



IRIS

Institute for Research and
Innovation in Sustainability

ANNUAL REPORT 2010

An organized research unit of York University

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1. DIRECTOR'S MESSAGE


As I enter the fifth year of my 5-year term, I have truly been experiencing the meaning of the phrase “time flies.” I have been trying to find time to talk with colleagues, and to reflect meaningfully on the exponentially increasing number of activities that we have been engaged in at IRIS, not only in the last year, but since 2006. These last 2 years, especially, have been a whirlwind of activity that has escalated to tornado level. But, frankly, given the state of planet Earth, this is how things ought to be.

Since January 2010, I have attended no fewer than nine (9!) conferences, ranging from local (Hamilton and York University) to international (Norway and Brazil). I presented, either in lecture or poster format, or convened sessions, at eight of them, often as an invited speaker. Plus, colleagues attended other conferences, where my name (or IRIS' name) was attached to a presentation. The conferences varied from ecology-themed research meetings about the arctic, temperate forests and grasslands, to sustainability, climate change and development-themed conferences.

What does this all mean? Well, a number of things. First, that the question needs to be asked of me, and I do ask it of myself, whether the enormous carbon footprint arising from all of my travelling was justifiable. The jury is still out on this one, but, whatever your opinion of carbon markets and trading, the fact remains that I need to be making some BIG purchases of excellent quality carbon offsets. That's what I'll be asking for from friends and relatives come Christmas and my next Birthday.

Second, all this activity reflects the fact that it's been four years since the start of a number of IRIS-housed research projects, and we are in a wind-up and reporting phase. This means going out, spreading the word and mobilizing knowledge. It is simply not enough for academics, these days, to be publishing the odd journal paper or book, turning up at a couple of conferences, and hoping that someone will read the research and figure out that there might be some implications for our broader society. In this regard, probably the most significant conference that I attended was the Science of Team Science conference (science sensu knowledge – and not just the natural and physical sciences) held in Chicago and organized by the inimitable Dr. Holly Falk-Krzesinski and her project manager, Ms. Latonia Trimuel. IRIS did not present here, but Dr. Nina Hewitt and I got a crash course in how future university-research and funding models are likely to look, as well as in bibliometric analyses of knowledge mobilization and social networks.

There is both good news and bad news on this front. The good news is for academics stimulated by and interested in collaborative research, where one can be a lifelong, curiosity-driven scholar, and be learning all the time from other experts, in interdisciplinary teams. What fun! The bad news is that currently



universities are not organized along these kinds of lines, being individualistic and competition driven. As I recently stated in Brazil, at the Second International Conference on Climate, Sustainability and Development in Semi-Arid Regions, “At my university which is the third biggest in Canada, we are always saying that professors must be more interdisciplinary when studying the wicked problems that the world faces, such as climate change and desertification. I would be very rich if I had a dollar for every university around the world that says this same thing (but I am not)! What does it mean?” I then went on to explain why universities are, in general, structurally, and systemically, unable to rise to the challenge of interdisciplinarity and what reforms would be needed. Regardless of whether such reform comes from within our institutions, the reality is that research funding models are shifting, and it really is going to be increasingly about collaboration and knowledge mobilization. Those of us at IRIS who like to step out of our academic comfort zone are going to be called upon much more – leading to the very real problem of burn-out stemming from being overwhelmed with work.

The third conclusion that I have drawn from my road trips, is that the decision of the IRIS community to draw very clear links between sustainability and ethics and justice, was bang on, and puts us exactly where we need to be. This decision, and our 2009 (April conference), “Ecojustice: How will disenfranchised peoples adapt to climate change?” took us last December, to the COP 15 (Conference of the Parties) of the UNFCCC (United Nations Framework Convention on Climate Change), where we obtained, for York University, observer status as a member of civil society. Most recently, we continued this work with Prof. Ellie Perkins in Brazil at the International Conference on Climate, Sustainability and Development in Semi-Arid Regions.

Fourth and finally, in his book, *Outliers*, Malcolm Gladwell defines the 10,000 hour rule, of work, study and practice as the magic number needed for someone to gain expertise in an area. Well, I did the maths, and based on an average 50 hour work week (it’s often more than that), 50 weeks a year (I don’t take much time off), I figured out why, after 4 years, I am feeling more comfortable with being asked to give lectures and sound-off about sustainability and the role that an interdisciplinary beast like IRIS could, does and will play in the modern university (not to mention being mistaken for a social scientist at a recent meeting!). There are many things that I am able to do, as a Biology professor, at IRIS working intimately with social scientists, that I cannot do in my home department and faculty. I believe that many of my colleagues with an interest in and passion for sustainability and the future are in agreement. So, I echo the message, of our Brazilian colleague, Miriam Duailibi, Director of ECOAR, the Brazilian Institute for Citizenship, an NGO and civil society organization, and IRIS and York University partner, to our community “Let’s make it happen. Join us”

Dawn Bazely

2. MANDATE, VISION, AND GOALS

On June 3, 2009, the IRIS Executive participated in a facilitated planning and strategy workshop in response to recommendations from our SCOR Review. As a result, this year the Executive created and approved a Strategic Plan for IRIS for 2010-2012.

