

**Canada–Latin America and the Caribbean Research
Exchange Grants (LACREG) Program – Phase V (2008–2011)**

Project number 105096–001

FINAL TECHNICAL REPORT

for Research Work the period of July1, 2008 to December 31, 2011

Report submitted to the
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By the
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1.0 SYNTHESIS

The purpose of the Phase V LACREG program (July 1, 2008 – December 31, 2011), funded by IDRC and managed by AUCC, was to strengthen international partnerships and consolidate emerging networks among academic researchers from Canada, Latin America and the Caribbean. More specifically, the objectives of the program were to:

- support small collaborative research activities which contribute to the creation, dissemination and sustained application of knowledge for the development process in at least one of IDRC's areas of thematic priority; and
- help to ensure the sustainability of research linkages, activities and results through explicit commitments from all partner institutions to (i) a plan of action for research collaboration and (ii) the proposed joint research activities.

The program was comprised of two principal components: 1) grants for research projects and 2) AUCC outreach and knowledge-sharing activities.

Component 1: AUCC received 171 project applications during the two competitions held as part of the Phase V program (60% more than during the previous phase). 34 applicants were awarded grants.

- 19 grants were awarded through the 2008 competition. Grant recipients' research took place between February 6, 2009 and March 31, 2010 with reports due to AUCC on May 30, 2010.
- 15 grants were awarded through the 2009 competition. Grant recipients' carried out their research between March 15, 2010 and April 29, 2011 with reports due at AUCC on May 30, 2011.

The maximum amount of each individual grant was CAD\$15,000. The grant recipients' home and/or partner institutions were required to contribute one-third of the total project costs. Research exchanges and travel were for a minimum period of 3 weeks. Expenses covered by the grants included travel, medical insurance, vaccinations, lodging, food, and equipment.

Phase V projects covered a wide range of collaborations, from work with ultraviolet light for water treatment in Bolivia to measuring social media in Brazil, and from the study of the ecological effects of invasive trout in Chile to the development of resources for street youth in Colombia.

Component 2: AUCC outreach and knowledge-sharing activities included:

- Posting regular updates about the program on the LACREG specific page of AUCC's website (www. aucc.ca/lacreg had 33,502 hits and 11,278 downloads between July 1, 2008 and December 31, 2011);
- Sharing information at the highest levels of our member institutions about the program through AUCC's President's letters, ILO-Talk network and via the International Update newsletter which is sent twice a year to the international liaison officers at AUCC's member universities.
- Sharing information about the program at conferences and workshops in LAC and Canada.
- Publishing 5 articles on LACREG Phase V projects in AUCC's *UniWorld magazine* which is published bi-annually and has a readership of 20,000 across the country; and
- Publishing a LACREG Phase V brochure (in four languages) highlighting key results of the 34 projects. Copies of the LACREG Phase V brochure were sent to the international offices of AUCC's 95 member universities, to LAC embassies in Canada, to Canadian embassies in LAC

countries, to grant recipients, and to representatives at CIDA. Copies will also be distributed at future AUCC events and conferences such as the upcoming Conference of the Americas in Rio de Janeiro in April 2012. AUCC has already received several inquiries about the program and requests for meetings as a result of this publication.

AUCC brought about several changes to the Phase V LACREG program in response to the key recommendations from an evaluation of the Phase IV program conducted by an independent consultant in 2007. And further feedback from 2008 grant recipients was incorporated in the development of AUCC's submission for the management of the Phase VI LACREG program which is now underway.

This final technical report first provides general statistics regarding LACREG Phase V and highlights the results of the 34 research projects funded through the program. It then describes AUCC's program management and implementation activities over the period including its work with respect to outreach and knowledge sharing. The last section of the report provides an overall assessment of the program, lessons learned and recommendations.

2.0 RESEARCH PROJECTS

2.1 General statistics

Competitions: 2

Project applications received: 171

- Applications from Canadian lead researchers: 111
- Applications from LAC lead researchers: 60
- Ratio of female to male lead applicants: 72:106 (some applications indicated more than one lead researcher)

Grants awarded: 34

- Grants to Canadian lead researchers: 29
- Grants to LAC lead researchers: 5
- Graduate student grant recipients: 6
- Ratio of lead female to lead male grant recipients: 14:20

Latin American and Caribbean countries involved in projects: 15

Latin American and Caribbean institutions involved in projects: 47

Canadian institutions involved in projects: 23

Distribution of projects by Latin American and Caribbean country:

Peru: 20%

Brazil: 12.5%

Chile: 10%

Colombia: 10%

Cuba: 10%

Mexico: 10%

Bolivia: 7.5%
Argentina: 2.5%
Costa Rica: 2.5%
Ecuador: 2.5%
Nicaragua: 2.5%
Panama: 2.5%
Paraguay: 2.5%
Uruguay: 2.5%
Venezuela: 2.5%

Provincial distribution of Canadian institutions (some institutions had several projects):

- Ontario: (14) 37%
- Quebec: (10) 26%
- Western provinces: (11) 29%
- Atlantic provinces: (3) 8%

IDRC thematic priorities addressed by Phase V projects:

- Environment and natural resource management: 49%
- Social and economic policy: 35%
- Information and communication technologies for development: 9%
- Innovation, Policy and Science: 6%

2.2 Project summaries

BOLIVIA

1. Indigenous autonomy in Bolivia: Prospects and challenges

John D. Cameron, Dalhousie University, Canada

Gonzalo Colque, Fundación Tierra, Bolivia

IDRC contribution: \$6,791 (\$12,931 initially awarded) – 2009 competition

Bolivia was the first state to formally support the UN Declaration on the Rights of Indigenous People, incorporating its core principles into the country's own 2009 Constitution. In light of this landmark event, researchers analyzed the creation of new indigenous self-governance institutions in three of the country's indigenous municipalities.

The process of creating these institutions in two of the municipalities (Jesús de Machaca and Tarabuco) slowed significantly during 2010. As a result, research shifted from analyzing the internal political obstacles to indigenous autonomy in each municipality. Ultimately, the project organized four workshops on indigenous autonomy that involved government officials, academics and representatives of other NGOs. In the autumn of 2010, researchers presented a paper on their findings to a meeting of the Latin American Studies Association.

The collaboration solidified the already strong relationship between the two partners. In 2008, four years after the start of their partnership, the university and the NGO signed a Memorandum of

Understanding. More recently, after signing a formal agreement for collaborative research between 2011 and 2014, they received a grant from SSHRC to pursue research on indigenous institutions.

2. Genre, ethnicité et inclusion politique dans les nouvelles autonomies municipales en Bolivie

*Nancy Thede, Marie-Michèle Mondor and Martha Lucia Gomez, Université du Québec à Montréal, with Stéphanie Rousseau, Université Laval and Pierre Beaucage, Université de Montréal, Canada
Manuel de la Fuente and Alejandra Ramirez, Universidad Mayor San Simón, Bolivia
IDRC contribution: \$15,000 – 2009 competition*

Fifteen years after the implementation of an innovative decentralization process praised around the world, most of Bolivia's 300 municipalities – which are largely rural – now have some form of participatory government. What's more, new players, both individual and collective, have made inroads into municipal politics, including women, smallholder farmers and indigenous people.

Researchers explored the tensions and paradoxes of inclusion and exclusion within this participatory process, consolidating the findings of their individual work. To that end, they analyzed the emergence of new autonomous municipalities. Ultimately, they sought to identify how the modification of municipal structures led to greater inclusion over the past 15 years without creating new exclusions.

Researchers organized scientific seminars at Université Laval, UQAM and Centro de Estudios Superiores Universitarios at the Universidad Mayor San Simón to present their findings. In addition to taking part in other symposiums and conferences, six members of the team contributed to articles for a special issue of CESU's *Decursos* journal in 2011. They expect to share their work again at the World Congress of the Latin American Studies Association in 2012.

3. Implementing a Ultraviolet Disinfection System in a Low-Income Community of Bolivia, South America

*Mario Zapata Peláez and James R. Bolton, University of Alberta, Canada
Julio Torres, Universidad San Francisco Xavier, Bolivia
IDRC contribution: \$9,016 – 2008 competition*

In Cerro Grande, a rural community in Bolivia which relies solely on untreated water, gastrointestinal diseases are common, especially among the large population of children under five years of age. While ultraviolet light has been used successfully in developed countries to treat water, the technology is not yet widespread in developing countries, especially in rural areas. To test the feasibility of UV technology in Bolivia, researchers installed two Canadian-made light units in the community to disinfect water at the source.

Capital costs were significant, especially when equipment had to be imported. "Community organization is a powerful tool for getting grants and funds for this kind of project," noted Mr. Zapata. He concluded the community's willingness to pay for safe water might make the operation and maintenance of the system sustainable for a number of years.

In Sucre, Mr. Zapata delivered a short course on disinfecting water and wastewater with ultraviolet light that was attended by 80 people, including government officials, the local water company and

students. Back in Canada, he drew on the research in Bolivia to complete his master's thesis in environmental engineering in 2011. Subsequently, he co-authored a proposal for a rain water collector treated with UV light in an indigenous community of Panama. "Since UV water treatment was proven to work properly in remote locations with minimally trained operators," said Mr. Zapata, "there is the possibility of changing many lives, even in our own backyard."

BRAZIL

4. Cooperative recycling and climate change mitigation

Megan King and Jutta Gutberlet, University of Victoria, Canada

Nidia Pontuschka, Universidade de São Paulo, Brazil

IDRC contribution: \$13,117 (\$14,640 initially awarded) – 2009 competition

Since 2005, the University of Victoria has worked with partners in Brazil on the Participatory Waste Sustainable Management Project, most recently with the University of São Paulo. In this project – the first of its kind in Brazil – Ms. King began assessing the extent to which cooperative recycling was reducing greenhouse gas (GHG) emissions, as well as its capacity to support further reductions. Drawing on these findings, the researchers planned to examine the potential for recycling cooperatives to earn carbon credits and take part in carbon trading.

Based on analysis to date, researchers expect to create a carbon offset calculation model and build capacity within the recycling community, particularly around GHG emissions, carbon offsets and the carbon market. "This would strengthen the position of these recycling cooperatives within the political realm and the marketplace," said Ms. King. In addition to her graduate thesis, the research was expected to generate two peer-reviewed papers.

Beyond the project, researchers would like to train recycling cooperative leaders in the application of the carbon offset calculation model. A brochure summarizing results and their implications would also be shared throughout the network of cooperatives.

