tribe of the caretaker, Orphan child, the role of the extended family and neighbors.

The different relationships and expectations among the caretakers' orphaned children and community and perceptions towards HIV, what are the enabling factors such as socio-economic factors, institutional support available.

Supportive and or discouraging influences of other family members and community towards HIV testing and disclosure among orphaned children.

Constraints and/or Challenges Encountered (Lessons Learned)

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The research community at the Mbarara University (MUST) ISS Clinic was supportive throughout this project; however we had issues regarding to obtaining Ethics approval from Mbarara University Research Ethics Board, Concept of keeping time is different in low-resource setting, Patience is a requirement to any research initiative, dealing with any disease outbreaks during the study that can hinder data collection. We were however successful in securing ethics before the study was started.

Lessons Learned:

Ethics Approval to conduct research from the host country- Even though this study was approved by the University of Saskatchewan Research and Ethics Board, it is important to also get ethics approval from the host country through the different Institutions Ethics Review Boards. In Uganda, Ethics approval follows hierarchy similar to any other International Ethics Review Board however, to ensure protection of the study participants, there are various steps to be undertaken, For example our research involved interviewing caretakers' of HIV orphaned children at the ISS Clinic. The college of medicine at MUST had to first approve the study, secondly the Institutional Review Board at MUST had to clear the study and thirdly the National Council of Science and Technology gives final approval to conduct the research.

Concept of keeping time is different in low-resource setting such as Uganda- Due to different commitments as a result of the social and economic context; most people do not keep time which most often leads to loss considerable amount of time. Researchers from north of the globe such as Canada have to aware of this. Therefore when allocating schedules for different activities while conducting research, allowance of 1-2 hours should be given for every activity. *“For example if you are to meet a community leader, focal person or study participants at 8am, there will be present at 9 am or 10am.”*

Patience is a key requirement to any research initiative- Often times conducting research is under strict time and budget allocation. With the several delays in obtaining ethics approval, networking with relevant people in the community takes most of the time before beginning actual study. One has to be very patient in such a set up without easily flying off the handle in order to succeed with the set up objectives of the research. We were delayed in starting data collecting in 2011 therefore had to wait until 2012 to do so.

Dealing with any disease outbreaks during the study- Disease outbreaks in developing countries are unpredictable. We did not anticipate that during our data collection, there was a deadly Ebola outbreak in the South-Western part of Uganda. Even though we were assured after sometime that there was no case of Ebola patient in the hospital where we were conducting interviews, there was Ebola scare among health workers in the clinic, researchers and participants alike. This halted our data collection process.

Potential for Future Research Cooperation and Expected Outcomes (Next Steps and New Opportunities)

There is potential for future research after the initial data analysis and findings of this study.

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Mama Kwanza (Women First) Health Cooperative Initiative – Dr. Pammla Petrucka

Executive Summary

One of the major documents of recent years to set the framework for development is the UN's Millennium Development Goals (MDGs). These eight goals have formed the backbone of many development initiatives and agendas. It has been recognized that the MDGs are inter-related and cannot successfully be addressed individually. When considering health and education in the development context, the inter-relatedness becomes increasingly apparent, and potentially paralyzing.

Our project's interest is specifically in the 4th and 5th MDGs which relate to Maternal and Child Health. Globally, each year, approximately half a million women die in pregnancy or childbirth and nearly 10 million children die before their fifth birth (with nearly 40% of these deaths occurring in the first month of life).¹ It is estimated that two-thirds of these deaths are preventable.² In Tanzania the maternal mortality rate continues to be high with estimates of about 578 deaths per 100 000 (primarily from hemorrhages, infections, obstructed labours), and as many as 450,000 Tanzanian women experience disabilities caused by complications during pregnancy and childbirth each year.³ Of note, less than half of women are assisted during child birth by a trained health worker, and, although nearly all women receive at least one antenatal contact, less than 50% are informed about the signs of pregnancy complications. Child mortality rates have improved significantly in Tanzania (68 deaths per 1000) and concomitantly the under-five mortality rates have fallen to 112 per 1000.

Globally health systems continue to deprive women of health and health care - failing most of the world's girls and women at key times of need throughout their life cycle. This reality has perpetuated health and social inequalities, impacted health outcomes, and contributed to limited or lost futures based on gender-based inequities. According to the World Health Organization (WHO), "Societies and their health systems need to be better geared to meet women's health needs in terms of access, comprehensiveness and responsiveness."¹ This imperative brings forward three critical areas for interventions and innovations: a) prioritizing Millennium Development Goals⁴ 4 [Reduce Child Mortality] and 5 [Improve Maternal Health]; b) novel approaches/alternatives to point of service payment for women's health; and c) embedding mobile health strategies within the health system for women's health.

Pregnancy and childbirth are non-illness conditions, but it is evident that maternal risks during the perinatal continuum are related to availability of skilled health workers, the woman's education level, and her socio-economic status^{12, 13, 14}. The most important risk factors for death and disability in this age group in low- and middle-income countries are lack of contraception and unsafe sex resulting in unwanted pregnancies, unsafe abortions, complications of pregnancy and childbirth, and sexually transmitted infections¹⁵. To further complicate efforts to redress

¹ WHO- Partnership for Maternal, Newborn, and Child Health (2010)

² WHO (2010)

³ USAID (2009)

⁴ In 2000, eight Millennium Development Goals (MDGs) were agreed upon by 189 nations. The MDGs provide a framework for improving health, education, gender equity, economic, and environmental conditions in developing countries. Specific and measurable targets were set for low and middle income developing countries.

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these issues is the lack of appropriate, accessible and reliable data, especially with respect to low-income countries¹⁶.

As a result of this project we were most notably able to reflect on the potentials/implications of a range of community based health insurance schemes (i.e., cooperative versus a micro-insurance approaches) to developing a sustainable model for health care for Maternal Child care in Arusha. In the following content we will reflect on the findings and recommendations arising from this project.

Extent to Which Project Objectives were Met

The overall research goal was to consider and delineate key components of a global health research collaborative (GHRC) comprised of local, national, and international partners seeking health system innovations for improving maternal child health outcomes within vulnerable populations in Tanzania. We soon recognized that this had to be reframed consideration of the components only within the Arusha District as the national plans and regional/district mandates varied significantly. With this constraint we met our overall research goal at a minimal level. It soon became apparent that resources, documents, and contacts were highly complex and inconsistent. As a result we strove to address the individual objectives which were met at a high level.

The articulation of promising practices in alternative payment schemes was achieved through the integrative literature review process. In the managing of this objective, we secured a PhD student who will continue to conduct this research over the subsequent grant. This student was able to outline economic and social aspects of each alternative and has continued to assemble international cases of such schemes in order to achieve our ongoing program implementation.

The articulation of a research agenda was significantly fast tracked with two calls for proposals in the area of Maternal Child Health. The first project was successful and we are awaiting results of the second submission. This opportunity to share ideas, agendas, and potential research directions yielded a solid matrix of potential projects in this critical area.

The capacity building activities related to alternative health payments included an extensive review of existing health insurance plans within Tanzania, as well as a series of in-house meetings with potential beneficiaries (n=14) and health providers (n=8) within an alternative health system. Unfortunately there was no response from the decision makers/policy makers to participate in these sessions.

We found that the participatory diagramming was highly successful within the health providers, but was somewhat confusing for the beneficiaries. It is possible that this was conducted at a higher level and could simply be adjusted in the future to be more acceptable and achievable for fuller participation of that segment of the target population.

Insights Gained into the Canadian and International Research Community

From the perspective of the PI, the insights gained into the Canadian and International Research community were framed in two ways. Firstly, we as Canadian researchers (regardless of the reality) are seen as experts and there is a dependency on our skills, knowledge, and capacities. This is a concern especially in terms of future leadership and sustainability of research efforts. There must be a commitment on the researcher's side to deal with this – and every effort must be

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made to ensure equitable and shared ownership. Secondly, I personally struggled with the lack of resources in some of the settings. The issues of power and simple supplies are limiting and it is imperative that the approaches used must build in 'extra' funding to compensate.

We believe that we have laid the path for a research program **based in Tanzania** *with Canadian partners*. We envision that this has solidified over the course of this project and will be further enabled with our new grant.

Constraints and/or Challenges Encountered (Lessons Learned)

There were limited challenges in this particular project as we seemed to find a few funding opportunities which aligned with our effort, and the team members were highly committed to the efforts. Likely the lack of research assistance and ability to 'connect' virtually should be noted. Unfortunately the technology and stability of power/internet in Tanzania is highly problematic.

In terms of promising practices envisioned:

Our team found the participatory diagramming was an acceptable and replicable tool.

Being present at 'each' site creates credibility and intentionality of our team and its efforts.

Using small grants to build our teams has proven extraordinarily valuable. It has built trust, collegiality, and enabled sharing of ideas at various stages of the process.

Potential for Future Research Cooperation and Expected Outcomes (Next Steps and New Opportunities)

As discussed in the proposal phase, this research partnership has existed for nearly 8 years. As a result of this opportunity we submitted 2 grant proposals related to the project. At this point the team has received a grant for over 2 million dollars to bring parts of this project to scale. We are finalizing our agreement in the next few weeks on the Mama Kwanza initiative. This will enable us to provide care in 6 sites in the Arusha District of Tanzania – so along with our Canadian and African partners we will have a 3 year initiative to realize many of the efforts launched through the Global Partners funding.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

The program has been a highly innovative and beneficial project for those of us striving to working globally, build a global research program, and partner effectively. This project specifically has enabled us to build new relationships especially with the Nelson Mandela Institution which emerged as a new partner during the project period. We have actually secured a Memorandum of Understanding with this institution and the University of Saskatchewan as a result and have a physical location (office space) there. This group has also partnered with our on ground partner on a number of initiatives.

I firmly believe that the GPII program has been a catalyst to my program of research and to bring my partners into a realistic and research intensive initiative.

8. Final Report Summary

i. Outcomes

- a) Influenced the creation of internal seed funding, leading to further partnership development with institutions in Germany and India, culminating in a successful Collaborative Research and Training Experience (CREATE) grant funded by NSERC. This collaboration is now continuing with an upcoming large-scale proposal for a high-level Government of Canada competition (Network Centres of Excellence).
- b) Led to formal agreements at the institutional levels with the University of the West Indies in the Caribbean, Ethiopian Health and Nutrition Research Institute and Hawassa University in Ethiopia, Universidade Lúrio in Mozambique, Green Hope Organization and Nelson Mandela African Institute of Science and Technology in Tanzania, Mbarara University of Science and Technology in Uganda, Lanzhou University, Northwest University for Nationalities, and Xi'an Jiaotong University in China.
- c) Assisted in building faculty resources, both here and with southern partners. For instance, faculty members of the U of S have provided support in curriculum design; teaching graduate courses as guest lecturers and conducted professional training sessions to upgrade skills of graduate students and faculty members of Hawassa University. With resources leveraged from other donors, Hawassa University faculty members visited the U of S and presented various research projects they had supervised. This particularly attracted interest among U of S faculty to be more engaged in the partnership development as co-supervisors and external examiners. This also created an opportunity for our faculty members to reflect on their involvement in research, teaching, and community engagement as well as working with people from a wide variety of cultural backgrounds.
- d) Furthered the internationalization of curriculum, both here and with southern partners. The U of S and partner institutions were interested in assessing and comparing the quality standard of education and how well institutions meet the needs of a changing society. International perspectives have been incorporated in curriculum revision and delivery. For example, when the U of S and Lanzhou University were both engaged in establishing graduate programs in Women's and Gender Studies. Three models of joint curriculum delivery were explored and synchronous teaching and learning technologies were under discussion as well.
- e) Strengthened the development of community partnerships, both here and abroad. For example Dr. Pammla Petrucka, in her e-Safi project, successfully engaged the Ministries of Communications and Technology, Ministries of Health/Social Welfare, Inter-governmental Affairs Departments, Computers for Schools in Kenya and local government in Arusha and Mwanza. Canadian community partnerships included SARCAN (Saskatchewan's major recycling program) and the Computers for Schools (SaskTel Pioneers).
- f) Supported the U of S Internationalization Foundational Document, Country Strategies and Signature Areas "Agriculture: Food and Bioproducts for a Sustainable Future" and "One Health: Solutions at the Animal-Human-Environment Interface".

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- g) Economic impact: the success of many of our Global Partners projects has led to \$5,255,690 of further funding to continue the valuable work started with the GPII seed grants.

ii. Lessons Learned

Across all projects, researchers stated that their work would not have been possible without the funding provided by these small Global Partners grants. The amount of work that was accomplished with these funds demonstrated an excellent return on investment in each case. Each grant recipient recognized the positive impact these grants had on their international collaborations and research.

The GPII Program grants provided sufficient funds to have great impact on the research performed at the U of S, the partner countries, and on the individuals involved in the projects. Project personnel and the IRO team also strengthened project management, cross-cultural understanding and communication skills. Since the GPII program was administered by the U of S International Research Office, use of the funding was maximized and well monitored. The assistance from the IRO was highly appreciated by all participants. One suggestion for future versions of the GPII Program would be to provide the researchers and the IRO with follow up grants in order that the most promising projects can continue. The full socio economic impact of this brief GPII program will only be known over time.⁵

iii. Recommendations

Researchers felt the program would be strengthened by including follow-up funding for continued development of their partnerships. A number of projects were looking into developing and/or expanding partnerships with government offices, village administrations, institutions, non -profit organizations, and local communities, as well as supporting local partners to run these projects more independently as a phase-out and sustainability strategy.

iv. Going Forward

The University of Saskatchewan will further strengthen those partnerships developed through the Global Partners program. Researchers will continue to seek formal agreements with partner institutions and additional funding, including institutional seed funding and both internal and external grant opportunities. The U of S will continue to encourage projects and partnerships that align with U of S Country Strategies and Signature Areas, as well as those of the major funding agencies.

The U of S will continue to facilitate the sharing of project ideas, approaches, techniques, and results between Global Partners recipients and the broader community. A gender focus forum led by Global Partners recipients was a great success, and this kind of discussion, training and mentoring can be conducted in different formats, such as workshops, seminars, bootcamps and web conferencing. The IRO is working with

⁵ Excerpt from external review

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research facilitators in various colleges to develop research clusters based on common interest in specific geographic or thematic topics. The IRO will discuss with the Office of Research Communications in regard to the possibility of producing video clips featuring experiences and lessons gained by the Global Partners II recipients, which would benefit U of S researchers working in the same regions/countries or interested in international development in general.

The U of S will continue to encourage fostering Canadian institutional and community partnerships. The Office of Research Services at Queens and Ryerson Universities have collaborated with the U of S on past funding proposals which included southern partnerships developed through the Global Partners program. Another strong partnership has evolved over the past few years with Canadian western universities (University of Alberta, Grant MacEwan University, and University of Manitoba) culminating in the formation of the Prairie Agricultural Universities in Ukraine (PAUIU) consortium. This group has been part of a major CIDA program proposal. The U of S has now signed a Memorandum of Understanding with one of the partner institutions developed through the PAUIU group. Further collaborations are underway.

The Global Partners program has accelerated the University of Saskatchewan's international collaborations by a significant amount. It is our plan to foster those relationships and continue to advance our role in international development and knowledge sharing.

Appendix A – External review

Global Partners II

Round 2 Awards

External Assessment and Recommendations

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Executive Summary

The GP2 Program grants provided sufficient funds to have great impact on the research performed at UoS, the partner countries, and on the individual people involved in the projects. Since the GP2 program was administered at the UoS International Relations Office, use of the funding was maximized and well monitored. The assistance from the IRO was highly appreciated by all participants. The one suggestion for change for future versions of the GP2 Program would be to provide the researchers and the IRO with follow up grants in order that the most promising projects can continue. The full socio economic impact of this brief GP2 program will only be known over time.

Section 1 Impact and Sustainability

1. Please comment on how receiving this funding contributed to collaboration and application of knowledge for development

In each case, the grants allowed for travel between Canada and the Global Partner country. This led to better communication and understanding of existing issues that would otherwise impede progress of the funded projects. There is a two-way exchange where the Partner and Canadian researchers become more aware of how the other deals with the research subject and therefore each can apply these in their own country, or use the information as a cautionary tale in future applications. Without the personal/face-to-face contact, none of the funded projects would be able to proceed effectively as many barriers to collaborations are due to the differences in societal practices that cannot be understood without personally experiencing the other culture.

2. Were sustainable research linkages established? Please comment.

The time frame and unique nature of the Global Partners II Funding Program presents challenges to the researchers since “sustainable” would require more than the single year of funding available with the GP2 program. In each case, there were pre-existing relationships. The pre-existing relationships varied in strength since some have been ongoing for several years whereas others were due to brief meetings at international conferences. In each case the grants led to strengthening of the existing relationships as well as adding new relationships during implementation of the projects. Many of these linkages are sustainable due to the fact that both partners share great passion for their research topics and they are personally committed to continuing their work. That said, in each case, sustaining the research linkages are dependent on continued funding to be able to continue information exchange through travel.

3. What plans have you made with your partner for the collaboration and work to continue?

In each case, the grant recipients have made plans to continue the collaborations.

4. In general, how will this work be accomplished? How will it be funded?

Each project has its own challenges for continuing. While the researchers have developed plans, there are in each case significant barriers that need to be overcome before the plans can be implemented and results realized.

Some of these barriers are societal and will require political will from Canada and the Partner country to remove the barriers. For instance, the partner countries often have significant unrelated challenges (e.g. crime, poverty, etc.) and limited financial resources. This limits the partner country to in kind contributions. The ideas presented by the research projects are introducing new concepts where the benefits may only be realized over time. Therefore the Partner countries are unable to budget funds towards these research projects.

The Global Partners fund is very forward thinking in allowing in-kind matching, which appreciates the value of volunteer time and good will activities (such as travel assistance and providing physical security for visiting Canadian researchers). Some of the projects have been successful in securing future funding. Other projects are not political priorities for Canada at the moment and are having greater difficulty in identifying future funding opportunities.

5. Can you estimate the timeline for future collaborations?

All the projects are continuing to collaborate, and these efforts are ongoing. The extent of the collaborations is definitely dependent on financial resources.

6. What were the main benefits to your research program?

Each project provided major benefits to the Partner country, Canada, the organizations involved in the research, University of Saskatchewan and to the individuals involved in the project.

- Increased personal awareness of global challenges by the people directly involved in exchange travel.
- Training for both Canadian students and participants from Partner countries
- Public awareness of the research issues (e.g. how to manage the spread of diseases, how to improve nutrition, how to improve education practices, environmental issues and how to deal with them)
- Publications
- Increased funding

7. What were the main benefits to your department, College, the University of Saskatchewan as a whole?

In addition to financial and research benefits, these projects all enhance the global community of which the department, College and University are part. Lessons learned from the issues faced by others can be applied to how Canadians deal with their own issues.

8. How might your project have contributed to the internationalization goals of the University of Saskatchewan?

The goal of the University is to enhance its position within the global community. These projects all reach out to the global community increasing awareness within the University faculty and student population to issues faced outside Canada. The projects also increase awareness within the global community of the existence of our University and the fact that we are interested in working together for the betterment of both their community as well as how it can improve our life experience.

9. Which would you consider the most important immediate and long-term impacts of your project on students in your university and in your collaborating partner?

From an overall standpoint, the personal contact and spread of knowledge are the most important immediate impacts of the projects. From an individual project standpoint, please refer to the summaries in Appendix II. Each young adult from our university and from the collaborating partners was exposed to a sense of how things are in other cultures. They are better equipped to choose the best from each and build a better global community. Inspired professors have been able to build on their vision for improved standards of living. Without these human aspects the UoS, as would any university, would remain isolated from the ever-expanding global community.

The long-term impacts are that the education UoS offers gains relevance with respect to educating our students how academia can influence our future.

10. Which would you consider the most important immediate and long-term impacts of your project on your developing country partners and their institutions?

Each of these projects has direct and indirect impacts on the developing country partners and their institutions. These individual economic and academic impacts are outlined in Appendix II. In general, the points mentioned in Question 9 apply equally to the developing country partners.

It should also be noted that each of these projects touched more than those directly involved with the research. One indirect outcome of note: In performing her research in Malawi, Jean Kayira's short project inspired 6 young students to further their education and attend high school in Malawi. No one from that community had aspired to this in the past. Her influence inspired these students to see the relevance of education to their lives as it integrates with their family culture. This type of human contact is priceless and should be revisited in 10-years to determine the long-term impact of the GP2 program.

Section 2 Impact on Your International Collaborations and Research

Across all the projects, researchers stated that their work would not have been possible without the funding provided by these small Global Partners grants. The amount of work that was accomplished with these funds demonstrated an excellent return on investment in each case. Each grant recipient recognized the positive impact these grants had on their international collaborations and research.

The other statement common between all the researchers was the concern for how to continue these projects. Each project had different levels of availability for new sources of funding. Some, such as the Ethiopia project, has funding from other sources so that work with this partner can continue in pre-existing directions. However the existing grant does not cover work on the specific nursing project funded by GP2. Therefore a key element to improving quality of life in Ethiopia, by providing nursing education, is again on hold.

Other projects are not politically mainstream and therefore finding continued funding has been unsuccessful. This does not mean the work was wasted. Relationships have been built and progress has been made in each case. Allowing follow up funding for three to five years would enhance future renditions of the GP2 program. Since the University IRO directly administers the GP2 funding, it is possible to supervise effective use of funds in real time. Therefore this consultant suggests that follow up funding can be contingent on the success of progress in the previous year.

Section 3: Management and Administration of the Program

- Was the Call for Proposals Application Form and Guidelines document clear and easily understood? Yes.
- Did you ask for and receive clarification from the IRO in regard to the call for proposals information? Yes.
- Did you ask and obtain assistance from the IRO in the preparation of you proposal? Most of the recipients did ask and did obtain assistance from the IRO.
- If so how helpful was this assistance? Very.

- Did you consider the value of the funding available a strong limitation? For some the funding was sufficient. However most had to supplement the funding with matching funds, personal contributions, or what they were able to accomplish was less than they could have done with more funding. Future renditions of the GP2 program could be more flexible regarding how much funds are available relative to the needs of each project. Also, as stated above, longer term funding is required for ensuring sustainability of the relationships.
- Did you consider the four thematic areas limiting? No, the themes were not found to be limiting. But only successful applicants were interviewed-so this conclusion may be biased.
- Was the Project Orientation Session and information provided at this session useful to you? Yes.
- Did you ask for and received assistance from the IRO during the course of your project work or when you were preparing your final report(s)? Yes. Assistance from the IRO was always easily accessible and was always greatly appreciated. The fact that assistance was available within the University, rather than from a remote head office, was an attractive feature of the GP2 funding.
- Were the requirements for your final reporting clear and easy to comply with? If not what changes would you suggest? Most of the researchers found the requirements reasonable.
- Overall, what changes could you suggest to improve the management and administration of the program? From the point of view of the researchers, there was great praise regarding how the IRO managed, administered and helped the researchers and the grant process.

Appendix I: Interview Schedule

Global Partners II External Review

Name	Date	Time	Room #
Pammla Petrucka	Tuesday, November 8 th	10:00 a.m.	Nursing – Regina Campus Teleconference – (306) 535-9597
Viji Kalagnanam	Wednesday, November 9 th	10:00 a.m.	School of Environment & Sustainability *Meeting here at NRC room 7
Ron Siemens	Thursday, November 10 th	8:15 a.m.	Royal University Hospital Peds ER – all the way to the left when you enter the Emergency Room (ask for Ron)
Phil Woods	Tuesday, November 15 th	10:00 a.m.	Nursing Rm 409 St. Andrew's College
Li Zong	Wednesday, November 16 th	10:00 a.m.	Arts & Science – Sociology Rm 1107
Jean Kayira	Wednesday, November 16 th	2:30 p.m.	School of Environment & Sustainability Rm 337 Kirk Hall
Ted Leighton	Thursday, November 17 th	10:30 a.m.	Western College of Veterinary Medicine Call Ted @ 222-7268 to meet at door
Vladimir Kricsfalusy	Friday, November 18 th	9:45 a.m.	School of Environment & Sustainability 330 Kirk Hall
Allison Henderson	Friday, November 18 th	11:00 a.m.	School of Environment & Sustainability 337 Kirk Hall
Jennifer Wright	Friday, November 18 th	12:00 noon	Pharmacy & Nutrition Teleconference – 668-8810 X 136
Donna Rennie Josh Lawson	Friday, November 18 th	1:15 p.m.	RUH – old wing Rm 3604

Appendix II: Interview Summaries

Interview with Pammla Petrucka

College of Nursing/Tanzania/Uganda/Kenya

Pammla's research is usually focused on health concerns of women and street youth in Africa. Her established research ties in Africa are in Tanzania. Pammla wanted to expand her ties beyond Tanzania to include Kenya and Uganda. She had met interested contact persons from these two countries at various conferences. This grant provided an opportunity to develop these relationships and to assess the feasibility of building a new branch on her existing research. Working in Africa Pamela sees the effects of how electronic equipment is disposed of in Africa. Electronic equipment is thrown into dumpsters and left to rot. Children then play in the dumpsters and sort through the dumpsters looking for food. This is hazardous from an injury standpoint as well as from the toxic effects of the liquids leeching from the equipment. It is also a huge waste of resources. There is general recognition of the problem in Africa, however with all the other concerns that exist, added to a lack of expertise regarding how to deal with the problem, the issue of e-waste is not being addressed.

Saskatchewan has a functioning model regarding how to deal with electronic waste, (Sarcen Saskatoon, Sarcen Regina, Sarcen in Prince Albert, and the SWEEP Program). One goal of the grant was to enable African collaborators to visit Saskatoon to observe how electronic waste is managed here and to build relationships between the African researchers, University of Saskatchewan researchers and Saskatchewan recycling program leaders. This goal was achieved. Three African researchers (two from Tanzania and one from Uganda) came to Saskatoon. Together with Pammla, they visited all the above-mentioned Sarcen recycling sites. Knowledge transfer was successful both in the form of seeing the sites and in them obtaining documents regarding common national and global practices. This will hopefully provide a common ground for Pammla to continue with her research in Tanzania.

Strengths of the IDRC-GP2 program

The \$10,000 of funding enabled these meetings to occur. The result is that further research in the subject of e-waste will be met with a better understanding of the possibilities and benefit to the African nations regarding increasing the perceived importance of dealing with the issue.

Compared to the last set of interviews (with the First Round Grant recipients), it seems that the concerns regarding reporting requirements have been well addressed. It is this consultant's impression that the financial and wrap-up reports were substantially less labour intensive. All grant recipients reported the orientation meetings were useful. The IRO staff was described as being very facilitative and helpful. Once again, this demonstrates that programs of this sort are highly benefited by having on-campus assistance to deal with idiosyncrasies of international research in developing countries.

Regarding international complications: One of the participants (from Kenya) did get a plane ticket to come to Saskatchewan, but was unable to obtain a travel visa and therefore could not attend.

Areas for Improvement

The funding is great, however, for the amount and cost of travel that is required, Pammla believes grants of \$25,000 would be more appropriate. All the \$10,000 went to travel costs, leaving it necessary to have additional funds to match, for Pammla's follow up visit in Africa. And the question does remain: How to implement the next step? The GP2 is invaluable for creating opportunities, but where do these opportunities lead to without follow up funding. A two tier funding where there is seed money for the first step (similar to the GP2) followed by additional funding over the next few years to continue. The Tanzanian government has allocated 8 acres of land for continuing this project. It would be a shame if UofS/Saskatchewan/Canada are not able to continue their support. Researchers are often feel they are left high and dry, starting good projects and then unable to deliver.

Interview with Viji Kalagnanam

School of Environment and Sustainability/India

Ms. Kalagnanam is a Masters student under the co-supervision of Dr. David Natcher (School of Environment and Sustainability) and Dr. Mark Johnston (SRC). Her thesis was to explore the effect of deforestation in India on nomadic forest tribes. Due to encroaching "civilization" the forests in India are shrinking. Nomadic people who live off the forest no longer have sufficient space to sustain their historic lifestyle. The Indian government has introduced legislation that gives these people land, however the tribal people need to learn more efficient ways to utilize these smaller spaces than their culture was historically adapted to. Viji worked closely with an NGO, BAIF, which has been in existence since 1967. In their efforts to assist the forest tribes, BAIF has several research needs. The specific project that Viji was working on is the development of a database documenting the various parameters that describe the present status of tribal members. This database will be used in order to compare to the future and thereby determine what programs have been most successful in helping the tribes.

Strengths of the IDRC-GP2 program

The program demonstrated flexibility to adapt the subject of the grant to have a better fit with the reality of the project. Once the project was started, the researchers realized that the situation in India differed from what was expected and made it less productive to follow the exact outline as written in the grant application. The procedures were modified to provide improved results.

This researcher specifically found it very helpful that the IRO was at hand and approachable for advice and guidance. Ms. Kalagnanam also had a CIDA grant and did not find assistance there to be as accessible. The IRO was specifically helpful in determining the value of in-kind contributions such as personal security in political turmoil.

The GP2 grant enabled Viji to make a trip back to Canada in the middle of her 3-month stay to discuss progress of the project. The surveys were adapted to add information that the initial survey had missed, thereby increasing the value of her work.

Ms. Kalagnanam found the reporting aspects of the program very helpful as they provided a structure under which the project could be documented in a concise manner.

Areas for Improvement

Some sort of “wind-up” meeting could be incorporated into the reporting system so recipients could compare experiences.

Ms. Kalagnanam would continue her research if there was some follow-up funding for expanding the research. The partner community has received forest land which they must now manage. Two other similar communities also exist and are at varying stages of sustainability. It would be an excellent project to integrate how each community learns from the efforts of previous communities.

Interview with Dr. Ron Siemens

Royal University Hospital, Pediatric ER/Mozambique

The goal of Dr. Siemens project was to extend the concept of the “Making Links Program” to Lurio University in Mozambique. The Making Links Program at UofS was established to provide a means for medical students to experience and understand the issues practitioners face in low resource areas such as rural communities in Canada, as well as in developing countries. Relationships between UofS and Mozambique have been initiated in Maputo, the capital of Mozambique at the southernmost tip of the country, and are somewhat established. Dr. Siemens applied for this GP2 grant in order to determine the feasibility of extending the relationships to the northernmost University located in Nampula. This university is only 5 years old and is working at developing research and education connections. This GP2 funding allowed Dr. Siemens and a graduate student to travel to Lurio University and perform interviews to assess the feasibility, time lines and proper contacts. The goal of the interviews was two fold. One was to determine if this was a good fit for providing placements for the UofS Making Links Program. The other was to determine the needs of the community; the idea being UofS participants would assist in setting up research projects and classes addressing how research is done for the general student population at Lurio University.

Strengths of the IDRC-GP2 program

The final goal of this grant was to fund teaching these classes. This was found to be too ambitious in the first year. Due to the intrinsic flexibility of the GP2 funding, remaining funds will be spent during the following year in order to implement this last step. This clearly demonstrates the strength of this program for international studies. Due to innumerable differences between cultures, distances, and the need for face-to-face interaction, one cannot anticipate how quickly projects will progress in developing areas. The flexibility of this granting program, and the ability to speak directly with the fund administrators, ensures the money is spent according to the spirit of the program. This is very important in developing initial relationships where one cannot anticipate the needs of the community and the different challenges that will be met in implementing a plan.

Areas for Improvement

Again, the grant recipient expressed the need for follow-up funding. A lot of effort is put into setting up relationships, but there is a sense that there lacks a financial commitment on behalf of both UofS and the fund concept in general. Once the seed money is used and relationships have been established there needs to be a clear financial commitment on behalf of the Canadian organizations to follow through. We risk getting the reputation of coming into a community with big talk and strong desires to help, but an inability to follow through. This risks tarnishing our reputation and will build sense of distrust to future endeavors.

Interview with Phil Woods

College of Nursing/Ethiopia

The long-term goal of this project is to expand existing UofS collaborations with Hawassa University in Ethiopia to include the College of Nursing. The relationship began with clarifying the needs of the School of Nursing & Midwifery at HU and determining how to meet these needs while still meeting the goals of UofS. This grant allowed two representatives from HU to visit the University of Saskatchewan for a period of 2 weeks, September 21 through October 5, 2010. During this period, the two representatives met key people associated with the College. The hope was that these two representatives would be able to implement changes in their nursing curriculum, in collaboration with the UofS partners, to better suit the needs of their community and to raise the level of their nursing education to meet international standards. At present, the quality of education at Hawassa is insufficient to in good conscience send a UofS student there to obtain a nursing degree. However, a UofS student could go there to do a research component of their degree.

Strengths of the IDRC-GP2 program

The two great strengths of this program are the flexibility of the program and open access to the fund administrators. Being able to consult with the UofS IRO at all stages of the program helps make the application process easier, reporting is easier, makes efficient changes and more effective results. The funding was indispensable for strengthening ties between HU and UofS and for initiating talks for integrating nursing programs into the HU/UofS relationship. There is continued commitment and interest for furthering these initiatives on both sides. The program is highly appreciated and there is a need for more programs like this.

Areas for Improvement

Dr. Woods expressed a few aspects of the project that he found disappointing. One is that, as yet, there has been no progress with respect to translating the experience of the two UH delegates into new educational programs at HU. The hope was that, by the end of funding period, new course work would be listed in the nursing curriculum at HU. The other is that it has proven to be difficult to obtain any significant feedback from HU regarding how useful the meetings were from their point of view. Certainly there are mitigating circumstances that are at the root of this lack of progress including a change in the management structure at HU and the fact that one of the delegates is no longer physically at HU (He is now a graduate student at UofS College of Nursing).

These two points demonstrate how political changes affect progress and why it is necessary to have realistic expectations regarding how quickly change can be implemented. This grant allowed successful implementation of one step in a long process. If the goal of this funding program is to be successful at building global partnerships, then the funding needs to be ongoing. In order for Dr. Woods to obtain feedback regarding the success of the project from HU's point of view, he will need additional funding to travel to Ethiopia and speak with members of the new leadership structure.

Also, the fact that one of the delegates used this opportunity to obtain a graduate student placement at UofS (with funding from Norway) brings to light cultural issues regarding communication and the expectation from countries with little financial resources that the collaborating country provide funding. With respect to this project it became clear that HU expects Canada or the UofS to fund these collaborations. This expectation is based on experiences with other countries and universities, which provide student scholarships, faculty scholarships, travel funding and leadership training to the developing countries. Perhaps the HU nursing program has unrealistic expectations regarding how our funding processes work, but the end result was a feeling within the UofS participants that the HU delegates were pursuing personal hidden agendas rather than institution goals. Without further face-to-face meetings by UofS representatives in Awassa, it is difficult to ascertain what the HU goals really are. This builds discord within the relationship until the matter is clarified.

Dr. Woods was pleased with the program from an administrative point of view. A tiny concern with the financial reporting was that the University and the GP2 reporting systems use different ways of dealing with GST expenses. One required that GST paid was reported and the other required that GST costs were removed from the report. This meant there was a bit of laborious calculations that needed to be done manually. It was considered a minor irritation, but possibly these reporting methods could be better integrated. Dr. Woods felt the IRO was extremely helpful and that all processes/reports were as straightforward as possible.

Interview with Li Zong

College of Arts and Science, Sociology/Lanzhou China

This GP2 grant provided funding for two researchers to come to Canada to attend an International Symposium on the Economic and Social Integration of Migrants and Immigrants: A Comparative Approach. It also funded a survey of over 1,090 individuals on economic and social integration of minority migrants in Lanzhou. The \$10,000 provided seed money to attract additional funds, which allowed Dr. Zong and Dr. Li to visit the Northwest University for Nationalities (NWUN) in Lanzhou, Gansu, China. The additional funding also supported a follow-up international conference at NWUN, the publication of multiple papers, and a report pertaining to socio-economic policy options aimed at reducing poverty and ethnic inequality that will be presented to the local Chinese government.

Strengths of the IDRC-GP2 program

It seems to be consistent among the recipients that this program is excellent and much needed. It helps fulfill the UofS goal to include the global community in our programming. It facilitates global awareness to the faculty and students directly and indirectly involved. It is also consistent that the IRO has been extremely helpful and flexible therefore allowing the most effective and efficient use of the funds.

Areas for Improvement

The program is excellent and is very much needed. For instance, despite significant ethnic and economic issues existing in China, China is no longer a “priority country” for CIDA. Therefore it is very difficult/impossible to obtain funding for research in China, despite the fact that China has good policies in place to provide matching funding to global university initiatives. This emphasizes the need for continued support on behalf of Canadian universities. Continued small grants providing faculty scholarships, student scholarships, travel funds, conference funding, capacity building, student exchanges, and faculty exchanges. A consistent theme from the fund recipients is that there are insufficient funds being made available to implement the UofS goal to enhance our global presence.

Dr. Li Zong expressed an interest in a second tier for this sort of program for researchers who successfully implement the first phase.

Interview with Jean Kayira

School of Environment and Sustainability/Rhode Island University South Africa and Malawi

Jean received one \$5000 grant. Her PhD supervisor, Marcia MacKenzie also received a \$5000 grant. Since the funding for Marcia was insufficient for both of them to travel, Jean performed the overseas activities associated with both projects, one exploring capacity building exchanges with Rhode Island University in South Africa, and the other performing primary research in two village communities in Malawi. Jean's visit to RIU satisfied two goals. One of which was to expand Jean's understanding of her course material and the other was to solidify the existing research relationship between RIU and UoS with respect to Marcia MacKenzie's research. Both of these functions were successful in that new relationships were established and existing relationships were solidified. The collaborations will continue to grow assuming additional funding is continued. Jean's research in Malawi related to integrating indigenous knowledge into mainstream education, and how this can improve the quality of education by bringing interest and cultural relevance into the classroom.

Strengths of the IDRC-GP2 program

This project has significant relevance to education practices, especially in our native communities. Without both sources of GP2 funding, this project would not have been possible. Since the program is flexible, the research was completed, relationships build, a thesis is being prepared and several journal articles and posters.

The ability to put value to in kind contributions had a huge impact on the success of this project. This included transportation, accommodation, family and friends giving a car, schools providing space, and cooperation. Through these collaborations, Jean became fully integrated into the community such that she is maintaining leadership relationships with the students. Her work exposed the grade school students to research methods and developed their enthusiasm for the value of education. Six of the students she worked with were accepted into high school whereas very few from these communities have ever aspired to this before. In addition to the research, this was an excellent mentoring project. It would be interesting to follow up in several years to determine the long-term impact of this project on these relationships between UoS, Canada, the partner individuals and communities.