The Strategic Plan details IRIS' focus of work by the following four criteria:

- Themes: Climate Change; Science-Policy Gap; Campus Sustainability; Sustainable Development
- Scope: multiple scales
- Research Diversity: multi-, inter- and trans-disciplinary research
- Community Impact: dissemination to peer-reviewed and community publications

The [Strategic Plan can be downloaded here](#).

MANDATE

IRIS promotes practical sustainability solutions that encompass environmental, social and economic considerations at local, regional and global scales. Operating as a leading edge interdisciplinary university wide research institute, IRIS is a hub for sustainability-related activities at York University. In this role we bridge internal and external interests through a policy of inclusivity, recognizing sustainability as a universal goal.

VISION

IRIS is a leader in the creation of a culture of sustainability within and beyond York University through engagement in practical, collaborative and interdisciplinary research and innovation that drives change.



GOALS

1. Provide leadership, integration and dissemination of interdisciplinary sustainability research by championing the use of a trans-disciplinary approach.
2. Engage with campus communities to create a “next generation” visible and collaborative green curriculum at York University.
3. Serve as a leading source for policy and decision makers on a variety of sustainability issues which reflect the current interests of affiliated faculty and fellows.
4. Engage students, staff and faculty in campus sustainability research and innovation projects that include pursuing carbon neutrality and implementing renewable energy to reduce York’s environmental footprint and sharing the knowledge with other sustainability offices nationally.
5. Make IRIS an accessible jumping off point for people and organizations both within and outside of the York community to collaborate on sustainability research and related activities.
6. Engage the broader community from local to international to effect change on sustainability by communicating meaningfully with different stakeholder groups.

3. ORGANIZATIONAL STRUCTURE AND MEMBERSHIP

EXECUTIVE BOARD

The Executive Board's mandate is to approve the Institute's policies, procedures, budgets, annual reports, and strategic plans and oversee their implementation. The IRIS Executive Board is chaired by the Director (ex officio) and is comprised of the Coordinator (ex officio); at least ten Core Faculty; at least three Junior Fellows; at least three Senior Fellows; to a maximum of 25 members (as per the IRIS Membership and Governance Document, December 2009). As of July 2010, we have 23 members (2 staff, 11 Core Faculty, 6 Senior Fellows and 4 Junior Fellows). The Executive Board members are currently all appointed by the Director, on advice of the steering committee. Core Faculty, Senior and Junior Fellow Board members serve two-year terms under the governance structure. The Director is responsible for ensuring that the terms of approximately half of the Board members in each category expire each year. There is, at present, no limit to the number of terms a Board member may serve.

During 2009-2010, the IRIS Executive met eight times: October 7, November 9, December 2, 2009, and January 18, March 8, April 14, May 5, and June 21, 2010. Executive meetings were typically preceded by a meeting of the Steering Committee, which discussed operational issues.

The following table lists the current members of the IRIS Executive:

Name	Affiliation	Membership	Term [#]	Executive Since
Aslop, Steve	Faculty, Faculty of Education	Core Faculty	July 1 2010 - June 30 2011	2006
Arsenault, Nicole/ Psathas, Helen	Manager, Transportation Services, CSBO / Senior Manager, Environmental Design and Sustainability, CSBO	Senior Fellow	July 1 2010 - June 30 2011	2007
Bazely, Dawn	Director IRIS & Faculty, Faculty of Science and Engineering	Staff		2006
Bell, David	Chair, Learning for a Sustainable Future	Senior Fellow	July 1 2010 - June 30 2011	2006
Denton, William	Web Librarian, Peter F Bronfman Business Library	Senior Fellow	July 1 2010 - June 30 2012	2010
Dubreuil, Annette	IRIS Coordinator	Staff		2007
Embleton, Sheila	Faculty, Faculty of Liberal Arts and Professional Studies	Core Faculty	July 1 2010 - June 30 2012	2010
Etcheverry, Jose	Faculty, Faculty of Environmental Studies	Core Faculty	July 1 2010 - June 30 2011	2007
Glassman, Steve	Director, Printing and Bookstore Services, CSBO	Senior Fellow	July 1 2010 - June 30 2012	2007