5. Exploring gender based inequities of female recyclers in Sao Paulo, Brazil: a baseline study

Neil Nunn, University of Victoria, Canada

Nidia Pontuschka, Universidade de São Paulo, Brazil

IDRC contribution: \$8,000 – 2008 competition

In what ways have recycling cooperatives given women the power to inspire personal and social change, as well as influence institutions that affect their lives? What institutions have had a significant influence in shaping this unique space? These were the two questions posed by Mr. Nunn in the first of two studies exploring gender relations in nine recycling cooperatives in the Greater ABC region (the industrial sector) of São Paulo.

The second study looked at socially produced power asymmetries within the lives of women and men employed by the cooperatives. Mr. Nunn suggested that it's not only men who oppress women; women themselves play a role in their own oppression. He affirmed this notion by exploring the

ways that female cooperative recyclers discursively (re)produce hegemonic masculinity and social roles, abilities and inabilities.

Beyond completing his thesis for a master's in geography, Mr. Nunn planned to draw on his research to write a book about gender-based struggles, challenges and potential solutions within cooperatives.

6. Politics as a feminine vocation. Uniformity of discourse and practice among female voters, activists and legislators in Brazil

Simone R. Bohn, York University

Denise Paiva, Universidade Federal de Goiás, Brazil

IDRC contribution: \$6,827.43 (\$7,860.17 initially awarded) – 2008 competition

Does the platform pushed by feminist NGOs reflect what women really want? Do bills initiated by women legislators really echo the public policy preferences of female voters and the agenda of feminist organizations? Do female legislators and feminist NGOs really represent female voters?

Researchers sought to answer these questions by looking at the case of Brazil. They began mapping female voters' preferences of public policies by analyzing national surveys. They also analyzed speeches by female representatives in Congress, both from the House and the Senate. And they analyzed both the quantity and quality of bills initiated by both congresswomen and female senators to assess their legislative preferences and verify whether they advance more bills in defence of women's interests than their male counterparts. Finally, they interviewed nearly half of federal congresswomen, as well as NGO advocates for rural female workers, Catholic women and female Native Brazilians.

The researchers have already published several articles with many more to follow. Ultimately, a book is expected to be published in 2012. In addition, the research has led to further collaboration between Dr. Bohn and a political scientist from the Federal University of Parana in Curitiba. They developed a project related to Bolsa Familia, the conditional cash transfer policy of President Lula's administration. Together they have produced one article on the policy, are working on a second and planning a third.

7. Studying the value of user-generated content in the internet and its impact on content governance

Elizeu Santos-Neto and Matei Ripeanu, University of British Columbia, Canada

Nazareno Andrade and Francisco Brasileiro, Universidade Federal de Campina Grande with Jussara Almeida and Marcos André Gonçalves, National Institute for Science and Technology for the Web, Brazil

IDRC contribution: \$12,050 - 2009 competition

The emergence of online social networks creates possibilities for new services that tap into a valuable pool of user-generated information such as citizen journalism. Realizing these benefits, however, demands more knowledge about the impact of such technologies on the "information economy" ecosystem, as well as on content governance on the Internet. In this context, the researchers examined user behaviour in online peer production systems and sought to design new

ways to quantify peer-produced information such as social tagging.

The project depends on software and hardware to analyze public records of user activity from YouTube and other systems. Researchers laid the foundation for this work by designing and implementing the core of the software infrastructure. In addition, they set up mechanisms to make remote collaboration more efficient, including tools to help control software quality.

Even more significantly, the project boosted on-site collaboration among the partners. NetSysLab hosted two Brazilian students for six months as part of the Emerging Leaders in the Americas Program, for example. The partners developed three new joint projects, and secured funding for a UBC student to visit LSD/UFCG in 2012.

CHILE

8. Freshwater Fish Biodiversity in Chile and the Ecological Effects of Invasive Trout in Patagonia

Cristian Correa-Guzman, Andrew Hendry and Irene Gregory-Eaves, McGill University, Canada

Brian Dyer and Gonzalo Gajardo, Universidad del Mar, Chile

IDRC contribution: \$12,487 – 2008 competition

Most freshwater fishes in Chile are at risk or else insufficiently understood. While researchers point to contributing factors such as degrading habitat and invasive trout, they lack systematic information on why species are endangered. The country also lacks a geographical inventory of fish biodiversity. This project began to fill these two knowledge gaps.

In what Mr. Correa-Guzman calls the broadest-ever study of freshwater fish in Chile, the researchers surveyed 25 Patagonian lakes ranging from those with high levels of trout to those undisturbed by this invasive species. The research provided important baseline information on biodiversity, uncovering strong impacts of trout across ecological scales in Patagonian lakes. “My motivation is to create more cultural awareness and promote appropriate conservation,” said Mr. Correa-Guzman.

Second, to stimulate broader perspectives, the researchers progressed towards the development of the first Chilean freshwater fish geographical database. It highlights 77 references, more than 600 sampling sites along the whole country and more than 60 native and introduced species detected in the wild. This resource will help identify knowledge gaps, temporal and geographical patterns, and stimulate more research and conservation.

The collaborators contend their innovative and multidisciplinary research (including an unprecedented sampling effort in lakes of the Aysen region) will become a landmark in the understanding of Patagonian freshwater fish and the ecological impacts of exotic trout in lake ecosystems.

9. Strengthening the International Research Partnership between the University of Prince Edward Island, Canada and ARCIS University, Chile

Irene Novaczek, University of Prince Edward Island, Canada

Manuel Munoz, Universidad ARCIS Patagonia, Chile

IDRC contribution: \$5,960 – 2008 competition

Prince Edward Island and Chiloe Island have much in common, including a reliance on potatoes, fisheries, aquaculture and tourism; Aboriginal populations that struggle with health and social problems, as well as for rights and access to land; and youth who leave home for better prospects. Through this project, the partners aimed to strengthen the capacity of indigenous people on the two islands to manage fisheries and aquaculture development and to engage youth in these processes. The project also supported advocacy for public policies that support indigenous rights of access to natural resources for livelihood, as well as for social economy organizations that work with indigenous communities.

In early 2009, the researchers collaborated on several well-attended workshops, and the UPEI-ARCIS internship program was subsequently evaluated and extended. The partners arranged to send a graduate student to Chiloe to do her MA thesis research, while other projects at UPEI were initiated to help build capacity for work in Chiloe.

Late in the same year, Mr. Munoz visited UPEI where he participated in a research seminar, gave lectures to academic and community audiences, worked with Aboriginal and non-native youth and travelled to indigenous coastal communities to meet and consult with Mi'kmaq elders and community leaders. "Chiloe has a much larger Aboriginal population that is more integrated into the mainstream," said Dr. Novaczek. "There is great potential for the Mi'kmaq people to learn from the Williche people [of Chiloe]."

The partnership continues to grow. In 2011, the partners offered workshops to the Williche Council of Chiefs on how seaweed could improve agricultural practices. In addition, interns on Chiloe Island published two research reports. Two Aboriginal interns, funded by CIDA, are expected to visit Chiloe in 2012.

10. Rock glacier remote-sensing: a scientific base for water resource management in the Andes

Alexander Brenning, University of Waterloo, Canada

Marco Peña, Universidad Mayor, Chile

IDRC contribution: \$8,470.41 (\$10,000 initially awarded) – 2008 competition

In the desert environment of the dry Andes, rock glaciers are one of the most important stores of frozen water. Researchers sought to apply a remote sensing/terrain analysis mapping system for detecting rock glaciers in the Andean environment. Such a system would strengthen Chile's ability to detect cryospheric water resources where they are most critically needed. At the same time, it would provide expert knowledge to environmental impact evaluations of high-mountain mining projects

that are increasingly affecting rock glaciers.

Researchers identified three previously unknown remote-sensing approaches that could help detect rock glaciers in remote mountain areas. They carried out, or ordered, image acquisitions for these approaches. A seminar on their findings in Santiago attracted participants from several research and government institutions, as well as consulting and mining companies.

Given his expertise, Dr. Brenning was invited to join an expert group advising Chile's national environmental protection agency on the implementation of its recently approved National Glacier Policy. In 2011, building on the LACREG research, Dr. Brenning set up a system for the Chilean water directorate to map ground temperatures and locate rock glaciers more effectively. "Mapping is a required by law to protect the rock glaciers," he said. "Tens of thousands of square kilometers need to be mapped in the next 10 years."

11. Economic and Environmental Outcomes for Selected Resource-Dependent Rural Communities in Canada and Latin America (with special attention to Aboriginal communities)

Margaret Rose Olfert, University of Saskatchewan, Canada

Julio Berdegué and Eduardo Ramírez, Rimisp-Centro Latinoamericano para el Desarrollo Rural, Chile

IDRC contribution: \$9,180 – 2008 competition

A significant proportion of rural communities in both Canada and Latin America, especially remote communities with large Aboriginal populations, continue to depend on natural resources to drive their economies. In 2001, an estimated 1,997 communities in Canada – many with large Aboriginal populations – derived at least 30 percent of their employment income from natural resources such as agriculture, energy, fisheries, forestry and mining. In Latin American countries, agriculture provides some 238 million rural inhabitants with half of their income.

In the first phase of a longer-term collaboration, research partners investigated factors affecting economic growth in resource-dependent rural communities in Canada and Chile. The principal investigators were supported by colleagues at their institutions, as well as from Ohio State University (USA), University of Waikato (New Zealand) and the University of Southampton (UK). Given an era of budget constraints and similarities among rural communities, researchers attempted to identify place-based policies that could determine strategic interventions in selected rural communities without creating disincentives.

Researchers proposed four "types" of communities based on population growth and poverty with Type I as the most likely candidate for intervention. They also used geographically weighted regression to explore spatial variations on the impact of local job growth. They confirmed that the effectiveness of local job growth varies across resource-dependent communities. Meanwhile, their typology can help focus the investigation on the most likely communities for place-based policy.

"The project turned out really well, beyond my wildest expectations," said Professor Olfert, who notes the grant helped strengthen her research network and supported her successful bid for a SSHRC grant of \$75,000. "The need to examine ways of helping particular places improve and participate in growth and development seems to be gaining ground."

COLOMBIA

12. Mobilizing a regional research network to address forced migration issues in Latin America

Susan McGrath and Alan Simmons, York University, Canada

Roberto Vidal, Pontificia Universidad Javeriana, Colombia

IDRC contribution: \$15,000 – 2009 competition

While Colombia has the second largest number of internally displaced people in the world, recent research suggests forced migration is a growing problem throughout Latin America. However, states lack a thorough understanding of the magnitude and profile of the displaced population, as well as how best to protect these vulnerable people. Moreover, the region lacks policy approaches that link forced migration and development processes, a problem made worse by the isolated and ad hoc nature of current research.

In response to this challenge, researchers formed the Latin American Network on Forced Migration to build alliances and inform both international and Canadian policy on the issue. LACREG funding enabled the network to convene its second meeting, which mobilized 30 NGOs and academics from various countries in the region, including Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Peru and Venezuela. In a two-day workshop held in Canada, participants explored issues such as trade, investment and forced migration in Latin America. A smaller group of scholars met for a third day to further build capacity in the network.