The ability of the University IRO to determine which grant proposals are funded allows the University to steer the research in a manner that is in line both with the interests of the researchers and the goals of the University.

Areas for improvement

\$5000 each was insufficient to fund international travel for both Dr. MacKenzie and Jean Kayira. There is more work to be done. Due to the groundbreaking nature of the work in the

village communities, there may not be continued funding. The recipients have not been able to find a source of funding that would partner with communities, not just with Universities. In developing countries, there often is no University to partner with and yet education at the grade school level is key to insightful leadership in the future.

Interview with Ted Leighton

Western College of Veterinary Medicine/Sri Lanka

This project was directed at capacity building in Sri Lanka to develop research in the wild life/animal/human disease interface. In order to fully realize this goal, Sri Lanka needs to build both the infrastructure to do testing and to train people.

An indicator that this project will be successfully implemented in the futures is the presence of demand-pull from the partner country. This project is largely driven by the University and NGOs and has the assistance of government departments. A reality of life is that government priorities change frequently, creating a need for this project to be driven by a University department or NGO whose focus will remain constant over time is a benefit. Another concern regarding having this research run by government departments is the intrinsic limited ability of governments to adjust departmental policies to changing needs.

With the GP2 funding of \$12,200 the project succeeded in identifying existing resources and determined that the University of Peridonia in Sri Lanka would be able to implement testing at a basic level in a sustainable manner. The biggest need for resources lies in training. There does not exist a sufficient critical mass of trained experts to carry out the testing. Therefore future work should focus on this.

Strengths of the IDRC-GP2 program:

The researchers were able to fulfill the goals of this project. The IRO was very facilitative and helpful in their role.

Areas for Improvement:

One year is simply not enough to do international work. That said, the program did allow implementation of this first step, but they really needed about \$30,000. The existing funds and time frame only allowed for one 8-week project. The remainder of the year was spent in planning prior to the 8-week project, and reporting and building conclusions based on data after the 8 weeks. Implementation of these results will be challenging since the IDRC is more interested in research outcomes rather than capacity building, but the research cannot be done without building capacity.

CIDA. Another possible source for continued funding would be the OIE "Twinning Program".

A big challenge for implementing research in developing countries is the fact that there are interested MDs but researchers are hard to come by. Clinicians are paid for teaching and for their medical practice, but not for doing research. However, to get ahead in the University they need to do research. It is a time/money conflict. To make money, these people do not have time

to do research. When training personnel, there has to be a financial incentive as well as a status incentive to do research. Otherwise it cannot get done except for by retired people and they do it on a volunteer basis, which is not sustainable.

Interview with Vladimir Kricsfalusy and Allison Henderson (PhD candidate)

School of Environment and Sustainability/Ukraine

This is an excellent example of multiple departments working together and building relationships. Grasslands are often overlooked from a research point of view, so when multiple countries and regions work together there is better understanding of how to deal with different issues relating to the disappearance of these natural resources. International, National and Regional goals were discovered during implementation of this project and a system for pulling them together was initiated. Cross-departmental collaborations were developed using an integrated approach. Hopefully there will be continued student exchanges, student scholarships and faculty scholarships.

Areas for Improvement:

This is one instance where funding provided for this research was insufficient for the scope of the project. Dr. Kricsfalusy used his \$10,000 from GP2 for airfare and accommodations. In order to successfully implement the project, he also used his \$2000 faculty member workshop/conference allowance. Allison received \$3000 from GP2, and needed an additional \$2,200 from UofS. They also contributed over \$5000 in kind.

This funding started a snowball, but sustainability will require ongoing funding. There is a strong sense by the partnering countries that the people involved have been left in the cold after this funding is over. Once again, an ongoing program is needed to maintain the relationships and the research. Suitable grants could continue to be small and simply allow for travel, accommodations etc.

Ukraine is apparently an extra challenging country to work in. In order to visit the areas where the grasslands exist, the distances travelled were long. Trains are inferior, and not suitable for overnight travel. Police stop cars with rental stickers on them, looking for bribes, therefore making it difficult to travel by car. The Ukrainian vodka drinking culture also becomes a safety problem when travelling by car.

Ukraine also presents further challenges with respect to language barriers and personal safety. There was no funding for an interpreter, so Alison's collaborators had to assist in keeping her in conversations, leading to a sense of isolation and frustration on her part and a sense of exhaustion for the professors playing the dual role of researcher and interpreter. As the IRO gains experience in the idiosyncrasies of specific partnering countries, the GP2 orientation may wish to present additional specific insight to fund recipients into logistical issues they may encounter in the countries they visit. For instance, to get things done in Ukraine, bribes were often expected. When travelling by train, it is standard for passports to be taken for the duration

of the trip. Also, some language preparation should be provided if the participants are going to regions where English is not commonly spoken. At a minimum translation dictionaries and translators should be provided.

For most projects, the foreign country looked after the logistics of travel and language barriers. However in this case, it seems, that transportation and language translation were not properly planned. This is a casualty of the fact that, when building relationships you cannot anticipate the strengths and weaknesses of your collaborators. I am not sure how much the GP2 program could have anticipated these problems and how much is the responsibility of the researchers.

Another aspect that could be included in the orientation package is the fact that fund recipients will very likely be exposed to people who feel that Canada has lots of money and therefore the Canadians should be paying for everything. This is an expectation that is reinforced by collaborative agreements with other developed countries that seem to have a more generous approach to international collaborations with developing countries. These other countries do buy equipment for their partner countries and use collaborative research as a means to identify individuals worthy of scholarships to come to Canada. The GP2 project does not provide this and inexperienced grant recipients could be introduced to ways of dealing with these expectations.

Interview with Jennifer Wright

College of Pharmacy and Nutrition/Ethiopia

This is an example of continued support for successful establishment of relationships between UofS and a foreign university. Round 1 GP2 supported collaborative efforts between Hawassa University in Ethiopia and the College of Pharmacy and Nutrition here at UofS. Based on this established relationship, Jennifer travelled to HU to continue a research study. The Round 2 GP2 funding provided money for travel, supplies and accommodations.

Strengths of the IDRC-GP2 program

By continued work with the same university, ongoing research can be performed. Relationships become more reliable. Funding allowed student to continue her work in Ethiopia which began with the College of Agriculture's UPCD Ethiopia project in summer of 2009.

Trans-cultural exchange exposes similar bureaucratic challenges such as getting ethics approval. In both Canada and in Ethiopia it takes a significant amount of work and time. The challenges are different and hopefully the best aspects of each system can be looked at to develop a system that can respond in a timely manner while still ensuring the safety of the research subjects. Since the time line for the GP2 projects are for a single year, and ethics approval (especially regarding studies involving humans) takes 18 months, GP2 proposals should provide evidence that this challenge has been recognized and dealt with.

Areas for Improvement

Apparently the money from the GP2 project was required before it was released and Jennifer had to get a loan from department funds. International travel can be time sensitive. For instance, researchers may have to coordinate their travel according to when conferences are held, weather issues, plant lifecycles, school terms, course work requirements, etc. Perhaps the GP2 funding needs to be more flexible regarding when funds can be released?

Interview with Donna Rennie and Josh Lawson

College of Nursing and Canadian Centre for Health and Safety in Agriculture/Ukraine

This project was to assist in developing consistent methods of diagnosing and treating asthma in children in Ukraine. This particular GP2 grant was used effectively as leverage for obtaining additional funding, so multiple exchange meetings were held in Canada, Ukraine, Belarus and Poland. There is a much better understanding of the different work conditions in each country and this led to being able to seek out better communication regarding asthma diagnostics such as using the same definitions for the survey of 15,000 children. Most of the Canadian contribution to the research was assisting with data analysis, writing publications and dissemination of the results.

Strengths of the IDRC-GP2 program

The Ukrainian in kind sponsorship for this project included interpreters, translators, methods for adapting to changing political requirements (such as changing visa and health insurance requirements) and people experienced in how to handle bribes. This alleviated all the safety concerns that the Kricsfalussy/Henderson group experienced when they were in Ukraine. Clearly these two groups had entirely different experiences with respect to Ukrainian hospitality. Why the difference occurred is difficult to determine, however, perhaps the GP2 program could emphasize more clearly the requirement from the host country to ensure safety of the scientists.

Drs Rennie and Lawson acknowledged that there is an expectation on the part of their Ukrainian collaborators that we can give gifts. It is necessary to be clear what the limitations are regarding using this fund for providing equipment and other “gifts” so there are no false expectations. Dr. Rennie and Lawson were able to keep expectations realistic by emphasizing the long-term nature of the relationship for establishing infrastructure and capacity building.

In Ukraine there is a shortage of researchers. In the medical field, people interested in research are paid for time spent in their clinical duties and in teaching. There is little time left over for focusing on research.

Areas for Improvement:

Drs Rennie and Lawson shared some of their insight regarding potential future versions of the Global Partner Program. They felt it is important to differentiate between the priorities of the different levels of government. For instance, Canadian global priorities are motivated by insight into future political and economic opportunities and threats. These priorities are implemented through policies and funding. At this level, individuals control the maintenance and changing of policies, while economics controls the availability of funds. On the other hand, provincial global priorities are motivated by political and economic influences as they relate to provincial resources. Again, these are implemented through policies and funding which are maintained and controlled by individuals. University priorities, as they relate to global issues, are dictated by local influences and resources. Since individuals perform the research, funds are most effectively administered at the university level. Individual researchers are motivated at a personal level: either by personal interests or personal experiences. Creativity cannot be

synthesized by a top-down approach. The top can create an environment where their goals can be reached. This is one of the reasons that the GP2 program has been so successful.

Appendix B – 1st Report

Technical Report: Global Partners II Program (October 2008-October 2010)

Prepared by

International Research Office
University of Saskatchewan

October 2010

The Global Partners II Program has been in operation over two years. During this time it has funded 20 projects (please see Appendix A, *Summary of Projects Awarded Global Partners II Funding Round 1 and Round 2*). This report follows on the Interim Technical Report submitted to IDRC in February 2010. Interest and participation in the program from University of Saskatchewan researchers has been high and positive and we are extremely pleased with the results our first round of recipients (Section C Round 1 Projects). At this time we would also like to express our sincere gratitude to IDRC for their financial support of this program and our appreciation for the on-going logistical and administrative support provided by Mr. Luc Mougeot and Ms. Aida Du Bois .

Section A: Management of the GPII Program

Introduction

The International Research Office (IRO) team promotes and manages the GPII program. In collaboration with our selection committee we decide which proposals will be funded over the three funding periods. ILO tracks funded projects and maintains contact with recipient's through-out the project cycle to monitor the progress of project implementation. The ILO is also responsible technical and financial reporting to IDRC. This report follows the Interim Technical Report prepared by the ILO and submitted to IDRC in February of 2010. Since that time we have received the research reports of our Round 1 applicants (See Section C) as well we have completed Round 2 dispersal of funds (See Appendix A). The following sub-sections provide information on how the GPII Program is managed.

Communication and Marketing of the GPII Program

Information on the Global Partner II funding opportunity was provided to as wide an audience as possible, and in a timely manner to allow researchers and students ample time to respond. In addition to established communication channels that include the International Research Office website, Research Services List-serves, Research News, Paws E-Bulletin, On Campus News and College distribution lists; IRO team contacts researchers directly. Meeting with individual researchers or College research groups appears to be one of the most effective medium for promoting the program and attracting high-quality applications

Proposal Development and Submission Process

Applicants were encouraged to contact the IRO to discuss any questions they may have in regard to program parameters and expectations and many did contact us for clarification and guidance. In addition, at the request of the applicant, the IRO team made time available to review proposal drafts and meet with applicants to ensure their proposals met program requirements and scope. We also provided advice on their work-plan and budget development. After a final proposal was submitted, applicants received an acknowledgement within one day of submission and were informed when the results could be expected.

The Global Partners II application guidelines require that all proposals involving human or animal subjects or bio-hazardous materials must be approved by a University of Saskatchewan human ethics, animal care, or biohazards review committee. To ensure that this requirement was being addressed changes were made to the second round competition. In their proposals second round applicants were required to indicate the current status of any ethics approval require. If approval had already been granted we required that a copy of the approval notice accompany the application.

Applicants who received support in Round 1 (2009-10) were not encouraged to re-apply with the same or similar project concept due to the fact that it was not possible to assess the results and success of their previously funded projects until September 2010 when final reports are due for Round 1. Therefore repeat applications were given to be given second priority in the review process. In Round 2 we did not support applications from any of the previous applicants although two such applications were submitted. The IRO and selection committee will reserve the right to invite selected applicants (from Round 1) to apply in Round 3 for further support based on the merit of their previous work and opportunities yet to be address.

Networking and Sharing of Experiences

A Global Partners II page is being developed on our International Research Office website to highlight the impact of the Program and funded projects, making available to others the documents, images, tools, and reports produced by the projects. Early in 2011, grant recipients from Round 1 will be invited to attend a retreat to share their experiences and reflections, and discuss their short report to be submitted in six months to update U of S-IDRC on the medium-term outcomes and results of their activity.

Section B: The Program to Date

Introduction

The following subsections provide a brief discussion of opinions of the IRO as to how the Global Partners II Program has progressed to date and includes comments on Round 1 and 2 of funding.

Extent to Which Objectives were Met

In Round 1 of funding nine projects were supported (2 graduate students) in seven different regions. All projects were completed on time with the exception of the project of Plant Diversity, Conservation and Sustainability, Dr. Hugo Cota-Sanchez. Due the H1N1 epidemic in Mexico and the travel advisory, Dr. Cota-Sanchez was provided with an extension and will now complete his research within the Round 2 timeline. We are very pleased with the accomplishments of our researchers and graduate students who received funding, the details of which are provided in Section C.

Constraints and/or Challenges Encountered

Much has been learned from the completion of the first phase of this program. Researchers have been very helpful and open about both the benefits and challenges of working with this program. Although significant thought and work went into making the financial accounting for this program as simple as possible, the spreadsheet developed by the IRO for use by the researcher has not been as helpful as projected. As well, the internal requirement of University of Saskatchewan Financial Accounting and Reporting to set-up two separate funds for each successful applicant (one holding the in-kind funding coming from the IRO and the other holding the funding from IDRC) was cumbersome for the researchers and our office to manage. In general applicants from the first round expressed some confusion and frustration with the amount of administrative effort required to track the funding once it had been awarded and commented that for the relatively small amount of financial support a significant amount of effort was required to report their spending. As well, first round applicants required a fair amount of clarification and assistance from our office to their final financial reporting requirements.

Although we succeeded in delivering our Project Initiation Session to all successful applicants of both Round 1 and Round 2 this did take some creative management and extra time on behalf of the IRO. Not all successful applicants were available to attend the scheduled session so we were required to setup separate meetings with a number of researchers. It will be a continuing challenge to motivate some researchers, who already are extremely time pressed already, to participate in initiation and follow-up sessions.

We will pro-actively address some of these challenges (those that we have the ability to impact upon) in our third round process through discussion in our Project Initiation Training Session for our successful third round applicants as well as a review and reformatting of our reporting template(s).

Program Evaluation

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An internal consultant has been engaged and the evaluation will be conducted during the month of November 2010. Three groups will be surveyed to evaluate the Global Partners II Program. These groups include the Selection Committee members, funded project leaders and their international collaborators, and unsuccessful applicants. Funded project leaders and unsuccessful applicants will be asked to comment on the various elements of the Global Partners II Program processes and provide feedback/suggestions. In addition, face-to-face interviews will be conducted to obtain details on how well the Program met the needs of the researchers and what aspects could be improved.

Section C Round 1 Projects

Introduction

The following section provides a summary reporting of each of the projects completed under Round 1 of the Global Partners II Program

Ecohealth, Gender, Goats, and Governance in Rural Uganda

Dr. Claire Card

Extent to Which Objectives were Met

The objectives of the project were to use an Ecohealth approach for poverty alleviation in rural southwestern Uganda. An interdisciplinary approach was used to build capacity in sustainable agriculture such as zero grazing goat production in women-headed households in rural Uganda. Our initial work in Uganda was funded by Veterinarians without Borders – Vétérinaires sans Frontières. The partners included Makerere University professors Drs. Ludwig Siefert, and David Owiny, Foundation for AIDS Orphaned Children (FAOC) (executive director Boaz Buyinza), National Agriculture Research Organization (NARO) staff (Dr. Charles Lagu). In addition we sought to expand our work with The AIDS Support Organization (TASO), Marie Stoppe Uganda, and Aids Information Center

To meet these objectives we had 3 recent veterinary graduates (Drs. Barmentloo, Frimmer, Lis) and 1 pharmacy student (Rick Lorenz) volunteer to work in Uganda in the spring and summer of 2009. In addition Dr. Card travelled to Uganda twice in August 2009 and February 2010. Dr. Nazarali from the University of Saskatchewan assisted with designing a project on HIV –AIDS with Rick Lorenz. Dr. Siefert assisted with the in country logistics, helped make local contacts, met with Dr. Card and educated the Canadian veterinarians with a variety of field experiences to help them understand the complexity of the local problems including domestic animal and wildlife conflicts. Dr. David Owiny helped with our efforts at procuring and storing goat semen for the future. Most of our local day to day work is performed alongside our local Ugandan NGO partner, the Foundation for AIDS orphaned children whose executive director is Mr. Boaz Buyinza. We were active in 8 parishes in Biere subcountry, Isingiro District.

Dr. Pamela Bartmentloo worked with Dr. Charles Lagu at National Agricultural Research Organization (NARO) in Mbarara. The NARO is one of our partners in the goat artificial insemination (AI) program. We imported semen and arranged for it to be stored with Dr. David Owiny at Makerere University. Dr. Owiny has successfully inseminated goats using the AI equipment we supplied him with. The imported goat semen and AI equipment from Canada is to be used for further instruction of the staff at NARO and Makerere. We also reviewed the techniques for estrus synchronization and training of bucks to serve an artificial vagina.

The advantages of AI in Uganda are that it minimizes transportation of bucks, decreases inbreeding, and prevents sexually transmitted diseases such as Brucellosis, which is a big problem locally. The process of AI limits the spread of communicable disease, allows for rapid

dissemination of good genetics and supports genetic improvement through superior sire selection. AI results in the production of offspring at a fraction of the cost of buying a purebred buck. Presently there is a desire to use cross breeding of goats to improve productivity.

Dr. Hershel Frimmer was involved in training and organizing the 18 paravets (contact) farmers in a vaccination program of over 500 goats. During our vaccination program we took random blood samples for Brucellosis testing. Our results showed that the incidence of the disease is quite high (20%) in the goats. This is extremely high.

Dr. Rocky Lis interviewed a number of Ugandan veterinarians about barriers to success as a veterinary professional. These narratives helped us to understand the local conditions and attitudes of our colleagues. These 3 veterinarians also provided additional paravet training program units in swine and poultry production.

Rick Lorenz was oriented by Dr. Adil Nazarali on HIV AIDS issues in Uganda. He began initially with a literature review and then went to Uganda to begin networking with local partners in The AIDS Support Organization (TASO) and Aids Information Council (AIC). The goal was to help develop a tool, which was a culturally sensitive questionnaire to be used during interviews of caregivers of HIV positive children, on HIV disclosure to and attitudes towards treating HIV positive children. This information was used by Dr. Nazarali to help inform and complete an ethics application needed at the University of Saskatchewan to perform this work (Appendix C).

In August 2009 and February 2010 Dr. Card followed up with local partners including The AIDS Support Organization (HIV treatment and counseling), Aids Information Center (HIV testing and support), and Marie Stopes, Uganda to work on the health programming for the beneficiaries. Marie Stopes is an international NGO that is able to provide programming on STD's, family planning, and safe births.

In February 2010 (Feb 11th and 20th) Dr. Card held 2 Conference meetings with the executives and the para veterinarians from the 8 parish groups (representing over 400 families). The group discussions centered on our results to date in terms of resilience, microfinance, agriculture, goat production and disease, and human nutrition. The group discussed priorities for the next 3 years. These included work in 3 theme areas: sustainable agriculture, human health promotion, and entrepreneurship. In agriculture the women are requesting that a local demonstration site be set up for training. Compost, silage production and dairy cattle production are on the list for contact farmers to learn, and to transfer knowledge to the members. We realized from our recent interactions that many of the rural beneficiaries do not know their HIV status and are not informed as to what services are available for HIV affected families. The people in the Isingiro district struggle to access basic services.

In health promotion we have worked with local partners (TASO and AIC) to deliver more HIV AIDS information delivery, testing and counseling. Each group delivered a seminar to the beneficiaries. We are developing more human nutrition programming and exploring the options of training community health workers. We met with potential partners (Technoserve, Uganda Heifer International, Heifer International) for entrepreneurship development and cooperative marketing particularly in regards to plantain (matoke), milk, goat and coffee selling. We held a

practice session on business plan development for the executives and contact farmers and organized a demonstration of solar power for lights and phone charging. Technoserve came to give one session for the women entrepreneurs on banana production.

Benefits and Insights into the Canadian and International Research Community

The experiences of the team are that progress is being made in improving the environment, livelihoods, and economic prospects of these HIV-AIDS affected families. This may be quantified by the improvement in the families' small holder farms such as fruit trees, vegetable gardens, and livestock productivity.

International: We had the opportunity to observe engage with the NARO in Mbarara in various capacities including building lab capacity, research efforts, and training for our beneficiaries. We were very impressed by their professionalism. There are struggles with the Makerere FVM as many of the faculty run businesses outside, off campus, which competes with their time and energy for instructing students and research. We also recognized the value of the “seeing is believing” instructional methods for our beneficiaries, and found that study trips to demonstration farms were very informative. Therefore we are very supportive of the development of a local demonstration site to help educate the beneficiaries and other community with our local partner Foundation for AIDS orphaned children. The paravets farmers reported some struggles with obtaining payment for their services, which was aided by the perception of the community members that the medicines supplied to them were free. In general while free stuff seems like a good idea at the time it must be used selectively and sparsely used as usually free stuff isn't a good bet if one wishes to use local investment as a means of leveraging support and engagement of people in problem solving.

One of the reasons we are working in Uganda is because of the difficulty impoverished farmers face in accessing and affording veterinary care. One solution is to focus on keeping the animals healthy, which was the main reason why the community based para-vet program was instituted. The problems with Tuberculosis and brucellosis in cattle sheep and goats are enormous and require veterinary assistance and research to solve. We learned about the barriers and frustrations of veterinarians in Uganda and their perceptions of what needed to change before graduates of veterinary medicine could find employment. These have to do with structural, educational, political and societal factors. We will help advocate for change by making an economic case for improved livestock health.

Canadian: Some Canadian colleagues have a hard time seeing the value in either working in Africa, or in the ecohealth approach to problem solving. There is the notion that local people should be employed than flying over foreigners, but this neglects and denies the endemic local problems with corruption, transparency and accountability. People really do steal from the poor, and funds do get redirected from their project purpose for an individual's family's needs on a regular basis. As foreigners the Canadians are outside of the complicated social web of obligations and traditions we can make sure that things happen in the village. In addition they easily network in ways locals cannot. On the topic of ecohealth some would say it seems inefficient to do the community engagement rather than just telling people what to do. Our experience is that in order to get local buy in and to create robust and appropriate solutions the impetus must come from the local people. Institutionally the ethics and UCACS protocols for

animal use were onerous, extremely time consuming, and meant for research rather than development work. Rick Lorenz's efforts were limited by the length of time it took to complete the ethics process.

It is clear that almost all individual's remark that being a partner in a project like this is a life changing experience. Knowing how the other part of the world lives first hand is a paradigm shift for most people.

Constraints and/or Challenges Encountered

As a scientist I have come to realize that once the developed world solved some of their pernicious disease problems using control programs involving mass vaccination and slaughter, we stopped doing research in that area. For example basic questions on the disease ecology of Brucellosis remain unanswered. This deficiency in knowledge leaves Canada and the world vulnerable to these chronic disease agents if they reemerge in a more virulent form. It also paralyzes our actions in assisting our local partners.

Logistics are a huge issue in Africa, with frequent frustrations regarding electricity, transportation, supplies, and communication difficulties. The Foundation for AIDS-Orphaned Children has some staffing issues which affect our work. Funding is very tight since the US economy crashed and many NGOs have had to reduce and or eliminate any new initiatives. The scope for partnership activities is limited. Therefore for our local partners to be engaged and effective we need to help support their personnel and transport costs. Right now things are so bad that Uganda's public system and NGO's are out of ARVs for known infected HIV positive individuals, let alone those who are newly diagnosed.

Potential for Future Research Cooperation and Expected Outcomes

Our present slate of partners is very willing to continue a collaboration with us. We feel that we need a long term partnership to be effective. We have a plan for community based health services for animals and peoples. We wish to work harder to remediate the environment, diversity crops, improve cultivation practices, and improve animal productivity. We realize that research dollars are in short supply in Africa and without external partners progress will be slow.

We have plans to work jointly with the National Agriculture Research Organization on animal production and training of village based community animal health workers (paravets). They will be our main partner in livestock issues and we have helped to equip their laboratory. We are working on some funding applications together. Our base funding which is matched in this proposal will be continued by a Canadian NGO Veterinarians without Borders – Vétérinaires sans Frontières.

- We are engaged in a dialogue with the following NGO's
- Marie Stopes International to assist with bringing information to the villages on STD's, family planning and safe deliveries
- The AIDS Support Organization – TASO to bring information on HIV testing and support services
- The Aids Information Centre – to bring testing services to the village

- Technoserve – to help with entrepreneurship including improvement of plantain banana production, cooperative formation and to help them consider the development of a gender targeted strategy

All have agreed to expand their work with us in the event we attract more funding.

Dr. Card visited Uganda in August 2010 to continue to network promote animal health care, and to learn and promote more crop diversification including chick pea and beet root production. We are working on external funding applications to include all of the partners mentioned. Our work will continue with some funding from Veterinarians without Borders – Vétérinaires sans Frontières.

Feasibility Study for Partnership in Graduate Gender Studies Research Exchange between the University of Saskatchewan and Lanzhou University in China

Dr. Diana Relke and Dr. Marie Lovrod

Extent to Which Objectives were Met

Founded in 1909 and among one of China's top 35 post-secondary institutions, Lanzhou University is located on two campuses in the Yellow River valley, with graduate activities centered in the heart of the city for which the institution is named, and undergraduate programs housed at a nearby rural site in the arid and semi-mountainous Gansu Province of northwestern China. There are 14,000 undergraduate and graduate students completing degrees at Lanzhou University, with more than half of the faculty involved in research projects.

The population of the city of Lanzhou is 3 million. Compared to China's coastal cities and their environs, the northwestern region is experiencing delayed domestic and foreign investments, with demonstrable effects of the uneven capital development of the nation. Nevertheless, since the mid-80s, the environmental impact of modernization has been substantial in the region, with a significant smog inversion effect readily apparent in the city, and desertification advancing in the countryside.

The concentration of poverty and minority nationalities in Gansu province makes the site particularly suited to multiple analyses of the social effects of uneven development, including gender-sensitive and environmental research. Various "autonomous" counties and communities further north and west, closer to Tibet, are strictly off limits to foreigners, which could potentially impact some environmental research projects in the area, but should not impede substantive work on gender and diversity, nor more localized projects involving urban and rural development patterns.

This potential partnership is rendered more attractive because the University of Saskatchewan's Sociology Department has invested considerable energy in developing regional academic networks already. A flourishing partnership with Xi'an Jiao Tong University in the adjacent Shaanxi province is the cornerstone of evolving relationships with nearby Xi'an Normal and

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Lanzhou Universities, as well as the Northwest University for Nationalities, also located in Lanzhou City. This latter institution specializes in research about and pedagogy for minority groups in the area. A more formalized relationship with Lanzhou University will help to strengthen this regional network of institutions already involved in collaborative relationships with the University of Saskatchewan.

As suggested above, results of this initial feasibility study indicate that continued development of the relationship with Lanzhou University is promising, beginning with expanded collaborative research and graduate learning partner projects in Women's and Gender Studies at both institutions. Because Women's and Gender Studies has not yet developed as a fully-articulated academic discipline in China, Lanzhou University sees a graduate studies exchange project with the University of Saskatchewan as key to the efficient establishment of expertise in the field. The goal is to mobilize graduate research as a ground for both for policy initiatives and for establishing undergraduate programming in intersectional gender studies. Both universities have strong commitments and incentives to develop international exchanges, and would benefit from augmenting one another's networks through information sharing and cross-cultural knowledge building. Consistent with the principles of feminist knowledge development, both are committed to full and equal participation in any partnership.

Lectures on feminist qualitative research and transnational feminist theory were well received by faculty, graduate and undergraduate students on both campuses at Lanzhou University. I was impressed by the critical engagement reflected in questions raised by students and faculty, with exchanges that continued beyond the time allotted in both cases.

At the University of Saskatchewan, the broader context of a conference sponsored by the Sociology Department on the "Economic and Social Integration of Migrants and Immigrants" in August 2010, provided an important platform for building relations across regional institutions in China, as well as strengthening ties among scholars working in both countries to engage with the effects of migration within and beyond their own borders.

The Sociology Department's on-going efforts to secure mutual investments between institutional regional networks in Canada and China enabled an enlargement of the initial objectives of this grant. Given the timing of the conference described above, and a much appreciated deadline extension for this Global Partners II grant, supplementary funds provided by the President's Advisory Council on the Status of Women made it possible to invite Dr. Yongmei Zhang, with whom I have already established a pilot project on the gendered effects of uneven development in the region, to travel to Saskatoon with Dr. Chen, who was originally scheduled to visit. This was the second visit to the University of Saskatchewan by Dr. Chen, who came here in 2006 as well, for a previous conference addressing international knowledge transfer and related policy development projects.

At the August conference, I presented a paper in English, co-authored with Dr. Zhang, entitled: "Re-building China's Economy on Gendered Rural Family Labor: A Case Study of Generational Migration and Stasis," which we are now developing for joint publication. As the

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title of the paper suggests, we are interested in pursuing further work on the evolving regional impact of gendered development policies and projects from within and beyond China, which could be of interest to graduate students from both institutions.

Insights Gained into the Canadian and/or International Research Community

As I learned during my visit with civil society project leaders and faculty and graduate students at Lanzhou University and in the neighboring province of Shaanxi, as a result of differential domestic investments in the inland regions of China, research that engages with gendered and minority effects of uneven development often depends upon international project-based foundational supports. This impacts the potential reciprocity and sustainability of research programs, for both good and ill. Private international foundation funding can enable more independent and varied emphases in research priorities from those advanced through domestic initiatives. However, because such opportunities are project-based, they are seldom sustainable in the longer term, and may reflect the interests of the funding organization more fully than local concerns.

A common challenge in developing regions the world over, this situation affects the trust that Chinese scholars bring to international research initiatives. One of the promising aspects, then, of efforts by the University of Saskatchewan to establish more durable regional ties in northwestern China is that resulting projects may be more locally and regionally sustainable, as well as respectful of approaches to teaching and scholarship that reflect the constituencies most affected by the issues under analysis, a value consistent with transnational feminist collaborative research practice.

Benefits

One of the tangential effects of securing this Global Partners II grant has been an emergent set of connections with other gender-focused researchers on campus at the University of Saskatchewan. In an effort to support greater synergy and practical problem solving across related international projects at our institution, I have been working with the Women's Studies Research Unit here to foster more collaborative discussions about the logistical contingencies, ethical implications, and efforts to support reciprocity and sustainability of gender-based international research projects.

Constraints and/or Challenges Encountered

Although translation was provided throughout my visit to Lanzhou, owing to various opportunities in China and abroad, the graduate students I met with there were remarkably well-prepared to engage with me and with one another in conversations and critical debates in English, an important factor for any future graduate exchanges. These students have also been helping with translation for faculty from both institutions.

That said, language proficiency will be important for students traveling in either direction. The University of Saskatchewan provides opportunities to begin and advance language learning in both Mandarin and English as an Acquired Language, while Lanzhou University can also support Mandarin and English language training, with predictable proficiencies on both sides. The Chinese embassy may enable scholarships for Canadian students to participate in 1 year of

language training. All of these programmatic opportunities will be important to future student exchanges.

Potential for Future Research Cooperation and Planned and Expected Outcomes

According to faculty and graduate students representing Lanzhou University and visiting faculty from the Northwest University for Nationalities, there are 4 main fields of research that would benefit from a gendered focus in northwestern China. These include:

- Environmental issues
- Poverty
- Urban and Rural Development
- New media influence on social struggle

If one uses Chinese poverty standards, 40% of China's poor live in Gansu province. The two key issues driving scholarship in Lanzhou, then, include: poverty, which reflects both cultural and environmental factors and impacts women and children most urgently, and ethnic relations. Of the 56 nationalities or ethnic groups recognized in China, 47 are found in the west, where the country borders on many other lands. There are many religious minorities as well, including Islam, Buddhism, and Christianity. The relations between the different groups can produce conflicts, but the government carefully monitors dissent and tensions.

Potential Research Projects Discussed *Elderly women* are a disadvantaged group in the local society. Because the Chinese Women's Federation focuses on production and its main target population is younger workers, one potential focus of research that I have been exploring with Dr. Zhang includes generational analysis of gendered economic effects. Such a project could be shorter term, and focus on policy goals.

Girls' Education Project: Rural girls are also at a disadvantage in China's education system. A local girls' education project supports skill development for supplying workers to urban and coastal factories, often far from home. One of the projects that could be undertaken, then, as part of a generational analysis of economic development, would be to follow the stories of a selected group of graduates from this program and evaluate its outcomes.

Tourism: Gansu province has rich tourist resources, but there is little incentive or focused expertise to develop them. Projects involving scholars with an interest in the gendered effects of rural and urban development could be supported in the context of interdisciplinary studies across both institutions.

Sex Work: Factors that influence the imperatives to participate in sex work in China include a gendered population differential that is experienced as a "shortage" of women, strained and difficult family relations under capital development, and the related movement of rural peasants into urban spaces, where jobs can be scarce and social nets limited. Only recently has there been public recognition that lack of policy in this area creates conditions that perpetuate the growth of

sex work in all markets. Although there is a deep need for greater research in this field, there is little infrastructure that would support safety for potential research participants.

Course Development There are 3 types of course-based activities that seem feasible across Lanzhou University and the University of Saskatchewan as partnering institutions:

- 1) The University of Saskatchewan could offer intensive one-month summer courses to students at Lanzhou University, similar to the current model between Sociology and Xi'an Jiao Tong University, ideally in feminist qualitative methods and/or transnational feminisms.
- 2) The University of Saskatchewan could bring Canadian students to Lanzhou for a collective course organized around a research project.
- 3) Lanzhou students could register at the University of Saskatchewan for graduate courses. Initial cohorts in Gender Studies should probably be limited to 2 students, to facilitate integration and to ensure that faculty supervision resources are not overly taxed.

Possible Graduate Program Courses at each institution:

<u>University of Saskatchewan</u>	<u>Lanzhou University</u>
<i>Advanced Feminist Theory</i>	<i>Chinese Socio-Cultural Research Practice</i>
<i>Advanced Qualitative Methods</i>	<i>Demographic Methods</i>
<i>English</i>	<i>Chinese</i>
<i>Transnational Feminisms</i>	<i>Sociology of Gender</i>
<i>Feminist Cultural Studies</i>	<i>Chinese Women's Cultural Studies</i>
<i>Gendered Health and Body Studies</i>	<i>Gendered Chinese Health Practices</i>
<i>International Relations</i>	<i>Studies in Chinese Socialism</i>

Given the developmental stages of graduate projects in both institutions, it may be more useful to begin by developing one or two small research projects resulting in joint papers, and then move on to explore how the relationship might develop further in terms of accredited pedagogical projects.

To that end, it could be useful to begin to develop a joint committee of faculty from both institutions who are prepared to initiate collaborative research along the lines proposed, and to assess the opportunities in both environments for interdisciplinary research and teaching projects.

One of the tasks of such a group could be to establish, for example, agreements about future admissions requirements in institutions, duration of student stays, co-supervision across institutions, and supports for student integration into both environments.

If faculty exchanges for intensive course delivery could be established over the next few years, conversations about agreements could proceed in person, as well as electronically. Ideally, these agreements could be well articulated by the time the University of Saskatchewan and Lanzhou

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University are prepared to offer more graduate courses in Women's and Gender Studies, individually and together, and the University of Saskatchewan has established protocols for joint degrees with partner institutions.

The results of this feasibility study suggest that slow, steady development of collaborative research projects and faculty and student exchanges with a view to establishing a more comprehensive graduate degree partnership in Women's and Gender Studies would be most practical between the University of Saskatchewan and Lanzhou University. Ultimately, as the example of the Francophone partnership with the Lanzhou Grasslands Institute suggests, creating conditions that enable interdisciplinary research and learning projects would support more expansive opportunities at both institutions.

(Serendipitously, at our hotel, we encountered Dr. Fabrice Dreyfus from SupAgro, Montpellier, France, and his junior colleague, Dr. Yuna Chiffolleau, a researcher in the sociology of economics, working with graduate students from both France and China through the Grasslands Institute at Lanzhou University.

Their project has been underway for the past 2 years, so they already have parallel research projects on the ground locally, with 4 students, three from China and one from France working in pairs, completing work on two related initiatives:

- 1) Due to a combination of degradation of the grasslands and social policy effects, nomadic lifestyles are slowly shifting toward more settled agricultural methods. However, the poverty is extreme. A study on rural producers and secondary and tertiary buyers examines the market chain, and an emerging niche for organic products. The study explores how fair trade certification might further increase capital to primary producers, and support better distribution systems.
- 2) The second part of the study, which has more direct relevance to gender studies, involves interviews with rural agricultural producers and families who participate in various survival strategies in grassland environments that range from stable to moderately or severely de-graded. Here, the objective is to study how the entire knowledge and production system operates among the local people. Data gathering focuses on task distributions within and across families, how knowledge is passed on, and how wider events may have impacted family fortunes. Clearly, gender-based analysis of such data could be invaluable.