Name	Affiliation	Membership	Term [#]	Executive Since
Gould, Arlene	Faculty Associate, IRIS	Core Faculty	July 1 2010 - June 30 2012	2006
Goussev, Mikhail/ Raizada, Parul	MBA student, Schulich School of Business	Junior Fellow (Net Impact representative)	July 1 2010 - June 30 2011	2010
Heath, Meagan	MES student, Faculty of Environmental Studies & IRIS Coordinator (part-time)	Junior Fellow		2010
Henriques, Irene	Faculty, Schulich School of Business	Core Faculty	July 1 2010 - June 30 2011	2006
Hirsch, Rachael	Post-doc, Faculty of Environmental Studies	Senior Fellow	July 1 2010 - June 30 2012	2010
Lipsig-Mummé, Carla	Faculty, Faculty of Liberal Arts and Professional Studies & Director of W3	Core Faculty	July 1 2010 - June 30 2012	2010
McKague, Kevin	PhD student, Schulich School of Business	Junior Fellow	July 1 2010 - June 30 2012	2004
Medalye, Jacqueline	PhD student, Faculty of Liberal Arts and Professional Studies	Junior Fellow	July 1 2010 - June 30 2012	2010
Podur, Justin	Faculty, Faculty of Environmental Studies	Core Faculty	July 1 2010 - June 30 2012	2007
Rahder, Barbara	Dean, Faculty of Environmental Studies	Core Faculty	July 1 2010 - June 30 2011	2006
Schoenfeld, Stuart	Faculty, Glendon	Core Faculty	July 1 2010 - June 30 2012	2004
Schwartzberg, Pam	Executive Director, Learning for a Sustainable Future	Senior Fellow	July 1 2010 - June 30 2012	2004
Winfield, Mark	Faculty, Faculty of Environmental Studies	Core Faculty	July 1 2010 - June 30 2011	2007
Wood, Stepan	Faculty, Osgoode Hall	Core Faculty	July 1 2010 - June 30 2011	2004

[#] Prior to 2010, no formal terms applied to Executive members. Terms were set at one or two years (as per member's preference) so that there is not a complete membership renewal all at once.

The following Executive members finished their term during the 2009-2010 year:

Name	Affiliation	Membership	Executive Since
Daugherty, Howard	Faculty, Faculty of Environmental Studies	Core Faculty	2006
Etkin, David	Faculty, Faculty of Liberal Arts and Professional Studies	Core Faculty	2007
Lowry, Ben	MBA student, Schulich School of Business	Junior Fellow (Net Impact representative)	2009
Smith, Andrea	Post-doc, Faculty of Science and Engineering	Senior Fellow	2007
Victor, Peter	Faculty, Faculty of Environmental Studies	Core Faculty	2006
Watson, Andrew	PhD candidate, Faculty of Liberal Arts and Professional Studies	Junior Fellow	2008

MEMBERS

At the heart of IRIS are the people who collectively make it work. IRIS has four membership categories: the administrative staff of the Institute, Core Faculty, Senior Fellows and Junior Fellows. These categories cut across IRIS's core constituencies of faculty, students, staff, and members of the broader sustainability community.

Staff

Administrative staff are those individuals employed on a full- or part-time basis by the Institute to develop and administer Institute projects and activities.

- Director: Dr. Dawn Bazely (also Associate Professor, Department of Biology), 3-year term commencing July 2006, renewed for an additional 2-year term as of July 2009.
- IRIS Coordinator: Annette Dubreuil (May 2009-present as Coordinator; working with IRIS since October 2007), Meagan Heath (May 2010-present as Coordinator; volunteering with IRIS since October 2009)
- W3 Project Coordinator: Sabreena Delhon (April 2010-present)
- W3 Project Information Scientist: Liz Perry (2009-present)
- Webmaster: Rajiv Rawat (2007-present as Webmaster; working with IRIS since 2006)
- Research Associate (all part-time): Cecilia Tagliavia (2006-present); Julian Wilmouth (November 2009-February 2010); Tony Morris (2009)

Core Faculty

Core Faculty are faculty members of York or another university, engaged in sustainability-related research or innovation, who are integrally involved with the activities of the Institute (as noted in brackets), including serving on the Executive (indicated with an asterisk).

The following are the active Core Faculty for 2009-2010:

Faculty of Fine Arts

- Arlene Gould* (WGBC Summer School Course Director)

Faculty of Liberal Arts and Professional Studies

- Adrian Shubert (Climate Justice)
- Carla Lipsig-Mummé* (W3)
- David Etkin* (Climate Justice)
- Gabrielle Slowey (GAPS Project)
- Richard Saunders (Climate Justice)
- Sheila Embleton* (former VP Academic; Climate Justice)

Faculty of Education

- Steve Alsop* (IRIS Speaker's Series Committee)

Faculty of Environmental Studies (FES)

- Barbara Rahder* (Dean of FES)
- Ellie Perkins (Climate Justice; Campus Sustainability)
- Howard Daugherty*
- James MacLellan (4 Solitudes; Campus Sustainability)
- Jose Etcheverry*
- Justin Podur*
- Kaz Higuchi (Climate Justice; Campus Sustainability)
- Mark Winfield*
- Martin Bunch (Climate Justice)
- Peter Victor*