The network identified three focus areas for further research: law and regulation, including corporate accountability and the tensions between human rights and investor rights; vulnerability, including physical violence, as well as economic and environmental concerns; and advocacy and civil society, which would focus on giving people and communities the tools and support to advocate on their own behalf.

13. Development and evaluation of educational resources for street-involved youth

John Wylie, Barbara McMillan, and Chelsea Jalloh, University of Manitoba, Canada

Carlos Rojas, Universidad de Antioquia and Dora Hernández, Alcaldía de Medellín, Colombia

IDRC contribution: \$8,742 (\$9,000 initially awarded) – 2009 competition

The internal conflict in Colombia has displaced more than three million people, including many youth who lose access to education, health care and a family network. Through this project, Canadian and Colombian researchers worked with street-affected youth in Medellín to identify their health concerns, and then create, distribute and evaluate a pamphlet as an educational resource. In addition to promoting awareness, the project was conceived as a way to empower youth. “Because these youth collaborated on every aspect of the pamphlet, it was physical proof that their voices and perspective matter,” said Ms. Jalloh.

Focus groups identified four key topics for the pamphlet. Researchers provided factual material

related to HIV/AIDS, Sacol (a solvent sniffed by many youth) and piercings, while the youth themselves identified positive and negative aspects about life on the street. A Colombian artist

developed the artwork for the pamphlet, which was called “Open Your Eyes.” The project distributed 700 copies to street-involved youth in Medellín and engaged youth in evaluating the resource.

Apart from the benefits to youth, the project enabled researchers, professionals and students to learn from each other and gain insight into services in other countries. Ms. Jalloh established contacts that could enable her to pursue a collaborative PhD between the two universities, while the Colombian outreach workers learned skills in planning and holding focus groups and interviews that could benefit future collaborations. Indeed, partly thanks to the project, formal agreements between the two partners and between the University of Manitoba and the municipal government of Medellín, bode well for new ventures.

14. Understanding Dengue Resistance in Colombia

Clara Ocampo, Centro Internacional de Entrenamiento e Investigaciones Médicas, Colombia

Carl Lowenberger, Simon Fraser University, Canada

IDRC contribution: \$14,580 – 2008 competition

With 50-100 million new cases annually, and 2.5 billion people at risk of infection, dengue is the most important viral disease spread by insects in the world. The lethal forms of dengue hemorrhagic fever occur when people are infected with more than one of the four serotypes, which is increasingly more common with travel between continents. Currently in Cali, Colombia, all four serotypes are circulating in the population, yet there are some mosquitoes that do not carry the dengue virus at all.

In a major step towards preventing dengue transmission, researchers identified potential molecules and mechanisms that help determine what factors limit the development of this virus. With funding from the Colombian government, a post-doctoral fellow from Simon Fraser University spent six months in Cali to build on the project’s initial promising results – a concrete example of strengthened linkages among institutions.

LACREG support has increased the capacity of Colombian researchers, who can now draw on techniques learned at Dr. Lowenberger’s lab. As a result of access to SFU’s Faculty of Health Science, two former SFU students began working at CIDEIM. Moreover, Dr. Ocampo has generated new funding, partly on the strength of the two-way exchange.

CUBA

15. Enhancement of cereals yield and its tolerance to drought by the inoculation of combined beneficial microbes

Carlos José Bécquer Granados, Instituto de Investigaciones de Pastos y Forrajes and Universidad de La Habana, Cuba

George Lazarovits and Danielle Prévost, Agriculture and Agri-Food Canada and Université Laval

IDRC contribution: \$13,351 (\$15,000 initially awarded) – 2009 competition

Many soil bacteria can play beneficial roles such as fixing atmospheric nitrogen, producing growth-promoting substances, enhancing stress resistance and increasing the solubility of organic and inorganic phosphate. These microbes, in the right combination, can improve the capacity of plants to resist environmental stress and reduce dependency on chemical fertilizers. This, in turn, can lead to better plant quality and higher yields.

In this project, considered the required first stage of long-term work, researchers conducted a variety of experiments under both controlled conditions and in the laboratory. Among other results, they demonstrated the positive effect of certain bacterial cultures on the plant's physiology, as well as the best alternative for multiplying and storing useful bacteria. Most significantly, they discovered that the presence of beneficial fungi, in a combined microbial inoculation, directly or indirectly influenced a plant's development.

On the basis of these encouraging results, researchers hope to conduct further greenhouse and field experiments on the application of combined biofertilizers onto wheat and other cereals such as oat, rye, corn and sorghum. Future experiments should integrate factors that limit plants' growth such as drought, salinity and acidity.

16. Gene expression profile in Cuban and Canadian soybeans infected with *Sclerotinia sclerotiorum*

Evelyn Valera Rojas, Agrarian University of Havana, Cuba

Istvan Rajcan and Greg Boland, University of Guelph, Canada

IDRC contribution: \$13,445 – 2008 competition

White mold (*Sclerotinia sclerotiorum*) can be detrimental to crops grown under cool, moist environments. Many plants, such as soybean, lack complete genetic resistance. With support from LACREG, researchers sought to identify possible genes involved in defending plants against this pathogen. "One of the main problems is that the disease is so unpredictable," said Dr. Rajcan. "It's widespread and it occurs sporadically."

In a scientific first, researchers tested the molecular biology of Cuban soybean varieties against white mold. Their findings were promising and led Ms. Rojas to pursue a PhD at the University of Guelph. Not only did she receive a scholarship from the Ontario Ministry of Agriculture, Food and Rural Affairs to continue her research, she gained the endorsement of Grain Farmers of Ontario for a successful application to the Canadian Agricultural Adaptation Program. Individual farmers from Manitoba to Quebec also supported her project.

Her research focused on specific genes in the soybean plant that are also expressed in the pathogen. Understanding these genes can lead to more resistant plant varieties. Ultimately, since the pathogen seriously affects many types of crops, the results of her research could also benefit other plants such as canola, dry beans and sunflowers.

17. Sistema de gestión de la Innovación Tecnológica para la Agricultura Urbana en el municipio de Cienfuegos

Leónides Castellanos González, Universidad de Cienfuegos, Cuba

Guy Debailleul, Université Laval, Canada

IDRC contribution: \$6,763 (\$8,135 initially awarded) – 2009 competition

Given Quebec's innovative approaches to urban and peri-urban agriculture, Dr. Castellanos González worked with Dr. Debailleul to investigate technologies that could be adapted in Cuba. Apart from field visits to farms to study cultivation, sewage treatment and genetic improvement of crops, the project also explored the rooftop gardens characteristic of urban agriculture in Montreal. A visit to a farmers' market in Montreal provided insights into made-in-Quebec branding, while further field trips and a symposium expanded awareness of agroforestry.

There was no single system of technological innovation and management that could be transplanted into a Cuban context. Indeed, Dr. Castellanos González gained an appreciation for the spirit of innovation among farmers that allows them to rise to the challenges of their particular circumstances.

In light of these results, the Cuban partner planned to revamp its courses on urban agriculture and put them online so that Quebec students could benefit from them. The two universities were also exploring further exchanges to enable Quebec students to learn more about rural agriculture in Cuba. In 2011, the two partners collaborated on a presentation at *Agrosost 2011*, an international workshop on sustainable agriculture held in the province of Cienfuegos.

18. Strengthening of International Research Partnerships and Consolidation of Emerging Research Networks

Daniel De La Rosa Medero, Instituto Superior de Tecnologías y Ciencias Aplicadas, Cuba

Johanne Saint-Charles, Université du Québec à Montréal with David Lean, University of Ottawa, Canada

IDRC contribution: \$9,825 – 2008 competition

Mercury-cell chlor alkali plants, which use mercury to produce chlorine and caustic soda, are a major source of mercury pollution around the world. For many years, the plant upstream of the city of Sagua la Grande in Cuba barely treated effluents before discharging them directly into the Sagua la Grande River. Few recent data exist, however, on the effects of mercury contamination on vulnerable groups such as pregnant or nursing women, women of childbearing age and children.

Researchers examined current methyl mercury levels in fish and sediment and also studied the risk perception of the population related to the mercury exposure. They discovered that mercury was accumulating in resident fish, particularly below the effluent discharge point of the local facility. In addition, total mercury concentration in sediment was above accepted levels in 80 percent of the stations sampled. And just over half of the population group studied were consuming unacceptably high quantities of methyl mercury in fish without a clear perception of the health risk.

The researchers shared these results with environmental and health authorities in the area, which led to collaborative strategies to reduce fish consumption and thus exposure to mercury. Dr. Medero

also presented results in two academic articles and three international conferences. Moreover, part of the results of the project and other previous results earned them the National Prize for the Environment in 2009 from Cuba's Ministry of the Environment.

ECUADOR

19. Capacity Building for Sustainable Community Co-Management of Introduced Vicuñas in the Chimborazo Faunal Reserve, Ecuador

Brian Edgar McLaren, Lakehead University, Canada

Edgar Washington Hernández Cervillos, Escuela Superior Politécnica de Chimborazo with Patricio Hermida, Ministerio del Ambiente, and Reserva de Producción de Fauna Chimborazo, Ecuador

IDRC contribution: \$9,350 – 2008 competition

In keeping with renewed interest in the Chimborazo Faunal Reserve by The Nature Conservancy and World Bank, the importance of biodiversity conservation in the reserve has grown. In the surrounding area, however, median family incomes amount to \$45 USD per month. The community also suffers high rates of unemployment and associated social problems. Families could supplement their income by producing fiber from the vicuña – a relative of the llama – but the practice raises concerns about the sustainability of the species.

In addition to completing field work and mapping of vicuñas in the reserve begun during an earlier LACREG project, researchers consulted community stakeholders, established a system to monitor water quantity and quality in wetlands, and conducted a rapid assessment of water quality in the reserve. In the process, Dr. McLaren uncovered mutual misconceptions among community members and the national government about their commitment to invest cooperatively in vicuña co-management and share benefits equitably. Both parties, however, want to learn more on preserving water for multiple uses in the reserve. During his stay in Ecuador, Dr. McLaren was commended for raising awareness of wildlife conservation and management.

MEXICO

20. Development of a cooperative research program in a small freshwater lake basin (Lake Zapotlán) in Western México

Harvey Shear, Brian Branfireun and Varouj Aivazian, University of Toronto, Canada

Gonzalo Rocha Chávez, J. Guadalupe Michel, and Carlos Gómez Galindo, Universidad de Guadalajara with Tomas Santamaria Preciado, Instituto Tecnológico de Ciudad Guzmán, Mexico

IDRC contribution: \$14,085 – 2008 competition

Since 2006, the University of Toronto has been working with the Universidad de Guadalajara to develop a research program in the Lake Zapotlán Basin in Mexico. The lake and its basin are integral to the sustainability of the local economy, but ecological damage is causing significant human health issues. In earlier research, for example, Dr. Shear determined a water treatment plant was

contributing to high bacteria levels.