These colleagues indicated that they were familiar with the University of Saskatchewan's reputation in agricultural research and would be interested in potential collaborations. This example also suggests that interdisciplinary research approaches that are sensitive to and respectful of local knowledge systems, can contribute to transferable sustainable development skills in similarly impacted grasslands regions.)

Gender, Health & Fair Trade (Nicaragua)

Lori Hanson

Extent to Which Objectives were Met

The partnership development activities supported by the Global Partners II funds strengthened a set of nascent collaborative research activities in Nicaragua in the area of Fair Trade (FT), health and gender equity that arose out of two separate long-term collaborations by academics at North American universities with Nicaraguan academic and community-based partners. With the support of the Global Partners II fund, twelve partner organizations including cooperatives, institutional representatives, and academic researchers came together to discuss an initial research agenda, structured around a discussion of the findings of an expanded environmental scan (that together GP-II and a President's SSHRC grant funded). The discussion was fruitful, and led to the decision to move forward with three small research projects, directed by a smaller research team, and for which two cooperatives volunteered to act as field sites. Two of the projects became theses projects of University of Saskatchewan graduate students (which are still underway), and a third ethnographic research project was carried out by Nicaraguan partners (research assistants) after receiving training and ongoing support from the U of S faculty. All of these activities – the expansion of the environmental scan and a small ethnographic study, the partners' and team meetings, the graduate students' involvement, Nicaraguan research assistant (RA) training activities and the preparation of an IDRC grant application were supported by the GP-II grant. (The IDRC - LACREG grant application was submitted in January 2010 but was unsuccessful.) The GP-II grant also at least partially supported the production of two non-peer reviewed articles, an informational video and a pamphlet on gender issues in Fair Trade. Currently, an article is being drafted for submission to a peer-reviewed journal, and potential ongoing funding sources are being investigated.

The basic rationale remains sound for this evolving research program. The broad overarching **goal** of the emerging research agenda is to better understand how FT organizations articulate and affect health and gender equity and to identify the obstacles and opportunities for improving gender equity and health in FT has not fundamentally changed. Each additional activity is adding clarity to both the actions and the research needed to support organizations seeking to improve health and gender equity. Modifications to the original plan have been relatively few.

Actual activities with outputs and outcomes include:

- 'All Partner' meeting – April 2009 - Dissemination and discussion of environmental scan findings, including report, presentation, and CD-ROM of resources distributed to each member organization as well as discussion and prioritization of initial research projects
- Creation and consolidation of research team: April 2009, November 2009, January 2010
 - Three team meetings were held, where logistical and methodological discussion and research plans were solidified. Meetings involved the Canadian and American academic researchers and students, representatives from a social development civil society organization, the Coffee producers' women's movement (MMFC) and two large cooperatives (PROCOCER and COOMPROCOM - research sites).

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- Two-day training in ethnographic research methods and research field preparation – Nov, 2009 - Two Nicaraguan RAs received training in ethnographic research methods by the Canadian and Nicaraguan research team members.
- Ethnographic research: Nov, 2009 - Jan, 2010 - Two Nicaraguan RAs carried out a small ethnographic study in 4 communities in two FT coffee cooperatives. Initial analysis of results were disseminated to the research team, and final results will be presented in October, 2010 at two events in Nicaragua 1) the annual “Movimiento de mujeres Flores de Café” (MMFC) meeting and 2) a week-long research symposium at the National Autonomous University wherein two days will be committed to a community-based research workshop showcasing the Fair Trade studies to date
- A Letter of Understanding between the Canadian researchers and the largest National small-holders coffee producers’ organization (CafeNica) has been signed detailing contributions and supports for the year 2010. Included are commitments to produce a short informational video and an informational pamphlet for cooperative members (~10,000 members). Both of these activities were initiated with GP-II funding but are being completed with limited (other) funds and through volunteer student involvements.
- Development and submission of an application to IDRC-LACREG.

Insights Gained into the Canadian and/or International Research Community

Fair Trade is a social movement and market mechanism that strives for greater equity in international trade. There is still relatively little research documenting the individual, household, and community level effects of FT among producers, though emerging research suggests that smallholder organizations connected into FT development networks and selling into FT markets experience indirect health and development impacts. These impacts occur primarily through higher prices and development projects that local organizations promote among their member, which can strengthen household economies, reduce small-scale producer vulnerability during commodity price crises, and provide an incentive for traditional agro-ecological management practices (i.e. shade grown coffee) that conserve local ecosystems. However, despite explicit objectives in FT espousing gender equity, much of the research into FT has been presented in a gender-blind manner, silencing the voices of women producers, omitting women’s experiences, and potentially weakening the ability of the FT movement to actively incorporate women’s concerns in the development process. The broad overarching **goal** of the emerging research agenda is to better understand how FT organizations articulate and affect health and gender equity and to identify the obstacles and opportunities for improving gender equity and health in FT.

Benefits

Two of the projects became thesis projects of University of Saskatchewan graduate students (which are still underway), and a third ethnographic research project was carried out by Nicaraguan partners (research assistants) after receiving training and ongoing support from the U of S faculty. All of these activities – the expansion of the environmental scan and a small ethnographic study, the partners’ and team meetings, the graduate students’ involvement, Nicaraguan research assistant (RA) training activities and the preparation of an IDRC grant application were supported by the GP-II grant.

Constraints and/or Challenges Encountered and Potential for Future Research Cooperation

Of note: The biggest frustration, for sure, was the lack of success with an IDRC- LACREG grant which was being sought to ensure a robust completion of this highly successful first phase largely funded by the GP-II. The U of S – IRO was helpful in reviewing the application and considered it to be strong. Their review, however, was the only one we got; i.e. No individual feedback was provided to applicants in the competition, and despite my email attempts to get the reviewers' comments, I received no response.

A Collaborative Model of Teacher Training for Infusing Health and Family Life Education in Elementary School Curriculum, Trinidad and Tobago

Carol Henry

Extent to Which Objectives were Met

We fulfilled goal and activities outlined in the GP-II grant and continue to work with our partners the University of the West Indies and Trinidad and Tobago's Ministry of Education in KT initiatives and plans for broadening the scope of the project.

The goal was to increase teacher advocacy within curriculum implementation and broaden students' experiences within physical education, nutrition, and overall health education in order to affect changes within the students' learning and living environments

The project that was supported by the Global Partners II fund, focused on the development of a teacher-led model of integrating health promotion into the elementary school curriculum in Trinidad and Tobago. The goal was to increase teacher advocacy within curriculum implementation and broaden students' experiences within physical education, nutrition, and overall health education in order to affect changes within the students' learning and living environments.

Twenty-four teachers and students from eight primary schools (four intervention and four control) participated. The model adopted for teacher training and development included:

- Video-conference workshops hosted by the University of Saskatchewan to promote knowledge exchange and sharing of best practices;
- An online email service for the research team and site visits to schools to monitor and support project integration;
- Use of the Flat Stanley Project⁵ as an interactive approach to integrating language arts, health, nutrition, physical activity and citizenship into the curriculum;
- The use of **TAKE 10!**[®] an interactive classroom-based physical activity program designed to integrate academic curriculum elements along with a physical activity program in providing moderate-to-vigorous intensity physical activity.

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- Provision of resources (books, training manuals, posters and other teaching aids) to support continued learning especially for those teachers who came to the classroom with limited knowledge in nutrition and physical activity.

Quantitative measures were also used to assess student's knowledge, attitude, belief and practices related to health, nutrition and fitness (baseline), at midpoint (June-July, 2009), and at the end of the intervention (December, 2009). Initial results were presented at the 55th Annual Scientific Conference of the Caribbean Health Research Council, Port of Spain, Trinidad, April, 2010

The project culminated in a public dissemination workshop in April 2010. The workshop showcased the work of teachers and students from the intervention schools who shared their work through song, physical activity, poems, portfolio presentations/examples, posters, teachers and principals (of the intervention schools) shared their reflective comments and processes. Participants were invited to reflect and contribute to an integration plan to move the project forward.

The outcomes were so positive that the Curriculum Department has encouraged expanding the project from the eight-school pilot to 100 schools in Trinidad and Tobago. Ongoing conversation is in progress regarding this expansion. The workshop was attended by a variety of stakeholder groups, children, teachers (from both the intervention and control schools), curriculum officers, health professionals, academics and researchers. The Honorable, Esther Legendre, Hon Minister of Education attended.

Notable Results Include

- The project activities contributed to the development of a draft School Nutrition Policy by the Ministry of Education and a draft School Health Policy by the Ministry of Health. Project activities also received parliamentary support in November 2008. Each of these results strengthened the partnership and increased awareness of the project. This was seen as especially crucial since the Ministry of Education had attempted programs to address the health needs of school children in the past with limited impact.
- The data that emerged from listening to the stakeholders, including teachers and students at the National Symposium, and the mandate from Parliament to increase student knowledge and affect health-related behaviors were the catalyst for action. Validating these issues was important because schools in Trinidad focus on meeting testable academic requirements and do not encourage non-testable subjects, such as health.
- Health and nutrition were successfully integrated across the curriculum in the four intervention schools. In addition, the resources that were supplied for the schools were well used by teachers and were evident in student portfolios. The support of school principals and other school staff was also evident.

Insights Gained into the Canadian and/or International Research Community & Constraints and/or Challenges Encountered

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The strategies employed in this north-south collaboration resulted in a successful research exchange. Involve partners in all phases of the project in order to facilitate greater use of research by decision-makers and establish a greater relevance in research orientation. The goal was to bring about a cultural shift that would facilitate greater use of research by decision-makers and establish a greater relevance in research orientation. Accordingly, the partners were actively involved in the project at all phases of planning, implementation and evaluation. Maintaining momentum and focus was a result of continuous connections with all the stakeholders.

Ongoing contact was imperative because lapses in communication might impede progress. This is particularly challenging when working between great distances, but it is not impossible. Video-conferencing, email, site visits (by team members and Trinidad support), resource materials supplied by the Canadian researchers, in-school teacher supports by administration, and constant reinforcement of process and progress, were invaluable tools.

The success of the project implementation (curriculum integration) is also associated with higher levels of involvement by the project champions (teachers, principals and MOE administrators). Each local champion worked during the project period to enforce, encourage, and support the project's goals.

Benefits

Graduate and undergraduate students gained hands-on research and writing experience via their involvement with the collection and dissemination of data. Of particular interest is exposing students to new and interesting methodologies, such as photo-voice and KT strategies that they may not be familiar with. The childhood obesity and diabetes, issues in Canadian children and youth are staggering, and the negative impact on their health must be addressed within schools and within the greater community. Canadian policymakers have the potential to follow this project's example by listening to the voices of Canadian students who experience similar, yet culturally different, influences on their lifestyle choices.

Potential for Future Research Cooperation

Expanding the project would involve training a broader spectrum of stakeholders (teachers, curriculum officers, administrators) to implement integrated learning within the health education curriculum. It will be impossible to facilitate site visits with the same regularity as in the pilot project; therefore, facilitators, on-site mentoring and administrative support are imperative. Pre-workshop training and orientation would present the strengths of the pilot and pay attention to potential challenges with larger groups. Teachers involved in the pilot project will become team leaders to facilitate training of further teachers and administrators, forming learning pods that would generate the project within schools and districts.

Measuring Gender Equity in Fair Trade Cooperatives in Nicaragua

Jannie Wing-sea Leung

Extent to Which Objectives were Met

The GPII grant funded the entire six-month period of field research conducted as part of my Master's thesis project. This study aims to develop a series of social indicators to measure progress towards gender equity in the context of the Fair Trade (FT) cooperative PROCOCER in Nicaragua, feeding into a larger ongoing action-research agenda in Nicaragua examining FT and its effects on gender equity and health. The research partnership within which this research is conducted includes Dr. Lori Hanson from the University of Saskatchewan, Raúl Díaz from the Association for Social Development in Nicaragua (ASDENIC), Christopher Bacon from the Santa Clara University in the United States, and fourteen other Fair Trade coffee cooperatives and organizations in Nicaragua. PROCOCER, one of the FT cooperatives in the partnership, was the primary partner for this project and provided direct support through the recruitment of participants, and research and logistical assistance. Raúl Díaz, Christopher Bacon, and María Asunción of the Women's Movement "Flores del Café" (MMFC) also provided research support throughout the course of this project. The intended outputs of this thesis research are to provide PROCOCER and potentially other FT cooperatives with an evaluation tool to measure progress towards gender equity, enhance the transparency and accountability of cooperatives in achieving gender equity, contribute to a better understanding of the areas that need to be considered in the examination of gender issues in FT, and inform future directions in the research agenda of the partnership.

Although the data is currently being analyzed and the final outputs have yet to be completed, it is anticipated that the project will meet its objectives based on the fieldwork conducted in Nicaragua.

Research question 1: gender equity indicators

To address the Research Question 1, the methods consisted of 3 interrelated stages. In Stage 1, I conducted a review of the academic and grey literature on gender equity indicators, both broadly from academic databases and context-specific literature in Nicaragua. In Stage 2, I conducted key informant interviews with two staff members of PROCOCER and two focus groups with women members of the cooperative, which formed the basis for understanding their conceptualizations of gender equity in the cooperative and in their lives. I conducted a preliminary qualitative analysis of this data and selected a draft set of gender equity indicators with the support of the documents from the literature review. In Stage 3, I assessed the face validity of the chosen set of indicators through a focus group with a subset of the initial participants as well as four key informant interviews with two staff members of PROCOCER and two gender specialists from other organizations. I am at present analyzing this data to inform the final revisions of the indicator set.

Data analysis is currently underway; the preliminary results show that PROCOCER has a role in promoting gender equity not only within its organizational functioning but in the families and communities of its members as well. PROCOCER's current programming with regards to gender equity focuses on increasing the participation of women in the organization and facilitating their

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access to productive resources; however, the findings indicate that this is an incomplete reflection of gender equity. Achieving gender equity requires a transformation of gender relations and the empowerment of women: women must control the resources they have and be able to hold decision-making positions in the organization in order to overcome the historical and cultural barriers that prevent their full and meaningful participation. Given that empowerment involves personal and collective transformations in beliefs, values and relations of power, this study included both objective and subjective indicators to take into account the more nuanced aspects such as self-esteem, autonomy and mutual support. Moreover, PROCOCER is in the early stages of developing a gender strategy for the organization and to allow for the evolving process towards gender equity, a set of indicators will be selected for immediate use by PROCOCER, reflecting assessments that are realistic for the current evaluation period, and additional indicators will be proposed for future integration to correspond to advances in the gender strategy in the organization.

To achieve this objective, the study drew upon participatory approaches that encouraged the meaningful collaboration of the research partner PROCOCER as the intended user of the results. As I selected indicators that accommodate the constraints, resources, and realities of PROCOCER, it is expected to be a useful and practical tool for the use of the organization in its annual evaluation of its gender programming. It is uncertain whether the other organizations in the research partnership will be able to make direct use of these results, as they are specific to the PROCOCER cooperative; however, it is expected to provide a foundation for similar indicators sets that can be adapted to specific contexts.

Research question 2: participatory indicator development

In addition to this deliverable, observation that arose from this project about the nature and process of participatory indicator development is proving to be as significant as the indicator set. My detailed field notes recorded over the course of this project and the interview and focus group data will lend valuable insights into Research Question 2. While PROCOCER is a cooperative that enables the participation of women, it has not to date dedicated a significant level of resources towards improving the position of women in the organization, neither amongst its staff, leadership nor members. As such, during the initial focus groups, significant difficulties were encountered when women members were asked to envision and articulate what gender equity could look like in their lives. Similarly, in the interviews with PROCOCER staff, there were confusions and misunderstandings around what gender equity means and its role in the organization, further suggesting a lack of gender awareness in the organization. This speaks to the need for researchers and partner organizations to develop a critical awareness of gender inequities and possibilities in improving women's lives in order to achieve meaningful and informed contributions in participatory processes. These findings lend valuable insights to other research programs and policy development with attention to gender equity; seeking the participation of women without building capacity among these women to critically analyze and evaluate gender relations in their own lives may result in programming and policies that only serve to uphold the status quo.

For the women members of PROCOCER who participated in this project, the opportunity express their opinions of and hopes for gender equity in the organization and in their families contributed to the early stages of self-awareness and an examination of gender relations in their

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lives as part of the longer process of empowerment and change. These insights provide a starting point with which to address the second project objective, and continuing in-depth analysis of the data will provide a more complete picture of lessons learned from this participatory process.

Insights Gained into the Canadian and/or International Research Community

As a Master's student, this project has had an incredibly formative influence on my competencies as a researcher. This is my first experience conducting research in an international setting, and it has had a significant impact on building my capacity to collaborate in a research partnership, maintain open and trusting relationships with my partners, communicate across language and cultural barriers, and seek solutions to the many challenges that inevitably and unexpectedly occur in field.

One of the most important lessons I took away from my period in Nicaragua is how to work within an existing research partnership. While I had learned about these principles in theory from my course work prior to entering the field, the experience of collaborating and building a relationship with partner organizations revealed complexities that I had never anticipated. Since my first official meeting with PROCOCER, they had been actively engaged in the development of my project, reviewed all the consent forms and focus group instruments, assisted with my focus groups, and gave me constant feedback and advice. This has been a vital process in gaining entry with the participants and also in producing outputs that will be relevant and useful to the organization, which is an essential component of this project. Furthermore, the research support from the other partners was a major component of conducting international research, as their familiarity with the country context, their experience conducting research in these settings, and their country contacts and resources provided vital mentorship and guidance. I have also discovered, however, that a constant negotiation occurs between organizations as part of the partnering process, particularly in establishing trust. Building and strengthening these partnerships was a continual process that required more time than actual data collection, but in dedicating this energy to fostering partnership, I gained a richness of learning and quality of data that could not have been attained had I worked without such supports. In addition, after six-months of fieldwork in Nicaragua, I left the organization with the feeling that my project was incomplete and a lot more work could have been done and still needs to be done. Working within a larger partnership will ensure that the project that I have worked on will not end with me, and will continue to move forward with the other organizations.

Further insights I gained about international research relate to the principle of reciprocity and how it can and should be practiced. In my initial interactions with PROCOCER, the staff members were wary of another foreign researcher coming to do a project with their organization, and justifiably so. For my part, it was very difficult to prove the benefits of the research project to their organization when the potential outcomes are long-term and not always tangible. It was through demonstrating reciprocity that I began to gain the trust of my partners and finding a best fit for my abilities to address their needs just as their abilities addressed mine. Throughout my time at the organization, I provided technical assistance with the development of a socioeconomic database for the membership of the cooperative, a project that was unrelated to my study. After this experience, I feel that our relationship took shape as a mutual exchange of knowledge, experiences, and skills; they were more open to sharing resources and inviting me to

participate in organizational activities. Although I was never able to lessen the perceived position of power and resources I represented as a foreigner from the North, I found that dedicating time and energy towards reciprocation was a fundamental part of the research process. It not only enabled me to gain a deeper understanding of the organization and cultural context of the research site but also facilitated a closer working relationship with the organization and participants.

Benefits

The activities supported under the project during the reporting period include language training and cultural immersion, meetings with the research partners to collaborate on the research methods, gathering and reviewing relevant literature in Nicaragua, and data collection.

Travel to Nicaragua was essential for the realization of this project, as the development of this study was dependent on the ongoing face-to-face meetings of the partner organizations to develop the research objectives and methods. Due to the strong focus on the participatory development of indicators in this study, the interaction with the participants of this study was key to gaining the perspective of women who are often excluded from the research. Face-to-face conversations were particularly important for data collection, as literacy is a common challenge in these communities.

My travel to Nicaragua and the research activities with PROCOCER and other partner organizations furthered strengthened the relationship and trust of this research partnership. Upon my arrival in Nicaragua, I attended a meeting of the research partnership where I presented my research proposal to elicit their feedback and support, an invaluable component to the development of my project that required the close collaboration and participation of all stakeholders involved. Finally, the international interaction required for the successful realization of this research project has contributed to developing the capacity of myself as a community-based researcher in international contexts and the ability to negotiate and communicate with my partners. PROCOCER and the other partners, in collaborating on this research project, have not only gained additional resources in the form of the project outputs, but also greater capacity in international collaboration and research as well.

Constraints and/or Challenges Encountered

Data collection Significant challenges were encountered during the research process that required slight modifications of the research methodology. At the time I submitted the application for this Global Partners II grant, the Fundación Entre Mujeres (FEM) had been proposed as the primary organizational partner for this project, although this was contingent upon the results of the environmental scan being conducted by the research partnership. Upon entering the field in Nicaragua, a meeting between the organizations of the partnership determined that PROCOCER would be a more appropriate research site for the purposes of this investigation. As a consequence of this change, there were logistical constraints due to the remote location of the office of PROCOCER (four hours by bus from my place of residence in Nicaragua) and I was not able to spend as much time at the research site as I had initially planned. In conducting research with a strong participatory focus, it is important to spend a

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significant period of time at the research site and with the participants for observation and cultural immersion; however the physical distance limited this important phase and also created some logistical difficulties in scheduling interviews and focus groups.

Moreover, the organizational structure of PROCOCER presented notable challenges in obtaining the information and documents needed for the study. Firstly, PROCOCER is a cooperative with a very limited operating budget and as a result, they are chronically under-staffed and the staff members have extremely busy schedules. This made it difficult to arrange meetings to collaborate on the project and to organize the interviews and focus groups. Since I only had a six-month period to complete my field research, only 3 focus groups of 8 participants were conducted instead of the proposed 4 focus groups with 24 participants. Due to these limitations, more key informant interviews were included in the research methods to supplement and augment the relatively thin data that came out the focus groups.

As discussed previously, the interviews and focus groups revealed a low level of gender awareness among staff and members of PROCOCER. This affected the ability of the study to rely solely on PROCOCER as the participant base in the development of the gender equity indicators, as their views may not fully capture the possibilities for gender equity in the organization. As a result of this unexpected challenge, the research methodology was slightly modified to include interviews gender specialists from other organizations that also work with women coffee producers and FT. These perspectives contributed feminist perspectives to the objectives of the indicators based on the work that is being done in other FT cooperatives. As such, this project still maintains its participatory nature, but has expanded its participant base to include informants outside of the primary research site.

Potential for Future Research Cooperation

As described above, this research project was conceived and developed within a larger partnership of researchers and organizations from Canada, the United States, and Nicaragua. Discussion on the results of a preliminary environmental scan identified the need for three research projects in order to gain a better understanding of the areas of gender, FT and health in Nicaragua and to further this research agenda, one of which developed into this research study. It is expected that the results of this research will help inform the planning and development of the next stages of the emerging research-action agenda. Although my involvement with this partnership will end with the completion of my Master's degree, the relationship between the primary research partner PROCOCER and my supervisor Dr. Hanson has been strengthened through the development of this project. Both parties have signed an official partnership agreement and there is a strong likelihood of future research cooperation that will build upon the findings of this project.

Planned and Expected Outcomes

Following the completion of the data collection stage for this project, Alejandra Ganem-Cuenca (another University of Saskatchewan graduate student working in this partnership) and I submitted a list of recommendations to PROCOCER on direct actions the organization can take towards improving gender equity in their organization, based on our preliminary findings and observations from the research projects. Additionally, the set of indicators that will be presented

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to PROCOCER at the end of this project will further support and guide PROCOCER's efforts in gender equity as a tool for their annual evaluations of their organizational programming. I plan to also share this set of indicators with other organizations working in FT and gender as a resource their work in the development of indicators. While there are no immediate plans for my return to Nicaragua, my supervisor and the larger research partnership will continue to further work in this area based on the outputs of this project, including an anticipated knowledge translation event with MMFC in October this year.

With regards to information sharing and dissemination, part of the research findings from this study is included in a manuscript entitled *Gender, health and Fairtrade: Insights from a research-action program in Nicaragua*, submitted to the journal *Development in Practice*. Furthermore, the abstract entitled, *Making the invisible count: participatory indicator development to measure gender equity in Fair Trade coffee cooperatives in Nicaragua* was accepted for Oral Presentation at the Canadian Conference on Global Health from October 31 to November 3 this year in Ottawa.

Capacity Building of a Human Nutrition Graduate Program for Improved Nutritional Status in Ethiopia

Dr. Gordon Zello

Extent to Which Objectives were Met

We fulfilled all the objectives outlined in the GPII grant and continue to work with our Ethiopian partners in a number of initiatives aimed at improving the nutritional health of Ethiopians. Our objectives were specifically to:

- To build and improve capacity of the Masters of Applied Human Nutrition (MAHN) program at Hawassa University (HU), through graduate teaching, research and knowledge dissemination. These activities will improve the capacity of individuals, households and communities within Hawassa and vicinity to understand nutrition problems and take practical and appropriate measures to address them.
- To promote faculty collaboration via the project, facilitate ongoing research and curriculum development between HU and U of S. We will assure the continued infusion of current scientific findings and international exposure through publications.
- To utilize the results of faculty/graduate student research to influence policy decisions and to support proposal submissions to local, regional and external agencies funding household nutrition and related projects.

Outlined below are the activities over the term of the GPII grant that addressed the specific objectives. We also comment on realized outcomes (e.g. student successes, graduate student training, additional funding successes – CIDA contingency funding and IDRC Project).

In Ethiopia, there are very few Ethiopian nutrition professionals who are working in the country, and most (except recent HU nutrition graduates) are trained overseas. To date, more than 30 students have been enrolled in the Master's program in Applied Human Nutrition (MAHN) that began in the 2007-08 school year. Faculty members from The University of Saskatchewan (U of S) along with partner institutions are leading the training of these graduate students. Graduates of year 1 of the program are employed in several sectors, in academia, government agencies and with NGOs (see Appendix). U of S professors have been teaching the courses Clinical Nutrition and Community Nutrition in all three years that the program has been offered: Dr Carol Henry in Community Nutrition, Dr. Gord Zello in Clinical Nutrition. More recently other faculty has joined in the instructing of students: Dr. Susan Whiting (2009 & 2010, first in Clinical Nutrition and then in Community Nutrition), Dr. Wendy Dahl (Adjunct Professor at the U of S; in Clinical Nutrition - 2010), and Dr. JoAnn Jaffe (Sociology-University of Regina; in Community Nutrition - 2010). In all three years, students have performed well, having achieved a range of grades between A+ and B+. This is significant given that these are block courses with intense didactic and field experience combined.

Faculty members Henry, Zello & Whiting provide guidance in program development and in research. U of S graduate student, Jennifer Wright, has been working with HU students in the area of neonatal diarrhea. The research currently undertaken by students also addresses food security and the nutritional needs of Ethiopia.

Recently, HU expanded its focus on nutrition to create the Institute of Human Nutrition and Food Science and (IHNFS), reflecting the need to strengthen the nutrition program (Undergraduate and Graduate) and progress towards the training of PhD graduates. The creation of the IHNFS provides further evidence of the important link between Agriculture, Food Science (processing/marketing) and Nutrition and the collaborative role this partnership will play in addressing food security concerns in Ethiopia through training, research and community related services.

As a direct result of the training MAHN students which involved U of S faculty (i.e. taught the Clinical Nutrition and Community Nutrition classes in 2008, 2009, and 2010, as well as played an advisory role in graduate student projects) an undergraduate program in nutrition at HU was started in 2010 under a unified East African Curriculum. This program is primarily taught by graduates of the MAHN program (e.g. capacity building). The first cohort of MAHN graduates has been successful in finding career positions in nutrition (including female graduates).

Potential for Future Research Cooperation & Planned and Expected Outcomes

The GPII grant, as well as in-kind support received by our Ethiopian partners, CIDA, NSERC as well as others, made it possible for us to apply for further funding to continue our program in Ethiopia. A number of applications were submitted and to date we have been successful in 3 applications (i.e. CIDA Contingency Fund, GPII Graduate Research Funding, IDR-CIRFSC Project Grant). Of particular evidence of our initial success and continued commitment, we (principal and co-investigators from the College of Pharmacy and Nutrition on this GPII grant)

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were successful in receiving a large grant “*Improving food security in the highlands of Ethiopia through improved and sustainable agricultural productivity and human nutrition*” from IDRC–CIRFSC in the amount of approximately \$1 million with the College of Agriculture and Bioresources, U of S. The grant contains a significant human nutrition component which is aimed to improve human health in the highlands of Ethiopia. This funding will also allow us to continue teaching in the MS program at Hawassa University (for at least 2 more years) thus continuing one of the objectives of the GPII grant of capacity building. The grant will directly fund at least 3 graduate student projects in the program, with co-supervision by nutrition faculty at the U of S who were applicants on the GPII grant.

Gender Equity and Health in Fair Trade Coffee Cooperatives in Nicaragua

Alejandra Ganem-Cuenca

Extent to Which Objectives were Met

The fair trade (FT) movement seeks to challenge historically unequal international market relations, transforming global North-South trade into an avenue of producer empowerment, poverty alleviation and sustainable development through a strategy of “trade not aid”. The Fairtrade Labelling Organization International (FLO), which is responsible for issuing fair trade certifications, includes social development as one of the major requirements of certification. This category includes democracy, participation, transparency and non-discrimination, particularly non-discrimination against members or restrictions of new membership on the basis of gender. Past and current research has evaluated other requirements, but no research has been conducted to examine social development in any depth, particularly with regards to gender equity within FT cooperatives.

Considering that gender equity is a requirement for maintaining FT certification, an evaluation of how gender equity is experienced within cooperatives is essential to the FT movement. Hence, the proposed research is explicitly concerned with issues of gender equity and development. The proposed goals of this research project were to provide a better understanding of gender issues in the FT context (and how they are perceived by both men and women) and to increase gender equity in coffee cooperatives, especially FT coffee cooperatives.

More specifically, the proposed objectives of the research were to: 1) examine how gender equity is understood, experienced and articulated in fair trade cooperatives, 2) identify ways that participation in and experiences of fair trade differ for men and women at the cooperative and household level 3) identify health outcomes of fair trade for women and men (especially those related to paid and unpaid work roles) and; 4) examine whether particular cooperative structures and organization influence the first three objectives.

In order to explore gender equity work within fair trade coffee cooperatives in Nicaragua, the original proposal stated that the study would be a comparative study between Las Harmanas, a cooperative within SOPPEXCCA (a federation of cooperatives), and a mixed gender but similar

cooperative. For logistical reasons, the proposed participant organizations changed upon entering the field. The study was therefore carried out with PROCOCER, a base cooperative, with CECOCAFEN, a federation of cooperatives, and with Cafenica and the *Movimiento de Mujeres Flores del Café* (MMFC- *Flores del Café Women's Movement*), the national small-scale coffee producers association of Nicaragua and the association's women's movement, all which expressed their interest in participating in the study and in dedicating the time and necessary resources for the duration of the study. Despite a shift in participating organizations, the overall end product, which was to elucidate best practices for promoting gender equity within FT cooperatives, was reached.

Along with the above mentioned organizations, the researcher also worked with other partner organizations with which Dr. Hanson (faculty recipient of Global Partners II funding) has well-established relationships with. These organizations included La FEM, ASDENIC, faculty associated with the Masters in Gender and Development program and the School of Public Health (CIES) and the Universidad Nacional Autonoma de Nicaragua (UNAN). Each of these partners served an instrumental role in supporting the researcher during the duration of her time in the field.

The completed research is explicitly concerned with issues of gender equity, development and health. The proposed goals of this research project were to provide a better understanding of gender issues in the FT context (and how they are perceived by both women and men) and to increase gender equity in FT coffee cooperatives. As time in the field elapsed, the second goal evolved to better reflect the gathered data. Instead of attempting to increase gender equity, the research is focused on making visible the challenges women face with regards to becoming cooperative members or participating more actively in the cooperative's activities. In naming the challenges faced by women, actionable entry points tailored to each of the participating organizations can be listed so that each organization can advance their unique gender agenda and in turn, work towards more equitable relationships.

A growing body of evidence shows that massive differences in health are predominantly caused by social determinants of health. There is increasing pressure on the need to act on the social determinants of health to reduce health inequities. In this project FT is proposed as one way to act on specific determinants of health, particularly gender. Hence, FT can be conceptualized as a direct action to decrease gender inequities and therefore decrease health inequities.

Upon entering the field, the proposed methodologies were tailored to suit the local environment so that the project could progress within the given time period. It was originally proposed that the study would consist of a comparative case study that would utilize ethnographic methods of data collection including: in-depth interviews focus groups and participant observation. Instead, only in-depth interviews and document gathering were used as data gathering methods. Observations were not considered an official gathering method (no ethics approval was obtained) but were instrumental for familiarization of the local context. As well, instead of comparing two similar cooperatives, the study included three different organizations that are situated at different levels within the organizational structure of cooperatives in Nicaragua. The three different levels were included to provide a thorough understating of gender work being carried out at each of the levels and any interactions between these. The three organizations that participated are

PROCOCER, a base cooperative, CECOCAFEN, a central of cooperatives, and Cafenica/MMFC, the national association of small-scale coffee producers in Nicaragua and the association's women's movement.

Participants that were interviewed are considered to be leaders within their organizations and are individuals with decision-making positions. The number of participants at each of the levels varied as this depended on the availability of individuals. There were 7 participants from PROCOCER, 3 participants from CECOCAFEN and 3 participants from Cafenica/MMFC for a total of 14 in-depth interviews (some participants were interviewed twice).

Although there were some changes to the research objectives/proposed results, the changes can be considered minor since they did not significantly change the orientation of the project. Overall, objectives were successfully met.

Insights Gained into the Canadian and/or International Research Community

Three key insights were gained during the duration of the project: the importance of collaboration and working with local partners, the importance of long-term commitment and time, and the necessity of resources to carry out research.

Collaboration is frequently discussed in qualitative research literature, especially in studies carried out in the global South. The details of how to establish meaningful and trusting relationships with local partners, however, is often understated. In this project, the researcher had first-hand experience in carrying out collaborative research and building relationships with local organizations involved in the project. For relationships to flourish and the research to advance, establishing trust with the organizations was essential. Working with the organizations was challenging at first and spending time with local partners was required to establish trust and demonstrate the researcher's commitment to the project and the involved organizations. After spending time with the organizations and staff, more open and comfortable relationships developed. Parallel to the importance of working with local organizations is ensuring that the proposed project relates to local concerns and issues; it is essential that proposed research projects are congruent with the organization's needs and wants. Although the project could have been completed if the organizations were not interested in the subject matter, gathered data would have been superficial and would not have encompassed all the necessary elements to provide a more complete picture.

Along with building relationships with local partners, the duration of a study is also of critical importance. Establishing trust and relationship-building is time intensive. Moreover, research in the global South requires time for cultural adaptation. Research projects need to take time into consideration and ensure that enough time is allocated for the researcher to be able to familiarize oneself with the local context and partners to contribute to the project's success. Furthermore, notions of time vary across countries and Nicaragua was no exception to this. For example, in Nicaragua there are different customs around setting meeting times and punctuality that differ from Canadian culture. This, in turn, meant that more time was needed to complete certain tasks that would normally take less time in a Canadian context. Thus, projects need to ensure that comprehensive timelines are established to be able to complete the research accordingly.

Lastly, the importance of resources cannot be overstated. Research that is carried out in the global South needs to be able to assume most, if not all, of the costs associated with the project. The organizations the researcher worked with are very limited in resources and they would have not been able to provide the monetary resources this project required; this study would not have been possible without the researcher providing having her own resources.

Benefits

Upon entering the Fair Trade coffee market, one Nicaraguan feminist organization (La FEM) and long-time partner organization of a Community Health & Epidemiology faculty member (Dr. Lori Hanson) perceived a troubling disconnect between their lived experiences and the rhetoric of gender equity in Fair Trade. They expressed a desire to better understand and challenge this contradiction through an action-research program. The broad, overarching goal of the research and action program is to improve gender equity and health through Fair Trade. An initial environmental scan of Nicaraguan stakeholders (cooperatives, educational institutions, non-governmental organizations) in areas of Fair Trade, health, and gender was completed and revealed that these lived contradictions resonated with other groups. All interested stakeholders were then invited to a workshop to set a research-action agenda and the partnership-building process has continued from there. The environmental scan culminated in the identification of three priority areas for further investigation, one of which is this completed research project.

The completion of the project benefits the already established action-research program. The results of the study will allow the action-research agenda to move forward by providing a firm stepping stone for future research. Similarly, significant amounts of time were spent with several stakeholders, further strengthening relationships. Although the partners have different interests and foci, a commitment to the values of respect, communication, trust, openness, and maintaining the principles of gender equity and social justice as central throughout the research project has also allowed the partnership to develop.

Without GPII funds, this research project would not have been possible. Only through interaction and the establishment of trusting relationships with FT producers, participation in FT cooperatives and an engagement with the aforementioned institutions was an understanding of gender equity within the FT context made possible.

Constraints and/or Challenges Encountered

Several cultural and logistical challenges were faced throughout the research. One of the limitations to the research project was the duration of time in the field. The project lasted 6 months, but much of that time was dedicated to adapting to the culture and local settings and to gaining understanding of how participating organizations operate. Therefore, the amount of time dedicated to actual data gathering was reduced. The amount of time required to set up interviews and gather documents was also very time-consuming. Locating participants was difficult and a significant amount of time was spent waiting for participants to arrive to scheduled interview times. Often, and after waiting a few hours (about four hours on average) for participants to arrive, rescheduling was necessary.

A few organizational challenges were faced with PROCOCER, a base cooperative with over 600 members. For the duration of the project, the cooperative was understaffed and all staff were over-worked, resulting in staff having less available time to spend with the researcher. More time availability would have allowed for more fluidity in building relationships and gathering data. Moreover, there are marked hierarchies within PROCOCER that made data gathering challenging. The hierarchical structure often added difficulty to setting interviews with participants and particularly in obtaining resources, which may have affected the comprehensiveness of the data.

Potential for Future Research Cooperation & Planned and Expected Outcomes

At PROCOCER's request, the researcher (along with another University of Saskatchewan student) developed a questionnaire and database layout for the cooperative to use to gather basic and necessary information about the cooperative's members. The intention of the database is for PROCOCER to be able to measure changes over the years and identify priority areas for improvement.

A document of actionable recommendations around the cooperative's gender work was also provided to PROCOCER to disseminate research results. In the near future, the researcher hopes to attend the MMFC's annual general meeting where members of Cafenica, CECOCAFEN and PROCOCER will be present. The intention is for the researcher to present her study at the meeting and visit the other participating organizations. Dr. Lori Hanson, the researcher's thesis supervisor is a member of the action-research program in Nicaragua and will continue to follow-up with the partner organizations.