Faculty of Science and Engineering

- Dawn Bazely* (IRIS Director; W3; 4 Solitudes; GAPS; UFORE; Deer; Invasive Species; Climate Justice; Campus Sustainability; IRIS Steering Committee; IRIS Speaker's Series Committee; President's Sustainability Council)
- Norman Yan (4 Solitudes)

Glendon

- Stuart Schoenfeld*

Osgoode Hall

- Stepan Wood* (W3; 4 Solitudes; IRIS Steering Committee)

Schulich School of Business

- Irene Henriques* (W3; 4 Solitudes; President's Sustainability Council)

Howard Daugherty was a valued member of the York University community and IRIS Executive. He will be sorely missed.

Senior Fellows

Senior Fellows are individuals, based at York or elsewhere, engaged in sustainability-related research or innovation, who maintain a substantial relationship with IRIS but do not fall into the category of Core Faculty or Junior Fellow. They may include faculty, post-doctoral fellows, staff, professionals, visitors to the Institute, and people working in government, the private sector or the voluntary sector. Executive members are indicated with an asterisk.

The following are IRIS' active 2009-2010 senior fellows:

Learning for a Sustainable Future (Community Partner in Work in a Warming World)

- David Bell,* Chair
- Pam Schwartzberg,* Executive Director (W3)

York University

- *York International*
 - Carol Irving (WGBC Summer School)
 - Larissa Strong (WGBC Summer School)
- *Campus Services and Business Operations*
 - Anthony Barbisan, Director of Food Services (Campus Sustainability)
 - Helen Psathas,* Senior Manager, Environmental Design and Sustainability (Campus Sustainability)
 - Nicole Arsenault,* Manager, Transportation Services, CSBO (Campus Sustainability)
 - Steve Glassman,* Director Printing and Bookstore Services (Campus Sustainability)
- *Post-docs*
 - Rachael Hirsh* (Climate Justice)
 - Andrea Smith* (Invasive Species; 4 Solitudes)
 - Nicole Klenk (4 Solitudes; Climate Justice)
 - Nina Hewitt (Invasive Species; 4 Solitudes)

Junior Fellows

Junior Fellows are graduate and undergraduate students at York or another university who engage in IRIS-led or IRIS-supported projects. Junior Fellows are appointed by the Director for a term of two-years or shorter reflecting the expected duration of their substantial relationship with the Institute. These include paid positions (i.e. Graduate Assistantships, Work Study program, RAY program), interns, and volunteers.

The 2009-2010 Junior Fellows include:

Graduate Assistants

- Alexis Esseltine – MES student, Environmental Studies (Campus Sustainability)
- Hazel Sutton – MES student, Environmental Studies (Climate Justice; Campus Sustainability)

Research Assistants (Graduate Students)

- Alana Kronstal – MA student, University of Victoria (GAPS)
- Andrew Tanentzap – PhD student, University of Oxford (GAPS; Deer)
- Ashley Royle – MES student, Environmental Studies (Urban Forest)
- Christie Cestra – MSc student, Science and Engineering (Deer project)
- David Staples – MSc student, Science and Engineering (4 Solitudes, GAPS)
- Julia Christensen – PhD Student, McGill University (GAPS)
- Gesseca Gos – PhD Student, Science and Engineering (GAPS)
- Milissa Elliott – MSc Student, Science and Engineering (GAPS)
- Nora Saona – PhD student, Science and Engineering (GAPS)
- Paul Marmer – MSc student, Science and Engineering (GAPS)

Research at York (RAY) Students (Undergraduate Students)

- Granaz Ghalehvand – Science and Engineering
- Tracy Tanentzap – Science and Engineering

Work Study Students

- Josephine Mo – Undergraduate student, Glendon College
- Pratyusha Muskula – Undergraduate student, Environmental Studies

Volunteers

- *Design Interns*
 - Angelina Ramdin – Undergraduate student, York-Sheridan Program in Design
 - Wen Ma – Undergraduate student, York-Sheridan Program in Design (Design intern)
- *IRIS Executive*
 - Andrew Watson – PhD student, Liberal Arts & Professional Studies
 - Jacqueline Medalye – PhD student, Liberal Arts & Professional Studies (Climate Justice, Climate Change Blog)
 - Kevin McKague – PhD student, Schulich (Board of Governors)
 - Meagan Heath – MES student, Environmental Studies (Part-time Coordinator; Campus Sustainability)
 - Mikhail Goussev – MBA student, Schulich (Net Impact)
 - Parul Raizada – MBA student, Schulich (Net Impact)