Through the LACREG project, researchers continued their pursuit of a water quality model for the lake. They noted the plant had adopted the project partners' earlier recommendations for chlorine treatment, and was now functioning. Field work also revealed that mercury levels were acceptable, but that the lake was contaminated with sewage. Finally, local stakeholders lacked understanding of ecological conditions in the lake and its basin.

As a direct result of the Canadian-Mexican partnership, the U de G committed funds to build a laboratory on the shore of the lake. With support from Dr. Shear, the Mexican partners developed a management plan that ultimately earned the lake and basin a spot on the Ramsar List of Wetlands of International Importance. This coveted designation may attract additional funding so that researchers can continue the work.

21. Understanding Regional Hydrogeological Flow Systems and Mechanisms for Arsenic and Fluoride Enrichment within the Independence Basin in Central Mexico

J.W. Molson, Université Laval, Canada

Adrian Ortega, Geoscience Centre, Juriquilla Campus, Mexico

IDRC contribution: \$2,588.23 (\$5,742 initially awarded) – 2008 competition

More than half a million people around Independence Basin in central Mexico rely heavily on groundwater for drinking, as well as for agricultural and industrial use. The water table, however, is rapidly dropping, a natural process amplified by over-pumping of the upper granular aquifer for industrial irrigation. "In 20 years, it will all be desert," said Dr. Molson. As the underground water-level sinks, it inches closer to the hot layer of volcanic rock under the earth's surface. This heats the water and dissolves contaminants such as arsenic, fluoride and sodium, making it unsafe to drink.

Dr. Molson's visit to the basin provided first-hand knowledge of the scale of the water resource problem, while Dr. Ortega's visit to the Université Laval brought new understanding of the regional geology and advanced tools. Together, they developed a preliminary flow model that illustrated differences between historical and recent conditions, as well as a heat-transport model that showed how deep higher temperature groundwater could be drawn up towards intensive groundwater pumping zones.

The Mexican partners now have new modeling tools to help interpret field data, which should lead to new solutions and strategies. Indeed, the partners will be able to work with local communities to improve aquifer management at the basin scale. Building on results to date, the universities planned to develop more detailed numerical models that can help predict what will happen to the aquifer in 10 years.

22. Transnational migration, family and gender: a comparison between Mexican seasonal workers and middle class urban migrants to Quebec

Patricia M. Martin and Jorge Pantaleón, Université de Montréal, Canada

Sara Maria Lara Flores and Marina Ariza, Universidad Autónoma Nacional de México

IDRC contribution: \$11,044 – 2008 competition

In this exchange project, researchers initially sought to compare gender and family dynamics among two distinct groups of Mexican migrants: seasonal agricultural workers who find jobs in rural Quebec and urban middleclass Mexicans who go to Montreal. As they explored these “intimate economies,” researchers also became interested in issues of social marginality and integration, as well as in asylum seekers from Mexico.

The project stimulated the emergence of a network of researchers, graduate students, union representatives and agricultural workers and, in particular, a permanent seminar and conference series in Mexico on the theme of Mexican migration to Canada. In addition, the two universities have also supported research into Mexican asylum seekers, which they plan to share with the Government of Quebec.

As a direct result of the project, several Mexicans pursued studies on Mexican migrants at the Université de Montréal. It has also stimulated new research into Mexicans who seek asylum in Montreal.

23. Pathways out of poverty: Policies for sustainable development

Henry Veltmeyer, Saint Mary's University, Canada

Raúl Delgado Wise, Universidad Autónoma de Zacatecas, Mexico; and René González Mercado, Universidad Mayor de San Andrés, Bolivia

IDRC contribution: \$14,021.36 (\$14,080 initially awarded) – 2009 competition

Saint Mary's University (SMU) and the Universidad Autónoma de Zacatecas (UAZ) in Mexico have been collaborating for many years. With support from IDRC, for example, the two partners developed a PhD program that was established at UAZ in 2003; a parallel program will eventually be offered at SMU. In another joint venture, the two universities launched critical development studies, a regional and now global network for alternative development. With support from IDRC, one of the network's key projects is to promote cooperation among universities through, for example, offering a doctoral program in development studies in Latin America.

With this in mind, the current project sought to advance collaboration among SMU and diverse universities within Latin America. To that end, researchers established a network that brought together SMU, UAZ, Universidad de Valparaíso (Chile), Universidad Mayor de San Andrés (Bolivia), Universidade Estadual do São Paulo (Brazil), ALAS (the Association of Latin American sociologists) and RIMD (International Network for Migration & Development).

Working together, the network designed a new master's program in critical development studies at the Universidad Mayor de San Andrés (UMSA) in La Paz, Bolivia, and at the Universidad Mayor de Cochabamba, Bolivia. At the same time, plans got underway to establish a PhD program at both UMSA in Bolivia and the Universidad de Valparaíso in Chile. Through exchange agreements supported by CIDA's Youth for Development Program, six students over three years can take part in internships in Bolivian NGOs.

NICARAGUA

24. Forced migration: Children and women trafficking within the Central American: Nicaragua experience

Mirna Carranza, McMaster University and Henry Parada, Ryerson University, Canada

Luz Angelina López-Herrera and Alma Iris Torres, National Autonomous University of Nicaragua

IDRC contribution: \$14,920 – 2009 competition

More than 80 percent of Nicaraguans live on less than two dollars a day, and one-third of all children never enroll in elementary school, fail to attend, or drop out before reaching the sixth grade. Poverty makes women and children particularly vulnerable to risk, including malnutrition, teenage pregnancy and early marriages, child trafficking and sexual exploitation.

Building on a collaboration that dates to 2008, the partners took new steps with this project to tackle sexual commercial exploitation of women, adolescents and children in Nicaragua. Through focus groups and interviews, they consulted government and community-based groups working to protect women and children who had been trafficked, and met informally with people in rural communities. In this way, they began to develop tools to measure the incidence of children and women involved in trafficking and sexual exploitation, as well as the incidence of forced migration to bordering countries and Canada.

They learned that drug trafficking and organized crime appear inextricably linked to the sexual exploitation of children and trafficking of women. They were also able to study how the lives of people in municipalities bordering other countries are vastly different from those in central regions of the country. Drawing on initial analysis of their data, the team secured funds from UNIFEM to expand their consultations to the Atlantic coast and with bordering municipalities in Costa Rica.

PANAMA

25. Alternative de développement durable face aux changements de l'usage de la terre et du territoire au Panama

Patrice Dion and Nancy Gélinas, Université Laval, Canada

Michael Roy, CREA-Panama, Jaime Castañeda, Université de Panama and Sunshine Van Bael, Smithsonian Tropical Research Institute, Panama

IDRC contribution: \$8,035 – 2008 competition

Changing land use in Panama threatens the country's rich biodiversity, and in particular, the livelihoods of smallholder farmers and indigenous communities in rural areas. Between 1950 and 2000, more than one million hectares of tropical forest were converted to pasture. Two complementary projects sought to address these challenges by strengthening governance of biodiversity and promoting more sustainable development.

In the first component, Dr. Gélinas helped develop a network engaging local NGOs, indigenous communities and other interested groups. Two interns from Université Laval pursued research

projects in Panama, while Dr. Gélinas initiated new research on deforestation that brought together indigenous groups, rural farmers, the government and other researchers. Led by Catherine Potvin from McGill University, this project is developing a national strategy to reduce emissions from deforestation and soil degradation, while reconciling differences between indigenous groups and rural farmers.

The second project focused on the province of Darien where extensive animal breeding has damaged fragile soil. Led by Dr. Dion, researchers identified a variety of socio-economic, scientific and agricultural factors that could help promote breeding systems based on the sustainable development of pastures. Towards the project's end, the team began seeking additional funds to continue the work, particularly around using the jatropa tree to restore soil fertility. Dr. Dion, who learned of this tree's potential while in Haiti, has helped bring Haitian and Panamanian researchers in contact with each other to exchange knowledge and ideas.

PARAGUAY

26. Can Biofuels be an Engine of Growth for Developing Countries? A Feasibility Study of Paraguay

Anil Hira, Simon Fraser University, Canada

Plinio Torres Garcete, Universidad Americana, Paraguay

IDRC contribution: \$11,478 – 2008 competition

Like other nations around the world, developing countries depend heavily on petroleum to drive their economies. In this project, researchers discovered that Paraguay has the technological knowledge and agricultural conditions to develop a sugarcane ethanol industry to support domestic demand.

At the same time, researchers identified the need for a deeper institutional capacity at the state level to regulate the sector, attract investment, provide basic infrastructure and reduce the possibilities of domination by a handful of companies. They also noted that, as in many countries, it would be challenging to develop a sustainable industry whose benefits are shared equitably.

The researchers made several recommendations aimed to develop a cooperative model for the industry, build state capacity and make the industry attractive to European markets by meeting sustainable development criteria. After sharing findings with Paraguayan stakeholders, Dr. Hira has continued his research on the industry, particularly in the area of governance.

PERU

27. Conserving for our future: Developing a plant gene bank in the Amazonas region, Peru

Bruce Coulman, University of Saskatchewan, Canada

Zoila Rosa Guevara Muñoz and Carlos Eduardo Millones Chanamé, Universidad Nacional Toribio Rodríguez de Mendoza de Amazonas (UNIT-A), Peru

IDRC contribution: \$6,605 (\$11,026 initially awarded) – 2009 competition

Founded in 2000, UNIT-A seeks to help advance socio-economic development in the Amazon region, while promoting sustainable use of resources. As a relatively new institution, UNIT-A is developing strategies – including international partnerships – to improve its capacity for professional training and scientific research. In 2003, it signed an agreement with the University of Saskatchewan that committed partners to support sustainable development in the region.

To date, several exchanges have focused on building the research and teaching capacity of UNIT-A. With this project, the partners strived to improve understanding and commitment to plant conservation, identifying indigenous cultivars and native plant species for inclusion in a gene bank. To that end, the two Peruvian partners spent three weeks in Canada to gain knowledge in plant propagation, germplasm use and gene bank management. This will prove invaluable as they establish their own gene bank in Peru, and support the PhD research conducted by Ms. Muñoz.