Since the completed research project forms part of a broader fair trade and gender action-research agenda, the successful completion of this project will hopefully serve to further strengthen partnerships and collaborative research. Future joint initiatives are planned between the University of Saskatchewan (through Dr. Lori Hanson) and the action-research fair trade and gender agenda.

Revitalizing and Strengthening Public Health and Research Networks in Latin American and Caribbean Countries: Emerging Antimicrobial Resistance in *Neisseria gonorrhoeae* -Implications for Disease Control

Dr. Jo-Anne Dillon

The objective of this project was to begin implementation of the second phase of the Gonococcal Antimicrobial Susceptibility Surveillance Program (GASP) in Latin America and the Caribbean (LA&C), a program promoted and endorsed by the World Health Organization. Building on long established partners in LA&C and her GASP Phase 1 work, Dr Dillon initiated visits to national public health centres in Argentina and Chile. In addition, information was obtained on the extent of renewed participation in GASP and regional/country partners for involvement in the Phase 2

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network were identified. Communications have been re-established with over 12 countries/institutions. An activity survey was developed and these 12 countries indicated a willingness to participate in GASP Phase 2 along with an urgent need to conduct antimicrobial susceptibility surveillance to monitor the emergence of antimicrobial resistance in *Neisseria gonorrhoeae*. The information gathered was presented by Dr. Dillon at an invited WHO/CDC consultation meeting in Manila, Philippines, in April 2010 in which other regional leaders for GASP were present. The long term implications of the support provided by Global Partners II includes WHO funding to launch the GASP Phase 2 program in LA&C, as well as an invitation by the WHO to submit a proposal for establishing a *WHO Collaborating Centre for Gonorrhoeae and other Sexually Transmitted Infections (STIs)* led by Dr Dillon and located at the Vaccine and Infectious Disease organization (VIDO) of the University of Saskatchewan. The launch of the second phase of GASP and the development of a WHO Collaborating Centre at the University of Saskatchewan will provide program leadership internationally and will serve to highlight expertise and international relations centered at the University of Saskatchewan. The activities undertaken will improve the diagnosis and treatment of gonorrhoea in the region, identify emerging trends in antibiotic resistance and improve global public health infrastructure related to the diagnosis and treatment of STIs.

Extent to Which Objectives were Met

The primary objective of this project was to re-establish the Gonococcal Antimicrobial Susceptibility Surveillance Program (GASP) in Latin Americas and the Caribbean (GASP Phase 2). Under the support of the Global Partners II Project as well as other research funding secured by the Dillon laboratory, several initiatives associated with this objective have been implemented during this reporting period:

Dr. Dillon visited and re-established ties with the “Instituto Nacional de Enfermedades Infecciosas Dr. Carlos G. Malbrán” in Buenos Aires Argentina (October 16-23, 2009). A brief outline of activities during this visit include: Seminar: “Re-Establishing the Gonococcal Antimicrobial Susceptibility (GASP) Network in Latin America and the Caribbean”

Discussion of collaboration and work plans

Identification of the Instituto Nacional de Enfermedades Infeccisas Dr. Carlos G. Malbran as a partner for quality control testing across Latin America and development of initial protocols and agreements

Facility Visits and Contacts: These visits included tours of some relevant laboratories that participate in the *N. gonorrhoeae* GASP network in Argentina. A review of methods and facilities was undertaken and the importance of this national network to global and national health initiatives was stressed. It was also noted that methods from GASP-Phase 1, led by Dr. Dillon, were in use in and simply needed to be upgraded. Further discussions as to value added research and other laboratory-based issues ensued over several days.

“Instituto Nacional de Enfermedades Infecciosas – Dr. Carlos G. Malbran”

- Viviana E. Molia – Director
- Marcelo Galas – Jefe Bacteriologia

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- Patricia Galarza -Jefa Servicio Enfermedades de Transmision Sexual
 - Julio A. Vazquez –Scientist, Institute of Health Carlos III, Spain
- “Bacteriologo Hospital F.J. Muniz” (Infectious Disease Hospital)
- Luis M. Buscemi – Bioquimico
 - Irene Pagano – Jefe
 - Hospital Alejandro Posadas
 - Susana DiBartolmeo – Jefe
- Domecq & Lafage Laboratorios Clinicos / Hospital Aleman
- Liliana Fernandez Canigia – Jefa de Microbiologia

2. Dr. Dillon visited the “Instituto de Salud Publica de Chile” in Santiago Chile (October 23-28, 2009). A brief outline of activities during this visit:

Seminar “Re-Establishing the Gonococcal Antimicrobial Susceptibility (GASP) Network in Latin America and the Caribbean” (Presentation #2)

Discussion of collaboration and work plans

Once again, methods developed during GASP-Phase 1 were in use in Chile. Discussions pertaining to national capacity and value added research were held both with the Director General of the National Institute as well as senior officials of the Institute (see below). The infrastructure of the Institute had been considerably enhanced and a new molecular biology wing of impressive scope was in preparation. Dr Dillon had a complete tour of the Institute and discussed possible collaborations.

Facility visits and contacts:

Gobierno de Chile, Ministerio de Salud, Instituto de Salud Publica de Chile

- Aurora Maldonado – Jefe Seccion Bacteriologia
- Julio Garcia Moreno – Head Biomedical Laboratory Department
- Ingrid Heitmann – Director

3. Training of personnel in Saskatchewan: Several people connected with Dr Dillon’s laboratory were trained in the international matters of the GASP. This included her laboratory manager, Dr Mingmin Liao; a postdoctoral fellow, Dr Stafania Starnino; and an assistant, Ava Storey. This complex work requires weekly contact with participating groups, intensive laboratory and medical knowledge and a thorough knowledge of the international scene surrounding work with the gonococcus and its health and research issues. A strong infrastructure in the Dillon laboratory regarding GASP is required both for the programs involved as well as its sustainability.

4. Dr. Dillon was invited to take part in a WHO/CDC consultation on the strategic “response to the threat of global antimicrobial resistance (AMR) in *Neisseria gonorrhoeae*” on April 7-9,

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2010, in Manila, Philippines. This visit consultation was funded by Global Partners II, and without this funding, Dr Dillon would not have been able to participate in this pivotal international meeting. The failure to attend would have severely compromised GASP initiatives and the leadership role from Canada in GASP-LA&C. Dr. Dillon was an active participant at this meeting, presenting two seminars reviewing current status of AMR surveillance in Latin American and the Caribbean regions (Presentation #3) and the prospective of re-establishing the GASP network for a second phase (Presentation #4). These activities further promoted the international collaboration of Dr. Dillon and her group, along with the University of Saskatchewan, with the WHO and public health agencies in other countries/regions. During her visit Dr Dillon consulted with Dr Francis Ndowa (Coordinator, Controlling Sexually Transmitted and Reproductive Tract Infections, Department of Reproductive Health and Research, WHO Headquarters) regarding the establishment of a *WHO Collaborating Centre for Gonorrhoeae and other Sexually Transmitted Infections (STIs)* under her leadership. She also met with the following people, who co-ordinate surveillance programs in various parts of the world:

- Magnus Unemo – National Reference Laboratory for Pathogenic Neisseria, Sweden
 - Cathy Ison – Director, Sexually Transmitted Bacteria Reference Laboratory, England
 - David Lewis – Head, Sexually Transmitted Infections Reference Centre, South Africa
 - Athena Limnios – Neisseria Reference Laboratory, South Eastern Laboratory Services, Prince of Wales Hospital, Australia
 - Manju Bala – Senior Microbiologist and Coordinator, WHO GASP SEAR Regional Reference Laboratory, India
 - • Thomas Wong – Director, Division of Community Acquired Infections, Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada, Canada
 - Matthew Gilmour – Director, Bacteriology and Enterics Program, Public Health Agency of Canada, Canada
- In addition, Dr. Dillon was able to have intensive discussions with Dr. Adele Benzaken-Schwartz (Director and President, Alfredo da Matta Foundation, Manaus, Brazil) to discuss Brazilian participation in the GASP network and the structure of the evolving GASp network in Brazil.

5. Dr. Dillon visited the Centre for Health Protection, Department of Health, Hong Kong on April 16, 2010. Contact -Janice Yee-Chi Lo (Consultant Medical Microbiologist, Public Health Laboratory Services Branch, Centre for Health Protection). Further to the activities of the network in Latin America, and connecting with the GASP network in South East Asia, of which Dr. Lo is a part, Dr Dillon and Dr Lo discussed emerging technologies for the detection of resistance to cephalosporins, the last effective antimicrobial drug class left for the treatment of gonorrhoea. Dr Dillon also toured the extensive facilities of the Hong Kong public health laboratories and met with various staff.

6. Building on the records from the first phase of GASP in Latin America and the Caribbean, which was led by Dr. Dillon in the 1990s, considerable research has been conducted to update the list of contacts and possible laboratories that could participate in the GASP Phase 2 network. This has included phone contact to Spanish-speaking participants by consultant Dr Martha

Ruben, who also visited Uruguay to re-identify participants in that country. Reestablishing these contacts has been labor intensive as some earlier members of the network have retired and have been replaced or have moved to other countries. To date, the following countries have been contacted to update the list of participants in each country and to ascertain their level of interest:

- Argentina
- Bolivia
- Brazil
- Chile
- Colombia
- Cuba
- Honduras
- Mexico
- Peru
- Trinidad and Tobago
- Uruguay
- Venezuela

7. A survey on antimicrobial surveillance activities on *N. gonorrhoeae* has been initiated with participating countries for the second phase of GASP. In these initial communications, a letter of invitation in both English and Spanish was sent to various potential participants of the GASP network. These participants head the public health initiatives in their respective countries and head government laboratories and programs. Each contact was asked to complete a questionnaire to evaluate their current practices regarding antimicrobial resistance (AMR) detection and reporting. Information gathered included the number of isolates of *N. gonorrhoeae* tested annually, procedures routinely used for isolation and testing antimicrobial susceptibility of the isolates, results of antimicrobial susceptibility testing, current country treatment guidelines, etc. The questionnaire and contact list were developed in both English and Spanish. The ultimate intent is to create a pan-American and Caribbean reporting network on antimicrobial susceptibility of *N. gonorrhoeae*, supported by a viable and sustainable laboratory and clinical infrastructure. Reports will be generated on an annual basis and will be accessible globally.

8. A panel of reference strains and a panel for quality control (QC) antimicrobial susceptibility testing have been established at Dr. Dillon's laboratory at the University of Saskatchewan. This involved some consultation with national and international partners. These strains will be used in the GASP Phase 2 studies to ensure the reproducibility of results between laboratories. The design of the QC program and its analysis was discussed with Dr. P. Galarza during Dr. Dillon's visit to Argentina with the intent that leadership of the GASPLA&C QC program will be a collaboration with the National Public Health Laboratories in Argentina.

9. To further fund the re-establishment of the GASP Phase 2 network, whose initial activities were begun with the financial support of the Global Partners II Program, we have partnered with the World Health Organization. Two consecutive proposals for funding were developed and submitted to the WHO. Unfortunately, the agreement for performance of work (APW) for the first proposal needed to be declined by Dr. Dillon given the short time frame for implementation

(~20 working days during December 2009). Subsequently, in early 2010, a second proposal was submitted to the WHO. The new APW which is valued over \$98,000 and will launch the GASP Phase 2 program led by Dr. Dillon. The APW will be processed at the Vaccine and Infectious Disease Organization and University Research Offices. Relevant activities of the APW will be implemented during the period of June 2010 and January 2011. Further grants will be developed thereafter.

Insights gained into the Canadian and /or International Research Community

Nowadays, there are no boundaries between countries/regions restricting the spread of infectious diseases including the spread of antimicrobial resistance in bacteria posing significant public health problems, such as *N. gonorrhoeae*. GASP Phase 1 in Latin America and the Caribbean established that a strong network and reporting system could be established and maintained with appropriate financial support. This network was viable for over a decade. The infrastructure in various countries to perform GASP-related initiatives has been strengthened through network activities. Given the urgency of the problem, in which *N. gonorrhoeae* has been likened to a superbug, there has been international recognition that GASP Phase 2 should begin in LA&C where there has been only limited information on the scope of the problem over the past decade.. For this round of GASP-LA&C activities, the principles of sustainability and value-added research will be incorporated into the mission of the GASP. In addition, we will continue to engage national laboratories in Canada and the US, thereby strengthening the extent of the GASP network in the Americas. The Dillon laboratory also researches similar issues in Saskatchewan with the collaboration of the Saskatchewan Disease Control Laboratory in Regina. In this way, Saskatchewan will be engaged in the broader global initiative pertaining to GASP.

Benefits of the international interaction

By undertaking this project, supported by the Global Partners II program, a broad interaction has become practical by linking Canadian researchers, the WHO, and the governmental and academic agencies in Latin America and the Caribbean. This builds upon linkages established by Dr Dillon beginning in the 1980s. The GASP Phase 2 in Latin America and the Caribbean will enable better global monitoring of an important medical problem including emerging antimicrobial resistance, training and capacity building in various countries and, hopefully, sustainability. Research networks that will be strengthened include those pertaining to the molecular epidemiology and microbiology (resistance mechanisms) of antibiotic resistant *N. gonorrhoeae* in the region.

Constraints and/or challenges encountered

Although limited, the present funding was important because it generated the ability to establish the appropriate contacts for renewed GASP LA&C activity. We also sought to engage trainees from several Latin American and Caribbean countries through various grant activities, but were challenged due to budgetary travel constraints which would have permitted active recruitment (of graduate students in particular). We faced challenges in identifying candidates for potential training funding such as the Canada-Chile (Government of Canada, Department of Foreign Affairs and International Trade Canada funded Canada-Chile Leadership Scholarship Program), Canada-CAREC (Government of Canada, Canadian Commonwealth Scholarship Program

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funded Canada-CARICOM Faculty Leadership Pilot Program) grant opportunities because of time constraints and limited connections with those institutions.

- The recent earthquakes in Chile have caused major damage to the infrastructure of our contact laboratories in that region. In the time that followed this disaster contact was limited, and the re-establishment of the GASP network was not a priority in Chile.

- Due to management changes in the CAREC organization since the first phase of the GASP network, re-establishing contact has been also been a challenge. At this point in time we are still looking for a commitment from this region to participate in the network. Other network collaborators (Argentina) have attended meetings with CAREC partners and indicated that there is a real interest in the region in this area of work.

Potential for future research cooperation and the expected follow-up or future joint initiatives

The Global Partners II grant established a foundation for future cooperation. Future joint initiatives include:

- 1 Training of HQPs from local institutions in Saskatchewan and elsewhere. This will be implemented by applying for funding from Canada-supported initiatives such as government funded Canada-Latin American country fellowships, etc.

- 2 Launching an expanded GASP Phase 2 program in LA&C with the support of the World Health Organization and others. This has been initiated by obtaining a WHO grant (Relevant funding #1). Further funding is being sought to sustain the project, and eventually the network will be hand over to regional centres.

- 3 Potential long term support from the WHO is expected through the establishment of the *WHO Collaborating Centre for Gonorrhoeae and other Sexually Transmitted Infections (STIs)* under the leadership of Dr Dillon at the Vaccine and Infectious Disease Organization (VIDO), University of Saskatchewan.

Relevant Presentations

- 1 **J.R. Dillon.** April 7, 2010. *Invited Oral Presentation.* Monitoring AMR in *N. gonorrhoeae* in selected countries in Latin America and the Caribbean. Joint WHO/CDC consultation on the strategic response to the threat of untreatable *Neisseria gonorrhoeae* and emergence of cephalosporin resistance in *Neisseria gonorrhoeae*. WHO Regional Office for the Western Pacific (WPRO) - Manila: April 7, 2010. Manila, Philippines.

- 2 **J.R. Dillon.** April 8, 2010. *Invited Oral Presentation.* Regional support for GC AMR in the Latin American sub-Region (Re-establishing the Gonococcal Antimicrobial Susceptibility (GASP) Network in Latin America and the Caribbean). Joint WHO/CDC consultation on the strategic response to the threat of untreatable *Neisseria gonorrhoeae* and emergence of cephalosporin resistance in *Neisseria gonorrhoeae*. WHO Regional Office for the Western Pacific (WPRO) -Manila: April 8, 2010. Manila, Philippines.

- 3 **J.R. Dillon.** October 21 2009. *Invited Oral Presentation.* Re-establishing the

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Gonococcal Antimicrobial Susceptibility Surveillance Program (GASP) Network (GASP Phase 2) in Latin America and the Caribbean and Argentina: trends in AMR. “Instituto Nacional de Enfermedades Infecciosas Dr. Carlos G. Malbran”, Buenos Aires, Argentina.

4 **J.R. Dillon.** October 27 2009. *Invited Oral Presentation.* Re-establishing the Gonococcal Antimicrobial Susceptibility Surveillance Program (GASP) Network (GASP Phase 2) in Latin America and the Caribbean and Chile: trends in AMR. “Instituto de Salud Publica de Chile”, Santiago, Chile.

Relevant Funding secured as a result of seed funding from Global Partners II

1. World Health Organization, Department of Reproductive Health and Research (RHR)

Controlling Sexually Transmitted and Reproductive Tract Infections (STI)

– Agreement for Performance of Work (APW) Purpose: To launch the second phase of the Gonococcal Antimicrobial Susceptibility Surveillance Program (GASP) in Latin America and the Caribbean (GASP-Phase 2)

J.R. Dillon

June 2010 – January 2011 \$98, 208

2. World Health Organization, Department of Reproductive Health and Research (RHR)

Controlling Sexually Transmitted and Reproductive Tract Infections (STI)

– Agreement for Performance of Work (APW) Purpose: To launch the second phase of the Gonococcal Antimicrobial Susceptibility Surveillance Program (GASP) in Latin America and the Caribbean (GASP-Phase 2)

J.R. Dillon

December 2009 – December 2009 \$15,558 Declined

Appendix A: Summary of Projects Awarded Global Partners II Funding Round 1 and 2

GPII Round 1: March 1, 2009 – July 1, 2010

Title: Plant Diversity, Conservation and Sustainability (Mexico)
Award: \$10,000
Start/End: April 2009 – June 2010
Principal Researcher: Hugo Cota-Sanchez
College: Arts & Science
Partner Organization: Universidad Autonoma de Sinaloa, Los Mochis , Sinaloa - Mexico
Project Description: A project to further develop a partnership with the Universidad Autonoma de Sinaloa, with interests in conservation, biodiversity and distribution of plants, in particular cacti & other related rare species in northwestern Mexico.
Student Involvement/Opportunities: Training of highly qualified personnel is a top priority of this proposal. In fact, my Ph.D. student, Ms. Deusa Santos-de-Abreu, is already involved in this project and proposal. She is investigating an unusual phenomenon in plants, vivipary, with an emphasis in the cactus family and will submit her proposal to this Global Partners II program. There are also another two graduate students: Mr. Bardo Sánchez from the UAS (already involved in biodiversity studies in the islands of NW Sinaloa) and Ms. Violeta Bautista-Alvarado, who is already admitted to the UofS and will start her MSc program under my supervision in May 2009 and will investigate aspects addressed in this proposal.

Title: Strengthening the Promotion of Healthy Lifestyle Behaviors towards Reducing the Risk of Obesity Among School-Aged Children (Trinidad & Tobago)
Award: \$10,000
Start/End: April 2009 – June 2010
Principal Researchers: Carol Henry, Susan Whiting, Brenda Kalyn
Colleges: Pharmacy & Nutrition, Education
Partner Organizations: University of West Indies, T & T Ministry of Education
Project Description: The goal is to integrate collaborative health and education research to inform health-promoting school policy and practice
Student Involvement/Opportunities: Graduate students at the U of S and UWI have been involved in all aspects of project design and implementation, research exchanges and knowledge dissemination from the beginning of the partnership (2006) to date. Every effort will be made to continue this trend.

Title: Sustainable Rural Agriculture (Ethiopia)- Capacity building for the Human Nutrition Graduate Program in Ethiopia
Award: \$10,000
Start/End: May 2009 – April 2010
Principal Researchers: Gord Zello, Mike Grevers, Carol Henry, Susan Whiting

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Colleges: Agriculture & Bioresources & Pharmacy and Nutrition
Partner Organization: Hawassa University
Project Description: This project is a new initiative that has been developed from work initiated by the partners that seeks to increase the capacity of HU to deliver the Masters of Applied Human Nutrition program in order to enhance nutritional practices in Ethiopia through well-developed and harmonized nutrition programs
Student Involvement/Opportunities: Graduate students are an integral part of this collaboration. Jennifer Wright's (JW, new UofS MSc student) thesis research will include working with HU and the hospital there in investigating new and practical nutritional therapies to combat infant diarrhea. She is also enrolled in an interdisciplinary SLSC 898.3 course "Study Abroad in Ethiopia for UofS Graduate Students" that is being offered through the C of A&B.

Title: Feasibility Study for Partnership in Graduate Gender Studies Research Exchange between the University of Saskatchewan and Lanzhou University in China
Award: \$10,000
Start/End: April 2009 – June 2010
Principal Researcher(s): Diana Relke, Marie Lovrod
College: Arts & Science
Partner Organization: Lanzhou University
Project Description: Building on an existing relationship with Lanzhou University, initially established by members of the Sociology department, this project seeks to explore the feasibility of enhancing and deepening that relationship with a focus on graduate studies exchanges in the field of Women's and Gender Studies.

Title: Gender, Health & Fair Trade (Nicaragua)
Award: \$10,000
Start/End: April 2009 – June 2010
Principal Researchers: Lori Hanson
College: Medicine
Partner Organization(s): Fundacion Entre Mujeres, La Asociación de Desarrollo Social de Nicaragua (ASDENIC), CafeNica, Movimiento de Mujeres Flores del Café, CaNica
Project Description: This participatory research planning phase bring partners together to discuss a long-term action and research agenda, structured around a discussion of the findings of an environmental scan as well as to support ongoing research training and student involvement
Student Involvement/Opportunities: Alejandra Ganem-Cuenca: Global Partners II project; Jannie Leung: Global Partners II project.

Title: Revitalizing and Strengthening Public Health and Research Networks in Latin American and Caribbean Countries: Emerging Antimicrobial Resistance in Neisseria Gonorrhoeae - Implications for Disease Control
Award: \$7,500
Start/End: April 2009 – June 2010
Principal Researcher: Jo-Anne Dillon

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College: Arts & Science
Partner Organizations: Instituto Nacional de Enfermedades Infecciosas - Argentina, Caribbean Epidemiology Center – Trinidad, the Chilean Public Health Institute – Chile.
Project Description: A program for monitoring gonococcal antimicrobial susceptibility (GASP-Phase1) was established in the 1990s in countries across Latin America and the Caribbean, directed by Dr Dillon. Since 2000, the GASP network has not gathered proactive data on antimicrobial resistance. The WHO has requested that these international collaborations be revitalized in view of the importance of antimicrobial resistance as an international, significant public health issue. The extent of the problem and molecular epidemiology of gonorrhoea in Latin America and the Caribbean will be ascertained through the revitalization and expansion of the GASP network co-ordinated and directed by Dr. Dillon at the University of Saskatchewan (GASP –Phase 2).
Student Involvement/Opportunities: It is anticipated that one to two graduate students will be recruited from the partner's institutes to complete more advanced studies at the U of S based on the isolates collected locally. Alternatively, a U of S student may be engaged to complete some of the work should other candidates not be found.

Title: Ecohealth, Gender, Goats and Governance in Rural Uganda
Award: \$7,500
Start/End: April 2009 – June 2010
Principal Researchers: Claire Card, Adil Nazarali, Carol Henry
Colleges: Western College of Veterinary Medicine, Pharmacy & Nutrition
Partner Organizations: Faculty of Veterinary Medicine at Makerere University, Foundation for AIDS Orphaned Children (FAOC)
Project Description: To use an ecohealthy approach to empower women from HIV/AIDS infected households through: sustainable agriculture and restoration of the environment; better food and water security; improvements in human health; policy advocacy for the land rights for women; and access to microcredit.
Student Involvement/Opportunities: Pharmacy & Nutrition student – field experience

Title: Gender, Health & Fair Trade (Nicaragua)
Award: \$5,000
Start/End: April 2009 – June 2010
Principal Researchers: Alejandra Ganem-Cuenca, Jannie Leung (Graduate Students)
College: Medicine
Partner Organization(s): Fundacion Entre Mujeres, La Asociación de Desarrollo Social de Nicaragua (ASDENIC), CafeNica, Movimiento de Mujeres Flores del Café, CaNica
Project Description: Alejandra Ganem-Cuenca project: to examine how gender equity is understood, experienced and articulated in fair trade cooperatives; to identify ways that participation in and experiences of fair trade differ for men and women at the cooperative and household level; to identify health outcomes of fair trade for men and women; and to examine whether or not particular cooperative structures and organization influence the first 3 objectives.

Jannie Leung project: to develop social indicators to measure, monitor and evaluate how participation in fair trade cooperatives in Nicaragua affects community health, food security and other aspects of social development through a gendered lens.

GPII Awards Round 2: April 2010 – June 2011

Title: Strengthening Long-Term Capacity for Research on Poverty Reduction and Policy Development in Western Ethnic Minority Region (China)
Award: \$15,000
Start/End: April 2010 – June 2011
Principal Researcher: Li Zong
College: Arts & Science
Partner Organization: Northwest University for Nationalities, Lanzhou, China
Project Description: The project is to collaborate with Northwest University for Nationalities in Lanzhou, China, to build long term capacity for policy relevant research on poverty and ethnic equality in a region of western China with a large ethnic minority population. The project also includes training opportunities for young policy researchers and graduate students as a means to respond to China's national policy of developing the West and reducing regional poverty.
Student Involvement/Opportunities: both Chinese and Canadian graduate students, particularly female graduate students will have an opportunity to acquire training and knowledge in social policy research methods and social policy development.

Title: Canadian Support for the Belarus, Ukraine, Poland Asthma long-term Study (BUPAS)
Award: \$10,000
Start/End: April 2010 – June 2011
Principal Researchers: Donna Rennie
Colleges: Nursing
Partner Organizations: Medical University of Silesia, Poland
Project Description: The purpose of the partnership is to work collaboratively at an international level. The Canadian role is to provide expertise in conducting epidemiological studies of asthma in children. BUPAS will assess the prevalence of asthma in children ages 6 to 14 years in Belarus, Ukraine and Poland. A platform will be developed for population-based screening for childhood asthma in the future.
Student Involvement/Opportunities: Team members have trained two PhD students, five Master's students, and two post-doctoral fellows in recent asthma epidemiology studies. Students at collaborating universities will participate in a two-year international study abroad under CCHAS's CIHR Strategic Training Initiative in Health Research (STIHR) program for graduate education, which provides training in rural and agricultural health.

Title: e-clean, e-safi: An Appreciative Inquiry Informed Approach to e-waste through Joint African Intra-regional and International, Situational and Stakeholder Analysis (Uganda)
Award: \$10,000
Start/End: April 2010 – June 2011
Principal Researchers: Pammla Petrucka

International Research Office, University of Saskatchewan (October 31st, 2010)

Colleges: Nursing
Partner Organization: Makerere University, Kampala, Uganda
Project Description: This project will be to conduct a situational scan on contextual and conceptual aspects of e-safi (e-clean); to explore the perceptions of stakeholders regarding e-safi; and to identify promising practices of e-safi within and outside the partnering sites.
Student Involvement/Opportunities: a doctoral student participates in all aspects of the project including work on tool development, data collection/analysis, and reporting.

Title: Exploring Collaboration and Capacity Development between the School of Nursing and Midwifery, the College of Nursing and Hawassa University (Ethiopia)
Award: \$10,000
Start/End: April 2010 – June 2011
Principal Researcher: Philip woods
College: Nursing
Partner Organization: Hawassa University
Project Description: The main objectives of the project are to meet and explore opportunities for partnership, align College of Nursing faculty research interests with the capacity development requirements of the School of Nursing & Midwifery, Hawassa University, and to develop a strategic approach to the potential partnership, identifying specific projects and deliverables. Discussions will embrace professional practice, academic programming (including curriculum and delivery methods) and research.
Student Involvement/Opportunities: The College of Nursing has a focus and support for global health, including international placements and exchanges for both undergraduate and graduate programs. The Ethiopian School of Nursing & Midwifery is interested in developing a graduate program and their visit here will include dialogue with our graduate students.

Title: Collaborative Research Training in Nampula (Mozambique)
Award: \$10,000
Start/End: April 2010 – June 2011
Principal Researchers: Ronald Siemens
College: Medicine
Partner Organization: Universidade Lurio, Mozambique
Project Description: This project will strengthen the collaboration and increase the capacity of Universidade Lurio in teaching and training Mozambican medical students in community-based research. It will also increase the pediatric teaching capacity of Universidade Lurio faculty.
Student Involvement/Opportunities: Research data gathering will include the entire class of Universidade Lurio medical school and six Canadian medical students.

Title: A National Wildlife Health Centre for Sri Lanka: A Preliminary Assessment of Need, Value and Feasibility
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Award: \$10,000
Start/End: April 2010 – June 2011
Principal Researcher: Ted Leighton
College: Western College of Veterinary Medicine
Partner Organization: University of Peradeniya, Sri Lanka
Project Description: The project is for a preliminary assessment of the need, value and feasibility of establishing a national wildlife health center in Sri Lanka as a first step toward establishing a program to develop capacity in Sri Lanka to direct and manage diseases in wildlife and their implications for environmental conservation, domestic animal health and public health. Additional objectives include a meaningful scientific exchange at the Canadian Cooperative Wildlife Health Center (CCWHC) for a member of the faculty of Veterinary Medicine and Animal Science, University of Peradeniya, and to provide a formative experience in International Research for a French veterinary student at the National Veterinary School in Lyon, France.
Student Involvement/Opportunities: The project includes a French graduate student on exchange at the Western College of Veterinary Medicine, and aims to include 1 to 2 graduate programs for U of S students.

Title: Advancing Biodiversity Conservation and Sustainable Management in the Canadian Prairies and Ukrainian Steppes by Enhancement of International Research Partnerships (Ukraine)
Award: \$10,000
Start/End: April 2010 – June 2011
Principal Researcher: Vladimir Kricsfalusy
Colleges: School of Environment and Sustainability
Partner Organizations: M.G. Kholodnyi School of Botany, National Academy of Sciences of Ukraine (Kyiv); Luhansk Taras Shevchenko National University (Luhansk)
Project Description: The project is to establish the Temperate Grassland Ecology Group in Ukraine and Canada, to develop a platform for exchanging expertise and information between partner institutions, and to initiate joint research programs between partner institutions. The proposed research activities will address problems and solutions for biodiversity conservation, invasion of exotic species and management of grasslands in human-altered landscapes.
Student Involvement/Opportunities: A U of S PhD student will assist in hosting Ukrainian partners in Canada during their visit to the grasslands of Saskatchewan, contact administrations of national and provincial parks in Canada, and travel to Ukraine as part of the research team. To Ukrainian PhD students will also participate; the first will assist in hosting Canadian partners in Ukraine, contact national parks and reserves in Ukraine

Title: Transcultural Youth Orientations to Place and Implications for Environment-related Education Policy & Practice (South Africa)
Award: \$5,000
Start/End: April 2010 – June 2011
Principal Researchers: Marcia McKenzie

International Research Office, University of Saskatchewan (October 31st, 2010)

College: Education
Partner Organization: Rhodes University, Artworks Youth Education, Umthati Indigenous Food Security Training Project
Project Description: The project is to study and consider how data collection and analysis needs to be modified for cross-cultural contexts. A pilot test will be done in the urban South African context of Grahamstown, with youths ages 14 – 19 in collaboration with two community-based groups: Artworks Youth Education, and Umthati Indigenous Food Security Training Project. Narrative or life-history methods of data collection offer an opportunity to explore youth's histories and memories in relationship to place and culture.
Student Involvement/Opportunities: PhD student, Jean Kayira's research in Malawi, is part of the larger proposed study. If additional funding is approved, this will be used to fund a research assistant in South Africa to coordinate and extend the pilot study. In the larger study we anticipate engaging students as research assistants in all aspects of the research, including ethics applications; design; ongoing literature review; data collection, transcription, and analysis; and the communication of results through publications and presentations. We will provide active mentoring for them throughout the process and will consider them central to the team.

Title: Doctoral Research Seminar and Field Work on Exploring Indigenous Ecological Knowledge in a Junior Farmer Field and Life Skills School in Malawi (Africa)
Award: \$5,000
Start/End: April 2010 – June 2011
Principal Researchers: Jean Kayira (Graduate student)
College: Education
Partner Organization: Rhodes University
Project Description: I intend to work with youth, Elders, youth guardians and instructors to explore the possibilities of Indigenous Ecological Knowledge (IEK) in furthering youth learning in relation to culturally appropriate environmental sustainability.

Title: Impact of the Indian Forest Act on the Tribal People of Samrانيا (India)
Award: \$5,000
Start/End: April 2010 – June 2011
Principal Researchers: Vijayalakshmi Kalagnanam (Graduate student)
College: Agriculture & Bioresources
Partner Organization: BAIF Development Research Foundation
Project Description: The Government of India introduced The Scheduled Tribes (Recognition of Forests Rights) Bill, 2005 which recognizes forest rights of Forest Dwelling Scheduled Tribes (FDSTs) who have been occupying the land prior to October 25, 1980. The project will provide a procedural framework for assessing the impacts of past, current and future management systems. This will involve a village-level analysis of the socio-economic and cultural impacts of forest use in an historical and regional context by examining the cumulative impacts of past policies and the potential effects of the change in the Forest Act.

Title: Collaboration of Nutrition Graduate Students Through Research for Improved Health in Ethiopia
Award: \$5,000
Start/End: April 2010 – June 2011
Principal Researchers: Jennifer Wright (Graduate student)
College: Pharmacy & Nutrition
Partner Organization: Hawassa University
Project Description: The objectives of this project aim to provide innovative nutrition graduate student research opportunities in the areas of food security, nutrition, health promotion and disease prevention at Hawassa University. The objectives are to continue the on-going D-lactic acidosis research study, started in 2009, in collaboration with HU graduate student (Biniam Amare), HU (Dr. Kassahun) and ARH (Dr. Yifru); and to work in collaboration with nutrition graduate students (recruited by HU and UofS partners) at HU to develop a survey to determine the prevalence and incidence of diarrhea in Awassa and surrounding areas (e.g., urban & rural Ethiopia).

Title: Shared Threats, Shared Solutions: Linking Grassland Conservation in Saskatchewan Canada and the Steppe Prairies of Southeastern Ukraine
Award: \$3,000
Start/End: April 2010 – June 2011
Principal Researchers: Allison Henderson (Graduate student)
College: School of Environment and Sustainability
Partner Organizations: National Academy of Sciences of Ukraine; Luhansk Taras Shevchenko National University
Project Description: Allison Henderson will: 1) assist in hosting Dr. Myroslav Shevera and Oksana Kucher during their visit to the native grasslands of south-western SK and, 2) travel as part of Dr. Vladimir Kricsfalussy's research team to the Kyiv, Luhansk, Donetsk, and Kherson provinces of Ukraine. The objectives of the proposed activities are: 1) to foster establishment of a strong research collaboration between Canadian and Ukrainian partners and, 2) to develop mutually-beneficial and effective conceptual and methodological frameworks for a Ukrainian/Canadian grassland ecology research project.

Appendix C – 2nd Report

Technical Report 2: Global Partners II Program (Round 2 April 2010-June 2011)

Submitted by

International Research Office
University of Saskatchewan

November 2011



Children from the Sahariya Tribe, Rajasthan, India

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SECTION A

Background

The International Research Office (IRO) team promotes and manages the GPPII program. In collaboration with our selection committee we have decided which proposals have been funded over the three funding periods. ILO tracks funded projects and maintains contact with recipient's through-out the project cycle to monitor the progress of project implementation. The ILO is also responsible technical and financial reporting to IDRC.

Since its inception in 2008 and to the completion of Round 2, in 2011 the University of Saskatchewan Global Partners II Program, in collaboration with IDRC, has supported 20 research and development projects. This is the third report to IDRC on the program. It follows an Interim Technical Report provided to IDRC in February of 2010 and the first Technical Report submitted in October 2010. This, the second Technical Report provides a more in depth summary of the research projects completed under Round 2 of the GPPII Program, as well as reporting on the first stage of a two stage external program evaluation.

It is with sincere gratitude that we thank IDRC for their financial support of this program. We would also like to thank our colleagues at IDRC Mr. Luc Mougeot and Ms Aida Du Bois. Their assistance to us and their support of the Global Partners II program is highly valued and very much appreciated.

Changes to the Program to Date

Eleven projects were selected for funding in Round 2. Two researchers were provided with extensions (one as a result of personal considerations and the other due to a request from their in-country partner) and will complete their research and report by the end of Round 3.

In 2010 MIC Consulting was hired to conduct a two stage program evaluation. An interview guide and questions were developed by Laurel O'Connor Assistant Director RS International Research Office in consultation with Mr. Luc Mougeot. Personal interviews were conducted with all recipients of funding from the first Round. A report of the first of a two stage program evaluation and the questionnaire template can be found on in Section C. The second phase of the program evaluation will be complete by February 2012.

Acting upon recommendations brought forward by recipients, and considering what aspects of the program were in the control of the IRO to effectively improve, a number of changes were made. These changes included:

- An update of the original financial reporting excel template and a simplification of required reporting on cash expenditures that are already being tracked and accounted for adequately through the University of Saskatchewan's expense claim and financial accounting systems
- Creation of a simple technical report template
- An increase in hands on assistance from ILO staff made available during reporting periods
- Enhancement of transparency around how funding decisions were made.

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- Names of committee members and their affiliations were provided when call for proposals was made.
 - A new simplified review guide and scoring matrix was developed and used by committee members, both documents were provided with calls for proposals

Section B

The following section provides a summary reporting of each of the projects completed under Round 2 of the Global Partners II Program. Each summary was prepared by the researcher who completed the project with some minor editing by the ILO for consistency of format and clarity.