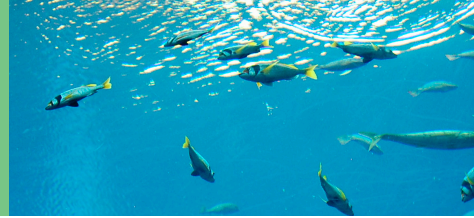
- *Campus Sustainability (including Earth Hour, and the Waste Survey)*
 - Aarti Rattan – Undergraduate student, Schulich
 - Andrea Lukac – MES student, Environmental Studies
 - Chiara Camponeschi – MES student, Environmental Studies
 - Eitan Yane – MBA student, Schulich
 - Guru Rengan – MBA Student, Schulich
 - Holly Ouellette – Undergraduate student, Environmental Studies
 - Manisha Peddinti – Undergraduate student, Environmental Studies
 - Marlee Kohn – MES student, Environmental Studies
 - Michelle Chow – Undergraduate student, Fine Arts
 - Nina Popova – MES student, Environmental Studies
 - Ryan Shannon – MES student, Environmental Studies
 - Santhosh Poobathy – MBA student, Schulich
 - Sridhar Srinivasan – MBA student, Schulich
 - Tony Morris – MES graduate, Environmental Studies
- *Climate Justice*
 - Benjamin Ramirez Jimenez – Undergraduate student, Health
 - Chidinma Akparah – Undergraduate student
 - Coreen Jones – MES student, Environmental Studies
 - Ewa Modlinska – Graduate student, Liberal Arts & Professional Studies
 - Fiona Street – MES student, Environmental Studies
 - Ian Rice – MES student, Environmental Studies
 - Janina Schan – MES student, Environmental Studies
 - Josh Sauer – MES student, Environmental Studies
 - Justin Goldrich – MES student, Environmental Studies
 - Linda Chebichii – MES student, Environmental Studies
 - Maja Ristic – Undergraduate student, Faculty of Liberal Arts and Professional Studies
 - Mohammad Hassan – Undergraduate student, Schulich
 - Sarah Lewis – MES student, Environmental Studies
 - Sarah Hamilton – Undergraduate student, of Liberal Arts and Professional Studies
 - Sarah Lewis – MES student, Environmental Studies
 - Shanon Zachidniak – MES student, Environmental Studies
 - Vanessa Higgins – MES student, Environmental Studies
- *Urban Forest*
 - Lorenzo Varga – Undergraduate student, Liberal Arts & Professional Studies

In addition, IRIS acknowledges the volunteer work of all other student volunteers, including those who assisted with Earth Hour activities and tabling in Vari Hall and at Glendon for the Waste survey and COP15 event.

Online

To read all our member profiles and for a complete list of York University faculty associated with IRIS, please visit: <http://www.iris.yorku.ca/about/our-people/>

4. ACTIVITIES OF THE UNIT



Broadly, IRIS's activities in 2009-2010 can be divided between, academic research projects (limited-term) and innovative engagement programs (ongoing).

ACADEMIC RESEARCH PROJECTS

During 2009-2010, IRIS housed and led numerous limited-term (1-5 years) academic research projects, including: Work in a Warming World; Connecting the Four Research Solitudes; Gas, Arctic Peoples and Security; The Effects of White-Tailed Deer; Assessment of Invasive Alien Species in Ontario; and The Value of the Keele Campus Urban Forest. The following projects are listed in order of completion, with the most recently started projects listed first and those completed listed last.

Work In A Warming World

Work in a Warming World (W3) is in its first year of a five-year SSHRC-funded Community-University Research Alliance (CURA) that addresses the challenge of climate change and response to climate change, for Canadian employment and work. This collaborative research initiative bridges two traditional solitudes: between environmental, policy and labour market organizations; and between academic and practitioner research. It brings together 43 organizations and researchers in 10 universities and 3 countries.

The purpose of W3 is to better understand the present and potential role of employment and work organization in Canada's transition to a low-carbon economy and to develop and deploy practical strategies and tools for adapting employment and work to the warming world. This is a new research area in Canada. Adapting work organization and employment patterns can contribute powerfully to Canada's efforts to slow global warming. Our goal in this CURA is to produce new research that informs widely and brings to its partner organizations practical, creative tools to adapt their practice. This is the time to craft tools and strategies for that contribution.

W3 held its first working conference from June 7-9 at the Schulich School of Business Executive Learning Centre. With over 40 participants from Canada and New Zealand the conference provided researchers from academic and community organizations with the opportunity to exchange ideas about climate change and labour. A highlight of the conference was the public panel which presented the results of an exploratory project funded by Canada's three national research councils. What Do We Know? What Do We Need To Know? – The State of Canadian Research on Work, Employment and Climate Change featured the following speakers: Carla Lipsig-Mummé, York University; John Calvert and Marjorie Griffin Cohen, Simon Fraser University; Steve Tufts, York University; Geoff Bickerton, Canadian Union of Postal Workers; John Holmes, Queens University. A final report based on the work presented at the panel along with other W3 updates will be available on the [W3 website](#) in the fall of 2010.