**28. An analysis of the innovative market chain of native potato from a gender perspective:
The innovative system revolutionizing agriculture in developing countries**

Silvia Sarapura and James Mahone, University of Guelph, Canada

Graham Thiele, International Potato Center, Peru

IDRC contribution: \$14,995 – 2009 competition

In the agricultural sector, gender inequalities undermine sustainable and inclusive development. With this in mind, Ms. Sarapura analyzed how innovative market chain systems for native potatoes were enabling women farmers in the central highlands of Peru to gain more control over the livelihoods. By generating deeper understanding, the project sought to promote collective action to stimulate market access for women farmers and reduce poverty.

While small-scale women producers lack knowledge, capacity and opportunities to take part in agricultural markets, they are slowly overcoming these barriers. Early findings, for example, revealed traditional indigenous women farmers were uniting to defend their livelihoods through seed conservation. Still, women generally lacked access to credit, seeds and labour-saving devices, and were rarely consulted on the development of new technology.

As part of the research process, Ms. Sarapura offered tools that brought together action, training and research. This included training in participatory video and photography, which were used to document findings that were then shared with policy-makers, academics and practitioners in both Canada and Peru. The initial collaboration continues to take off in new directions. Not only have the Canadian and Peruvian partners pursued funding for new research, Ms. Sarapura and the university have made contact with interested civil society organizations in Peru and Bolivia. “Partners in Peru, especially peasant people who participated in the study, have a special interest in strengthening this research alliance because Canada would be a place to begin trading Andean crops like quinoa,” said Ms. Sarapura.

29. Fair Trade, Child Labour and Schooling: Evidence from Coffee Farmers in Rural Peru

Ana C. Dammert, Carleton University, Canada

Ricardo Fort, Grupo de Análisis para el Desarrollo, Peru

IDRC contribution: \$6,460 – 2008 competition

Critics of trade agreements argue that globalization puts smallholder farmers in developing countries at risk. Given their poverty and lack of technology, rural producers can't compete with foreign products on the domestic market. In response, rural farmers can pursue niche markets for high-value products, particularly those related to fair trade. "Fair trade is something that everyone has on their minds, but the literature is not clear on whether it affects the livelihoods of farmers," said Dr. Dammert.

Through this project, Dr. Dammert travelled to coffee regions in Peru, meeting with cooperatives and managers to explore the potential for fair trade. She also contacted farmers in these cooperatives to gather information about their perceptions of fair trade and child labour. Using her findings, she successfully applied for a SSHRC grant.

30. From Partnership to Action: A Current Situation Analysis and Preliminary Needs Assessment of Water Security in Luya, Peru

Peggy MacLeod and Lalita Bharadwaj, University of Saskatchewan, Canada

Zoila Rosa Guevara Muñoz, Universidad Nacional Toribio Rodríguez de Mendoza de Amazonas, Peru

IDRC contribution: \$9,180 – 2008 competition

Improved agricultural productivity can enhance livelihoods, but unsustainable approaches can contaminate water sources and create health problems. Through this project, researchers examined water security in Lamud, a district in the province of Luya. In a one-day workshop, community, health and education representatives joined other provincial and municipal groups to share information on water safety, quality, collection and storage practices, as well as practices for human consumption and agricultural use.

Collectively the groups identified seven water security issues: the need for, and access to, sustainable water resources; inadequate infrastructure for irrigation; inadequate infrastructure, treatment, distribution, management and monitoring of water for human consumption; deforestation; lack of awareness among the general population and authorities regarding responsibility for sustainability of natural resources; contamination of water supplies; and insufficient training of water personnel in the areas of water treatment, management and monitoring.

Professor MacLeod contended the results will serve as the foundation for a comprehensive mapping of community needs and support a sustainable plan for water security. A 2009 LACREG grant enabled the University of Saskatchewan to build local capacity for integrated water resource management in indigenous communities in the Ancash region of Peru.

31. Building local capacity for integrated water resource management in indigenous communities in Ancash region, Peru

Lalita Bharadwaj and Robert Patrick, University of Saskatchewan, Canada

Eduardo Castro Suarez and S.P. Reyes Tafur, Asociación Uripichallay with Edwin Julio Palomino Cadenas, Universidad Nacional de Ancash Santiago Antunez de Mayolo, Peru

IDRC contribution: \$13,450 – 2009 competition

On a global scale, water-borne illnesses cause 30,000 deaths every year, and uneven access to safe drinking water contributes to poverty, creates local conflict and reduces access to education –

especially for young women. In response, the United Nations has promoted integrated water resource management (IWRM) as a holistic approach that can empower local actors and support appropriate technology.

With this project, researchers assessed the existing adoption of IWRM at the indigenous level in the Ancash region of Peru, as well as capacity requirements and institutional barriers to full adoption. Not only were the communities not practising IWRM, the absence of an integrated approach to water management was undermining health and economic development, and in some cases, social and cultural capital.

The researchers shared knowledge of basic water source protection with local communities. Even as the team sought funding to continue its work, members were establishing links between the Peruvian partners and Saskatchewan First Nations to share ideas of local capacity building. In addition, in partnership with the Federation of Saskatchewan Nations, the team was planning a cultural exchange between indigenous water keepers from Peru and the province.

32. The development contribution of Canada-Latin American trade and investment linkages

Pablo Heidrich, North-South Institute, Canada

Diana Tussie, Latin American Trade Network, Argentina; Pedro da Motta Veiga, Brazil Node; Juan Manuel Villasuso, Costa Rica Node; and Alan Fairlie Reinoso, Peru Node

IDRC contribution: \$7,064 (\$10,440 initially awarded) – 2009 competition

With Latin America playing an increasing role in Canadian foreign policy, the North-South Institute proposed to study the work of researchers from the region that could prove relevant to Canadian policy-makers. Twelve working papers were summarized in three shorter publications tailor-made for Canadian audiences. The papers focused on international trade and poverty, food security and global production chains and local social impacts.

Researchers shared their findings with various levels of Canadian government, including embassies and consulates, as well as with CIDA and DFAIT officials. The government has responded favourably to the advice and input, and policy-makers have followed up with LATN researchers. Moreover, Dr. Heidrich has been invited to take part in policy planning sessions with CIDA and DFAIT and to give testimony on Canadian policy toward Latin America in Parliament.

Apart from its potential impact on Canadian policy, the project enabled partners to gain greater insight into each other's work. Latin American researchers learned more about the Canadian policy process, making it easier to generate research that can influence policy and improve results in the region. By establishing contact with counterparts in Latin America and integrating their results into its own policy work, the North-South Institute heightened its credibility in the eyes of the Canadian government.

URUGUAY

33. The social impact of pulp mills and changing economies in Ontario and Uruguay

Ronald Harpelle and Michel Beaulieu, Lakehead University, Canada

Diego Piñero and Matías Carámbula, Universidad de la República, Uruguay

IDRC contribution: \$15,000 – 2009 competition

In the wake of globalization and the recent economic downturn, resource-based economies in northern Ontario face reduced business investment, high unemployment and environmental problems from the impact of clear-cutting of forests. The town of Fray Bentos in Uruguay, conversely, is enjoying an economic boom for its forest industry with multinational investment in several large pulp mills. All this development, however, has led to the conversion of massive amounts of grassland to plantations and one of the longest running environmental protests in the world.

Building on an earlier collaboration, researchers sought to enhance knowledge about how global economic shifts in the pulp industry are affecting communities. In addition to launching a new debate on the issues among academics and within affected communities, the project planned to provide civil society with information that could help them take part in policy debates on globalization and development.

The project organized seminars in Thunder Bay and Montevideo. Supplementing the grant with funding from other sources enabled the team to hire and support students in both countries. In addition, researchers made links with counterparts in Finland, who invited them to take part in a workshop and conference that explored Finnish investment in Uruguay's pulp industry. Other Canadian researchers have also joined them to form a new network relating to forest communities in a changing world whose first collection of research essays, "Pulp Friction," is expected in 2012.

VENEZUELA, COLOMBIA, PERU

34. The use of cellular phones among poor women in Colombia, Peru and Venezuela: potential applications in healthcare and social development

Daniel Paré and Isaac Nahon-Serfaty, University of Ottawa, Canada

Arlette Beltrán, Universidad del Pacífico, Peru; Harold Castañeda, Universidad Javeriana, Colombia; and Caroline de Oteyza, Universidad Católica Andrés Bello, Venezuela

IDRC contribution: \$10,123 – 2008 competition

Within Latin America, the exponential growth in mobile telephones offers a host of new opportunities for healthcare access and education among the poor. This is especially true for poor women, who play a major role in keeping their families healthy. But despite this potential, healthcare providers still have difficulty reaching socially vulnerable populations.

"Venezuela has the highest penetration of mobile phones in the region, and almost all young people have one," said Dr. Nahon-Serfaty. "Our next steps are to find out whether mobile phones are the best way to reach young women, and what kind of messages would be most effective to keep them healthy."

Using LACREG funds for the preparatory stages of a larger regional study, the Canadian researchers teamed up with counterparts from Peru, Colombia and Venezuela, as well as with healthcare providers and administrators from these same countries. As a starting point, researchers sought to understand the factors influencing the integration of mobile telephony into healthcare service delivery.

On the one hand, researchers investigated day-to-day mobile telephony and communication practices of women in impoverished communities within specific districts of Lima, Bogota and Caracas. On the other, they looked at healthcare practitioners and administrators in community clinics serving these areas. Building on their results, researchers obtained funding from a Venezuelan source to design and implement a pilot health initiative.

3.0 AUCC PROGRAM IMPLEMENTATION AND MANAGEMENT

3.1 Management of 2008 and 2009 competitions

Launched guidelines and processed applications for two competitions

- Prepared guidelines for two competitions (incorporating changes recommended following Phase IV evaluation – see section 3.3) and advertised the competitions widely through AUCC's ILO network and via emails to the following organizations: the Canadian Foundation for the Americas (FOCAL); the Canadian Association for Latin American and Caribbean Studies (CALACS); the Canadian Association for the Study of International Development (CASID); the Canadian Anthropology Society (CASCAS); Canadian Embassies in the countries targeted by the program; the Inter-American Organization for Higher Education (IOHE); the Centro Boliviano de Estudios Multidisciplinarios (CBEM); the [Facultad Latinoamericana de Ciencias Sociales](#) (FLACSO); the Red de Salud de las Mujeres Latinoamericanas y del Caribe; the International Congress on Culture and Development in Cuba; the Pan American Health Organization; the Unión de Universidades de América Latina y el Caribe (UDUAL); the Organizacion del Convenio Andres Bello (CAB); the Organizacion de Estados Iberoamericanos the Alianza Educacion para la Construcccion de Culturas de Paz; and RIMISP
- Responded to emails and phone calls regarding the program and posted an FAQ document on the website to address frequently asked questions.
- Processed the 171 applications for the two competitions. The deadlines for submissions: November 30, 2008 and January 18, 2010. Processing involved reviewing the eligibility of applications, entering relevant data in the LACREG database, and sending applications and assessment documents to committee members.