Deforestation –Its Impact on the Sahariya Tribe, Rajasthan, India

Vijayalakshmi S. Kalagnanam (Masters Student)
School of Environment and Sustainability
University of Saskatchewan

Executive Summary

Impact of the Indian Forest Act on the Tribal People of Samrania—this was the initial study that was to be undertaken. BAIF Research Development Foundation (BAIF), the collaborating non-governmental organization, was working in the Sahariya Tribal region for development of the members of Khanda Sharol village in Baran District of Rajasthan in India. What I had known as Samrania earlier was in fact the village of Khanda Sharol. Deforestation had impacted the livelihoods of the forest-dependent Sahariya Tribe. They are struggling to make a living. So the objective of this partnership was set up to collect data on the rate and causal factors leading to changes in forest cover in Baran District, Rajasthan and to determine how such changes have affected the local collection of Non-Timber Forest Products by village residents of Khanda Sharol and was titled as -- Deforestation –Its Impact on the Sahariya Tribe, Rajasthan, India.

Changes in land cover, most notably in the forest regions of India, are occurring at an unprecedented rate. The loss of forest cover has been attributed to a host of factors, including population growth which logically leads to expansion for human settlement, the conversion of forested lands to meet growing agricultural and livestock grazing demands, changes in forest policies that have hastened the unsustainable use of forest resources, and an over-reliance on fuel wood to meet rural energy needs. Compounding these conditions has been new legislation (e.g., Wildlife Protection Act, 1972, Forest Conservation Act, 1980) that has set aside large tracts of forest as protected areas thereby prohibiting local use.

Historically, forests have been providing substantial support to rural economies. There are about 250 tribal communities in India, representing 7.8% of the total population. Because tribal peoples are, or once were, located in close proximity to forest areas, their livelihoods have in many cases have been undermined by their exclusion and/or the depletion of the forest.

Today, many tribal communities in remote regions of India face a daily struggle to survive. Poor health, limited access to services, and forced emigrations to urban areas now characterize much of their daily existence. Sahariya Tribe and other forest-dependent people of Khanda Sharol are no different. To get a better understanding of the demographics of the people of Khanda Sharol a detailed household survey was administered to each household, and included various

parameters like family structure, land and livestock ownership, income and expenditure information, and NTFP collection patterns. Individual interviews with committee members, BAIF officials and focus groups of village people were conducted. The surveys and interviews conclude that the landscape of Khanda Shahrol has changed over time. The inhabitants of Khanda Sharol village have seen and experienced the changes that have taken place over time.



Girls and women carrying water

The population and the livestock growth along with the change in forest cover has impacted their livelihood sources and hence life in general.

While it cannot be stated unequivocally that the loss of forest cover in the Baran District has been the cause of the deteriorating well-being of tribal members in Khanda Sharol, forest conversion can be linked to shifts in household economic production which then can be tied to poverty, health and education of tribal members. Two hundred and ten out of 363 households (57.9%) live below the poverty line. Poverty has a great impact on nutrition and health. Information regarding the weight and food intake of infants and toddlers offered dramatic insight. Most of infants fell under the 15th percentile curve of the World Health Organization Growth Standard Chart; 28% of the infants ranged between the 3rd and 15th percentile curve and 64% infants were below the 3rd percentile curve. Only 18% of the toddlers fell between the 3rd and 15 percentile curve; the remaining 82 % children fell under the 3rd percentile curve. Twenty toddlers were weighed and their food intake was noted. Only 25% of these children drank milk

on a regular basis. They mostly ate roti (Indian bread) with a seasonal vegetable or lentil. The village has a special school for the tribal community children where they are given a free mid-day nutritious meal; despite the free meal attendance is poor. Out of 85 children enrolled in the school, only 30-40 children are present on a given day. Either they are sick or they have to go to the forest to collect wood. According to the Indian Forest Act, only women and children are allowed to go into forest to bring fuel wood. Because of deforestation women and children have to make a 14 kilometer round trip to bring fuel wood which is the only source of energy in that region.

BAIF had acquired a communal land for the development of the members of this village. The trees existing on the communal land have been counted and identified and in consultation with senior members of the village, BAIF is planting more trees and plants for non-timber forest products production so that all the villages can be benefitted. The committee formed meets regularly to take care of communal land under BAIF's Guidance. BAIF is hopeful that the committee will work effectively, and will take good care of the communal land.



Researcher Vijayalakshmi S. Kalagnanam consults with community elders

Extent to Which Project Objectives were Met

There is variance in projected objectives and the objectives that were met. The initial plan was to look at the impact of Forest Act on the people of Samrainia; but plans had to be altered because the host organization I worked with was in the process of developing a communal land into a forest for improving the livelihood of the members of the village Khanda Sharol.

The village is mostly inhabited by tribal people called Sahariya. Deforestation in the area had deprived them of their livelihood and left them to be landless labourers, struggling to make a living. It was important to get a basic knowledge of the village, its surroundings and the members of the village. The following objectives were designed for the research:

-
1. To explore changes that has occurred in the forest cover in the state of Rajasthan and specifically within the tribal region of Khanda Sharol, Baran District.
 2. To determine how changes in forest cover have affected access and use of NTFP by tribal households.
 3. To determine how changes in access and use of NTFPs have affected the health and well-being of tribal members.
 4. To examine the feasibility of introducing a community-based management system for the sustained production of NTFPs.

The above mentioned objectives were met and in summary I would say that the forest cover has changed over time and that has affected access and use of NTFP of the tribal households in the village of Khanda Sharol, Baran District. Changes in the access and use of NTFP have affected the health and well-being of tribal members as well though a direct relationship could not be linked. A community based communal land has been started by BAIF, and as of now the committee as well as members of the village are interested in it. With the help of BAIF the land is being well looked after. What the future will be is yet to be seen.

Insights Gained into the Canadian and International Research Community

Communal land is a common pool property and much research has been done in this area. BAIF has acquired 135 hectares of land and has designated it as communal land for development of the village of Khanda Sharol, Baran District. BAIF has set up an 11 member committee made up of members belonging to different socio-economic groups and is training them to take care of the communal land. In consultation with senior members of the village, BAIF is planting trees and plants for non-timber forest products production so that all the villages can be benefitted. Although the future of this communal land is unknown, valuable insight can be gained through this project in understanding communal land management strategies for Canadian as well as the international research community.

Through this project I obtained valuable data on the Sahariya Tribe, which will hopefully lead to the development of a long-term support plan for these people. Deforestation has played a major role in their livelihoods. Changes in forest cover may be contributing to declining social and economic conditions of tribal members.

While it cannot be stated unequivocally that the loss of forest cover in the Baran District has been the cause of the deteriorating well-being of tribal members in Khanda Sharol, forest conversion can be linked to shifts in household economic production which then can be tied to poverty, health and education of tribal members. This project also helped in developing partnership with India for the University of Saskatchewan, Saskatoon, Canada. The thesis written for this project enhanced my knowledge and understanding of Indian tribal life, as well as it will help build U of S knowledge base.

Constraints and/or Challenges Encountered

For this research as well as for part of a CIDA internship project a survey was conducted for all 365 households in the village. The survey collected detailed information of the demographics

(family structure, land and livestock ownership, and income and expenditure information among other aspects) of each household in the village. Access to people was a significant challenge in this study. The villagers were away during day time; therefore surveys had to be done early in the morning or during evenings. The harvest season was in the middle of November and the tribe people went away to work as labourers or work on their own lands if they owned any. Two big festivals were celebrated during that time and people were busy with that too. There were political disturbances during that time frame in India but fortunately BAIF staff took good care and I was safe.

Although during this research a lot of data was collected regarding people's view regarding change in forest cover, unfortunately pictures proving the fact could not be gathered due to lack of satellite images from the previous years. Lack of pictures to provide visual confirmation could be seen as one of the limitations of this research. Although the data shows that livelihood of members of the village has changed and change in forest cover has led to income variations, a direct link could not be established for change in the well-being of the villagers. Another limitation I see is that I was unable to obtain more detailed information regarding the historical usage of NTFPs by the villagers.

Potential for Future Research Cooperation and Expected Outcomes

BAIF's interventions are a ray of hope for the villagers, but how this will progress is something that will definitely have to be seen in the future. Some of the questions that can be raised for study in the future are:

- Will the people give enough time for the communal land to develop?
 - Will men and women get equal rights?
 - What will happen when BAIF leaves?
 - Will all castes (social strata) get equal rights?
 - Will power play a role?
 - Will the committee be responsible enough to take care of the communal land?
-
- A study can be planned in the future to see how the committee and communal land is and how and if lives of the villagers has changed. A study can be planned in the future to study the performance of the committee members and development of the communal land. BAIF has a similar project in Bhilwara district where a communal land was started for development for the village. BAIF's website states that the project is working well and the committee established is functioning well. BAIF has also been approved to work with the tribal population in Madhya Pradesh and Maharashtra. The project is set up with the following objectives:
-
- To promote innovative activities and implement technologies for diversified livelihoods with focus on resource base such as wild vegetables, fruits, medicinal plants, gums, resins, lac, honey, seeds, etc., in selected clusters.
 - To re-orient agro-forestry and other farming systems in selected clusters for enhanced production of useful NTFP resources on private & community lands apart from conventional approach of conservation & regeneration in natural forest.

-
- To build capacities of staff and participating communities for activity adoption.
 - To demonstrate and undertake activities based on NTFP resources leading to local entrepreneurship.
 - To provide value addition and suitable market linkages for NTFP resources.
 - To supporting cross learning, sharing of approaches and learning for wider dissemination.

As part of my doctoral studies my interest is do a case study on the three communal lands developed by BAIF and study what works and what does not in communal land managements. The study will help in designing a conceptual framework for communal lands which can be beneficial learning opportunity in Canadian as well as international research community.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

In conclusion I would like to say that I had a wonderful learning experience through the research I conducted with being a student of University of Saskatchewan (U of S) and working under the guidance of Dr. David Natcher (U of S) and Dr. Mark Johnston (Saskatchewan Research Council). With this project we were able to establish a fruitful collaboration with BAIF Development Research Foundation which was beneficial to both concerned parties. BAIF now has a valuable database containing critical demographic information of the Sahariya Tribe in Khanda Sharol village. Knowing the profile of this tribal group is important in order to develop livelihood opportunities for the people.

Moreover, this will allow BAIF to look into providing nutritious meals to infants and toddlers. It is my hope that we can continue this partnership in the future for other similar projects. This year being the year of India in Canada, this partnership can forge forward to many collaborative research opportunities between University of Saskatchewan and BAIF. Last but not the least this project would not have been possible without the funding that was provided by IDRC and the University of Saskatchewan through the Global Partners II Program. I sincerely thank them for granting me the funding to enable me to conduct this Research.

Advancing Biodiversity Conservation and Sustainable Management In the Canadian Prairies and Ukrainian Steppes by Enhancement of International Research Partnerships

Dr. Vladimir Kricsfalussy,
School of Environment and Sustainability

Executive Summary

Temperate grasslands – one of the most endangered ecosystems in the world – are drastically altered by human activities and yet poorly represented in protected areas. The main threats currently facing Ukraine's steppes are similar to the problems experienced on the Canadian prairies – changes in land use, abandonment of traditional activities, loss of large-scale dynamic ecosystem processes, and climate change. Reducing the downward spiral of environmental degradation and biodiversity loss can be achieved through raising the public awareness, increasing local community participation, enhancing knowledge translation, and ensuring international partnership. This might be achieved through joint research projects of mutual interest, collaboration between scientists, conservationists and local communities in both countries to improve the management of natural resources. These activities can help build not only ecological resilience of steppe ecosystems, but also increase overall human well-being in rural areas.

To access the link between biodiversity conservation and sustainability in the Canadian prairies and the Ukrainian steppes we have initiated research collaboration and field visits in both countries through the project *Advancing biodiversity conservation and sustainable management in the Canadian prairies and the Ukrainian steppes by enhancement of international research partnerships*. This project was conducted within the Global Partners II Program with financial support from IDRC and University of Saskatchewan in 2010-2011.

The major topic of this collaboration is *Temperate Grasslands in a Changing Environment*. Research activities addressed problems and solutions for biodiversity conservation, invasion of exotic species and management of grasslands in human-altered landscapes. Current research program in the temperate grasslands is focused on crucial questions at the frontier between plant ecology, community ecology, biodiversity conservation and ecosystem management. The long-term goals are to investigate how global change and human impact affect temperate grasslands in different regions of the world.

It was the first time that Canadian and Ukrainian research teams traveled to each other's respective countries. The proposed travel included intensive field trips across the prairies in Canada and steppes in Ukraine, and visits to UNESCO Biosphere Reserves and National Parks in both countries where meetings with research staff of these institutions were made possible. This travel was crucial for participating researchers to gain an understanding of existing

ecological issues on the ground, to develop common methodological approaches, and to test sampling methods in the field for research activities in the future.

As a result of this project a program concept *Advancing environmental sustainability in south-eastern Ukraine* has been developed (Kricsfalussy 2010). This concept identifies the area of potential initiatives of the University of Saskatchewan's School of Environment and Sustainability within emerging in Canada the Prairie Agricultural Universities Initiative in Ukraine (PAUIU). Our program aims to promote an integrated approach to biodiversity conservation and ecosystem services to increase overall human well-being within the wider context of advancing environmental sustainability of rural areas in South-Eastern Ukraine (SEU). Apart from the gathering of valuable scientific data, project participants aimed to include learning cultural exchange, given the fact that the steppes of Ukraine were the ancestral homeland for several ethnic and religious groups who settled on the Canadian prairies in the 19-20th centuries.

Effectiveness of the project went far beyond its original purposes and the program ended up providing training and opportunities for researchers to enter international scientific community, an electronic database, and public awareness. Also, some popular articles have already been published in both Canadian and Ukrainian mass-media and served as an outreach function by informing public about the overall state, constraints, and opportunities facing temperate grasslands and interrelated environments of this ecosystem. The activities and results of the project have potential to be substantially enhanced in the strategic areas of research translation and student exchange, should this project be funded by the IDRC in the future.

Extent to Which Project Objectives were Met

The long-term goal of the research program is to examine how human impact on temperate grasslands and climate change can be mitigated through improved professional practice and collaboration in natural resources management. Therefore, the main objectives of the project activity were 1) to develop a platform for exchanging expertise and information between partner institutions, 2) to initiate joint research programs between partner institutions, and 3) to lay down the foundation for establishing of *Temperate Grassland Ecology Group*.

The joint field visits were conducted in the province of Saskatchewan, Canada as well as in Kherson, Luhansk and Donetsk oblast (province) of Ukraine during July 26-August 5, 2010 (Fig. 1). Project participants met with their academic partners (*Canada*: University of Saskatchewan; *Ukraine*: M.G. Kholodny Institute of Botany, I.I. Schmalhausen Institute of Zoology, Mykolaiv State University, Luhansk Taras Shevchenko National University) as well as with representatives of conservation organizations in Canada (Grasslands National Park, Cypress Hill Interprovincial Park, and Redberry Lake Biosphere Reserve) and nature protection institutions in Ukraine (Chornomorsky Biosphere Reserve, Askania-Nova Biosphere Reserve, Luhansk Nature Reserve, Donetsk Botanical Garden, and Svyati Hory National Park). Each meeting brought together conservationists, specialists, and scientists (Tabl. 1) to discuss and identify common threats faced and common solutions for conserving temperate grasslands.

During the field visits project participants sampled the variety of dry grassland types in both geographical and ecological terms. We analysed flora, vegetation and biodiversity of various

grasslands in selected study areas in Canada and Ukraine. We found wonderful grassland communities, rich in plant species, including some endemics. We used available literature and Internet resources as scientific background for the general characterization of visited protected areas. The results of these studies will be published in a research paper.



Figure 1. Joint Canadian-Ukrainian research team on the field studies in Grasslands National Park (from left to right: Myroslav Shevera, Oksana Kucher, Allison Henderson and Vladimir Kricsfalusy)

It was the first time that both research teams traveled to each other's respective countries. The proposed travel included intensive field trips across the prairies in Canada and steppes in Ukraine, and visits to UNESCO Biosphere Reserves and National Parks in both countries where meetings with research staff of these institutions were made possible. This travel was crucial for participating researchers to gain an understanding of existing ecological issues on the ground, to develop common methodological approaches, and to test sampling methods in the field for research activities in the future. The original purpose of the project was to draft an approach, but its effectiveness went far beyond that and the program ended up providing training, an electronic database, and public awareness, to name only a few outcomes.

Another effect of the project is that it broadened policy horizons by providing opportunities for researchers to enter international scientific community. For the first time they conducted research according to international standards, started publishing in international scientific journals, collaborated with other research projects, facilitated coordination with other organizations, and participated in training and trips abroad, thus acquiring not only new knowledge but also a new perspective on issues.

Generally speaking, a stimulating dialogue between and among researchers and decision-makers was initiated. Raising public awareness, increasing local community participation, enhancing knowledge translation, and ensuring international partnerships were targeted through the project

as well as collaborating with scientists, conservationists and local communities in both countries. These activities can help build not only ecological resilience of steppe ecosystems, but also increase overall human well-being in rural areas (Kricsfalussy 2010). As a result of the initiated project, some popular articles have already been published in both Canadian and Ukrainian mass-media and served as an outreach function by informing public about the overall state, constraints, and opportunities facing temperate grasslands and interrelated environments of this ecosystem (e.g. Kricsfalussy 2011a, 2011b; Kucher & Shevera 2011).

There was also a strong scientific establishment with the first-rate scientists in Ukraine. Whereas the issue was that establishment had been organized by a Soviet system that separated the specialists and kept them isolated from each other and also from the practical applications of their research. For example, the botanists and zoologists functioned in isolation from the forage producers and farmers.

Table 1. Meetings participants list

Name, Title	Position	E-mail
UKRAINE: M.G. Kholodny Institute of Botany, National Academy of Sciences of Ukraine		
Mosyakin S.L., Prof., Dr.Sc.	Director, Head of Department of Systematics and Floristics	s_mosyakin@hotmail.com
Shevera M.V., PhD	Senior Research Scientist	shevera@mail.ru
Wasser S.P., Prof., Dr.Sc.	Leading Research Scientist	
Shyian N.M., PhD	Senior Research Scientist, Curator of Herbarium	nsh.16@mail.ru
Protopopova V.V. , Prof., Dr.Sc.	Leading Research Scientist	vprotopopova@mail.ru
I.I. Schmalhausen Institute of Zoology, National Academy of Sciences of Ukraine		
Kostyushin V.A., PhD	Senior Research Scientist	kv@wetl.kiev.ua; kost@izan.kiev.ua
Chornomorsky Biosphere Reserve		
Selyunina Z.V., PhD	Senior Research Scientist	zapovidnyk@selen.kherson.ua
Umanets O.Yu., PhD	Senior Research Scientist	Umanets@gopri.hs.ukrtel.net, Umanets@diapup.ukrtel.net
Mykolaiv State University		
Melnyk R.P., PhD		melruslana@yandex.ru
Luhansk Taras Shevchenko National University		
Kucher O.V.	PhD student/Technician	prykhodko.oksana@mail.ru
Donetsk Botanical Garden, National Academy of Sciences of Ukraine		
Ostapko V.M., Prof. , Dr.Sc.	Leading Research Scientist	ostapko.dbs@mail.ru
Askania-Nova Biosphere Reserve		
Shapoval V.V., PhD	Senior Research Scientist	Shapoval_botany@ukr.net
Polischuk I.K., PhD	Senior Research Scientist	
Luhansk Nature Reserve, Provalsky Steppe Branch		

Bondarenko A.V.	Head of the Brach	
Tarasenko V.I.	Chief Engineer	
CANADA: University of Saskatchewan		
Kricsfalusy V., PhD	Associate Professor, School of Environment and Sustainability	vladimir.k@usask.ca
Cota-Sanches H., PhD	Associate Professor, Department of Biology	hugo.cota@Usask.ca
Henderson A.	PhD student, School of Environment and Sustainability	aeh112@mail.usask.ca
Zbyranyk O.	MES student, School of Environment and Sustainability	okz447@care2.com
Grasslands National Park		
Patterson K.	Superintendent	katherine.patterson@pc.gc.ca
Fargey P.	Species at Risk Specialist	pat.fargey@pc.gc.ca
Sturch A.	Manager	adrian.sturch@pc.gc.ca
Redberry Lake Biosphere Reserve		
Kindrachuk J.	Director	aegp@redberylake.ca
Hawrysh A.	Deputy-director	hawryshcreek@sasktel.net

It is also worth mentioning that gender stereotypes and traditionalist views still prevail in Ukraine. Political and other leaders will often state publicly that women should be at home. Whereas the program did not reflect these attitudes and women were involved.

Insights Gained into the Canadian and International Research Community

Exchange visits allowed researchers from both countries to compare and gain new insights based on field exploration and communication with colleagues from partner institutions. As a result, main threats currently facing the Ukrainian steppes were identified and turned out to be similar to the problems experiencing by the Canadian prairies – including changes in land use, abandonment of traditional activities, loss of large-scale dynamic processes, and climate change (Kricsfalusy 2011c). Whereas, additional threats to steppes in Ukraine also are land privatization, afforestation, insufficient management practices in protected areas, and growing poverty of rural population. Issues such as habitat loss and fragmentation, native species decline and exotic species invasion, management use of grazing and fire are of common concern in both countries. Given the complexity of threats to the Ukrainian steppe, more detailed studies would be a high priority in order to understand the causes underlying their biodiversity patterns.

The steppe plant species and communities represent an outstanding and highly valuable part of world's natural heritage that needs more efficient conservation efforts, particularly as many of the stands are threatened by land use and other changes. Considering the growing global demand on bioenergy, carbon sequestration, food, and importance of biodiversity conservation it is clear that the steppes of Ukraine should be one of focal regions of the world in this context.

Apart from the gathering of a valuable scientific data, project participants aimed to include learning cultural exchange, given the fact that the steppes of Ukraine were the ancestral homeland for several ethnic and religious groups (Ukrainians, Germans, Mennonites, Hutterites, and Doukhobors) who settled on the Canadian prairies in the 19-20th centuries. Also, we believe that this project will help to fill a gap in academic discourse relating the steppes of Ukraine and break linguistic barriers that have limited access to this topic for most Western researchers.

Constraints and/or Challenges Encountered

Taking into consideration the international nature of the project, successful partnership management was a vital aspect of the research. Misunderstandings, adjustments, and cross-cultural exchanges were all part of the process towards goals clarification, motivations, interests, and constraints. This project is a good demonstration of that process. A good partnership is a series of open-ended rolling contacts that can move in different directions: it requires a lot of ingenuity. Considering general lessons that could be learned, a participant noted that some important elements included a clear intent upfront, local ownership and empowerment, champions on both sides, persistence, and personal relationships based on respect and trust.

Despite some constraints that would occur of any international venture, it is important to mention a positive aspect of the project that is community outreach. It was positive not only environmentally but also as a contribution to democracy and to habits of thought that are fundamental to the development of democracy.

Throughout all visited protected areas concerns were expressed over land encroachment, conflict with wildlife, weak governance, and growing population poverty. The consensus reached by scientists and conservationists was that reducing the downward spiral of environmental degradation and biodiversity loss can be achieved through raising the public awareness, increasing local community participation, enhancing sharing of knowledge, and ensuring international partnerships. The replacement of confrontation with collaboration between antagonistic groups such as private land owners and conservationists is of a high priority.

There is also a slow paradigm shift from traditional balanced nature protection to dynamic nature conservation among scientists and practitioners which is a significant barrier for introducing modern management in steppe conservation. To conserve steppe reserves, policies of absolute non-intervention should be abandoned. Managerial practices on steppe lands (grazing, burning, etc.) should be implemented to slow down succession and conserve biodiversity of the ecosystems.

Although at times, limited knowledge of English in most Ukrainian towns was difficult and even frustrating, many local residents were eager to engage and help. Our visit provided new clues and inspiration especially on the research methods highlighting the importance of community participation. The lessons learned should not go to waste. Study sites were critically evaluated based on the data collected during our field visits. There was a discussion regarding ways of disseminating the knowledge within Canada and Ukraine, which project participant would follow up on. Lessons learned will be rolled up in publications, knowledge-sharing with other departments in all partner institutions, and continued work in Ukraine.

Potential for Future Research Cooperation and Expected Outcomes

The accomplished travel and exchange of researchers and students from participating institutions laid down the foundation for establishing of *Temperate Grassland Ecology Group*. There are strong expectations that once established, it will expand research activities in the near future into other countries where temperate grasslands occur (Canada, Ukraine, Russia, Kazakhstan, and Mongolia). The activities and results of the project have potential to be substantially enhanced in the strategic areas of research translation and student exchange, should this project be funded by the IDRC in the future. This might be achieved through organization of a joint conference or the creation of a formal student exchange program between partner institutions.

This initial research collaboration and exchange will lay the foundation for peer learning opportunities for students in the future. There is a great potential for PhD students from the School of Environment and Sustainability at the University of Saskatchewan for sharing both knowledge and methodology generated through their studies with the Ukrainian partners. The proposed research and travel activity offered Allison Henderson the valuable opportunity to understand and contribute to the issues of grassland conservation prevalent in Ukraine.

There is a wonderful opportunity for Oksana Kucher, a PhD student at the Luhansk Taras Shevchenko National University, to apply the findings of her work into the prairie ecosystem in Canada, where many problems of grassland management are similar to those that Oksana has been studying in the steppes of Ukraine.

As a result of this project a program concept *Advancing environmental sustainability in south-eastern Ukraine* has been developed (Kricsfalussy 2010). This concept identifies the area of potential initiatives of the University of Saskatchewan's School of Environment and Sustainability within emerging in Canada the *Prairie Agricultural Universities Initiative in Ukraine* (PAUIU). Our program aims to promote an integrated approach to biodiversity conservation and ecosystem services to increase overall human well-being within the wider context of advancing environmental sustainability of rural areas in South-Eastern Ukraine (SEU). The long-term objective of this program is to increase human well-being by implementing integrated land-use and nature conservation management in rural areas of SEU through improving access to environmental information and decision-making (education of students, knowledge transfer to experts and local authorities, involving of local people to management) and integration with local economy.

Overall, the proposed activities will enhance ability of rural communities to address problems and solutions for biodiversity loss and environmental degradation which will assist in reducing poverty. The key deliverables of this program will be:

- textbook/course scripts "Biodiversity Conservation and Management" to be prepared for graduate students at participating universities in Ukraine;
- teaching modules to be distributed to the learning universities of all participants in the study;
- graduate student exchanges for theoretical studies and practical field courses;

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- research translation through co-advising master and doctoral students, exchange of visiting lecturers and field researchers to conduct studies and interviews together;
 - peer reviewed academic papers to be composed by researchers involved in the study;
 - proceedings to be published from an international scientific conference;
 - development of GIS, maps (for the endangered species, plant communities and habitats) and website;
 - an awareness raising brochure for public at large;
 - series of workshops involving the research team, stakeholders, and local authorities;
 - establishment of a regional learning network of stakeholders affiliated to *Temperate Grassland Ecology Group*;
 - *Local Biodiversity Action Plans* for model communities within the targeted regions in Ukraine;

The program-specific objectives directly correspond to the broader goals of *Canada's International Policy Statement* and *Canada's Aid Effectiveness Agenda*. The program will also contribute to the initiative *Community Based Approach to Local Development* which is being implemented in SEU by European Union and United Nation Development Program with support by the Government of Ukraine, local authorities and self-governance bodies in 2009-2011. The program also suits well into the wider United Nation international initiative *Ukraine in 2015: Millennium development goals adapted for Ukraine* and *The Concept of National Programme of Ukraine for Biodiversity Conservation in 2005-2025*.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

The partnership between School of Environment and Sustainability at the University of Saskatchewan, and M.G. Kholodny Institute of Botany, National Academy of Sciences of Ukraine and Luhansk Taras Shevchenko National University, is a new and promising venture. This partnership emerged through research collaboration in the field of Plant Sciences between Dr. Kricsfalusy and Dr. Shevera.

The initiated partnership holds great potential for future collaboration between the above mentioned institutions in the new scientific fields of biodiversity conservation, invasive species ecology, grassland conservation and management. The started research activities will examine how human impact and climate change on prairie/steppe ecosystem in temperate zone of Canada and Ukraine can be mitigated through an improved professional practice in natural resources management.

The assembled research team has considerable relevant expertise and developed during the project implementation research program is well-supported by home institutions in both countries. Dr. Kricsfalusy built his career in Ukraine before immigrating to Canada and has well-established research networks with many Ukrainian universities and research institutes of the National Academy of Sciences of Ukraine.

School of Environment and Sustainability, University of Saskatchewan supported the project activities by providing \$2,120 (in-kind cash contribution) to offset travel expenses and assisted in the establishment of this important research collaboration. The School also provided temporary

office space at the University of Saskatchewan as required throughout the duration of the project; interpretation services were provided by Dr. Kricsfalussy on behalf of the School. Founded in July 2007, the School of Environment and Sustainability at the University of Saskatchewan was designed to address interdisciplinary in both learning and research. The strategic priorities of the School include diverse aspects of environment and sustainability which are important to local, regional, and global ecosystems. Biodiversity conservation and environmental management are among key long-term priorities for the School's international academic cooperation. The establishment of an international research partnership is extremely important to the School of Environment and Sustainability. Creating linkages between the local and the global has been articulated as an institutional imperative at the University of Saskatchewan.

M.G. Kholodny Institute of Botany, National Academy of Sciences of Ukraine provided organizational and technical assistance for the joint research groups during field trips in the Ukraine. The Institute also supported research activities by providing temporary office space as required and access to the herbarium collections on site. *Luhansk Taras Shevchenko National University* secured organizational and technical assistance during field trips in Luhansk, Donetsk, and Kherson provinces of Ukraine. The main research priorities of the M.G. Kholodny Institute of Botany, National Academy of Sciences of Ukraine are fundamental systematic, floristic and phytocoenological studies of phytobiota and mycobiota, as well as the structure, organization and dynamics of biodiversity, its monitoring and conservation. The conducted research activity is perfectly suited to the Institute's long-term priorities for international cooperation. Both partner institutions from Ukraine benefited highly from the proposed field trips where participants will exchange valuable knowledge, collect original data and gain valuable insight into the conservation and sustainable development of temperate grasslands in a Canadian prairie ecosystem setting.

Field visits and other activities have the potential to be substantially enhanced in the areas of research translation and learning exchanges between Canadian and Ukrainian partners. This might be achieved through joint research projects of mutual interest, collaboration between scientists, conservationists, and local communities in both countries to improve the management of natural resources. These activities can help build not only ecological resilience of steppe ecosystems, but also increase overall human well-being in rural areas. If carefully managed and planned, sustainable development and biodiversity can go hand in hand and reinforce each other.

As with most of the larger interdisciplinary science events, integration of diverse disciplines, methods and values will state a major challenge. The future cooperation should be more than a mere platform for information exchange. Rather it should be a means to steer this program towards more interdisciplinary research initiatives, which in turn generate better knowledge on Global Change processes in the temperate grasslands.

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Shared Threats, Shared Solutions: Linking Grassland Conservation in south-eastern Ukraine and Saskatchewan, Canada

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Executive Summary

Protection of species at risk is a growing global concern in temperate grasslands (Gauthier and Wiken, 2003), an ecosystem now considered among the most altered and imperiled on our planet (Samson and Knopf, 1994, 1996; White *et al.*, 2000). Land-use change (e.g. cultivation, oil and gas development, livestock production) poses a serious threat to the remaining native temperate grasslands around the world. According to Pressey *et al.* (2007) and Kiesecker *et al.* (2009), effective conservation planning for the future relies on careful examination of the influential ecological, social, economic and political factors in a system. Though government-regulated protected areas such as national parks and nature preserves play an important role, collaboration with members of the civic community outside of protected areas is considered a critical piece to achieving conservation (Cortner and Moote, 1999; Duane, 1997; Sutherland *et al.*, 2009). The aim of our IDRC funded research was to compare the socio-political factors that might influence the success of conservation planning in temperate grasslands of the Ukrainian steppes and Saskatchewan mixed-grasslands. Furthermore, we aimed to establish open and trusting relationships with potential Ukrainian researchers for future grassland research.

In addition to building on an existing U of S/Ukrainian research connection, we selected the steppes of Ukraine because the temperate grasslands found in Saskatchewan, Canada and Ukraine share common threats (e.g. land-use change) and common management goals (i.e. biodiversity conservation). Interestingly, our study sites are set within very different land-use, political and cultural contexts that have real implications for the capacity of each country to achieve their grassland conservation goals.

All research was be mediated and led by Dr. Vladimir Kricsfalusy. Dr. Kricsfalusy, originally from the Ukraine, built his career as a biodiversity and invasive species specialist in Ukraine before immigrating to Canada. He relied on well-established research networks with the [Luhansk Taras Shevchenko National University](#) and National Academy of Sciences of Ukraine during this research trip.

During our visit to Ukraine in August 2010, Allison Henderson and Dr. Vladimir Kricsfalusy (VK) met with researchers and managers from a wide range of land management units (e.g. national, oblast, private) in the south and south-eastern steppe region of Ukraine, including Kyiv, Luhansk, Donetsk, and Kherson oblasts (Ukrainian provinces). There, we gathered information about land-use change surrounding protected areas in the grassland or steppe region.

With the logistical and communications support of VK, Allison Henderson was able to:

- 1) Broadly characterize current temperate grassland land-use in and around protected areas southern and south-eastern Ukraine.
- 2) Assess the capacity for collaboration with civic communities outside of protected areas in Ukraine (e.g. livestock or agricultural producers)
- 3) Network with Ukrainian researchers and managers and encourage the establishment of an open, trusting relationship between the University of Saskatchewan and potential Ukrainian research partners.

Allison Henderson also provided logistical support and local knowledge during the visit of our Ukrainian partners, Dr. Myroslav Shevera and Oksana Kucher, to the native grasslands of south-western SK in July 2010. Despite limitations posed by language and culture, the time that Allison Henderson spent with Dr. Myroslav Shevera and Oksana Kucher in Ukraine and Canada helped establish the foundation for potential future research in the context of grasslands conservation.

Extent to Which Project Objectives were Met

Though our time in Ukraine was limited, I was able to achieve the following research objectives:

1. Broadly characterize current temperate grassland management in and land-use around protected areas in the steppe zone of southern and south-eastern Ukraine; compare with protected areas in mixed grasslands of Saskatchewan, Canada.

Due to time constraints, Allison Henderson focused her efforts on land management in and around protected areas (e.g. nature preserves, wildlife preserves and biosphere reserves) in the south and south-eastern steppe region of Ukraine. Her travel in the Ukraine included visits to protected areas in the south and south-eastern steppe region of Ukraine, including Kyiv, Luhansk, Donetsk, and Kherson oblasts (Ukrainian provinces).

I was unable to acquire digital or hardcopy maps of land-use in and around protected areas in the steppe zone. Broadly speaking, my field observations suggest that land use within steppe protected areas is minimal. Limited budgets and resources mean that protected area managers have little opportunity to employ management tools (e.g. fire, grazing) to achieve conservation goals. Even strategic management of invasive species is not possible due to limited resources.

It appears that some steppe conservation is achieved solely via school involvement, non-government organizations and through the dedication of the few people employed by protected areas. Despite the rather blatant lack of government support, protected area managers are required to formally report on their activities to the government regularly.

These observations sharply contrast to the conditions for management in protected areas in Saskatchewan, Canada. For example, managers at Grasslands National Park in south-western SK actively use fire and grazing to restore ecological integrity to their land base. While the availability of financial resources shifts through time in Canada, the government has an explicit mandate to support conservation of endangered species (i.e. Species at Risk Act).

My field observations suggest that land-use surrounding protected areas in Ukraine and Canada generally appear similar- existing native grassland is used as pasture to support livestock production and that which has been cultivated is used to produce crops (namely wheat). One key difference is that in south-western Saskatchewan the parcels of native grassland surrounding protected areas are large (>10 HA) and include government owned and actively managed pastures (i.e. PFRA pastures), while in Ukraine pieces of remaining native steppe appear small (<10 HA) and the large tracts of steppe that once were a part of the government-established collective farms (i.e. kolkhoz of 1930s) are seemingly abandoned and not actively managed today. With government support and strategic planning, former kolkhoz may pose a real opportunity for steppe conservation through carefully selected land-use practices (e.g. grazing at appropriate stocking rates, etc.).

2. To compare/contrast the policy that surrounds grassland conservation in Kyiv, Luhansk, Donetsk, and Kherson oblasts (Ukraine) and Saskatchewan (Canada)

Each protected area management representative that we spoke with explained that lack of government funding, organization and general support were the largest limitations to achieving conservation goals. Unlike the Canadian Species at Risk Act, it appeared that Ukraine does not have national legislation mandating protection of endangered species. Corruption throughout the ranks of government was also identified as a limiting factor in achieving conservation goals.

3. Assess the capacity for collaboration with civic communities outside of protected areas in Ukraine (e.g. livestock or agricultural producers)

Due to the apparent lack of economic and social stability in the rural areas surrounding protected areas, there may be little capacity for formal collaboration with civic communities outside of Ukrainian protected areas. One protected area manager mentioned that school children from the surrounding region have provided the labour needed to achieve a management goal; aside from this there were few examples of local people engaging in conservation activities. It seems as though communities are burdened with enough economic and social challenges; engaging in conservation is not on their minds.

4. Network with Ukrainian researchers and managers and encourage the establishment of an open, trusting relationship between the University of Saskatchewan and potential Ukrainian research partners.

The 2010 research exchange that Ukrainian and Canadian partners participated in succeeded in establishing the foundation for new partnerships between the School of Environment and Sustainability at the University of Saskatchewan and several Ukrainian institutions, including the [Luhansk Taras Shevchenko National University](#) and National Academy of Sciences of Ukraine. Allison Henderson accompanied VK and spent ample time establishing trust with Ukrainian partners and land-managers through repeated, informal, face-to-face interactions (Westley and Miller, 2003). During our visit to Ukraine in August 2010, we explored the potential for new collaborative research, identified specific environmental research themes of mutual interest and benefit and scoped possible mechanisms for collaboration. As suspected, our research interests intersected most strongly in the fields of temperate grassland ecology, biodiversity assessment, invasive species management and grassland conservation.