Connecting Four Research Solitudes: The Impact And Implications Of Climate Change For Invasive Species, Biodiversity And Society

Connecting Four Research Solitudes is a one-year knowledge synthesis project, which builds off of the now completed IRIS research project, Assessment of Invasive Alien Species in Ontario, profiled below. Climate change and Invasive Alien Species (IAS) are major drivers of global environmental change and both have already had profound impacts on different parts of Canadian society. With this Canadian Foundation for Climate and Atmospheric (CFCAS) funded project, IRIS is helping researchers to connect the four solitudes of climate change, invasive species, biodiversity loss and society, more effectively. The researcher's knowledge synthesis will help to operationalize these connections by assessing (1) which invasive species are expected to spread the most with climate change, (2) the implications of efforts to combat climate change through the development of alternative fuel sources (biofuels), and (3) how proposed efforts to assist threatened and rare species, by physically moving them to new locations for example, may cause more invasions. The potential impacts of these issues for trade, legislation and policy, work and employment, as well as education and training will be addressed. Knowledge pertaining to each of each of these questions, including knowledge attained through community consultation, will be explored in a synthesis report. All three themes will be combined and synthesized in a final report. Each knowledge synthesis report will be communicated through multiple channels, ranging from websites, to hard copy reports, newsletters, factsheets and small workshops.

Gas, Arctic Peoples And Security (GAPS)

"Impacts of oil and gas activity on peoples in the Arctic Using a Multiple Securities Perspective" (or Gas, Arctic Peoples and Security) is a Canadian-Norwegian collaboration funded the International Polar Year Program, involving researchers from York University, McGill University, University of Victoria, and the University of Tromsø in Norway. The Canadian GAPS project is focused on diverse aspects of human security such as introduced species movements along the proposed Mackenzie Valley Pipeline, hidden homelessness, mental health workers, and governance issues. By exploring the effects of oil and gas activity, and its interactions with climate change, on the human security of Arctic peoples, GAPS will further understanding and knowledge of 1) the science of climate change impacts and adaptation, and 2) the health and well-being of Northern communities.

Now in its fourth year, this five-year project sees the GAPS team doing final data analysis with masters and doctoral students beginning to finish their programs. This year saw MSc student Milissa Elliott finish her thesis on invasive species along the proposed Mackenzie Gas pipeline, and MA student Alana Kronstal finish her study of mental health practitioners in the north, titled "Community-Based Mental Health and Addiction Practice in the Northwest Territories of Canada". Final results will be presented at a workshop to be held in Yellowknife next spring, while preliminary Canadian results were recently presented in February 2010 at the Early Results Workshop in Ottawa deliver by INAC (Indian and Northern Affairs Canada) and again in June 2010 at the IPY Oslo Science Conference. The project also created its fourth [annual community newsletter](#).

The Effects Of White-Tailed Deer

Southwestern Ontario, Canada, is densely populated and highly urbanized and industrialized areas exist in proximity to extensive areas of intensive agriculture. Consequently, natural forest cover has become reduced and fragmented. Many species of deer are able to thrive in landscapes with fragmented forests, because overall amounts of forage increase at forest edges, and deer populations have increased across North America over the last few decades.

Over the last three years, through a grant from the City of London, Ontario, IRIS members have been assessing the effects of white-tailed deer browsing on different vegetation community types in three environmentally significant areas (ESAs) in the City of London. The ESAs include the Sifton Bog, Medway Valley and Meadowlilly Woods. The experimental approach involves the use of deer exclosures that have been built at all sites. Vegetation matrixes, including current annual growth on woody stems, tree and shrub densities, and species composition of the woody and herbaceous vegetation (cover and frequency) have been used to quantify the effects that white-tailed deer have had on the ESAs. The height, density, and abundance of *Trillium grandiflorum* have been used as an indicator of deer density. The structure and composition of the plant communities at the sites will be placed in a regional context and compared with other plant communities across southern Ontario. It is predicted that the sites will fall along a disturbance gradient that reflects both deer densities and surrounding urbanization of the last 25 years. The findings will be detailed in a paper to be released in the Fall of 2010.

Assessment Of Invasive Alien Species In Ontario

Recognizing that invasive species represent a significant threat to biodiversity, the Ontario Ministry of Research and Innovation funded this two-year research project on invasive alien species (IAS) in Ontario. This research adopted an interdisciplinary approach to examine current and potential future IAS threats, their ecological and socio-economic impacts, and our preparedness to prevent and manage IAS in Ontario. The project culminated in two papers.