Facilitated the selection process for two competitions

- Committee members for the 2008 competition committee were: Dr. Alain Boutet, Dalhousie University; Beatriz Diaz, FLASCO Cuba; and Carolina Robina, IDRC Montevideo. Given the large number of applications received for the second competitions AUCC sought a fourth committee member to review applications. The mandate of the committee was posted on the LACREG website and a notice seeking a new member was circulated through ILO Talk. Several CVs were received. Dr. Michel Lafleur, Université de Sherbrooke joined the 2009 committee.
- Convened two teleconferences to discuss proposals – the first selection committee was held December 12, 2008 and the second competition's committee meeting was held on March 5, 2010. The committee approved 20 applications during the first competition amounting to \$192,450.17 and 16 grants during the second competition for \$203,912.
- Issued letters to all applicants with the results of the competition. The letters included a summary of the committee members' general comments on submissions.

- Responded to questions from unsuccessful applicants.

Issued Memorandum of Grant Conditions for grant recipients' institutions, issued first payments and dealt with issues that arose during project implementation, as required

- Developed a new memorandum of grant conditions for 2009 recipients.
- One of the 2008 competition grant recipients, Tiffanie Rainville, was forced to withdraw from the program due to problems with her partner organization in Cuba and visa issues.
- Two 2009 competition grant recipients, Sarah Bowen and Brian Fleck, withdrew from the program shortly after receiving the grant. Two researchers on the committee's alternate list, Bruce Coulman and Susan McGrath, were subsequently awarded grants.

Processed financial and narrative reports and issued final cheques

- Reports for 2008 competition grant recipients were due May 31, 2011 and reports from 2009 competition grant recipients were due May 30, 2011.
- Reviewed narrative reports and sought clarifications from researchers when reports were unclear. Followed-up with universities' finance departments when receipts were missing and/or when reports did not meet the program's requirements. Several projects, particularly from the second competition did not meet the in-kind requirements and/or did not spend the full grant awarded. This led to underspending within the project grants component.
- Despite repeated efforts, AUCC was not able to obtain narrative or financial reports from one of the 2009 grant recipients, Sylvia Kenny, and in December 2011, the student's university reimbursed AUCC for the full grant amount.
- The researchers' reports will be provided to IDRC on a CD.

Obtained updates on project outcomes

- Only two of the nineteen 2008 competition grant recipients submitted updated reports six months after the completion of their research project (i.e. by November 30, 2010). For this reason, AUCC conducted telephone interviews with these researchers in February 2011 to learn more about the medium-term outcomes of their projects.
- Nine of the fifteen 2009 competition grant recipients submitted update reports by early December 2011.
- The medium-term outcomes of these projects have been incorporated in the project summaries outlined in section 2.2 of this report and in the LACREG Phase V publication. The updates provided information on new funding, new partnerships, and publications and presentations made since the submission of project reports. The update reports (and summaries of the telephone interviews) will be provided to IDRC on a CD.

Implemented outreach and knowledge-sharing activities

- See section 3.2.

3.2 Outreach and knowledge-sharing

As part of its commitments to outreach and knowledge-sharing, AUCC:

- Posted regular updates on the program on AUCC's LACREG website (www.aucc.ca/lacreg had 33,502 hits and 11,278 downloads between July 1, 2008 and December 31, 2011) and had the LACREG program advertised on DFAIT's scholarship website (www.scholarships.gc.ca);

- Entered the 34 Phase V project profiles in AUCC's Canadian University Projects in International Development (CUPID) database which is available on AUCC's website at: http://www.aucc.ca/programs/intprograms/index_e.html
- Shared information about the program through AUCC's President's letter, ILO-Talk network and via the International Update newsletter which is sent twice a year to the international liaison officers at AUCC's member universities.
- Leveraged its attendance at research and partnership conferences in LAC to promote LACREG (e.g. the 2nd Latin American and Caribbean Conference on Human Development and the Human Capabilities Approach in Uruguay in November 2008, FAUBAI conferences in Brazil in 2009 and April 2010, and conferences in Chile in May 2010). Also promoted the program at conferences and events in Canada including AUCC's meetings for embassy representatives in April/May 2009 and at AUCC's annual meetings for ILOs.
- Published 5 articles on LACREG Phase V projects in AUCC's *UniWorld magazine* which is distributed bi-annually and has a readership of 20,000 across the country. These articles also appear on AUCC's website:
 - "Forced migration and child trafficking along borders" – winter 2012
 - "Empowering Colombian street youth through informal education" – winter 2012
 - "Discovering Chile's hidden water treasures – glaciers" – spring 2011
 - "You have a new message: Emerging new technologies may help improve the health of women and children" – fall 2010
 - "Building biofuels in Paraguay" – spring 2010
- Posted on the LACREG website the video "Andean Women's Worldviews" produced by 2009 grant recipient Silvia Sarapura.
- Published the brochure, [Partnerships for Knowledge: Highlights of the Phase V \(2008-2011\) of the LACREG program](#) (in four languages) highlighting key results of the 34 projects. Copies of this brochure were sent to the international offices of AUCC's 95 member universities, to LAC embassies in Canada, to Canadian embassies in LAC countries, to grant recipients, and to representatives at CIDA. Copies will also be distributed at future AUCC events and conferences such as the upcoming Conference of the Americas in Rio de Janeiro in April 2012. AUCC has already received several inquiries about the program and requests for meetings as a result of this publication.

3.3 Summary of key changes to the program implemented during Phase V as a result of the Phase IV evaluation

The table below summarizes the changes that were brought to program during Phase V in response to the key recommendations from the Phase IV evaluation. The changes were brought to the program following consultation with the LACREG selection committee and IDRC.

Program aspect	Key recommendations from the evaluation	Changes made during Phase V
1) Funding level	<i>Finding:</i> More funding is needed to allow for longer stays, two-way travel and to cover required research costs.	<ul style="list-style-type: none"> • AUCC maintained one category of grants but the maximum funding per grant was increased from \$6,500 to \$15,000. The purpose was to enable applicants to pursue two types of objectives: 1) to further develop research skills and allow applicants

Program aspect	Key recommendations from the evaluation	Changes made during Phase V
	<i>Recommendation</i> Increase the maximum funding for each grant.	<p>to gain valuable field experience in either Canada or LAC; and 2) to focus on joint research that promotes the sustainability of research linkages, activities and results and that shows potential for policy or high-level impact. It is interesting to note that six of the twenty 2008 competition grant recipients received \$8,000 or less and twelve of the twenty received \$10,000 or less. Reports from competition 1 grant recipients generally indicate that those who sought and received smaller levels of funding focused on exploratory missions for establishing research linkages while those with larger funds succeeded in pursuing more concrete research results with established partners.</p> <ul style="list-style-type: none"> • Eligible expenses were expanded to include equipment costs (5% of IDRC budget). • To assist researchers in reaching the 1/3 cost-sharing requirements, partners were allowed to count salaries and stipends towards their in-kind contributions (maximum 50% of the in-kind).
2) Application process	<p><i>Finding:</i> The applicants felt the application process is labour intensive given the size of the grants.</p> <p><i>Recommendation:</i> Simplify the application form.</p>	<ul style="list-style-type: none"> • The number of questions on the application form was not reduced (given the larger \$15,000 grant) but adjusted and refined at the recommendation of the selection committee. • An eligibility checklist was developed, applicants were required to provide a project title and abstract, and the budget form was modified to assist applicants, AUCC and committee members.
3) Reporting by grant recipients	<p><i>Finding:</i> Reporting requirements are heavy given the size of the grants.</p> <p><i>Recommendation:</i> Simplify the reporting requirements.</p>	<ul style="list-style-type: none"> • The number of questions on the reporting form was reduced and modified to better align with IDRC's reporting requirements (also to facilitate AUCC's reporting to IDRC on results). • AUCC introduced two-page update reports due six months after the project ends to facilitate monitoring of outcomes over a longer period and enable grant recipients to assess the added-value of their collaborative work over the longer term.
4) Gender issues	<p><i>Finding:</i> The application process penalizes researchers working on gender neutral issues. Female grant recipients want more flexible start and end dates for travel to accommodate family</p>	<ul style="list-style-type: none"> • AUCC revised the wording related to gender on the application form and selection criteria form so as not to penalize researchers working on gender neutral issues. • The project implementation period was increased from seven months to just over one year. • Organizations such as the Red de Salud de las Mujeres Latinoamericanas y del Caribe were targeted

Program aspect	Key recommendations from the evaluation	Changes made during Phase V
	<p>commitments.</p> <p><i>Recommendation:</i> Adjust selection criteria, establish more flexible start and finish times and monitor the number of women grant recipients. Promote to women specifically if necessary.</p>	<p>in the promotion of the program.</p> <ul style="list-style-type: none"> • The ratio of women to men applying for LACREG grants was 72:106. The percentage of female grant recipients was 41% which is consistent with the results found by the evaluator during the first three phases of the program.
<p>5) Promoting and broadening reach of LACREG</p>	<p><i>Finding:</i> There is a relative lack of awareness amongst Canadian researchers, ILOs and LAC grant recipients that LAC-based academics can apply for a LACREG grant</p> <p><i>Recommendation:</i> There is a need to generate a higher number of proposals originating from LAC</p>	<ul style="list-style-type: none"> • With under spending from Phase IV, AUCC developed a promotional brochure for the LACREG program and distributed it widely. Copies were sent to all 95 AUCC member universities, to relevant LAC embassies in Ottawa, and distributed at conferences including AUCC's ILO meetings in Ottawa in January 2009 attended by LAC participants. AUCC also developed a promotional poster. • AUCC made it clear in the competition guidelines that applicants can be from Canada or LAC countries (though some asked if there was any advantage to having one partner apply over the other). • AUCC leveraged its attendance at research and partnership conferences in LAC to promote LACREG (e.g. the 2nd Latin American and Caribbean Conference on Human Development and the Human Capabilities Approach in Uruguay in November 2008, FAUBAI conferences in Brazil in 2009 and April 2010, and conferences in Chile in May 2010). • AUCC officers travelling to Bolivia, Honduras and Brazil as part of the AUCC's UPCD program also took the opportunity to promote LACREG. Similarly the project officer who travelled to Argentina as part of AUCC's SFD program promoted the LACREG program at institutions in Buenos Aries and northern Argentina. • In April and May 2009, AUCC hosted embassy events for 56 Ottawa embassy representatives (including several from LAC)during which the LACREG program was discussed and LACREG brochures distributed. AUCC also hosted representatives from embassies during the year who were interested in learning more about LACREG.