Insights Gained into the Canadian and International Research Community

A lot of potential exists for collaborations between researchers at Ukrainian institutions and the University of Saskatchewan in the areas of temperate grassland ecology, biodiversity assessment, invasive species management and grassland conservation. While the lack of Ukrainian government support described in this report may exist, this is certainly no reflection on the high quality of expertise present in Ukrainian research institutions. On the contrary, the fact that researchers and managers remain dedicated to the study and management of the steppe ecosystem despite waning government support is a testament to their strong capacity and commitment to excellence.

It was an honour to represent the University of Saskatchewan in this research exchange. Our stable political climate can provide Ukrainian partners with long-term comparative research sites that are so important to fully understanding grassland ecology (e.g. East Block grazing experiment at Grasslands National Park).

Constraints and/or Challenges Encountered

The following describes challenges with transportation, accommodation, meals, communications, travel safety and trip planning encountered during our 2010 visit to Ukraine. Ideally, students and researchers involved in future Ukraine-Canada initiatives at the University of Saskatchewan can prosper from a careful examination of what went well and what can be improved.

Transportation

- The team was adaptable to new options (e.g. car rental) and actively sought out creative ways to deal with changing circumstances.
- In the future, details of transportation can be clearly communicated with all team members to ensure that all team members agree to the terms of the transportation plan.
- In 2010, unclear communication and trip planning placed the responsibility of driving on select individuals (e.g. Vladimir and Allison); this caused mounting pressure during the trip.

Accommodations

- Accommodations throughout the 2010 trip were clean, comfortable and safe.
- Not all accommodations in Ukraine accept VISA or travelers cheques; future students should ensure that they carry Ukrainian currency with them at all times to avoid problems in paying for accommodations.

Meals

- The team again demonstrated flexibility when dining amidst the realities of a tight travel schedule; most meals were based on grocery store purchases made on-the-fly during the 2010 trip.
- In the future, travel plans can be arranged in such a way that regular hot meals are a part of the daily itinerary where possible.

Translation and Communications

- I recommend any Canadian students participating in future IDRC Ukraine initiatives take basic Ukrainian or Russian language training. Few people speak English in Ukraine. On several occasions, I felt my personal safety was at risk because I could not speak the language nor did I have someone with me to translate (e.g. on train, in taxi cab when cab driver was lost, etc.).
- In future initiatives, translation responsibilities can be delegated to one person whose only duty is to translate. This can remove some pressure and frustration from team leaders who are also responsible for many other aspects of the project (e.g. transportation, securing accommodation, etc.).

Travel safety

- The team again showed an ability to be adaptable and avoided problems when stopped by Ukrainian police on several occasions while driving on the highway.
- If Canadian students are going to be held responsible for driving in Ukraine, they must understand all rules (e.g. signage and speed) prior to taking the wheel. Also, while a smile seems to go a long way, money appears to go further with Ukrainian police.
- In the future, team leaders should ensure that students are not placed in a compromising or potentially unsafe situation where they are responsible for designated driving.

Trip Planning

- Thanks to Myroslav Shevera, the Ukrainian project leader, the 2010 IDRC team met with many Ukrainian officials from both academic and government institutions; this was a great achievement given the logistical challenges we faced.
- At the same time, travel in Ukraine is challenging and difficult. Trip plans must be made according to what is logistically possible (e.g. driving 9 hours only to miss the meeting).
- In the future, trip goals can be clearly communicated at the outset of the travel. This will ensure that all team members start on the same page and understand what the trip experience will look like.

Potential for Future Research Cooperation and Expected Outcomes

There is most definitely strong potential for future research cooperation in the areas of temperate grassland ecology, biodiversity assessment, invasive species management and grassland conservation. I cannot comment on what the next steps and new opportunities might be as they are completely dependent on Canadian/International funding. There is surely ample steppe ecology and conservation work to be done and valuable Ukrainian expertise present to achieve it.

Conclusions and Thoughts on the Benefit of the Global Partners II

Our travel funded by IDRC was critical to us achieving our objectives. The personal face-to-face time spent in Ukraine undoubtedly laid the foundation for future collaborations between grassland ecologists at the University of Saskatchewan and protected areas and scientific institutions in Ukraine.

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Strengthening Long-Term Capacity for Research on Poverty Reduction and Policy Development in Western Ethnic Minority Region in China

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College of Arts and Science

Executive Summary

The purpose of the project is to collaborate with Northwest University for Nationalities (NWUN) in Lanzhou, Gansu, China in building the long-term capacity for community-based and policy relevant research on economic and social integration of minority migrants and social inequality in western China. The project has successfully completed with three integrated components – a training program at NWUN, two international conferences at the U of S and NWUN, and a survey research in Lanzhou, China.

1. The training program at NWUN

Dr. Li Zong and Dr. Peter Li visited NWUN in December, 2011 and delivered a series of lectures to graduate students and Chinese faculty members on policy relevant research methods and ethnic equality.

2. International conferences

The International Symposium on “Economic and Social Integration of Migrants and Immigrants: A Comparative Approach,” was held at the U of S between August 30 and August 31, 2010. One keynote paper and 26 papers were presented at the conference. Four papers were subsequently published in the Prairie Metropolis Centre working paper series, one paper became a book chapter in a book to be published by McGill-Queen's University Press and various other papers were being submitted to various outlets for publication. 22 speakers from Canada and 8 speakers from China were involved, including 4 presentations by Ph.D. students, covering topics related to employment barriers, social integration, education of migrant children, family relations, rights and legal issues and policy matters. The conference created a forum to discuss issues of integration faced by migrants in China and immigrants in Canada. Many comparative perspectives were presented. Participants had opportunities to discuss further collaborations.

A follow-up international conference was held at NWUN between May 7 and May 8, 2011. 21 papers were presented at the conference, including 10 papers presented by Canadian scholars and one Ph. D. student from the U of S. The conference engaged policy makers, NGOs, and Chinese and Canadian researchers in the areas of social policy, ethnic/cultural diversity, and poverty in discussing and debating policy options aimed at reducing poverty and ethnic inequality.

3. Collaborative research

A survey on economic and social integration of minority migrants in Lanzhou was conducted during the summer 2011. In total, 1,090 completed questionnaires were collected. Findings indicate that minority migrants in western China encounter many barriers of integration similar to the experiences of the migrant underclass in other countries.

Minority migrants in Lanzhou develop an economic and residential niche but maintain economic relationships with the larger community far beyond the minority quarters. However, minority migrants remain socially and culturally segregated or marginal to Lanzhou, and the degree of marginalization depends in part on their economic class location. The findings of the study suggest that official policies in China towards integrating minority migrants need to consider institutional and economic barriers of integration beyond cultural differences.

As one of results of this survey, we have completed a 61 page report for the local government. We are now working on two joint research articles for publication in academic journals; one will be published in the *Canadian Ethnic Studies*.

Extent to Which Project Objectives were Met

The main objective of the project is to develop global partnership and collaborations between the U of S and NWUN. This objective has been met.

- Two faculty members from NWUN visited the U of S and attended the international conference in August, 2010. Dr. Hua Wen, the Dean of School of Ethnology and Sociology at NWUN, was appointed as Adjunct Professor in the Department of Sociology.
- Four faculty members and the Director of International Office from the U of S visited NWUN in December, 2010. Four faculty members in the Department of Sociology at the U of S have been appointed as Adjunct Professors at NWUN.
- The President of NWUN and a delegation will visit the U of S In November 2011. A MOA on partnership between the two institutions will be signed during their visit. The Dean of College of Graduate Studies and Research at the U of S plans to visit NWUN next year for a potential joint M.A. program in the area of ethnic studies.
- Through mutual visits, co-organized conferences, collaborative research, and joint publications, the two Universities have established academic relationship and good partnership.

Insights Gained into the Canadian and International Research Community

Two co-organized conferences encouraged scholars from Canada and China to adopt a more comparative perspective in their research and work. It also opened up new opportunities for scholars from both countries to explore collaborative research on the issues of ethnic relations, migration, integration, and social inequality.

Two Chinese professors from NWUN were invited to attend an international conference at the U of S, which also enabled them to meet colleagues in Sociology and in other disciplines such as Native Studies, and Policy Studies for exchanging academic views on ethnic and policy issues. Four professors and one Ph. D. student in the Department of Sociology at the U of S visited NWUN for academic exchange activities, including teaching, attending a conference, and conducting a research. In addition, a colleague from Women and Gender Studies at the U of S is now working with colleagues at the Lanzhou University in China to develop a joint program of research and teaching in women and gender studies.

The project has strengthened the capacity for poverty reduction and contributed to social policy development in western ethnic minority region in China, especially in the areas of reducing poverty along gender division and regional differences. A survey report has been delivered to the local government, which includes some policy recommendations. Research findings will also be available to share with ethnic community, NGOs, policy makers, and other scholars through workshops and conferences.

One direct output of the project is student training. Both Chinese and Canadian graduate students, particularly female graduate students, had an opportunity to acquire training and knowledge in social policy research methods and social policy development. A doctoral student at the U of S was involved in the project. The student had a chance to participate in the literature review, questionnaire development and sampling design. As well, the data collected from the survey will be available to the student for thesis writing. In this way, the graduate student will have a first-hand opportunity to see how a project is conceptualized, executed and analyzed from the beginning to the end.

The project also involved 50 undergraduate and graduate students in NWUN to collect the questionnaires. These students had a chance to be trained in field methodology and data collection. Chinese social policy research faculty members and graduate students benefited from the policy research experiences and expertise of Canadian scholars, especially in policy areas pertaining to ethnic studies, migration issues, poverty reduction, and methodology for policy relevant research.

Constraints and/or Challenges Encountered

To conduct empirical research on social inequalities and ethnic issues in Chinese society, we have to be aware of their sensitivity in the context of China. We have managed to study these issues under the topic of “economic and social integration of minority migrants.”

Potential for Future Research Cooperation and Expected

Our partnership with NWNU will be extended to Lanzhou University (LU). We will work with both NWUN and LU in developing training program and collaborative research on ethnic inequality and migration in the western minority region. Between Dec. 3 and Dec. 23, 2011, Dr. Peter Li and Dr. Li Zong will teach at Lanzhou University for a short course training program in methodology and conduct joint research project with Chinese colleagues at LU. On the basis of the global partnership established with NWUN and LU, we will seek other funding opportunities for a larger collaborative research project with Chinese colleagues at NWUN and LU.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

The rationale of the project is fully consistent with IDRC thematic priority, particularly the emphasis on social and economic policy (SEP). Both the Gansu provincial government and China’s Western Development Strategy identified the importance of building a *Xiaokang* (modest well-being) society by 2020 that embraces economic and social development. Our

research is also consistent with Chinese provincial and central governments' goal of western development in China.

The Global Partnership II program has benefited NWUN and the U of S at least in the following aspects:

- Chinese social policy research faculty members and graduate students benefited from the policy research experiences and expertise of Canadian scholars, especially in policy areas pertaining to ethnic studies, migration issues, poverty reduction, and methodology for policy relevant research.
- The capacity of policy research in China will be developed, enabling to generate research findings that address the social policy concerns of poverty and equality in the western ethnic minority region in China.
- The capacity for knowledge transfer and good governance could be strengthened, and it engaged Chinese policy makers, academics and NGOs in western China to explore policy options and policy efficacy.
- The goal of internationalization of the U of S is to integrate an international dimension into its education, research, and service activities in order to prepare the University community to live and work in an increasingly interdependent world. The Integrated Planning Initiative at U of S also offers timely opportunities for the University to reflect on the current state of international activities, and to develop a series of strategies to move forward, building upon past successes and current programs, and looking for ways to capitalize on new international opportunities for faculty and students. The international collaboration in this project fits into the U of S's long term priority for international academic cooperation.
- It has been a precious opportunity that enabled academics from Canada and China to share different expertise in advancing research of mutual interests and concerns. Faculty members from the Department of Sociology at the U of S have established an academic exchange channel with faculty members at the School of Ethnology and Sociology at NWUN in the areas of ethnic and gender inequality, migration, and social integration.

Canadian Support for the Belarus, Ukraine, Poland Asthma Study

Dr. Donna C. Rennie RN, PhD
College of Nursing

Executive Summary

The Can for BUSPAS grant provided support for an international collaboration project between researchers in Poland, Ukraine, Belarus and Canada. The primary purpose of this collaboration was to establish relationships with researchers from these eastern European countries, to provide researcher expertise and both statistical and knowledge translation support for the Belarus, Ukraine, and Poland Asthma Study (BUPAS). The BUPAS project is examining asthma prevalence and associated risk factors in approximately 15,000 rural and urban children living in the three study countries. To support this project, the Canadian research team held initial meetings with investigators from Poland, Ukraine and Belarus during a meeting of the Polish Respiratory Society, September 2010. The purpose of these meetings were to outline in more detail the specific needs of the team members in the three research study areas and to identify how we could support these needs. The Canadian researchers also met with the lead researcher in Poland to discuss the collaborative process expected and to outline the assistance required to secure the compilation of the final data set to be used for dissemination of findings.

Another objective of Can for BUPAS was to facilitate research intensive activities between researchers in Belarus, Ukraine and Poland and Canada. During a return visit to Poland to assist with the data cleaning and analysis, a member of the Canadian team also presented lectures on epidemiology to medical students at the Medical University of Silesia in Katowice, Poland. Canadian visits were made by the two researchers from Poland who presented findings from the BUPAS study to AIRWAYS, a respiratory research group at the University of Saskatchewan.

During the Canadian visits, other opportunities for international collaborations with Canadian researchers in agricultural health, childhood asthma, air pollution, sleep apnea were discussed as was the potential for student exchange. Although not all of the projects goals outlined in this grant were met, this project has resulted in continued collaborative research activities and the beginning of the dissemination of research findings. Dr. Lawson, one of the Canadian researchers, will lead the Canadian team again in visits to Belarus and Ukraine to assist in building upon the work of the first project. Researchers will also meet to begin preparation for the next international collaborative epidemiological study of childhood asthma that will include a Canadian component.

Extent to Which Project Objectives were Met

The overall objective for this project was to foster a research collaborative exchange for large epidemiological study of childhood asthma in rural and urban areas of Ukraine, Belarus and Poland where in the past, childhood asthma has not been well studied. Specifically our objectives were 1) to provide methodological and data management support as part of BUPAS; 2) to assist

in the dissemination of study results and 3) to support opportunities for further international research collaborations that include Canada.

Objective 1 To provide methodological and data management support as part of BUPAS

a.) Mikolajki, Poland.

The Canadian collaborators attended the 31st Congress of the Polish Respiratory Society held September 1-4, 2010 in Mikolajki, Poland. At this meeting, we met with the BUPAS investigators (Dr. Andrei Shpakov, Yanka Kupala State University, Grodno Belarus, Belarus Study Coordinator; Dr. Olga Fedortsiv, Horbachevsky State Medical University, Ternopil, Ukraine, Ukraine Study Coordinator; and Dr. Jan Zejda, Medical University of Silesia, Katowice, Poland, Polish Study Coordinator) All three coordinators were accompanied by study investigators: Belarus: Dr. Andrei Stryzak (Belarus); Dr. Leonid Hryshchuk (Ukraine); and Dr. Gzregorz Brozek (Poland). Two presentations by investigators (Drs Zejda and Dr Brozek) were made at this conference on preliminary findings for asthma prevalence and methodology of the study.

The meetings with collaborators were very successful in establishing where the different research areas were in their data collection and management. As well the meetings provided a chance to identify what specific research skills were needed to enhance the project. This was our first look at the preliminary findings from the BUPAS study. Investigators reported that all of the data had been collected in the three study sites.

However, data cleaning with the Belarus and Ukraine data and checking of data was still being undertaken by regional investigative teams. The Medical University of Silesia in Poland, which would be the headquarters for the de-identified data from Poland, Ukraine and Belarus sites, had not received data from Ukraine and Belarus as yet.

b.) Medical University of Silesia, Katowice, Poland

The Canadian investigators met with the researchers from Poland for 10 days in Katowice at the Department of Public Health at the Medical University of Silesia. During this visit we conferred with Drs Gzregorz Brozek and Dr. Jan Zejda regarding translation of the questionnaire and names of variables in the data set. These meetings provided an opportunity to explore further how we could aid in the dissemination of research from the study. Working closely with Dr Zejda, we identified the approach that should be taken to minimize errors in the data and how to manage the data from Belarus and Ukraine.

c.)University of Saskatchewan, Saskatoon, Canada

In June 2011, Dr. Zejda came to Canada. While the main purpose of this visit was to develop future research initiatives that would include Canada (Objective 3) time was also spent working on examining the BUPAS data and making decisions on the order of the papers to be produced from the data. Both Dr. Olga Fedortsiv (Ukraine) and Dr. Andrei Shpakov (Belarus) have spent time this last year in Poland with Dr. Zejda. The result was the beginning of two manuscripts. It was during the visit to Canada that one of these manuscripts was first introduced to the anadian researchers. During this visit data was rechecked and analyses reviewed.

In August, 2011 Dr. Brozek came to Canada to work with Dr. Lawson on preparing analyses. Dr. Brozek was also the guest of the AIRWAYS research group at the University of Saskatchewan, presenting information on children's respiratory health in Poland. Dr. Brozek and the Canadian researchers presented the BUPAS study to the AIRWAYS group outlining the role of the Canadian researchers.



Tour of the University of Ternopil Tuberculosis Unit in Ternopil, Ukraine

Objective 2 To assist in the dissemination of study results

During our meetings with the research team, Canadian researchers discussed how the manuscripts could be handled and how Canadian participation could be acknowledged. It was agreed that the priorities would be to have the study investigators develop their own regional reports. The overall paper describing childhood asthma prevalence in each country would be led by Dr. Zejda. This paper would also present the results of the rural urban prevalence in asthma. We have continued to help in the development of papers from this project. One paper that is nearly ready for submission is: *Prevalence of childhood asthma, rhinitis, and eczema in the Ternopil region of Ukraine*. The lead author is Dr. Fedortsiv. This paper will be submitted to the *Annals of Allergy Asthma and Immunology*. Dr. Lawson, co-investigator on the Global Partners II grant, returned to Medical University of Silesia in March 2011 for one week to continue assistance in the preparation of the data for analysis by the study investigators.

Objective 3. To support opportunities for further international research collaborations that include Canada

By participating in the analysis and dissemination of findings from this study and the meetings held with collaborators both in Europe and in Canada, there has been good opportunity to develop other future collaborations. An important finding from the BUPAS project so far is the identification of a potential diagnostic bias for childhood asthma in some of the study countries. This leads to interesting future research that could identify more accurate estimates of the prevalence of asthma particularly in Ukraine and Belarus. At the meeting planned in Krakow this September there will be a round table discussion of a future research project as part of a proposed research network between Poland, Belarus, Ukraine and Canada (POLBUCAN). The University of Saskatchewan would be the Canadian site for this Network.

Opportunities arose during visits in Europe and Canada to work with other researchers on related research topics. During our visit to Poland we assisted in manuscript editing for a researcher who was examining the validity of a quality of life scale used in chronic disease in children. This paper has since been published where Canadian researchers have been acknowledged.

Dr. Lawson is assisting Dr. Brozek in analysis and manuscript preparation of research related to his research projects. While Dr. Brozek was in Canada at the University of Saskatchewan, meetings were held with a respirologist interested in sleep apnea. The visit to the University of Saskatchewan by Dr. Jan Zejda stimulated discussion of potential respiratory research projects related to rural health that could be conducted with other researchers at the Canadian Centre for Health and Safety in Agriculture at the University.

Insights Gained into the Canadian and International Research Community

We have gained several insights as a result of this international collaboration. Our current work with our partners in Europe will help us as we prepare for future collaborations. Initially, we believed that language would be the greatest barrier in the collaboration. In our day to day work, we found that we managed to communicate as most scientists had sufficient English that goals and current research needs could be elicited. English is the language used in internationally at European conferences and this requirement has been challenging for some of the investigators. An expectation by researchers of the project has been that the collaboration with Canadian researchers would assist European investigators preparing scientific presentations and publication in English. While investigators would prepare materials for manuscripts in English, we would assist in final editing as needed. The process will be slow as our goal is that they will become more independent and comfortable preparing their own manuscripts of their research for publication and presentation.

A greater challenge will be to build statistical infrastructure particularly in Belarus and Ukraine study sites in preparing the data for dissemination. Many of the team members have a clinical background and are most comfortable in that area and it will take time and patience to make them more comfortable with statistical analyses.

Another barrier in Ukraine and Belarus may be the lack of funds for research and building statistical infrastructure. We needed to consider more simple alternatives for analysis of data with

software that the investigators have access to. Noteworthy, is that investigators in these countries collected data for 5000 children in each country. This is not an easy task for any researcher to accomplish. Their success at this stage of the research was important to the success of this project. Data collection was done with minimal funds and was conducted in a timely manner.

It was an inspiring experience working with international collaborators from Eastern Europe. An important aspect of this study for Canadian collaborators was the data collected on rural populations of children. We were interested in how their findings for childhood asthma would compare with what we had found. Interestingly, many of their results to date parallel what we have found in Canada. Rural populations appear to be underserved in Eastern Europe as they are in Canada.

Constraints and/or Challenges Encountered

Our intent to visit each of the study areas of the BUPAS project was not achieved as initially planned. Our visit to Belarus could not be cleared (approval from Belarus and collecting visas from the Belarusian Embassy in Ottawa) prior to our departure to Europe. Once we were in Europe, it was clear that travel in the Ukraine would take longer than we had anticipated because of the required train changes we would need to make to get to Ternopil, Ukraine. Most importantly, it became apparent by August 2010, that the collected data at study sites was not at the stage where our consultation could have helped the researchers. However, the trip to Europe had been planned and meetings established. These initial personal communications with members of the research team as they met in Mikolajki was of primary importance to our future work with the investigators.

Potential for Future Research Cooperation and Expected Outcomes

Dr. Lawson has been successful in leading us in a second research project funded by the Global Partners Initiative in 2011 (Childhood Asthma: Development of an International Research Initiative) that will see more collaboration with our partners in Belarus, Poland and Ukraine. One of the major findings from the research to date is that there appears to be a diagnostic bias in the reporting of doctor diagnosed asthma in some of the participating countries. This leads to potentially interesting future research that would explore the reasons for such dramatic differences in asthma prevalence between countries.

This fall we will return to Eastern Europe with the objective to continue with dissemination of results from BUPAS and begin plans for the Canadian research that will be done in conjunction with Poland, Ukraine and Belarus examining asthma diagnosis in these four countries. As well, we will present research lectures on environmental epidemiology and biostatistics to our collaborators attending the conference entitled: "Childhood Asthma: Epidemiology and Prevention" to be held in Krakow, Poland, September 2011. We believe our collaboration will help to direct the process of asthma research by researchers in these three countries.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

This grant provided us with opportunity to work internationally as part of the research group examining childhood asthma in rural and urban populations. The presence of a Canadian

research team was well received by our collaborators. Establishing international collaborations in research benefits all institutions and the support letters from the different Universities of the participating researchers definitely confirmed the importance of what we were doing. This is only a beginning. Including research with Canadian children in the next asthma project will help to assess the nature of differences in diagnosing patterns of childhood asthma between countries. Understanding the reasons for these differences could lead to better reporting of this condition by all study communities. Asthma affects many children worldwide and better management and care of children with this condition regardless of what country they live in is the goal of all researchers in this collaboration.

Biodiversity, Conservation and Sustainability in the Islands of Northwestern Sinaloa State, Mexico

Prepared by
J. Hugo Cota-Sánchez
College of Arts and Science

Executive Summary

This project deals with and advocates for the conservation efforts of nature and the environment, primarily with a general survey to evaluate the biodiversity status of representative plants and animals native to the islands of northwestern Mexico. The rationale behind this project is based on the poor state of knowledge of the flora and vegetation and the current alarming proportion of species at risk in northern Mexico and throughout the world. This is a serious issue world-wide and must be addressed with knowledge-based conservation programs. Thus, conservation programs designed to protect rare species are based on “hotspots” of regional biodiversity, which are determined by systematic and coordinated surveys *in-situ*.

The study area focuses on islands located in the Bahía de Ohuira in the state of Sinaloa. This bay is part of the Gulf of California, one of the most biodiversity-rich marine and coastal ecosystems with an important aquaculture industry affected by the oil industry. The islands in this area host a high proportion of endemic plants, that is, 75 species, which make up ca. 40% of the total -190 species. The islands provide natural habitats and nesting sites for several endemic animal species, including migrating bird species. Further, the coastal areas of Sinaloa represent the only setting in the world in which vivipary, a rare event in plants, has been documented in wild cacti (Cota- Sánchez, 2008; Reyes-Olivas et al., 2008; Cota-Sánchez et al., 2007, 2011). Despite the fact that the above biological factors are relevant and deserve protection, ongoing human activities have severe impact in the area, threatening both local flora and fauna. Various local communities depend on the fish industry and plants for food, medicine, and shelter. Thus, in addition to floristic inventories to document plant distribution and local use of species, we will investigate the occurrence of viviparity as an evolutionary process deserving consideration for conservation of the cactus family. The main goal of this long-term project is the creation of a database documenting the local vegetation, focusing on species at risk, as well as the scarabid (Coleoptera) beetles representing the fauna of the islands. Another major component of this program is the enrichment of the botanical and entomological collections and the study of viviparism, a rare reproductive phenomenon in plants, in various endemic species of cacti.

Also, our studies will involve small local communities/industries devoted to tourism activities. Local people were introduced to natural areas where we are investigating the local flora/fauna, vivipary, and cactus diversity in order to understand the culture and natural history of the environment and its native biodiversity. Consequently, in addition to addressing our diversity

studies, we will continue to contribute to the training of local people within the scope of environmental sustainability and ecotourism. We will provide continuous instruction and support (via workshops and seminars) to local individuals in different ways of learning about their natural resources while preserving nature and using it as a sustainable resource to satisfy and provide biological information to a number of mindful consumers who visit the area to enjoy nature and its resources. We believe that producing economic opportunities to maintain the integrity of the ecosystem facilitates the conservation of natural resources in a more effective and beneficial way for local people in particular and global biodiversity in general.

Extent to Which Project Objectives were Met

Our objectives were met and in line with those initially proposed. In addition to generating a preliminary understanding of the flora and fauna and ecology of some of the islands in NW Mexico, we achieved substantial progress in several other aspects, in particular training of personnel (students and local people). This project has been fundamental in the professional development of project participants because it has served as a platform for additional training in mapping and digitization tools, the establishment of new collaborative networks and the future publication of data generated in this project. In this section the highlights are the following:

Project Milestones

Seminars

Cota-Sánchez, J.H. 2010. Facultative vivipary in the Cactaceae: An adaptation to harsh environments? Centro de Investigaciones Biológicas del Noroeste de México. La Paz, Baja California Sur, México. October 22, 2010. In Spanish.

Cota-Sánchez, J.H. 2010. Vivipary in plants: Implications for conservation and crop supply. Universidad Autónoma de Sinaloa. Colegio de Agriculture. Los Mochis, Sinaloa, Mexico. May 7, 2010. In Spanish.

Publications

Explanation of authorship: First author indicates primary responsibility for developing and writing the project. Last author (PI) indicates leading the development and supervision of the entire research project including significant contribution to the writing process. The names of graduate and undergraduate students involved in this project are underlined.

Note that both Mexican and UofS graduate students have been involved in this project. In addition, my Mexican colleague is also in the author list of the publications, which attests to the active involvement of both parties in this project.

Published and/or accepted

Almeida, O.J., A.A. Paoli, and **J.H. Cota-Sánchez**. (2012). A macro- and micromorphological survey of floral and extrafloral nectaries in the epiphytic cactus *Rhipsalis teres* (Cactoideae: Rhipsalideae). *Flora* 207 (2): xxxx.

Lugo-García, G.A., M.A. Morón, **A. Reyes-Olivas**, A. Aragón-García, L.D. Ortega-Arenas y **J.H. Cota-Sánchez**. (2011). Un estudio de la riqueza de escarabajos (Coleoptera: Scarabaeoidea) en islas de las Bahías de Ohuira y Navachiste, Sinaloa, México. *Duguesiana* 18: 1-10.

Cota-Sánchez, J.H., **A. Reyes-Olivas**, and D.D. Abreu. (2011). Vivipary in the cactus family: A reply to Ortega-Baes' et al. evaluation of 25 species from northwestern Argentina. *Journal of Arid Environments* 75: 878-880.

Cota-Sánchez, J. H. and M. Bomfim-Patricio. (2010). Seed morphology, ploidy and the evolutionary history of the epiphytic cactus *Rhipsalis baccifera* (Cactaceae). *Polibotánica*. 29: 107-129.

Manuscripts submitted and/or in preparation

Cota-Sánchez, J.H. and **A. Reyes-Olivas**. New cases of viviparity in the Cactaceae: Implications for conservation. Submitted to *International Journal of Plant Biology*.

Abreu, D.D., A. Rodrigues, and **J. H. Cota-Sánchez**. Compartmentalized levels of abscisic acid are involved in the vivipary of *Epiphyllum phyllanthus* (Cactaceae). In preparation for *Plant Biology*.

Almeida, O.J., and **J.H. Cota-Sánchez**. Nectary structure and nectar composition in epiphytic viviparous cacti. In preparation for *American Journal of Botany*.

Training of students (two undergraduate and one graduate theses) and local community leaders in the Islas of Bahía de Ohuira

Ahumada Cortez, R.A. *Fauna de Coleoptera Lamellicornia en el norte de Sinaloa*, México. Undergraduate Thesis – Agriculture. Universidad Autónoma de Sinaloa-Unidad Regional Norte. May 2010. **Supervisors: A. Reyes-Olivas and J. H. Cota-Sánchez.**

Pérez López, O. *Catálogo comentado de la flora vascular de la isla Tunosa en la bahía de Ohuira, Sinaloa*. Undergraduate Thesis – Botany. Universidad Autónoma de Sinaloa- Unidad Regional Norte. Sept. 2010. **Supervisors: A. Reyes-Olivas and J.H. Cota- Sánchez.**

Aragón-Gastélum, J.L. 2009. Germinación precoz de *Ferocactus herrerae* J. G. Ortega (Cactaceae) en jardines experimentales. Universidad Autónoma de Sinaloa, Escuela Superior de Agricultura del Valle del Fuerte. Los Mochis, Sinaloa, México. Dec. 2009. B.Sc. Thesis. **Supervisors: A. Reyes-Olivas and J.H. Cota-Sánchez.**

Pérez, S.B. 2009. Reproducción vivípara de *Stenocereus thurberi* y *S. alamosensis* (Cactaceae) en ambientes naturales del noroeste de México. Universidad Autónoma de Sinaloa, Escuela Superior de Agricultura del Valle del Fuerte. Los Mochis, Sinaloa, México. Dec. 2009. B.Sc Thesis. **Supervisors: A. Reyes-Olivas and J. H. Cota-Sánchez.**

Lugo García, G.A.. *Fauna de Coleoptera asociada al cultivo de maíz, umbrales económicos y control*. Ph.D. Thesis. Universidad Autónoma de Sinaloa-Unidad Regional Norte. December 2010.

Training of students and local community leaders

A. Reyes-Olivas and **J. H. Cota-Sánchez**. Sampling and monitoring establishment of viviparous and non-viviparous seedlings of *Ferocactus herrerae* in different types of substrate. Topolobampo, Sinaloa, April 26-30, 2010.

A. Reyes-Olivas and **J. H. Cota-Sánchez**. *In-situ* installation of a community washing station and workshop on identification, uses and rarity status of plant in the Bahía de Ohuira. May 2-6, 2011.

Insights Gained into the Canadian and International Research Community

We have gained some administrative and scientific insights during the tenure of the project. From the administrative viewpoint, we have learned to manage unexpected turns of event, such as those explained in the next session. In those cases, the solution was actually out of our hands, and we soon realized that we had to accommodate the circumstances and continue our research project to the best of our abilities.

From the scientific perspective we gained tremendous insight into the current status of the biodiversity in the islands of the Bahia de Ohuira. As in other localities around the world, we observed that in spite of the vast number of plant and animal species and the seemingly decent state of conservation of the islands, more rigid conservation efforts should be implemented to protect these environment, in particular the native species.

We also learned about the different routes and long administrative rituals involved in the requisition of collecting permits when working in different cultural settings. Nonetheless, we had a fantastic personal interaction with all the personnel involved in the project, who really worked hard. We are pleased that the product of our work has been beneficial and our knowledge has been expanded and made accessible to the local and regional community. Overall, we feel that we have been successful in reaching out and interacting with students and the community at different levels.

Constraints and/or Challenges Encountered

My international research program in NW Mexico sponsored by the Global Partners II Program faced two major challenges, namely 1) the swine flu pandemic eruption in Mexico and 2) personal health of Mexican collaborator and lengthy and complex process for application for a Canadian visa for Mexican visitors.

1. Mexican swine flu pandemic

This project was originally planned to start in May 2009, and I initially managed to conduct a fieldtrip in December 2009. Due to the eruption of the swine flu pandemics in various states of Mexico in 2009 with concomitant travel alerts by the Canadian Government, I was forced to cancel my fieldwork scheduled to Mexico and those from Mexico to Canada by the partner institution. The trips were re-scheduled once after the Canadian Government removed the travel alert.

2. We had two additional setbacks that prevented the flux of the Mexican collaborators. That is, the Mexican collaborator had personal health issues and when these were addressed, there were visa issues for the Mexican counterpart. Since July 2008 the Canadian Government requires a visa for Mexican visitors. Unfortunately, the protocol to request a Canadian visa is a complex process involving personal background checks and numerous documents. Some of the major supporting documents for the visa application are those regarding statement of real estate property and strong banking accounts for Mexican applicants. Unfortunately, due to the economic situation, most Mexicans can't afford to own their own house nor even have a healthy bank account. This was a very disappointing

situation, and we are not sure how to deal with it in the future. Perhaps we will require an institutional letter to support the visitor visa application of project collaborators. Based on this learning experience we will have to be better prepared in the future. That is, ensure that the visa application is submitted at least six months prior to the scheduled visit.

Potential for Future Research Cooperation and Expected

This project has had enormous success in various research and technical aspects and other outcome support. The future of this project looks very promising in view of the new opportunities and additional funding obtained by the participants.

Among the project outcomes resulting from the financial support provided by the Global Partner II fund, two additional funding sources from different agencies stand out as very important end products providing continuity for this project and enhanced international collaborations and partnerships. These are the following:

1. The Mexican agency, the Programa de Fortalecimiento de Proyectos de Investigación (PROFAPI), awarded a three-year research grant (PROFAPI Grant No. 2010/112) for the amount of \$299,983.00 MXN (= \$25,000 CND). July 1, 2010.
Funding operable from July 1, 2010, to June 30, 2013.
Project Title: Germinación Vivípara en Cactáceas Mexicanas (Viviparous Germination in Mexican Cacti).
Applicants: **Dr. A. Reyes-Olivas. (PI);** Co-PIs: J.R. Villegas-Cota, P. Casillas-Álvarez, **J.H. Cota-Sánchez,** G.A. Lugo-García, B.H. Sánchez-Soto, and J.L. Aragón Gastélum.
Note that partner collaborator Dr. Reyes-Olivas is the PI and Dr. Cota-Sánchez is one of the PIs among multiple research grant applications.

This is a significant outcome because it will strengthen the international partnerships between the UofS and the UAS. As indicated, this network was established through a grant from the Global Partners II fund to coordinate efforts to preserve biodiversity and sustainability and to train high-qualified personnel and now will have continuance until the middle of 2013.

2. New Scholarship (\$10,000 CND) for a graduate student exchange program awarded to Dr. Cota-Sánchez.
The Canadian Department of Foreign Affairs and International Trade, under the Emerging Leaders of Latin American Program, granted a \$10,000 scholarship to Dr. Cota-Sánchez. The scholarship recipient will be his Brazilian student, Mr. Odair Almeida, who will continue his research on reproductive biology and floral morphology of viviparous cacti.

This grant has brought another major partnership at the international level in connection with biodiversity and conservation of viviparous taxa. Within this umbrella a newly emerged partnership between the Universidade Estadual Paulista-Rio Claro, Brazil, and the UofS is in progress. Dr. Cota-Sánchez will spend part of his sabbatical leave in 2012-13 at that institution.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

One of the most important outcomes of this project was learning about the partnership with the counterpart institution. This was a platform for mutual learning in terms of expectations, meetings goals and deadlines. Although for the most part both collaborators intended to keep the research on schedule, unexpected factors often forced us to be flexible and readjust to the changes. Although rigid schedules don't normally work well in rural Latin America and some cultural shock may have been evident, our personnel were always willing and ready to help. In fact, most of the project aims were achieved and a stronger partnership relationship was built for the future.

Several of the greatest benefits of this program were 1) the ability to secure financial funds from other sources to have continuity in this project and 2) the reinforcing of the existing institutional partnership and the synergy provided for the establishment of new research relationships, within the same scope, with the Brazilian institute.

In conclusion, in spite of some frustrating events, overall the Global Partners II program provided an enjoyable platform from which both institutions benefited academically, scientifically and logistically, and we fully acknowledge the support of the Global Partners II program for our progress and development. I hope that this briefing gives you an understanding of the progression and important achievements, outcomes, new partnerships, and potential of our project despite the challenges we faced.

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Transcultural Youth Orientations to Place and Implications for Environment-related Education Policy & Practice: A Pilot Study

‘Relearning Our Roots: Youth Participatory Action Research, Indigenous Knowledge, and Sustainability through Agriculture’

Jean Kayira (Student)
School of Environment & Sustainability

Executive Summary

I travelled to South Africa (SA) and Malawi in September 2010. I was in South Africa for a week and in Malawi for four months. The objective of the South Africa trip was two-fold. First, was to participate in a doctoral research seminar at Rhodes University (RU) which enabled me have face-to-face meetings with faculty and other doctoral students and engage in in-depth discussions on Indigenous Knowledge (IK) and environmental education research, particularly in relation to African contexts. I was also able to work more closely with Professor Heila Lotz-Sisitka, who is a member of my doctoral committee. Second, was getting to know and build relationships with Dr. McKenzie’s research collaborators on the proposed international study “Transcultural Youth Orientations to Place and Implications for Environment-related Education Policy & Practice.” The research collaborators are RU (Department of Education) and two community-based partners Arkwork Youth Education Program and Umthathi Training Project. I had discussions with Mr. Dylan McGarry, the director of Arkwork program and Mr. Lawrence Sisitka, the project leader of Umthathi project. Both community-based partners work with youth on environmental issues as they relate to development. They were both interested to be part of the larger international project Dr. McKenzie is leading.