The first paper, [Missing the Boat on Invasive Alien Species: A Review of Post-Secondary Curricula in Canada](#), details how higher education can contribute to the development of effective strategies for dealing with the IAS problem. This study, to be published in the Journal of Higher Education, reviewed the undergraduate and graduate university curricula at all 94 member institutions of the Association of Universities and Colleges of Canada for IAS content to determine the extent of such training in Canada. The main finding was that degree and diploma programs focusing on IAS issues are lacking at Canadian post-secondary institutions. Furthermore, few courses are devoted solely to IAS, and those that are offered typically adopt an ecological perspective. It was recommended that interdisciplinary university curricula on IAS be adopted in Canada. Several international educational programs on IAS are presented as case studies.

The second paper, *Invasive Alien Species Policy in Two Great Lakes Jurisdictions*, compares the approaches taken by Ontario and Minnesota to prevent and control IAS. While Minnesota has developed a comprehensive and coordinated approach to deal with IAS within the state, comprised of specific legislation, dedicated staff, widespread monitoring and consistent enforcement, Ontario lacks an overarching framework directing IAS efforts. Instead, the province adopts a piecemeal approach to the IAS problem, with no specific legislation or enforcement mechanisms, few staff focusing on prevention and management and insufficient monitoring. The paper is being prepared for submission to the journal *Canadian Public Policy*.

The Value Of The Keele Campus Urban Forest

Over the course of 2007 and 2008, IRIS researchers conducted an inventory of the trees on York's Keele campus collecting data on type of species, tree diameter, height, and plot size. The inventory included sample plots in each of the campus woodlots: Boyer woodlot, Danby woods, Boynton woods, Osgoode woodlot and Saywell woods. Data was analyzed according to the UFORE (Urban Forest Effects Model) computer model, which assessed the carbon sequestration capability of the urban forest using specific measurement protocols.

At the beginning of 2010, IRIS released the results of the UFORE project, in the report [The Value of the Keele Campus Urban Forest](#), indicating the benefits and challenges associated with the University's tree canopy. In particular, the report indicates the need to actively manage the urban forest on campus in order to maintain forest health, protect against pests and tackle invasive species. The report proposes various potential future studies including measurement of Energy savings, estimating of the canopy cover and creation of a land-use map for the campus. Like all urban forests, the trees on campus provide many benefits, such as energy efficiency, aesthetics and pollution abatement. IRIS will continue to work with the University to protect, support and grow the urban forest, including supporting the University, the York University Development Corporation and the City of Toronto with the York University subway expansion which will run under some of the woodlots.

INNOVATIVE ENGAGEMENT INITIATIVES

During 2009-2010, IRIS sought to innovatively engage the public through a variety of initiatives, including: leading a delegation to the 15th Conference of the Parties of the United Nations Framework Convention on Climate Change; running several campus sustainability initiatives at York University; developing sustainability-focused curriculum; hosting its annual speakers series; supporting other organizations through committee representation, event sponsorship, or providing work space; and increasing its e-presence.

Climate Justice

From its establishment, IRIS has recognized climate justice as a core issue. Since then, it has conducted numerous research project and engagement initiatives related to climate justice, such as hosting the Ecojustice Conference and developing the [Global Climate Justice for Disenfranchised People Web Portal](#) hot site with the ECOAR Institute for Citizenship. Most recently, IRIS sent a delegation to the 15th Conference of the Parties (COP15) of the United Nations Framework Convention on Climate Change.

UNFCCC COP15

Inspired by discussion at the Ecojustice Conference, this past December, IRIS sent 8 delegates to the 15th Conference of the Parties (COP15) of the United Nations Framework Convention on Climate Change in Copenhagen, Denmark. COP15 was a significant moment in global environmental politics and it was expected that the negotiations would bring forward new obligations for the post-Kyoto 2012 period. Although COP15 did not establish a legally binding accord, the opportunity for IRIS to participate in the conference was an accomplishment.

In the lead up to COP15, volunteers from IRIS and FES collected messages from the York community to send to the climate negotiations. Messages on a moveable mural and a canvas banner were displayed at the IRIS Climate Justice booth, inside the conference, for international delegates to view. As well, MES students Linda Chebichii and Janina Schan prepared a video featuring Professor José Etcheverry and student comments on climate change which was presented to world leaders. In preparation for COP15, some members of the IRIS delegation also attended the JD/Master in Environmental Studies Lunchtime Seminar Series entitled “Countdown to Copenhagen” featuring Graham Erion Associate, Torys LLP and Board Member, Islands First.

The York delegation presented at several events during the conference. Professor Ellie Perkins and ECOAR Executive Director Miriam Duailibi along with IRIS Staff Annette Dubreuil, and undergraduate student Benjamin Ramirez Jimenez spoke numerous times about the upcoming Climate Justice Web Portal. IRIS presented at the WWF Arctic tent on Indigenous People’s Day on December 8th, 2009. As well, Professor Jose Etcheverry presented on renewable energy and North American feed-in tariffs. Finally, Professor L. Anders Sandberg presented a paper on the aggregate industry’s relationship to climate change issues to the wider climate justice community during an “Academic Seminar Blockade” outside the gates of a gas and oil-burning plant in the northern parts of Copenhagen. The “Academic Seminar Blockade” presenters are now part of an effort to publish their papers in a special issue of ACME: An International E-Journal for Critical Geographies entitled “Climate Change: Power, Policy and Public Action.”