Program aspect	Key recommendations from the evaluation	Changes made during Phase V
		<ul style="list-style-type: none"> AUCC expanded its LACREG guidelines distribution e-mail list/listserv to incorporate many more institutions and organizations within LAC. AUCC also ensured that the LACREG program was included on DFAIT's database and new website (www.scholarships.gc.ca) of scholarship and grant programs which can be accessed by researchers from around the world. In December 2011, AUCC published a brochure in four languages highlighting the results from the Phase V program. The brochures were distributed widely.
6) Reinforcement of LACREG experience	<i>Recommendation:</i> AUCC establish an internet site for LACREG to provide updated information on the program and to serve as a mechanism to share LACREG experiences.	<ul style="list-style-type: none"> AUCC provided regular updates on the program through the AUCC President's letter, the ILO Talk listserv and ILO Update Newsletter. AUCC also published articles regarding LACREG projects in AUCC's <i>UniWorld</i> magazine which has a distribution of 20,000. LACREG competition guidelines, application forms and reporting guidelines were posted on AUCC's LACREG website. A list of the 2008 and 2009 competition grant recipients and project abstracts were made available on the site to allow others to learn about the projects being undertaken. The LACREG brochures and LACREG articles that appeared in AUCC's <i>UniWorld</i> were also made available on the site. Information on the Phase V LACREG projects was inputted into AUCC's Canadian University Projects in International Development database which is available on AUCC's website. AUCC did not establish a LACREG blog as suggested by the evaluator as while it works well for students, our experience with the UPCD program indicates that the tool is not appealing to faculty.

4.0 OVERALL IMPACT, LESSONS LEARNED AND RECOMMENDATIONS

4.1 Overall Impact

The LACREG Phase V program played an important role in advancing multiple dimensions of Canada-LAC academic relationships (beyond just research collaborations). Examples follow.

1) Policy influence

- Dr. Heidrich from the North-South Institute and his project partners shared their findings with various levels of Canadian government, including embassies and consulates as well as with CIDA and DFAIT. The government has responded favourably to the advice and input and policy makers have followed up with LATN researchers. And Dr. Heidrich has been invited to take part in policy planning sessions with CIDA and DFAIT and to give testimony on Canadian policy toward Latin America to the Parliament of Canada.
- Given his expertise, Dr. Brenning was invited to join an expert group advising Chile's National Environmental Protection Agency on the implementation of its recently approved National Glacier Policy. And in 2011 he set up a system for the Chilean water directorate to map ground temperatures and locate rock glaciers more effectively.

2) New strategies and management plans

- The results of Dr. Medero's project which examined current methyl mercury levels in fish and sediment in Sagua la Grande and the population's perception of risk to the mercury exposure were shared with local environmental and health authorities. The data is being used to establish strategies to reduce the population's exposure to mercury. Part of the results of this project and other previous results earned them the National Prize for Environment in 2009 from Cuba's Ministry of the Environment.
- A water treatment plant by Lake Zapotlan in Mexico adopted Dr. Shear and his project partners' recommendations for chlorine treatment and is now functioning. With support from the LACREG program (two grants), the Canadian and Mexican partners developed a management plan that ultimately earned the lake and basin a spot on the Ramsar List of Wetlands of International Importance.

3) Skills training and capacity building

- As part of Dr. Wylie's project, Colombian outreach workers learned skills in planning and in holding focus groups and interviews that could benefit future collaborations.
- Dr. Ocampo reports that LACREG support has increased the capacity of Colombian researchers who can now draw on techniques learned at the Simon Fraser University lab.
- Through her LACREG project, Silvia Sarapura offered training in participatory video and photography which were used to document findings that were then shared with policy-makers, academics and practitioners in Canada and Peru.

4) New curriculum

- Dr. Castellanos Gonzalez's university is revamping its courses on urban agriculture and putting them online so that Quebec students can benefit from them.
- Dr. Veltmeyer and his project partners designed a new master's program in critical development studies at the Universidad Mayor de San Andres in La Paz and at the Universidad Mayor de Cochabamba.

5) Publications and presentations at conferences

- Dr. Bohn has published several articles and will be publishing a book on her LACREG research in 2012 with the working title *Politics as a feminine vocation. Uniformity of discourse and practice among female voters, activities and legislators in Brazil*.
- Dr. Harpelle will be publishing *Pulp Friction* in 2012 with his project partners.
- Nancy Thede and her research partners contributed to articles for a special issue of CESU's

Decursos journal in 2011 and will share their work at the World Congress of the Latin American Studies Association in 2012.

- Dr. Becquer Granados and his partners have published several articles resulting from their LACREG research in journals such as *Revista Cubana de Ciencia Agrícola* and *Pastos y Forrajes*.
- 6) New agreements
- Thanks to Dr. Cameron's efforts, Dalhousie University recently signed a formal agreement with the Fundación Tierra for continued work together.
 - As part of Dr. Wylie's project, new formal agreements were developed between the two partners and between the University of Manitoba and the municipal government of Medellin for new ventures.
- 7) New collaborations and networks
- During her LACREG project, Dr. Bohn met a political scientist from the Federal University of Parana in Curitiba. They have since developed a project related to Bolsa Familia, the conditional cash transfer policy of President Lula's administration.
 - Dr. Martin's project stimulated the emergence of a new network of researchers, graduate students and union representatives and agricultural workers and in particular a permanent seminar and conference series in Mexico on the theme of Mexican migration in Canada.
 - Dr. Dion helped bring Haitian researchers (with whom he worked on a previous project) and his Panamanian LACREG project partners in contact with each other to exchange knowledge and ideas.
 - Dr. Bharadwaj's LACREG project expanded to include links between the Peruvian partners and Saskatchewan First Nations to share ideas for local capacity building.
 - Dr. Harpelle's project made links with counterparts in Finland who invited them to take part in a workshop and conference that explored Finnish investment in Uruguay's pulp industry. Other researchers have also joined them to form a new network relating to forest communities in a changing world whose first collection of research essays *Pulp Friction* is expected in 2012.
- 8) New funding
- Several LACREG grant recipients were able to translate their LACREG seed funding into larger projects which have since received SSHRC funding. They include: Dr. Cameron, Dr. Olfert, Dr. Dammert, and Dr. Harpelle.
 - Drawing on initial analysis of their data, Dr. Carranza's team secured funds from The United Nations Development Fund for Women to expand their consultations to the Atlantic coast and with bordering municipalities in Costa Rica.
 - Evelyn Valera Rojas received a scholarship from the Ontario Ministry of Agriculture, Food and Rural Affairs to continue her LACREG research. She also gained the endorsement of Grain Farmers of Ontario for a successful application to the Canadian Agricultural Adaptation Program.
 - Dr. Pare is building on the results of his LACREG research – he and his project partners received funding from a Venezuelan source to design and implement a pilot health initiative.
 - Dr. Bharadwaj used initial results from her first LACREG project (2008 competition) to secure a second phase of LACREG funding (2009 competition) for continued research work in Peru. Dr. Heidrich was granted new funding through the 2011 LACREG competition.
 - Dr. Veltmeyer's partnership with the Universidad Mayor de San Andres in Bolivia led to Saint Mary's University and the Bolivian University obtaining project funding from the CIDA-funded Students for Development program to send student interns to Bolivia over a three year period.

Also, two Aboriginal interns, funded by CIDA are expected to visit Chiloe in 2012, thanks to the partnership developed through Dr. Novaczek's project.

- Elizeu Santos-Neto's partnership has lead to NetSystemsLab hosting two Brazilian students for six months as part of the DFAIT-funded Emerging Leaders of the Americas program. They also secured funding for a UBC student to visit the partner institution in Brazil.
 - The Colombian government has provided funding to a post-doctoral fellow from Simon Fraser University to spend six months at Dr. Ocampo's lab in Cali to build on LACREG project's promising results.
- 9) Student involvement and benefits for Canadians from working with LAC colleagues and vice-versa
- Mr. Zapata, Ms. King, and Mr. Nunn used their research for their master's theses while the research of Mr. Santos Neto, Mr. Correa-Guzman, Ms. Valera Rojas, and Ms. Sarapura was conducted as part of their PhD programs.
 - Dozens of other students were involved as research assistants in the Phase V LACREG projects. Ms. Jalloh for example, a master's student at the University of Manitoba, worked in Colombia as part of Dr. Wylie's project team and contacts established there will enable her to pursue a collaborative PhD between the two universities. Seven students were involved in Dr. Ocampo's research project (4 Colombians, 3 Canadians). She writes, "It was a great process for Colombians to see how research is carried out in the Lowenberger (SFU) laboratory and was a great experience for the Canadian-based researchers to have access to people who deal with diseases (i.e. dengue) on a daily basis and to understand some of the limitations, restrictions and problems associated with working with feral mosquitoes in Colombia."
 - Several commented on the opportunity these projects provided for improving language skills.

4.2 Lessons learned

Some of the grant recipients' lessons learned follow:

- 1) Set more realistic objectives and expectations given the project's time-frame and resources
 - Mr. Correa-Guzman said he would have designed the project slightly differently and would narrow the scope to do what is materially feasible to accomplish given the resources available.
 - Ms. Rojas would have appreciated more time to carry out the research as there are conditions that need to be created in the laboratory before research can begin.
 - Dr. Thede wrote, "nous avons tous été entrainés par notre propre enthousiasme à étendre les objectifs et les recherché par rapport à ce qui était prévu au départ, ce qui nous a crée des charges supplémentaires de travail imprévues. On se tiendra compte pour l'avenir. »
- 2) Logistics require more time than anticipated
 - Dr. Olfert said she would have carried out more advance planning as the logistics were particularly difficult. She says the time and expense of international travel and logistics for coordinating up to ten very busy researchers is challenging. She added that there is a need to get people together at intervals to initiate and report on findings and there is a need to find attractive venues for meetings if one is going to appeal to senior researchers since they have the advantage of attractive alternative uses of their time.
- 3) Conducting research at a limited number of institutions is more efficient