My trip to Malawi was to collect data for my doctoral research which is part of the international proposed project. I worked with a community-based school, Chinduzi Junior Farmer Field and Life Skills School (JFFLS) exploring with youth, the possibilities of Indigenous Knowledge (IK) in furthering youth learning in relation to culturally appropriate environmental sustainability. The title of my study is “Re-learning our Roots: Youth Participatory Action Research, Indigenous Knowledge, and Sustainability through Agriculture.” Since my research is employing participatory action research (PAR) and indigenous research methodologies (IRM), both of which emphasize the importance of relationships and research *with* instead of *on* participants, I spent considerable time building relationships with participants as well as the community at large, learning appropriate protocols including dealing with Elders. Results of my research in Malawi will contribute to a better understanding of the cross cultural contexts of the international project and their implications for the focus and methods of the research.



Planting

Extent to Which Project Objectives were Met

Rhodes University South Africa

Doctoral research seminar

I participated in a week long research seminar along with graduate students from Rhodes University. The seminar focused on environmental education, social learning, human capabilities and social-ecological resilience. Some of the keynote topics presented included education for sustainable development and ecosystem services, the role for research in a national skills strategy, a systems approach to capacity development, social learning and sustainability, and social-ecological resilience. Speakers came from the Wageningen University—Netherlands, Bristol University—United Kingdom, United Nations Education Program—Kenya, University of Malawi, South African Qualifications Authority, Lewis Foundation—SA, National Research Foundation—SA, World Wildlife Fund—SA, and Rhodes University. Some of the activities I was involved in include leading a discussion on ‘concepts of sustainability,’ participating in a discussion on theoretical framework in research, and presenting my research proposal in a dialogue stream on social-ecological resilience and learning. Apart from working with a member of my PhD committee, Professor Heila Lotz-Sisitka, I had the opportunity to meet with an Indigenous Knowledge scholar Professor Rob O’Donoghue and networked with many students who are working on similar topics of IK and sustainability.

Relationship building with community-based partners in Grahamstown

Dr. McKenzie's pilot study on "Transcultural Youth Orientations to Place and Implications for Environment-related Education Policy & Practice" did not take place primarily due to inadequate funding. She was unable to travel to SA. Instead, while I was at RU, I held discussions with her research collaborators, the two community-based partners Arkwork Youth Education program and Umthathi Training Project. I learned the work of the two organizations from Mr Dylan McGarry (director Arkwork program) and Mr Lawrence Sisitka (the project leader of Umthathi project). Arkwork represents a collaboration of contemporary artists in the visual, drama, and musical arts. It strives to create experiences for people to turn lost space into empowered space. For instance, the Arkwork circus focuses on exploring creative learning processes, while creating awareness about the levels of discarded waste that accumulates in rubbish dumps around Grahamstown. It provides opportunities for young people to comment on their surroundings in creative ways. Using story-telling, thematic story construction, creative play, African masquerade and puppetry, participants draw on their own unique creative expression to develop informed, empowered and collective decisions about the future.

Umthathi Training project has a mission to promote better quality of life and sustainable healthy living through an integrated capacity-building programme in organic food production, nutrition & health, income generation and the cultivation & conservation of useful indigenous plants. Their mission is based on principles such as "pro poor, pro women, pro youth, adult education methodology, and respect and dignity for all." They have three programs: Africulture, community development and school gardens. Africulture is aimed at restoring plant-based African culture through supporting plant users by developing training and advocacy programmes that support and enhance sustainable resource management and skills in the cultivation, use and preservation of traditionally used indigenous plants. Through community development, community members are trained in cultivation, health, nutrition and livelihoods skills. The school gardens program enables sustainable healthy living by training school communities in cultivation and livelihood skills and encouraging the transfer of skills to the surrounding community as well as supporting the school's feeding scheme. I discussed with the two partners the broader proposed project and they were both interested in getting involved.



Watering

Data Collection with Youth at Chinduzi JFFLS - Malawi

My doctoral research with a Junior Farmer Field and Life Skills School (JFFLS) in my home country of Malawi, is part of the proposed broader international study that Dr. McKenzie is leading. I was at Chinduzi JFFLS community for almost four months working with youth, facilitators, and Elders exploring the possibilities of IK in furthering youth learning in relation to culturally appropriate environmental sustainability.

Research methods: data collection methods for my research included focus group discussions (FGD) with facilitators and youth, youth place mapping, conversations with Elders, and observations.

Facilitator FGD

The JFFLS is located at the primary school under the overall leadership of the headmaster. Chinduzi JFFLS has three facilitators—a school teacher and two from the community. Facilitators were invited to participate in the research. Apart from the three facilitators, both the headmaster and his deputy were keen to join the group and signed all the consent forms. I had a total of four FGD with facilitators. The headmaster participated in none while his deputy participated only in the first one. The first two FGD focused on learning about the JFFLS and facilitators' views and perspectives on IK and environmental sustainability. During the third FGD, youth shared with facilitators what they learned from their conversations with Elders. The last one was aimed at verifying and clarifying what was discussed during the first two FGD. All meetings took place at the school and were approximately two hours long.

Youth FGD and Place-mapping

24 youth (17 females and 7 males) participated in three FGD. The first FGD was aimed at learning their views and perspectives on the current JFFLS and IK. During the second FGD, youth discussed their identifications with place and environmental sustainability; at the end of the FGD, they were given a place-mapping exercise i.e., they were asked to draw a place in their community they identify with or against. Their drawings were discussed during the third FGD.

Conversations with Elders

Five Elders (1 female and 4 male) accepted to participate in the study. 14 (11 female and 3 male) youth joined me during conversations with Elders. These young women and men were my research assistants. They participated in refining conversation questions, pilot-testing the conversations among ourselves, leading a conversation with Elders, and initial analysis of conversation transcriptions. They also led a FGD with facilitators during which they shared what they had learned from the Elders. Each Elder was visited three times in her/his home. The first conversation centred on learning the Elder's views and perspectives on the JFFLS program, IK and environmental sustainability regarding youth learning in the program. Although I transcribed the conversation myself, I shared them with the youth and we listened to the conversations together. As we listened and discussed what we were hearing, we quickly became aware we needed more clarification on certain issues and we had follow-up questions on others. So we went back to each Elder. We did the same thing after the second round and went back the last time to verify what we had heard, a process Thomas (2006) calls participant member checking. This process gave each Elder the opportunity to review the final conversation transcript, after which she/he gave the release verbally due to oral versus print-based literacy.

This group of 14 youth met with me before and after each Elder's visit to prepare and debrief respectively. They also participated in initial data analysis based on the main themes we were hearing from the Elders, and also about themselves—their identity regarding place and environmental sustainability, their views and perspectives regarding IK and environmental sustainability in the JFFLS, what they learned by participating in the study, and their future plans. These points were reiterated during the last FGD with them.

Observations

I observed lessons in the garden at the school and in a facilitator's garden at his home. I also observed a lesson on life skills in a classroom.

Insights Gained into the Canadian and International Research Community

There is great potential for the U of S to forge research collaborations in SA and Malawi. Scholars, researchers, and community members I interacted with in both countries have excellent expertise in their fields and are willing to share with and learn from Canadian researchers. My insights are primarily based on my field work in Malawi. I have arranged the insights in the categories of strategic, operational and technical issues. I list issues that should be considered by international researchers conducting research in a country such as Malawi.



Weeding

Strategic issues

1. Coordination with partner institutions and communities
2. Authorization form mainline Government departments or Ministry
3. Reporting - pre-research and post research debriefing mainline Ministry/departments or agencies in host country
4. Working with local government authorities at district or zone or economic planning area level
5. Interaction and integration with national research institutes conducting similar areas of studies in the country
6. Field level supervision – visits by advisor in the (for student researchers)

Operational issues

1. Understanding community traditions and rituals and their implications on community participation. It is imperative to take time to learn cultural protocols of the community in order to establish trusting relationships. As researchers coming into a community, one needs to realize that they have to work around the schedules of participants and not the other way round. Hence the need for flexibility in scheduling events is a must.
2. Transportation to fro and within research site

Technical issues

1. Review of local literature on the subject – in country
2. Adaptations of research questionnaire, assumptions to local realities



Community Consultation

Constraints and/or Challenges Encountered

Although in my application I had indicated I would stay in Malawi for about two months, I ended up staying longer (four months). This was necessary because the methodologies I am using (PAR and IRM) require considerable time building relationships with participants. Furthermore, I had to work around participants' schedules. On a number of occasions scheduled meetings had to be cancelled due to emergencies such as funeral or too much rains in the community.

Transportation to the site was a challenge. My family lent me a small car. However because the roads in the community are earth, it was difficult to get around every time it rained. I used to get stuck in the mud for a considerable amount of time, I needed a four-wheel drive.

Potential for Future Research Cooperation and Expected Outcomes

As I have mentioned earlier, opportunities exist for the U of S to establish research partnerships in SA and Malawi. Already relationship building has been strengthened with Rhodes University and two community-based groups in Grahamstown (Arkwork Youth Education Program and Umthathi Training Project) SA. Dr. McKenzie is in the process of developing follow up grant applications to further comparative work between Saskatchewan and SA with the same community-based partners. In Malawi, partnership has been established with Chinduzi JFFLS. In addition, while in Malawi, I initiated conversations with the University of Malawi for a possible partnership with the U of S. I had discussions with Department Head—Technical Education at Polytechnic and the Director of Centre for Education Research and Training at Chancellor College.



Conclusions and Thoughts on the Benefit of the Global Partners II Program

Through the Global Partners II Program Support:

- I was able to participate in a doctoral research seminar at RU which enabled me to meet face-face with faculty and other students and engage in in-depth discussions on environmental education research, particularly in relation to African contexts. As a result of the seminar, I have a well-established network of scholars and researchers on IK, environmental education research and sustainability
- I was able to build relationships with Dr. McKenzie's research collaborators in Grahamstown SA

-
- The experience of collecting data in Malawi has increased my research skills. I learned a lot from the community about the local IK, agriculture, sustainability and youth orientations to place. In addition, the JFFLS youth I worked with, learned research skills
 - I established a partnership with the Chinduzi JFFLS community

I carried out all these activities as a U of S student. I feel greatly honoured to have represented the U of S at RU in SA as well as at Chinduzi JFFLS community in Malawi.

Collaboration of Nutrition Graduate Students through Research for Improved Health in Ethiopia

Jennifer Wright (Masters Student)
College of Pharmacy and Nutrition

Executive Summary

The College of Agriculture and Bioresources and College of Pharmacy and Nutrition at the University of Saskatchewan (UofS) have developed a partnership with Hawassa University (HU) in Awassa, Ethiopia in building and improving the capacity of HU in curriculum development, teaching, graduate student supervision, and research collaboration. Ethiopia is an agrarian country where small-scale farmers dominate agricultural production. Food insecurity and chronic malnutrition is a persistent problem and significantly impacts the health and wellbeing of households. A recent survey conducted by student researchers at UofS (Arcand et al., 2009) identified several potential areas of research for graduate students including human health.

The Global Partner II Program provided the opportunity to return to Awassa, Ethiopia to continue strengthening the research collaboration developed between HU and UofS and to work jointly with HU graduate students on nutritional research. More specifically, I continued the on-going D-lactic acidosis research study, started in 2009, in collaboration with HU graduate student (Biniam Amare), Awassa Referral Hospital (Dr. Kassahun) and HU Department of Veterinary Medicine (Dr. Yifru) and developed research proposals for future research opportunities for the Masters of Applied Human Nutrition Program (MAHN) at HU. For the animal D-lactate research project, I worked alongside the HU nutrition graduate student and the veterinarian technician throughout the sample collection phase and shared my knowledge in preparing the serum and fecal samples for analysis. Although the study was not fully completed during the time of my travels, results obtained from this animal study can be added to our knowledge of diarrhea and acidosis in neonatal animals. For the human D-lactate research project, no progress was made as ethics was not obtained the National Health Research Ethics Committee in Ethiopia at the time of my return to Awassa, Ethiopia.

Although there were constraints and/or challenges during this project including time, equipment, and resources, as a new student researcher with little to no previous international travel experience, I gained insights in conducting research abroad. I developed problem-solving skills and learned to think ‘outside the box’. As a result of working side-by-side with nutrition graduate students, I became aware of the similarities we had in our vision of what we, as nutrition graduate students, were working towards. I also became aware of many of the challenges and barriers to reaching those goals.

To date, the partnership between the UofS and HU continues to be strong. Several potential areas for agricultural, nutritional, and health research exist and these opportunities continue to be

explored and investigated as UofS faculty continue to co-supervise HU graduate students and develop research collaborations with HU faculty members.

Extent to Which Project Objectives were Met

The objective of this project was to provide innovative nutrition graduate student research opportunities in the areas of food security, nutrition, health promotion, and disease prevention at Hawassa University (HU), Awassa, Ethiopia. More specifically:

1. To continue the on-going D-lactic acidosis research study, started in 2009, in collaboration with HU graduate student (Biniam Amare), Awassa Referral Hospital (Dr. Kassahun) and HU Department of Veterinary Medicine (Dr. Yifru).

During my first visit to Awassa, Ethiopia in 2009, I had the opportunity to present my thesis research involving investigation of neonatal diarrhea and D-Lactate, a known organic acid that contributes to acidosis in neonatal animals, to nutrition graduate students enrolled in the Masters of Applied Human Nutrition (MAHN) program at HU. Diarrhea is a well known cause of neonatal mortality and morbidity in both humans and animals in Ethiopia. In 2008, there was an estimated 73,341 child deaths were due to diarrhea (Black et al., 2010). In neonatal calves, diarrhea related morbidity and death have a significant impact on the wellbeing of Ethiopian farmers as they are dependent on livestock for food, income, draught power for crop production and financial security (Wudu, Kelay, Mekonnen & Tesfu, 2008; Randolph et al., 2007).

Dr. Kassahun Asmare (Dean of Veterinarian Medicine, HU), Dr. Yifru Berhan (Dean of Medical Faculty, HU) and other health professionals at Awassa Referral Hospital (ARH) expressed interest in initiating a parallel graduate student project in Awassa, Ethiopia. Partnerships were formed and a HU nutrition graduate student, Biniam Amare, was recruited to conduct the study in collaboration with the UofS. The Global Partners II Program provided me with the opportunity to return to Ethiopia from May 1-May 23, 2010 to strengthen the partnerships with faculty at HU, assist Biniam in sample collection and analysis for the D-lactic acidosis project, and propose potential future graduate research projects. Much work was done prior to my return in May, 2010. Biniam prepared documents (literature review, study proposal, human ethics application) per his nutrition graduate course requirements at HU and we worked together in the development of animal and human study protocols.

Animal Study

The objectives of the Global Partners II Program were met in that the D-lactic acidosis project was able to continue. I was able to purchase and deliver the necessary laboratory equipment (pH meter, pipettes, etc) and supplies (blood collection tubes, enzymatic assay kits, microplates, etc.) needed to conduct the experiment that may have been otherwise difficult access and/or obtain in Ethiopia. During my two and a half week stay in Ethiopia, nine goat kids, less than 35 days of age, were selected for blood and fecal sampling based on clinical signs of diarrhea from a goat and sheep research farm located at Hawassa University. Biniam and I worked closely with Dr. Kassahun and a veterinarian technician from HU. Control samples (blood and fecal) were also obtained from nine healthy goat kids from the same research farm. Blood and fecal samples were also obtained from one diarrheic neonatal calf at a nearby village veterinarian clinic.

Animals were selected for this study on the basis of having clinical signs of diarrhea. All animals were assigned a clinical depression score and assessed for dehydration and diarrhea type by the research team. At the time of this study, there was no animal ethics board at HU however this project was approved by the University of Saskatchewan's Animal Research Ethics Board, and adhered to the Canadian Council on Animal Care guidelines for humane animal use. Jugular vein blood samples, approximately 5-10mL, were collected from each animal and pH was determined immediately (Accumet basic pH meter; Fishers Scientific, Schwerte, Germany). The blood was then allowed to coagulate at room temperature for 20 minutes, centrifuged, and serum drawn off and stored at -20°C. Approximately 20 g of feces was collected from each animal and mixed with 15 mL Thiomerosal, a bacteriostatic agent, and frozen at -20°C until analysis.

Results were obtained from this animal study and can be added to our knowledge of diarrhea and acidosis in neonatal animals as two goat kids with diarrhea had blood pH < 7.28, which is indicative of acidosis. Upon clinical assessment, one kid with indicators of acidosis had no suck. The anion gap, which is often used to diagnosis metabolic acidosis, could not be calculated as researchers did not have access to a blood gas and electrolyte analyzer. Upon clinical assessment, the diarrheic calf had a weak menace but demonstrated normal suck, palpebral and tactile responses, and ability to stand. The blood pH of this calf was not indicative of acidosis.

I worked alongside Biniam throughout the sample collection phase and shared my knowledge in preparing the serum and fecal samples for analysis using D-lactate, L-lactate, and pyruvate using enzymatic assay kits (Biovision, Mountain View, CA) which I had brought with me from Canada. The analysis for this project required the use of a microplate reader, which was determined to be available at HU prior to my travels. However, I was unaware that this piece of equipment had never been used prior to this study and no one within the department had any knowledge of its use. Due to some difficulties in set-up (i.e. misplacement of software) and technological difficulties (i.e. unable to obtain required optical density for microplate) samples could not be analyzed while I was in Awassa, Ethiopia however technical skills and instruction on the use of the analytical kits was provided. On the day before I left Awassa, I was able to resolve most of the technical issues and upon discussion with Biniam, the veterinarian technician, and Dr. Kassahun sample collection and analysis was to continue once I left Ethiopia. It is unfortunate however a few months after my departure Biniam withdrew from the project prior to completion. Upon discussion with our HU faculty partners, it is not known why he withdrew from the project and according to Associate VP of Research and Extension at HU, Biniam is no longer a nutrition graduate student at HU. As a result, to date, no additional samples have been collected and/or analyzed.

Human Study

In Ethiopia, all health research involving humans must be approved by the National Health Research Ethics Committee. As discussed in 2009 with our HU partners and HU graduate student, a research proposal and ethics application was to be composed by the HU graduate student with guidance from the UofS researchers. A study proposal and study protocol was drafted and reviewed however this document and ethics application was not submitted to the National Health Research Ethics Committee in Ethiopia before my return to Awassa.

Since human ethic approval was not obtained, no work could be carried out for the human D-lactate project. I was, however, able to connect with researchers in Addis, Ethiopia who were also investigating pediatric diarrhea (pathological origins). We were able to discuss the challenges of obtaining ethics, which I discovered took this particular research group over one year to obtain. The research group was studying the same population group as the proposed D-lactate study. If human ethics was obtained in the future, collaboration with this research group could significantly increase our sample size and result in samples with a wide range of diarrhea severity. As the Addis nutrition researcher was also interested in our project, contact information was exchanged. To date, the HU graduate student has left the project (as discussed above) and as a result, the ethics application and research proposal have not been submitted to the National Health Research Ethics Committee in Ethiopia.

2. To work in collaboration with nutrition graduate students (recruited by HU and UofS partners) at HU to develop a survey to determine the prevalence and incidence of diarrhea in Awassa and surrounding areas.

This second objective is closely related to objective #1. As diarrheal diseases continue to cause significant mortality and morbidity among children living in Ethiopia, the purpose of this project was to provide graduate students with an opportunity to gather information regarding pediatric diarrhea at a local level. Students from HU would be responsible for developing and implementing a survey to gather statistics on incidence and prevalence of diarrhea in Awassa and surrounding communities and was designed to involve several graduate students from HU.

For this objective, I composed a research project description for the Masters of Applied Human Nutrition program at HU. This project was presented to the graduate students by a UofS faculty member prior to my travels in May 2010. As part of their program, nutrition graduate students at HU have the opportunity to review potential research projects and apply for those for which they have interest in. However, since my project request was somewhat late in the year, the majority of students in the 2010 class had already been assigned research projects for their program. Therefore, during my stay in Awassa, no students were recruited to begin this project in 2010. As nutrition faculty members from the UofS continue to travel HU annually for graduate teaching and research, there is still potential for future nutrition graduate students to peruse this project in upcoming years if interested.

Insights Gained into the Canadian and International Research Community

Laboratory Supplies & Documentation

Even though our team was assured that all the necessary laboratory supplies (pipettes, blood collection tubes, sample containers, etc.) would be available at HU, we brought all supplies needed to conduct this research project from Canada. From the previous year, I was aware that supplies were somewhat limited and difficult to find in Awassa (i.e. distilled water).

Prior to my travel, as I needed to bring various laboratory equipment and supplies including enzymatic assay kits, pH meters, pipettes, and other miscellaneous laboratory supplies (i.e. gloves, blood collection tubes, etc.) there was some concern regarding bringing these items through customs. After several discussions with others who have travel abroad for analytical

research, I obtained a letters from both the Associate Dean of Research from College of Pharmacy and Nutrition and from Associate VP of Research and Extension at HU. These letters stated the relationship between the UofS and HU and the intent of the research project. It also described, in detail, (including all kit contents and reference numbers) what supplies were being brought into the country. Having the proper document proved to be very useful when trying to communicate with custom officials and, as a result of these documents, all supplies were allowed into country.

Co-learning

I believe one of the key insights I gained from this project was the positive interactive process and co-learning that occurred. I was quite familiar and comfortable with my research project in Saskatchewan however, once abroad, I quickly discovered that applying research in a different context presented several challenges. The research technicians and graduate student at HU had many innovative ways to address some of these challenges and as a result, I strongly believe that while the HU student may have learned a new analytical technique, the technicians and student helped me develop my problem-solving skills and helped me, as a new graduate student researcher, to “think outside the box”.

During my work, I was also able to gain insight on other nutrition research occurring within Ethiopia by visiting the Ethiopian Health and Nutrition Institute. During this time I was able to meet with another graduate student investigating pediatric diarrhea (as previously described). I was able to learn about some of the successes and challenges that other researchers experienced. This information was useful as it was similar to the process we were following for the D-lactate project. I also learned about several other research projects including food product development and analysis; farinograph and toxicology studies.

Constraints and/or Challenges Encountered

Time: If presented with a similar opportunity in the future, I believe I would benefit from extending the duration of my stay abroad. Two and a half weeks was not adequate time to collect all necessary samples and complete the training for analysis. I would have liked to have factored in time for technical difficulties including power outages. I would also ensure that I would train more than one person on the analytical technique therefore if someone was to leave the project the skills are not lost and the project may be able to continue.

Ethics: I was not aware of the challenges to obtaining human ethics in Ethiopia and the time it would take to complete the process. In the future, in partnership with the HU graduate student, I would further educate myself about the process and try to connect with individuals within the National Health Research Ethics Committee to address their requirements and expectations.

Resources & Equipment: Although I brought most of the laboratory equipment and supplies with me, I did encounter some technical difficulties (as previously described). Upon arrival, the laboratories did, in fact, have similar equipment found in undergraduate student laboratories at UofS. I was told that a lot of the equipment has been donated from several different countries. What was interesting to note is although the equipment was there, it was not in use because no

one had been trained on how to operate it. Some equipment had been used but required maintenance and/or parts which were not readily available in Awassa.

I also had difficulties obtaining the necessary space in which to process the samples. The laboratories were also used as teaching facilities and classes, at the time, were in session. Finding space to work was challenging and resulted in delays.

Potential for Future Research Cooperation and Expected

University of Saskatchewan faculty members from the College of Pharmacy and Nutrition and College of Agriculture and Bioresources continue to collaborate with HU. The partners are completing a 5-year multidisciplinary project to develop graduate programs in agriculture and in applied human nutrition, at the MSc level, delivered entirely in Ethiopia. HU faculty members also travel to Canada to obtain professional development at the U of S. The goal of the existing partnership is to improve the capacity of both programs (agriculture & nutrition) through graduate teaching, research, and knowledge dissemination. The aim of this partnership is to address capacity building for farmers, households and communities to understand and take practical and appropriate measures to address health and food security.

More recently a new project, “Improving food security in the highlands of Ethiopia through improved and sustainable agricultural productivity and human nutrition” is currently underway. The goal of this project is to increase the capacity of Ethiopia to improve food security and human nutrition, through training agricultural specialists on the breeding, cultivation and farm implementation of pulse crops by farmers, and on developing and implementing sustainable agricultural management practices that include pulse crops, which help stabilize and improve local soils and provide a much-needed source of protein to local farmers. Furthermore, it includes human nutrition training for rural Ethiopians regarding food production patterns, post-harvest handling of agricultural produce, and the extent of malnutrition and the dietary needs of various age groups. Graduate students for this project will be enrolled at HU with coursework at HU and some of the course work completed at UofS.

Through our ongoing work with HU partners, it is evident several potential areas of research for graduate students exist and these opportunities continue to be explored. Over this past year, three more nutrition graduate students from HU are currently conducting a research project for the Masters of Applied Human Nutrition program under the co-supervision of University of Saskatchewan faculty from College of Pharmacy and Nutrition.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

I would like to first, and foremost, thank the Global Partners II Program for the opportunity to return to Ethiopia to conduct further nutritional research. I do believe that travelling to Ethiopia to work jointly with other nutrition graduate students at Hawassa University helped to strengthen the research collaboration developed between Hawassa University and University of Saskatchewan. UofS faculty members continue to travel annually for teaching, graduate student supervision, and research collaboration and new faculty members have joined the team (ex. sociology). The partnership that was developed, I believe, is strong because of our ability to be

on-site, working side-by-side. We are able to see the challenges hands on and work together to address these challenges.

As a new graduate student research with no previous experience in international research, I found it very interesting that despite cultural, political, and environmental differences, the one thing we, the student researchers, all had in common was the pursuit of knowledge. But perhaps more importantly, we had a common vision, or goal, to apply this knowledge. In my discussions with HU graduate students it is interesting to note that there was little talk about collecting data for publications or high impact journals and rather we focused on how we, as students, wanted to conduct research to make a difference in the health of our friends, families and communities and improve overall quality of life.

Lastly, on a more personal note, words and pictures can hardly begin to describe how this research experience and the impact this trip has had on my work and personal life. It is so difficult, in words, to describe the beauty and strength of the people I met and worked with on my journey. I learned so much about the history, the culture, and the many challenges faced by those living in Ethiopia. I also learned a lot about myself and this opportunity helped redefine my goals as a future nutrition researcher.

Exploring Collaboration and Capacity Development between the School of Nursing and Midwifery, Hawassa University and the College of Nursing, University of Saskatchewan

Dr Phil Woods
College of Nursing

Executive Summary

The overarching focus of this project was to further explore a partnership between the College of Nursing at the University of Saskatchewan and the School of Nursing & Midwifery at Hawassa University. The project had three specific objectives:

1. To meet and explore what opportunities exist for a partnership
2. To align College of Nursing faculty research interests with the capacity development requirements of the School of Nursing & Midwifery Hawassa University
3. To develop a strategic approach to the potential partnership, identifying specific projects and deliverables.

Objective 1 was met. Objectives 2 and 3 were partially met and remain work in progress. We are currently providing opportunity for two faculty to prepare them to PhD aimed at developing their capacity locally in Ethiopia. We have, along with other University of Saskatchewan Colleges secured other funding to continue to work with Hawassa University. Other opportunities will continue to be sought.

Extent to Which Project Objectives were Met

The overarching focus of this project was to further explore a partnership between the College of Nursing at the University of Saskatchewan and the School of Nursing & Midwifery at Hawassa University. The project had three specific objectives:

1. To meet and explore what opportunities exist for a partnership
2. To align College of Nursing faculty research interests with the capacity development requirements of the School of Nursing & Midwifery Hawassa University
3. To develop a strategic approach to the potential partnership, identifying specific projects and deliverables.

We needed to understand what the School of Nursing & Midwifery Hawassa University was looking for in any partnership. Whatever direction we moved in had to be mutually beneficial and involve capacity building for both countries. We agreed to the following roles and responsibilities:

University of Saskatchewan

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- To plan an active and engaging program of events for the visit
 - To facilitate and fully participate in all meetings, events and visits arranged
 - To listen actively and co-lead discussion surrounding a partnership
 - To explore graduate nursing education and how the University of Saskatchewan could contribute to the development of graduate programs at HU

Hawassa University

- To fully participate in all meetings, events and visits arranged
- To listen actively and co-lead discussion surrounding a partnership
- To be vocal around comparisons between Canadian and Ethiopian health care systems
- To engage in discussion of graduate nursing education

Objective 1 was met. Objectives 2 and 3 were partially met and remain work in progress.

Objective 1. To meet and explore what opportunities exist for a partnership

During the period September 21, 2010 and October 5, 2010 Aweke Yilma, Head School of Nursing and Midwifery, College of Medicine and Health Sciences, Hawassa University and Abraham Alano, Associate Vice President for Development, Hawassa University visited the University of Saskatchewan. An optimistic and intense agenda had been negotiated and developed to ensure their time in Saskatchewan gave them ample opportunity to meet and network, and to gain a good understanding of the University, College and the Agencies we work with. All meetings were facilitated by Dr Woods. Fiona Haynes Research Facilitator was in attendance during most meetings.

- ***Wednesday 22 September: College of Nursing Prince Albert Site Visit***
 - Morning meeting with Dr Lois Berry, Acting Associate Dean North and North-Western Saskatchewan Campus Rural and Remote Engagement (specializing in leadership in nursing and nursing education, equity and social justice issues in health care and health professional education); Dr Janet McCabe, Assistant Professor (specializing in sexual health of youth with intellectual disabilities); Dr Ebin Arries, Assistant Professor (specializing in Acute/ Critical Care Nursing, Ethics gender/sex and race/ethnicity as determinants of health); and a number of our college of nursing clinical instructors.
 - Afternoon visits to two community care centres as both provide clinical placements for nursing students: Children's Haven, a 24-hour child crisis centre and the Prince Albert Safe Shelter for Women.
- ***Thursday 23 September***
 - A full day meeting which allowed our visitors to meet with a range of university personnel from various units including:

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- College of Nursing - Dr Lorna Butler, Dean; Dr Phil Woods, Associate Dean Research, Innovation & Global Initiatives; Dr Lynette Leeseberg-Stamler, Assistant Dean Graduate Studies & Continuing Nursing Education; Dr Susan Fowler-Kerry International Committee, University Council; Fiona Haynes, Research Facilitator
 - College of Agriculture & Bioresources – Bunyamin Taran, Crop Development Centre and engaged in Ethiopian projects
 - School of Public Health – Dr Robert Buckingham, Executive Director; Dr John Moraros, Program Director
 - International Research Office – Laurel O'Connor, Manager; Dr Tom Wishart, Special Advisor
 - College of Pharmacy & Nutrition: Dr Carol Henry
- ***Friday 24 September***
 - In the morning met with Dr Linda Ferguson, Director the Centre for the Advancement of the Study of Nursing Education and Interprofessional education, (CASNIE), College of Nursing to discuss potential research collaboration through the centre.
 - Lunch Laurel O'Connor, Assistant Director, International Research, and Bruna Bonavia-Fisher, International Research Facilitator.
 - In the afternoon met with Anna Pacik Development Officer, College of Nursing.
 - ***Monday 27 September: College of Nursing, Regina Site***
 - Morning meeting with Dr Marlene Smadu, Associate Dean, Regina site and International Student Affairs; Dr Lynn Jansen (community health); Karen Hewson (pediatric nursing, community placements – schools, inter professional – Kinesiology & Nursing); Marie Dietrich-Leurer (community health - early childhood, vulnerable populations, healthy public policy); Diane Campbell (KT – putting best practice into practice, maternal child health); Cara Spence, Research Facilitator, Regina site
 - For lunch attended the completion event for our 4th year NEPS students. During this event our guests had an opportunity to speak briefly with the SK Minister of Health and students, including a student from Ethiopia.
 - During the afternoon meetings occurred with several clinical nurse educators at Regina General Hospital and we toured 3 units: Medicine, Mother/baby, Pediatrics.
 - ***Tuesday 28 September***
 - Morning meeting with Peggy MacLeod, Associate Professor College of Nursing to discuss our new nursing curriculum
 - Abraham and Aweke gave a Lunch & Learn on Nursing in Ethiopia for all our faculty, staff and graduate students. This was delivered from the Saskatoon site and video conferenced to Regina and PA sites.
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- Afternoon meeting with Deb Briere and tour of our Clinical Learning Resource Centre (CLRC) and other skills labs.
 - Afternoon meeting with Dr. Trevor Crowe, Associate Dean College of Graduate Studies and Research
 - Afternoon meeting with Dr Lynnette Leesberg Stamler.
 - Supper with Dean Lorna Butler and Leadership Team
 - ***Wednesday September 29, 2010***
 - Morning meeting with Dr. Karen Semchuk Professor, College of Nursing to discuss our senior practicum
 - Morning meeting with Cathy Jefferies City Hospital Rehab Unit
 - ***Thursday September 30, 2010***
 - Morning teleconference with Karen Turner and Cheryl Hamilton from the Saskatchewan Registered Nurses Association. They requested to consult with our guests on Internationally educated nurses.
 - Afternoon meeting with Dr Vivan Ramsden Associate Professor & Director, Research Division, Department of Academic Family Medicine. Tour of West Winds Primary Health Centre also took place.
 - ***Friday October 1***
 - Morning meeting with Dean Lorna Butler to discuss the outcome of the previous two weeks events and our next steps.
 - ***Saturday October 2, 2010***
 - Afternoon meeting with Dr Ron Siemens, College of Medicine to follow-up on their discussion on collaboration from when we visited Ethiopia.
 - ***Sunday October 3, 2010***
 - Morning meeting with Dr Angela Bowen, Associate Professor, College of Nursing to discuss her program of research on maternal mental health.
 - ***Monday October 4, 2010***
 - Morning meeting to discuss future directions for the collaboration
 - Lunch with Dr Gord Zello, Professor, College of Pharmacy and Nutrition. Dr Zello has a track record on collaboration with Hawassa University.

In conclusion Objective 1 was fully met through these meetings and extensive discussion which occurred throughout them.

Objective 2. To align College of Nursing faculty research interests with the capacity development requirements of the School of Nursing & Midwifery Hawassa University

Throughout the meetings we tried to focus discussion to meet this objective. I am not sure we were as successful as we could have been. Some alignment of interests in maternal health, pediatric care, public health, and the study of nursing education were seen to emerge. There was some feeling from those engaged in the discussions that it was premature to push our work in this direction at present. More focus should be on developing the research capacity within the faculty at Hawassa University as a first step. To move somewhat in this direction we aligned both our Abraham and Aweke with potential supervisors/mentors for their PhD studies they wish to pursue with us.

In conclusion objective 2 was partially met through these meetings and extensive discussion which occurred throughout them.

Objective 3. To develop a strategic approach to the potential partnership, identifying specific projects and deliverables.

Again throughout the meetings we tried to focus discussion to meet this objective. Once again I am not sure we were as successful as we could have been. When we had our final discussion on what Hawassa University really wants from a partnerships it was capacity development through:

- Graduate programs in Nursing– Masters and PhD (Goal: Masters in Nursing Education in place by 2012)
- Student & faculty exchange
- Research Collaboration
- Position them for sustainability

Over the months that followed the trip to Canada email requests to Abraham and Aweke for further information from them on what they had learnt and how we needed to move forward received no replies in this regard. I have recently learnt that Abraham moved to another position soon after his return from Canada. I was originally informed that any partnership discussion should be discussed through his Associate Vice President position. One of the main reasons it was important he came to Canada to meet with us. Both Abraham and Aweke are focused on one component of the capacity development needed by Hawassa University. Namely to prepare their faculty to PhD. Both Abraham and Aweke had been accepted into our College of Nursing PhD program with required pre-requisite studies. Abraham has secured funding and begins his studies this fall. Aweke is still pursuing funding opportunities for next year.

In conclusion objective 3 was partially met through these meetings and extensive discussion which occurred throughout them.

Insights Gained into the Canadian and International Research Community

This question is a difficult one to answer considering the scope of the project. What insights did emerge could be grouped as follows:

-
- Much opportunity exists for research partnerships in maternal health, pediatric care, public health, and the study of nursing education
 - Another opportunity could exist for mental health research.

Constraints and/or Challenges Encountered (Lessons Learned)

Such a project is always constrained by who can be in the room when discussion is taking place. Who are the decision-makers and how are people encouraged to commit their time. Individual priorities also influence outcome. Some of this was observed during the meeting discussions and influenced how our faculty engaged in the process. An additional goal/expectation emerged from our Hawassa partners during their visit that had not been discussed during the visit planning. Securing a place in our College PhD program was an important goal for them during their trip to Canada. This was supported as an important strategy for their capacity development. Whilst this was not possible during their visit they have both secured conditional acceptance in our program based on meeting our admission criteria. More recently it has just become known that Abraham Alano is no longer the key person we need to help move any partnership forward. Ethiopian policy development has decided that Associate Vice Presidents are no longer part of the Senior Leadership structure.

Potential for Future Research Cooperation and Expected Outcomes

We have learnt from the exchange more about our partner institutions, their priorities and needs. There continues to be immense opportunity for us to collaborate but no firm agreements have evolved from this project. An MOU does exist between our respective Colleges and Universities to allow further collaboration occur. During a recent visit and meeting with the new President of Hawassa University it was confirmed to us that they are still keen for a partnership with us. Unfortunately Abraham Alano is no longer in his Vice President position. Further he is now a student at the University of Saskatchewan and as such is not our key link with Hawassa University. In some respects we are now at the stage where any partnership development will need us to develop new working relationships.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

Global Partners II provides valuable seed money to help develop partnerships outside of Canada. It allowed our international partners the opportunity to meet with many of our faculty, as well as others in the University face-to-face. Further it allowed them to try and understand the differences and similarities in our practices. Whilst it helped us to explore further a potential partnership, the scope of the work that is required cannot be supported by such funds. Significant other investment will be required to see any partnership come to fruition.

e-SAFI/e-CLEAN: An appreciative inquiry informed approach to e-waste through joint intra-regional and international situational and stakeholder analysis

Pammla M. Petrucka
College of Nursing

Executive Summary

The issue of e-waste has become a dominant issue on the global environmental and health scene in recent years. In East Africa there is a significant accumulation of electronics and peripherals often from donated or contributed efforts from the North. Although many developed contexts have undertaken to manage the e-waste situation, the difficulties of competing priorities, lack of knowledge and capacity deficits make the addressing of this emerging and soon to be emergent issue problematic in the developing context.

The e-safi (or e-clean) proposal re-conceptualizes e-waste management through an integrated 4R approach. During this project, partners from Tanzania and Uganda have explored the basic issues and concepts related to e-waste. Further they have considered how their e-safi project intersects with local, national and global efforts. The Global Partners II project resulted in a number of key learnings with respect to an application of innovation and policy related to information and communications technologies. Overall, the project affirmed, confirmed, or addressed issues such as the imperatives for common language/terminologies, shared strategies to identify and measure the e-waste situation, and enabling legislation or governance approaches.

The essential message was clearly that there is a need to address e-waste issues in East Africa across the near to long term which will require inter-sectoral, inter-jurisdictional and international approaches to be achievable and sustainable. Within this report the reader will find key learnings, gaps, and opportunities which were identified in the course of this brief project.

Extent to Which Project Objectives were Met

The overall goal of building a research interest in e-waste was achieved and exceeded. We have created linkages in Tanzania and Uganda which continue beyond the project. These are further discussed within. In terms of overall goals, these shall be considered below:

Sub-goal #1: What are key elements of an e-safi perspective in local/national/global contexts?

This objective was met through an extensive literature review and concept mapping exercise. Our preliminary work has informed the existence of 3 to 4 different ‘overarching’ components that will require different expertise and follow up – *a) Common Terminologies; b) Capture through Disposition; c) Enabling Legislation; and d) Funding (which may come from Government therefore overlapping with c).*



Sub-goal #2: In the local/national/global contexts, what are the barriers and facilitators to comprehensive e-safi initiatives?

This objective was explored through a series of stakeholder interviews (i.e., COSTECH, Ministry of Communications and Technology, Ministries of Health/Social Welfare, Inter-governmental Affairs Departments). In addition, in Tanzania, local government (District) in Arusha and Mwanza were consulted for their inputs. Key findings in this component were quite variable and it became evident that more directed work would be required. At the local level, the main barriers identified were “*recycling is not valued*”, “*other priorities*” and “*lack of budget*”; whereas the facilitators identified included “*coincides with the plastics recycling*” and “*emerging national agenda on e-waste*”. At the national level, the main barriers identified were “*lack of international commitment*” and “*viability of an e-waste program requires baseline funding*”; whereas the facilitators identified included “*a pending (on the table) national e-waste agenda, informed by a recent consultation*”.

The research objectives for the study were met as follows:

Objective #1: To conduct a situational (environmental) scan on contextual and conceptual aspects of e-safi

We are presently completing a series of visual depictions of the e-safi perspective which will be provided for publication purposes (See Appendix #1) and shared with other stakeholders in the

appropriate jurisdictions. It became evident that the situational analysis would be a very large undertaking and beyond the scope of this project. We were able to use a significant amount of the information provided through the recent consultation conducted in Tanzania. This provided guiding headings and key aspects (see Appendix #2) necessary for an integrated e-safi program. The major learning with respect to the environmental scan in both Uganda and Tanzania was that there seems to be limited or no consultation with the public on their ideas for a sustainable direction. Also, the consultation in Tanzania showed limited involvement of business other than as a 'source' of used equipment rather than a 'solution' contributor.

Objective #2: To explore the perceptions of stakeholders regarding e-safi

This objective was partially met in that we spoke with groups in Tanzania and Uganda but did not have the same opportunity in Kenya. In the two participating sites we heard similar perceptions, but given the small number of participants (i.e., Uganda 3; Tanzania 7) it is difficult to generalize beyond these specific participants. The most common 10 stated perceptions included:

Country Frequency Perception	Uganda	Tanzania
Lots of Stakeholders	3	4
Confusing/Complex	3	4
Need to Get Gov't Buy-in	3	3
Need to Go Slowly/Be cautious	2	5
Cost-efficiencies/Cost-benefit analysis needed	3	5
Mostly about removing threat (of waste) (not recycling)	2	4
Need to think broadly – like other dangerous goods	2	4
Need international inputs/ need to have an international partner	3	5
Not the priority	2	4
Business case or independent business model preferred	2	3

Objective #3: To identify promising practices in e-safi within and outside the partnering sites

During the period of the project, the identification of promising practices was partially met. Again, there was little or no contribution from the Kenyan partner. However, through literature reviews and document searches, we were able to identify numerous national and global practices. Additionally, the partners from Uganda and Tanzania met with the e-waste program leads in Saskatchewan during their time on the ground in Canada which contributed to knowledge sharing and awareness. The document by the Ontario e-waste project was considered especially beneficial in terms of promising practices in e-waste and was widely distributed.

Insights Gained into the Canadian and International Research Community

From the perspective of the PI, the insights gained into the Canadian and International Research community were primarily in three categories – *coordination*, *capacities*, and *commitments*. In terms of *coordination*, there are significant differences in terms of time utilization and organization across contexts. The need for negotiating these differences is more important to avert misunderstandings, conflicts, and unnecessary adjustments. The research *capacities* differ across the sites – especially in terms of resources available (i.e., internet coverage), supports available (i.e., research assistants), and institutional capabilities (i.e., administrative commitments). These realities were perhaps most evident given the range from academic to non-profit sectors involved in this research. Thirdly, competing *commitments* were evident as impinging or affecting the research.

It was our hope to bring these groups together as a research community. It was felt that this was partially achieved – but we also recognized that just working together (without the research imperative) was an important first step. The trust building and the time spent together was extremely valuable in the process of coming together as a research community or network. Admittedly distance and diversities are elements for consideration, but, our experience shows that internationally we shared commitments to the issues and concerns – even in these formative stages of a research community.

Constraints and/or Challenges Encountered

The team experiences challenges but also experienced promising practices in e-safi efforts.

In terms of challenges encountered:

- One of our team members was unable to secure his visa and resultantly did not attend in Canada. This impacted on his commitment to the initiative and he eventually removed himself from our group.
- Limited resources constrained the efforts and focus of the time spent together.
- Limited time to commit to the project (outside of the individual's home country).
- Lack of research assistance to compare and analyze results.

In terms of promising practices envisioned:

- Our team became familiar with each other's strengths and preferred directions.
- The model of bringing various groups together across boundaries and sectors is seen as holding great potential for building a network.
- Being present at 'each' site creates credibility and intentionality of our team and its efforts.
- The idea of e-safi was seen as valued and potentially a critical direction inter-sectorally, inter-regionally, and internationally. There was support for an East African approach to the issue of e-waste which did not currently exist hence a promising practice was identified within this project.

Potential for Future Research Cooperation and Expected Outcomes

This project has led to three grant proposals (unfortunately not successful) to Canadian based programs. We have the continued commitment of our Ugandan and Tanzanian partners to a joint effort. A pending initiative is the hosting of a conference juxtaposing academics and artists interpreting e-safi/e-clean.

On a single country scale, the government of Tanzania has indicated a significant interest in supporting an e-safi demonstration project in the Arusha district of Tanzania. The team is presently working on the development of an agreement with the Arusha District and the national Ministry of Communications, Science and Technology. The NGO partner is presently negotiating a location for establishing a capture/ collection point.

It should be noted that near the conclusion of this project, the Nelson Mandela African Institute of Science and Technology in Arusha was opened. This group has now met with the Tanzanian and Canadian partners to develop a research relationship inclusive of the e-safi agenda.

Conclusions and Thoughts on the Benefit of the Global Partners II Program

This project has enabled a number of new linkages and insights that would not have been possible without the support of the GPII program. Further, for me, as a researcher, I have forged new relationships both internationally and locally. The NGO partner in Tanzania has now signed a Memorandum of Understanding with the University of Saskatchewan for research and other partnering. The Ugandan partner remains committed to working collaboratively. We have since located a different Kenyan partner who has joined us on another research project grant (CIDA). For the University of Saskatchewan, there are new linkages to a focus developing country for student, research, and innovation opportunities.

Without the GPII it was unlikely that the coordinated approach and joint presence of participants would have been possible. In addition, the GPII provide a catalyst to moving the agenda for e-safi to the forefront of a number of research partners.

Strengthening Of International Research Partnerships and Consolidation Of Emerging Research Networks

This has been reflected throughout a number of the previous sections. The group will continue to explore a network opportunity with the Nelson Mandela group which is East African based. The strongest link is likely the Tanzanian partnership and given the government's commitment to the NGO it is possible this might be a demonstration site for the e-safi effort.



APPENDIX TWO: TENTATIVE PROGRAM COMPONENTS – GUIDING HEADINGS

- Baseline Data
 - Definitions
 - Material Categories
- Program Plan
 - Environmental Considerations
 - Stewardship & Program Overview:
 - Funding Principles
 - Program Budget
 - Costs – collection, transportation, consolidation
 - Fees
 - Program Principles
 - Collecting/Capturing
 - Processing
 - Reconstituting
 - Disposing
 - 4Rs
 - REDUCE
 - RECYCLE
 - REUSE
 - RECLAIM
 - Transportation & Storage Considerations
 - Promotion & Public Engagement Considerations
- Monitoring & Evaluation
 - Targets & Reporting
 - Research & Development
- Governance, Authority & Accountability

Section C Program Review

External Assessment and Recommendations

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Executive Summary

The Global Partners 2 Round 1 Awards has been highly successful from the perspectives of the researchers, the University of Saskatchewan and the global partners. These eight small grants, totaling \$70,000 (six for \$10,000 and two for \$5,000) have brought a better understanding of global issues to the University. The projects have stimulated new research into how academic exchange can create avenues for the betterment of quality of life to the research partners. The sharing of different kinds of expertise between the organizations has enhanced the experience of Professors and Students at the University of Saskatchewan. These experiences have led to measurable activities that reflect the betterment of the global community. Several of the projects have blossomed and have the potential to develop into internationally driven collaborations that will bring significant funding to new research programs to the University of Saskatchewan.

The Global Partners program is generally well structured and has been well managed. Most of the projects fall outside traditional academic funding opportunities and would not have qualified for funding had it not been for the GP Awards. Sustainability continues to be a risk factor for projects that have not successfully identified continued funding. Many of these at risk projects would have a greater chance of influencing sustained change if they were given another one to three years of funding. Having started on a small budget, this continued funding could be offered on the same or a similar scale.

I. Introduction

This is the first of two external assessment reports. The purpose of these reports is to obtain a more objective response from the fund recipients regarding their satisfaction with the program. The report is divided into 3 sections. The first is “Project Summaries” which describe what has been accomplished by each project. Second, is Project Structure, which outlines strengths, weaknesses and recommendations regarding various aspects of the Global Partners 2 Fund structure. The third section discusses the impact of internal management and administrative assistance given by the University of Saskatchewan International Research Office.

II. Project Summaries

This section describes how the specific projects contributed to new research, built new collaborations, and what the impacts were on the international partners.

Project 1.

Topic: Improving Standards of Post Graduate Education regarding Clinical Nutrition

Partner Country: Ethiopia

Interviewee: Gord Zello

New Collaborations: This project involves collaboration between the University of Saskatchewan and the Hawassa University in Awassa Ethiopia. Close ties have been built between Canadian and Ethiopian researchers and students.

New Research: The goal was to enhance the quality of post-graduate education in Ethiopia regarding Clinical Nutrition. Graduates from the program would then be able to pass down their expertise via different areas of employment offered by the Ethiopian government. The focus of the project was on teaching theories behind common problems such as food security, community nutrition, toxicology, laboratory practices, HIV/AIDS and neonatal diarrhea. Collaborative research was initiated regarding indigenous knowledge, cultural and social dimensions of food practices and other interdisciplinary studies. This project is key to providing effective education

Impacts: Ethiopian graduates of the course work introduced to Hawassa University have already taken government and academic positions. A \$2M IDRC-CIDA Food Security grant supporting this collaboration, as well as other UoS/HA collaborative efforts, has been obtained.

Project 2

Topic: Encouraging Healthy Lifestyle Behaviors in School Children

Partner Country: Trinidad and Tobago

Interviewee: Carol Henry

New Collaborations: The relationships in this project include the researchers at the University of Saskatchewan, public school students in Trinidad and Tobago, and administrators involved in setting the curriculum for schools in Trinidad and Tobago. These administrators include public school teachers, school administrators and government administrators.

New Research: The issues being addressed are the lifestyle choices being made in the Caribbean that is resulting in dangerous levels of childhood obesity. The issues faced in the Caribbean are not unlike the issues faced by Canadian educators and children. The project developed simple activities for the classroom that would encourage healthy food choices, the concepts of nutrition and simple physical activities that can be practiced in the classroom and by people of limited income with limited space resources. Any knowledge gained through the collaboration could be applied in Canadian schools as well, resulting in a direct benefit to Canada.

Impact: The Canadian researchers, as well as school administrators in Trinidad and Tobago, have already seen changes in the attitudes of some of the students. Simple concepts of play and exercise were introduced into the classrooms. Students were demonstrating their understanding of simple dietary concepts, such as choosing water rather than sweetened carbonated beverages. The short time-span of the project has not yet enabled documentation regarding long-term impacts of the guidelines developed in this project.

Project 3.

Topic: Women and Gender Studies

Partner Country: China

Interviewee: Marie Lovrod

New Collaborations: The initial relationship developed in this project is between the University of Saskatchewan and the Lanzhou University in the Lanzhou Province of China.

New Research: While the communist philosophy rested on equality for everyone, in reality there is a strong discrepancy between men and women regarding social and economic roles, especially in rural China. The changing economic practices and the flow of manpower to urban centers has further complicated these discrepancies. Gender differences have not been studied in China from an academic point of view. The research exchange programs being developed by this GP2 project are in the early stages of development and have yet to be formalized. Initial agreements have been accomplished for the following activities: setting up graduate studies in women and gender issues at Lanzhou University, setting up exchange programs between the two universities, utilizing existing scholarship funding, involving NGOs (such as the Federation of Chinese Women), expansion to involve multidisciplinary studies, and potential expansion with other Universities in China.

Impacts: This project has great potential for attracting new students to the University of Saskatoon and providing a rich source of experience for exchange programs. One significant attribute to developing academic relationships as a platform for positive change within the global community rests in the fact that the benefits go in both directions via knowledge exchange, as opposed to proscribed transfer. As history has shown, relationships grow through continued trust. At a time when China and Canada are trying to build trusting relationships, this is a great opportunity.

Project 4.

Topic: Building a Public Health Network with respect to the Study of Gonococcal Antimicrobial Resistance

Partner Country: Latin America/Caribbean (LA/C)

Interviewees: Jo-Anne Dillon and Mingmin Lao

New Collaborations: This project involves the University of Saskatchewan and multiple academic, non-government and Latin America/Caribbean government organizations.

New Research: The groundwork for this project was initiated in the 1980's and 1990's. During the 80's and 90's, a network of researchers was established, and standardized clinical testing and research protocols were developed. This was under the auspices of Phase I of the "Gonococcal Antimicrobial Susceptibility Program" (GASP), and was promoted and endorsed by the WHO (World Health Organization). This project was left to languish over the following decade due to lack of funding and leadership. The money provided by GPII funding helped fund an assessment of the sustained activity resulting from this GASP Phase I program. The money also helped fund an assessment of the level of interest in mobilizing GASP Phase II.

Impacts: The multiple direct benefits to Canada and the University of Saskatchewan resulting from the success of this GPII project are well outlined in Dr. Dillon's Report. Generally speaking, these benefits would emanate from establishing a *WHO Collaborating Centre for Gonorrhoeae and other Sexually Transmitted Infections*, to be located at the Vaccine and Infectious Disease Organization (VIDO) of the University of Saskatchewan, under the leadership of University of Saskatchewan Professor Dillon. The offshoots of the resulting international research collaborations are striking and include global monitoring of a growing global health issue, graduate student training, student exchanges, and representation of the University of Saskatchewan and Canada at key international public forums. Without funding for Canadian leadership, this project is at risk for once again being scrapped. The initial concern of the LA/C partners is: having been abandoned after completion of GASP Phase I, should they invest their share of money into supporting a program for which there is little evidence for continued Canadian support. For relatively small amounts of funding, the benefits to Canada would be significant.

Project 5.

Topic: Improving Veterinary Health in Rural Uganda

Partner Country: Uganda

Interviewee: Claire Card

New Collaborations: This project established relationships between the University of Saskatchewan, Makerere University and multiple NGOs, such as the Foundation for AIDS Orphaned Children, the Association of Universities and Colleges of Canada, and Veterinarians Without Borders.

New Research: As is the case in many countries, quality of life for HIV/AIDS orphaned children in rural Uganda is poor. This is largely because grandmothers are left to look after the children. These grandmothers are often subsistence farmers having few social support systems. Common to many social problems, multiple issues need to be changed in order to affect quality of life; hence the Ecohealth approach advocated in this GP2 project. Improved education, farming practices, nutrition, health counseling, animal husbandry practices, micro financing, and gender issues are just some of the factors that need to be addressed. The researcher's area of expertise lies in veterinary medicine, and so was directed at training key individuals in the proper care of goats, and then setting up training networks of local stakeholders to transmit this training to others. While addressing this specific goal, the researcher and her team affect many additional aspects of the Ecohealth approach.

Impacts: As an integral component of the Ecohealth concept, the impact of this GPII grant in developing the veterinary training program in Uganda will have far reaching effects in rural Uganda. Lessons learned about how to manage endemic diseases in Uganda, such as bovine tuberculosis or brucellosis, will be useful for Canadians should similar issues arise on our homeland. The project certainly brings a wider appreciation of the issues faced in rural Uganda to the Canadian students of veterinary medicine who were involved in this project; and therefore will develop more knowledgeable future leaders for both Canada and Uganda.

Projects 6, 7 and 8.

Topic: A three-prong approach to studying whether researching the coffee free-trade industry can improve quality of life in rural Nicaragua

Partner Country: Nicaragua

Interviewees: Lori Hanson (Professor), Alejandra Ganem-Cuenca (Graduate Student) and Jannie Leung (Graduate Student)

New Collaborations: This project spearheads communication between multiple parties. The research of University of Saskatchewan Professor Hanson, Ms. Ganem-Cuenca and Ms. Leung brought approximately 12 different Nicaraguan academic, community and co-operative groups to a common table for discussion regarding future collaborative research efforts.

New Research: This project explores a new area of academic study; whether business co-operatives can provide a business structure that would ultimately improve quality of life for their members and communities. The research would lead to recommendations that could be implemented by the co-operatives. Jannie Leung's project focused on identifying relevant parameters with which to measure gender equity in rural Nicaragua, specifically among women involved in the fair trade coffee cooperatives. Her emphasis was in identifying the social and business issues (loans, land ownership, price, business ownership, childcare, nutrition, etc.) that affect the community and could be addressed by the co-operatives to improve quality of life. Alejandra Ganem-Cuenca's project looked at similar issues but from the perspective of the co-operatives; studying organizational parameters within the cooperative that limit progress for women. Dr. Hanson's role was focused on the long-term feasibility of initiating research on the role of free trade in Nicaragua. Being among the first people to study this, the research is transformational and brings a novel perspective to local health and social standards.

Impacts: Building on existing academic relationships, this research brought approximately 12 different academic, community and co-operative groups to a common table to discuss the level of interest and dedication to continue the research. The conclusions were that there is great interest in continuing the research. All parties recognize the potential value to business, academics and the community. The Nicaraguan organizations have significant research needs, but no traditional research agenda. The institutes involved only have access to in-kind contributions. This highlights one of the strengths of the GP2 Awards for accessing new research. The GP2 Awards value in-kind contributions as highly as cash contributions, and are therefore one of very few grant systems available to them.

III. Program Structure

Was the size of the grants sufficient to accomplish what was set out to do in the grant proposals?

Each of the recipients was successful in fulfilling the specific goals proposed in their grant applications. Almost by definition then, the amounts granted (\$10,000 to Principal Researchers and \$5,000 to Graduate Students) must have been sufficient for them to accomplish their goals. That said, in each of the cases the recipients reported they were required to leverage their awards either with other grants or from their own personal income. Sometimes it was because certain costs weren't covered by the grant. In other cases it was because, while the fund was sufficient for the researcher's contribution to the project, their contribution would have been meaningless without funding for other aspects of the project. The additional amount of money required, as approximated by the recipients ranged from \$1,000 to \$10,000.

Were research linkages strengthened and were new linkages developed?

In each case, there was at least one pre-existing relationship that provided the motivation to initiate the research. In one case, it was as simple as an undergraduate student being inspired by the PI's lecture to ask if the topic of the undergraduate lecture (Qualitative Research Methods) could be introduced to his home country. This simple question inspired the PI to explore the possibility, with respect to her area of research. In other cases, the pre-existing relationships were complex, involving multiple academic, personal and/or non-government organizations. In each case these relationships were strengthened, are on-going, and have developed new linkages. It is the opinion of the award recipients that these small grant awards make a significant contribution to establishing a collaborative international community.

Have the projects contributed to the internationalization goals of the University of Saskatchewan?

Each research project has inspired, at a personal level, a deeper understanding of international global issues. To loosely quote one researcher, "travelling to the region removes (the researchers) from the "Ivory Tower" of academia and from the relative abundance experienced by the average Canadian lifestyle". Each participant expressed experiencing a clearer perspective regarding living standards around the world. Each person interviewed expressed a desire to share his/her experiences both in the interview and to others they interact with inside

and outside the University. Each researcher claims to have articulated these perspectives at a formal level in the classroom as well as at an informal level. In this way, the Program has clearly contributed in a positive fashion to the internationalization goals of the University of Saskatchewan.

In addition, some of the projects gave the University of Saskatchewan access to existing graduate student funding from the partner country and will be attracting student exchange programs. The collaborative research has the potential to establish an international research center, which will attract revenue to the University. All the projects have raised the profile of the University of Saskatchewan on a global level and strengthened ties with academic organizations, non-academic organizations, government organizations, non-government organizations, communities, and businesses.

In summary, the Global Partners I and II programs seem to be highly proactive in building a collaborative global community.

Value of the Program to the Researchers

The existence of the program was considered **highly** valuable to the researchers. The money provided funding for niches not otherwise covered by grants. It provided seed money to determine feasibility and readiness for collaboration. When initiating international collaborations, especially in rural communities, the researchers recognized a rich source for new research. They also recognized the need for the research and how the research could benefit the community. However, what needed to be determined was whether the community was able to recognize the benefits, was ready for collaboration and was willing to commit time and resources to the research.

Budget Quantities

As mentioned above, the budgets of \$10,000/\$5,000 were highly appreciated. While everyone said they had to supplement the money with other funds, they fully endorsed the fact that without the GP2 funding the projects could not have been done. Some covered the extra costs from their own pockets; while others were able to leverage additional grant funding using the GP2 funds.

While the size of the grants was arguably sufficient, most of the researchers felt that a prolonged commitment period by the program would help the sustainability of the projects. One year of funding was sufficient for laying the groundwork and determining feasibility, however this left the researcher scrambling for additional funds to implement the next step or to formalize agreements. Should future funding programs be considered, it is this consultant's recommendation that this one-time exploratory grant be followed up by an opportunity to apply for a second program, of 1 to 3 year duration, for ensuring the goals regarding sustainability are accomplished.

Thematic flexibility

It is difficult for the consultant to determine whether the thematic areas eligible for funding were sufficiently flexible, too broad or limiting, since only successful applicants were interviewed. This question would possibly be better answered by interviewing unsuccessful applicants, or researchers who did not apply if they felt the thematic areas were too rigid or not applicable. Certainly each of the successful recipients was satisfied with the grant requirements.

IV. Internal Management and Administration

The general attitude towards the members of the IRO was one of great appreciation.

Several researchers mentioned that they felt that the UoS International Research Office was an integral part of their research team. This is both gratifying and presents challenges.

Researchers recognize that projects with developing nations have complications that are not found in establishing research relationships with established academic research communities. It was the opinion of most of the researchers that the IRO was indispensable with respect to providing guidance in how to deal with financial practices such as cultural differences, a more flexible definition of valuing "in-kind" contributions, and the inability to obtain official receipts for some services, food or lodging. The orientation package was especially useful for less experienced researchers who were unfamiliar with grant application processes, financial reporting processes and written reports. Experienced or not, the researchers felt that a dedicated International Research Office is a necessary component of the Fund.

Both sides have a responsibility to manage expectations. A common challenge facing researchers is the difficulty of balancing their time between writing grants, providing reports on grants, and doing the research they propose in the grant. Unfortunately the amount of time and effort required for a small grant is not proportionately smaller than for a large grant. The Global Partners II program attempted to make the process as painless as possible by providing templates to simplify the process. While some researchers embraced these simplifications, others found the administrative requirements burdensome. Some of the concerns can be addressed by further streamlining the process and have been implemented by the IRO in the second round of funding. Other concerns can only be addressed by hiring additional administrative staff.

V. Recommendations

1. Keep the requirement for any University wishing to be involved in a Global Partners type fund that they have an IRO to assist through the novel challenges intrinsic to international studies.
2. Some projects would have benefited from larger grants. In some cases it would be worthwhile to expand the first year pilot project funding to range between \$5,000-\$20,000.
3. Add a second tier of funding for up to an additional 3 years to ensure new programs are stable and can be sustained through other funding. Increasing the burden of additional grant application procedures on the researchers for small grants is not recommended as it subtracts from the amount of time, energy and focus available to implement the proposals. However, additional funding should be conditional on attaining reasonable specific milestones and demonstrating there is collaborative agreement that the research continues to be beneficial.
4. Continue to build collaborative relationships between researchers and GP2 Administrators through assisting with and simplifying the application and reporting aspects of the fund.
5. Manage expectations regarding how much assistance administrators can provide and the multiple time demands on grant recipients.
6. Continue to improve transparency of the selection process with respect to: How is the selection committee selected? What are the credentials of the selection committee

members? What are the criteria upon which the awards are judged? What were the criteria that made applications successful and others rejected?

7. With respect to identifying new sources of funding to continue GP2 funded projects: Any future funding programs modeled on the GP2 Awards Program should ensure the recipients have access to an expanded database to identify obscure funding sources. The researchers do not require large grants, but they seldom have sufficient human resources, expertise, or database resources to identify suitable small grant funds. This could be well served by a central resource of expertise and, while it does not need to be exclusive to GP2 Award recipients, the needs represented by GP2 Award recipients are unique and therefore may require additional support.

Program Review - Interview Questions

Section 1 Impact and Sustainability

1. Please comment on how receiving this funding contributed to collaboration and application of knowledge for development.
2. Were pre-exchange research linkages strengthened? If so, which ones and how?
 - a. Were any new linkages developed?
3. What were the main impacts/benefits to your international partner(s) that you can rightly attribute to this exchange? Please describe.
4. What were the main benefits to your research program that you can rightly attribute to this exchange?
5. What were the main benefits to your department, College, the University of Saskatchewan as a whole that you can rightly attribute to this exchange?
6. How do you think your project has contributed to the internationalization goals of the University of Saskatchewan?
7. What plans have you made with your partner for the collaboration and work started or carried out so far through this exchange to continue?
8. In a broad sense, how will this work be accomplished? How will it be funded?
9. Can you estimate the timeline for future collaboration and continuation of this research?
10. Which would you consider the most important immediate and long-term impacts of your project on U of S students and the students of your collaborating partner?
11. Which would you consider the most important immediate and long-term impacts of your project on your developing country partners and their institutions?

Section 2 GPII Program Structure

1. Would you consider the four thematic areas eligible for funding flexible, limiting or too broad? Please explain
2. Was the budget of \$10,000, available for individual projects, adequate to accomplish what was required by the program and your research objectives? If no, why and what would you suggest?
3. Was the budget of \$5,000 available for graduate students adequate to accomplish what was required by the program and your research objectives? If no, why and what would you suggest?
4. Was the category of eligible expenses flexible, limiting or too broad? Please explain?
5. Would you consider the in-kind requirement reasonable or difficult to achieve? Please explain?
6. Do you consider the reporting requirement to be reasonable?
7. Was the time allotted to complete the project and submit the report(s) adequate?
8. Overall would you consider the existence of this program as being of valuable to yourself, your international partner(s) and the internationalization of the University of Saskatchewan?
9. What suggestions might you have to improve the structure of the GPII Program?

Section 3 Internal Management and Administration of the Program

1. Was the Call for Proposals Application Form and Guidelines document clear and easily understood? Did you ask for and receive clarification from the IRO in regard to the call for proposals information?
2. Did you ask and obtain assistance from the IRO in the preparation of you proposal? If so how helpful was this assistance?

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3. Was the Project Orientation Session and information provided at this session useful to you?
 4. Did you ask for and received assistance from the IRO during the course of your project work or when you were preparing your final report(s)?
 5. Did you receive assistance and was that assistance useful to you?
 6. Were the requirements for your final reporting clear and easy to comply with? If not, why were they not, and what changes would you suggest to address this?
 7. Overall, what suggestions may you have for improving the internal management and administration of the GPII Program?

Section D Table of Round 2 Projects

Summary of Projects Awarded Global Partners II Funding Round 2

GPII Awards Round 2: April 2010 – June 2011

Title: Strengthening Long-Term Capacity for Research on Poverty Reduction and Policy Development in Western Ethnic Minority Region (China)
Start/End: April 2010 – June 2011
Principal Researcher: Li Zong
College: Arts & Science
Partner Organization: Northwest University for Nationalities, Lanzhou, China
Project Description: The project is to collaborate with Northwest University for Nationalities in Lanzhou, China, to build long term capacity for policy relevant research on poverty and ethnic equality in a region of western China with a large ethnic minority population. The project also includes training opportunities for young policy researchers and graduate students as a means to respond to China's national policy of developing the West and reducing regional poverty.
Student Involvement/Opportunities: both Chinese and Canadian graduate students, particularly female graduate students will have an opportunity to acquire training and knowledge in social policy research methods and social policy development.

Title: Canadian Support for the Belarus, Ukraine, Poland Asthma long-term Study (BUPAS)
Start/End: April 2010 – June 2011
Principal Researchers: Donna Rennie
Colleges: Nursing
Partner Organizations: Medical University of Silesia, Poland
Project Description: The purpose of the partnership is to work collaboratively at an international level. The Canadian role is to provide expertise in conducting epidemiological studies of asthma in children. BUPAS will assess the prevalence of asthma in children ages 6 to 14 years in Belarus, Ukraine and Poland. A platform will be developed for population-based screening for childhood asthma in the future.
Student Involvement/Opportunities: Team members have trained two PhD students, five Master's students, and two post-doctoral fellows in recent asthma epidemiology studies. Students at collaborating universities will participate in a two-year international study abroad under CCHAS's CIHR Strategic Training Initiative in Health Research (STIHR) program for graduate education, which provides training in rural and agricultural health.

Title: e-clean, e-safi: An Appreciative Inquiry Informed Approach to e-waste through Joint African Intra-regional and International, Situational and Stakeholder Analysis (Uganda)
Start/End: April 2010 – June 2011

Principal Researchers: Pammla Petrucka
Colleges: Nursing
Partner Organization: Mekerere University, Kampala, Uganda
Project Description: This project will be to conduct a situational scan on contextual and conceptual aspects of e-safi (e-clean); to explore the perceptions of stakeholders regarding e-safi; and to identify promising practices of e-safi within and outside the partnering sites.
Student Involvement/Opportunities: a doctoral student participates in all aspects of the project including work on tool development, data collection/analysis, and reporting.

Title: Exploring Collaboration and Capacity Development between the School of Nursing and Midwifery, the College of Nursing and Hawassa University (Ethiopia)
Start/End: April 2010 – June 2011
Principal Researcher: Philip woods
College: Nursing
Partner Organization: Hawassa University
Project Description: The main objectives of the project are to meet and explore opportunities for partnership, align College of Nursing faculty research interests with the capacity development requirements of the School of Nursing & Midwifery, Hawassa University, and to develop a strategic approach to the potential partnership, identifying specific projects and deliverables. Discussions will embrace professional practice, academic programming (including curriculum and delivery methods) and research.
Student Involvement/Opportunities: The College of Nursing has a focus and support for global health, including international placements and exchanges for both undergraduate and graduate programs. The Ethiopian School of Nursing & Midwifery is interested in developing a graduate program and their visit here will include dialogue with our graduate students.

Title: Collaborative Research Training in Nampula (Mozambique) (extension granted)
Start/End: April 2010 – June 2011 (project period extended due to request of U of Lurio)
Principal Researchers: Ronald Siemens
College: Medicine
Partner Organization: Universidade Lurio, Mozambique
Project Description: This project will strengthen the collaboration and increase the capacity of Universidade Lurio in teaching and training Mozambican medical students in community-based research. It will also increase the pediatric teaching capacity of Universidade Lurio faculty.
Student Involvement/Opportunities: Research data gathering will include the entire class of Universidade Lurio medical school and six Canadian medical students.

Title: A National Wildlife Health Centre for Sri Lanka: A Preliminary Assessment of Need, Value and Feasibility (extension granted)
Start/End: April 2010 – June 2011 (project period extended due to illness of researcher)

Principal Researcher: Ted Leighton
College: Western College of Veterinary Medicine
Partner Organization: University of Peradeniya, Sri Lanka
Project Description: The project is for a preliminary assessment of the need, value and feasibility of establishing a national wildlife health center in Sri Lanka as a first step toward establishing a program to develop capacity in Sri Lanka to direct and manage diseases in wildlife and their implications for environmental conservation, domestic animal health and public health. Additional objectives include a meaningful scientific exchange at the Canadian Cooperative Wildlife Health Center (CCWHC) for a member of the faculty of Veterinary Medicine and Animal Science, University of Peradeniya, and to provide a formative experience in International Research for a French veterinary student at the National Veterinary School in Lyon, France.
Student Involvement/Opportunities: The project includes a French graduate student on exchange at the Western College of Veterinary Medicine, and aims to include 1 to 2 graduate programs for U of S students.

Title: Advancing Biodiversity Conservation and Sustainable Management in the Canadian Prairies and Ukrainian Steppes by Enhancement of International Research Partnerships (Ukraine)
Start/End: April 2010 – June 2011
Principal Researcher: Vladimir Kricsfalusy
Colleges: School of Environment and Sustainability
Partner Organizations: M.G. Kholodnyi School of Botany, National Academy of Sciences of Ukraine (Kyiv); Luhansk Taras Shevchenko National University (Luhansk)
Project Description: The project is to establish the Temperate Grassland Ecology Group in Ukraine and Canada, to develop a platform for exchanging expertise and information between partner institutions, and to initiate joint research programs between partner institutions. The proposed research activities will address problems and solutions for biodiversity conservation, invasion of exotic species and management of grasslands in human-altered landscapes.
Student Involvement/Opportunities: A U of S PhD student will assist in hosting Ukrainian partners in Canada during their visit to the grasslands of Saskatchewan, contact administrations of national and provincial parks in Canada, and travel to Ukraine as part of the research team. To Ukrainian PhD students will also participate; the first will assist in hosting Canadian partners in Ukraine, contact national parks and reserves in Ukraine

Title: Doctoral Research Seminar and Field Work on Exploring Indigenous Ecological Knowledge in a Junior Farmer Field and Life Skills School in Malawi (Africa)
Start/End: April 2010 – June 2011
Principal Researchers: Jean Kayira (Graduate student)
College: Education
Partner Organization: Rhodes University
Project Description: I intend to work with youth, Elders, youth guardians and instructors to explore the possibilities of Indigenous Ecological Knowledge (IEK) in furthering youth learning in relation to culturally appropriate environmental sustainability.

Title: Impact of the Indian Forest Act on the Tribal People of Samrania (India)
Start/End: April 2010 – June 2011
Principal Researchers: Vijayalakshmi Kalagnanam (Graduate student)
College: Agriculture & Bioresources
Partner Organization: BAIF Development Research Foundation
Project Description: The Government of India introduced The Scheduled Tribes (Recognition of Forests Rights) Bill, 2005 which recognizes forest rights of Forest Dwelling Scheduled Tribes (FDSTs) who have been occupying the land prior to October 25, 1980. The project will provide a procedural framework for assessing the impacts of past, current and future management systems. This will involve a village-level analysis of the socio-economic and cultural impacts of forest use in an historical and regional context by examining the cumulative impacts of past policies and the potential effects of the change in the Forest Act.

Title: Collaboration of Nutrition Graduate Students Through Research for Improved Health in Ethiopia
Start/End: April 2010 – June 2011
Principal Researchers: Jennifer Wright (Graduate student)
College: Pharmacy & Nutrition
Partner Organization: Hawassa University
Project Description: The objectives of this project aim to provide innovative nutrition graduate student research opportunities in the areas of food security, nutrition, health promotion and disease prevention at Hawassa University. The objectives are to continue the on-going D-lactic acidosis research study, started in 2009, in collaboration with HU graduate student (Biniam Amare), HU (Dr. Kassahun) and ARH (Dr. Yifru); and to work in collaboration with nutrition graduate students (recruited by HU and UofS partners) at HU to develop a survey to determine the prevalence and incidence of diarrhea in Awassa and surrounding areas (e.g., urban & rural Ethiopia).

Title: Shared Threats, Shared Solutions: Linking Grassland Conservation in Saskatchewan Canada and the Steppe Prairies of Southeastern Ukraine
Start/End: April 2010 – June 2011
Principal Researchers: Allison Henderson (Graduate student)
College: School of Environment and Sustainability
Partner Organizations: National Academy of Sciences of Ukraine; Luhansk Taras Shevchenko National University
Project Description: Allison Henderson will: 1) assist in hosting Dr. Myroslav Shevera and Oksana Kucher during their visit to the native grasslands of south-western SK and, 2) travel as part of Dr. Vladimir Kricsfalussy's research team to the Kyiv, Luhansk, Donetsk, and Kherson provinces of Ukraine. The objectives of the proposed activities are: 1) to foster establishment of a strong research collaboration between Canadian and Ukrainian partners and, 2) to develop mutually-beneficial and effective conceptual and methodological frameworks for a Ukrainian/Canadian grassland ecology research project.