- Dr. Becquer Granados felt that further collaborations should be accomplished at one place only. “It is a considerable source of stress and waste of time to split out the project in different host institutions, though this alternative should seriously be considered when the original host institution lacks specific facilities or supplies.”
- 4) Partners’ must be clear with respect to each other’s expectations
- Dr. Bharadwaj felt that more specific timelines and goals for partners of the host country university could be set prior to the initiation of the project objectives and activities and arrival of international partners.
- 5) Do not under-estimate the need for and cost of interpreters and translation
- Dr. Novaczek says she underestimated the need for interpreters to support such an intense and sustained effort. She added that the willingness of students to provide translation services was invaluable to the partnership.
 - Dr. Coulman observed that a lack of proficiency in both Spanish and English in the two partner institutions makes collaborations and exchanges more difficult.
 - Dr. Heidrich wrote that research in Latin America is and will continue to be produced mostly or solely in Spanish and Portuguese. Therefore translation costs will need to be better assessed in the future for this type of project.
- 6) Understand the differential institutional and contextual realities of the project partners
- Dr. Pare writes, “in order to put together an effective research network it is critical to understand the different institutional realities of network partners and based on that develop a common framework to accommodate all.” Contending with different university policies vis-à-vis faculty participation in collaborative research (and difference in research grant management) and dealing with different realities in terms of primary health concerns was challenging.
 - Dr. Cameron noted that the process of research capacity building is gradual and ongoing. He recognized that it takes time for front-line staff whose regular work involves the provision of technical support in rural municipalities to also begin to think like researchers and to adopt the goals of a research project as their own. This process is gradually taking place but it could not be accomplished in two short visits.
 - Dr. Hira described how university professors do not earn enough money to make a living in Paraguay. Because of this, he says they are also not held under the same standard to publish as Canadian researchers. This severely limits their time, resources and capacity to teach or do research. Many have full time jobs and teach on the side.
 - Dr. Wylie learned about the differences in approaches in handling the youth participant honoraria in Winnipeg and in Medellin. He wrote that “when a similar project to develop an education resource was implemented in Winnipeg, street-involved participants in both the focus groups and individual interviews were provided with a monetary honorarium for their participation. The government of Medellin however, expressed reservation in providing a monetary honorarium to participants due to concerns that youth would use the funds to purchase drugs. As a compromise, the funds budgeted for monetary honoraria were used to purchase items for participants such as juice boxes, granola bars, underwear, toothbrushes and the like...Government officials also expressed concern about the safety of the research team distributing honoraria items directly in the street to participants not recruited via an institution. The concern was that a crowd would assemble and become difficult to manage once individuals in the community learned that the research team was giving out items... Therefore individuals who participated in individual interviews outside of an institution were not able to receive an

honorarium.”

7) Understand your own institution’s contract requirements

- Ms. King says first time grant recipients should make it a priority to thoroughly understand their university’s research accounting department’s policies on the administration of external funding, and the grant conditions of the funding body. To improve future initiatives, she would consult with the research accounting department – and specifically, with the person responsible for her file– about the grant conditions and the accounting department’s requirements to ensure that they share the same understanding.

8) Carefully assess risks and develop a safety plan

- Dr. Carranza writes that travelling and spending time in the most vulnerable and impoverished communities in Somotillo and Chinandega, Nicaragua highlighted for her and her colleagues the dangers that female researchers can encounter while conducting field work. She reports that one of the female members of the team experienced sexual harassment and after this experience, they opted to travel in pairs, hire the services of trusted taxi drivers, and purchase cell phones to check in with each other. They also learned the need to change hotels often for safety reasons, “as taxi drivers, local police and hotel employees and owners are willing participants and beneficiaries of drug trafficking, the sexual exploitation of children and trafficking of women”, the latter being the topic of their research.

What works?

Dr. Olfert stated that her project worked well because of the participants’ prior experience, competence and accomplishments. She also said it helped that she was working with mature academics, committed policy researchers with prior international experience, who respected differences and demonstrated a high degree of willingness and capacity to produce high quality and usable output.

9) The personality and social skills of the researcher can be important to the success of the project

- Ms. King discovered that participant observation requires the researcher to be quite extroverted, which is the opposite of her natural inclination. She said that to improve future initiatives, she would endeavor to cultivate a more outgoing personal style. She would also reside closer to the fieldwork site as this would serve to deepen and intensify the participant observation experience, and the connection between the recyclers and herself, thereby enhancing the richness of the data.

10) Constraints of language, distance and relative mutual isolation coalesce to create inappropriate and ineffective policies

- Dr. Heidrich observed that, “Distances makes the possibility of doing multiple country field work very tiring activity and discourages Latin American researchers from engaging in trips to Canada (visas are also a big problem). Relative mutual isolation means that for most Latin American researchers, Canada is a rather unknown actor and therefore, much explaining is needed in order to get usable policy advice from them to bring back to Ottawa. The other side of this is that Canadian policymakers make astonishingly small efforts to obtain any research advice from Latin Americans when designing policy towards that region. Both elements coalesce into Canadian policies that are often inappropriate and ineffective in Latin America.”

4.3 Recommendations to AUCC and IDRC

Feedback from LACREG grant recipients is always positive. For example, Dr. Carranza writes, “The team is very thankful to LACREG for providing seminal funds. This funding was key in the development and strengthening of our partnership.” Dr. Harpelle reports that “the LACREG program afforded a small group of researchers an opportunity that otherwise would have been difficult to organize... New relationships have developed among the LACREG group and far beyond as a result of this opportunity.” Dr. Becquer Granados writes “This collaboration with a funding from LACREG constitutes an exceptional opportunity for scientists from developing countries to conduct research in well established scientific institutions abroad.”

AUCC however, seeks feedback on how the LACREG program may be improved. In their reports, 10 of the 2008 and 4 of the 2009 grant recipients provided the recommendations regarding the implementation of the program. The recommendations are categorized below in order of importance (based on the number of times the recommendations were made in reports). Many are direct quotes from the grant recipients.

- 1) Increase the program’s funding envelope and enable successful projects to benefit from a subsequent phase of funding
 - It is recommended that the overall funding envelope be expanded to increase funding levels for projects and the annual number of recipients.
 - I know funding is limited but I would encourage funders to “Think Big” in terms of projects, always maximizing the probability of high quality academic output, along with practical applications.
 - I would strongly support the continuation of the LACREG program. But the establishment of a connection from the project does not mean it will continue unless other funding can be found. Such funding might come from research, but it would not really include the range of activities that would facilitate development, such as training of academics and government officials from Paraguay. The latter would make a much bigger difference than any one off research project could.
 - The amount of money provided in each grant is low. One possibility might be the split the LACREG program in two: one stream focused on building partnerships and the other stream focused on more time and budget consuming research activities (i.e. field work or surveys).
 - The downside as always is where and how to find funds to support further studies and exchanges. These ideally would be for 2-3 years to establish significant North-South interactions. A graded program whereby LACREG graduates would then be able to apply for subsequent funds in different agencies to reaffirm and expand on the results of the LACREG operation would be ideal. Knowing the progression from small to medium to larger grants (such as the UPCD program) would allow us to dream of many other long-term proposals that would bring direct benefit to both Canadian and non-Canadian researchers and communities.
 - In light of our experience, one idea that might pose an interesting option would be the possibility of a second year of funding, based on the degree of success of the first year. The impression that I have is that all partners put in a lot of time and energy into this project and to immediately turn around to find other sources of funding to keep the collaboration going seems somewhat daunting.
 - At the end of each project, a commission of experts could make a critical revision of the outcomes and assess the opinion of the partner(s) in order to decide if a second chance for the continuity of the research is appropriate. Very often, in institutions in developing countries, scientific projects with a promising future should be set aside due to lack of resources, regardless the stage of accomplishment. AUCC grants may focus its outcomes not only in terms of how

many scientists got one opportunity to conduct research but how many countries or institutions got outstanding long-term results from the AUCC program.

- It is very hard to maintain a professional relationship with LAC partners if we don't have an actual project. Researchers in LAC spend their time doing consultancies and I found it very hard to make them interested in a "future" project with no payoff in the present.
- 2) Provide researchers more time to carry out their projects
 - Time and funding for the grant could be planned according to the objectives and nature of the project. It is different to give this opportunity to a young scientist in formation seeking expertise, that to allow a university professor or senior scientist to develop quite deep research with a solid impact either on scientific knowledge or industrial-agricultural practice.
 - The one-year duration of this project was perceived as a limiting factor. Although both partners are convinced that it will pay in the long run, a longer project duration (maybe two years), even with the same amount of funding, may be more effective at stimulating research partnerships.
 - Travel time requirements might discourage applications from female researchers with personal commitments.
 - Funding would be much more useful if the timeline for spending it could be extended for two or even three years.
 - 3) Expand the list of eligible LAC countries
 - During Phase V AUCC received many e-mails asking why so few Caribbean countries are on the list of eligible countries (i.e. there are currently only four). People frequently asked why Trinidad and Tobago, Jamaica and Barbados are not on the list particularly as they are home to campuses of the University of the West Indies.
 - 4) Allow additional kinds of expenses to be covered by the grant
 - I recommend that LACREG grants consider covering small technician/students contracts in the host country, such that participants that are not full-time committed to the program can still manage to deliver necessary outputs to ensure the success of the project.
 - Researchers should be able to hire research assistants with LACREG funds.
 - Allowance should be made for the inclusion of resources that could be left with the host country to continue the initiative would lend credibility and contribute in a tangible way to strengthening the relationship and future collaborative efforts between the two institutions.
 - 5) Reduce the program's cost-sharing requirements
 - The cost-sharing requirements of the program should be reduced as only larger universities can participate in the program.
 - I found the budgeting restrictions somewhat complicated and frustrating, particularly because the kind of work that we were doing (qualitative, field-based research) does not depend on large amounts of "in-kind" resources from the respective institutions.
 - 6) Allow emeritus professors to be eligible for grants
 - Emeritus professors have a wealth of knowledge to share.

7) Simply the reporting and application process

- Compared to NSERC and especially DFAIT (ELAP), the LACREG grants require a comparatively greater amount of work for proposal writing and reporting, given the short duration of the exchange projects and relatively limited funds. Shorter exchanges (maybe extending only over 6 months or even short individual trips) would possibly be attractive, provided that the application process is more efficient and application is possible several times a year (compare for example programs offered by the German Academic Exchange Service, DAAD).

8) Create an online database of articles and books published by grant recipients using the funding from LACREG

- It could be mandatory for grant recipients to report any publications on a yearly basis up to three years after the receipt of the grant. The database would increase the program's transparency and would familiarize funders and society at large with the outcomes of the funded research. Additionally, from the perspective of grant recipients, three years are a more reasonable timeframe when it comes to the production of bigger products, such as books.

AUCC considered these recommendations in the development of the LACREG Phase VI proposal submitted to IDRC in February 2011. For example, the Phase VI program which began in March 2011 now includes two project streams, a longer project implementation period for researchers, and the inclusion of four additional Caribbean countries on the LACREG country eligibility list. AUCC may consider the suggestion of creating an online database of articles and books produced in whole or in part through LACREG grant research.

The large number of submissions to the two competitions and the feedback provided by grant recipients demonstrate that the LACREG program is highly valued by researchers and universities across Canada and LAC. The results of the 34 projects show how the program continues to meet its objectives of developing and strengthening research networks and of influencing policies, practices and structures of organizations and governments at the local, national and international levels. AUCC thanks IDRC for its continued support of the LACREG program and looks forward to continuing to be a proud partner in implementing this valuable source of support for Canada-LAC collaboration.