Attending COP15 also provided research opportunities for our graduate students. They attended numerous seminars and lectures within the UN conference and also attended Klimaforum, the global civil society counterpart to the UN conference. After returning to Toronto, COP15 delegates (Anders Sandberg, Ellie Perkins (pictured right) and Jacqueline Medalye) spoke at a debrief session and open meeting during the Earth Hour symposium at York on the results of the COP. Topics discussed included climate change discourses, emerging issues in climate justice, symbols of resistance, and the politics of the COP15.

The unprecedented experience of attending COP15 inspired our delegates to critically reflect on international climate politics and questions of climate justice. After COP15 Professor L. Anders Sandberg (FES) and Tor Sandberg (editors) published *Climate Change—Who's Carrying the Burden?* The chilly climates of the global environmental dilemma (Ottawa: Canadian Centre for Policy Alternatives, 2010). The volume features many York University members, among them IRIS junior fellow Jacqueline Medalye. This timely publication draws attention to the disparity between climate change and social justice concerns. Its contributors confound, confuse and extend what constitutes the meaning of climate change. Moreover, they juxtapose and make connections between climate change and the chilly climates that exclude and marginalize groups and individuals who live and imagine different ways of interacting that are more respectful of social and environmental relationships.



Participation at COP15 encouraged the launch of our new climate blog, [Turning Up the Heat](#), which provides a space for experts from the York community to share critical thoughts on climate and society. IRIS hopes to attend COP16 in Mexico, to continue promoting climate justice at the international level.

Campus Sustainability Action Agenda

IRIS is increasingly working on engaging the York University community in sustainability issues. Since the 2007-2008 academic year, we have selected an annual theme to serve as the focus of our community engagement initiatives: [Climate Change and Carbon Offsetting](#) (2007-2008); [Food Sustainability](#) (2008-2009); Waste Management (2009-2010). Once a theme has been selected, IRIS works closely with the relevant faculties, departments and operational units to develop the action agenda. Each year, we conduct a survey on the annual theme, which is complemented by other engagement initiatives such as presentations, interactive activities, and tailored reporting to relevant parties throughout the University.

Food Sustainability

During the 2008-2009 academic year, IRIS focused on campus food services for its campus-based research, and led a survey of over 1200 members of the York community about their dining preferences and sustainable food priorities, culminating in the [Examining Campus Food Sustainability at York University](#) report. Over the fall of 2010, IRIS will be visiting campus food vendors to share some of the findings of the campus food report and encouraging the adoption of more sustainable food offerings and practices. In the course of this research, it became apparent that waste management was an essential element to developing a more sustainable food services program, thus leading to IRIS's focus on campus waste management in its 2009-2010 campus sustainability initiatives.

Since the publication of the Food report, there have been many substantial changes to food services at York. Aramark, which provides approximately one-third of the food at York, has been leading the charge by sourcing 17% of its ingredients from local farmers, offering exclusively cage-free shelled eggs, and establishing an Ecotainer program in three of its cafeterias, in which diners can sign up for reusable takeout food containers. As well, increasingly, campus cafés are offering Fair Trade and organic coffees and teas, and providing discounts for using refillable mugs. Finally, beyond the campus boundaries, York is partnering in the development of the Good Food Market, which, as of July 2010, will sell healthy/affordable produce in the Jane-Finch community.

Waste Management

In 2009-2010, IRIS complemented this research by exploring the generation, management and impacts of waste at York University. As with the food survey, IRIS worked closely with Campus Services and Business Operations (CSBO) in the development of the waste survey in which participants were asked about: their awareness of waste management in general and

York's waste programs specifically; their waste reduction and diversion behaviours; and what changes they would like to make to York's waste management programs. The survey was completed in December of 2009. Initial findings were presented at the Earth Hour Symposium, and the final report of the findings, a comparative review of university waste management in North America and the associated recommendations will be published in the fall of 2010.

In addition to the survey, IRIS engaged the York University community around waste management by hosting a multi-day Waste Challenge, which challenged community members to sort typical waste items between the various waste streams on campus: composting, paper products recycling, bottles and cans recycling, special waste (i.e. batteries) and garbage. IRIS's enthusiasm for discussing waste has also spread into its blogging with the dedicated blog category [Waste Junkies](#).

IRIS's survey findings provide support for many of the waste reduction and diversion programs that the University has recently undertaken. York recently launched its [ZeroWaste](#) program, which encourages community members to become aware of and take responsibility for their personal waste production by requiring individuals to empty their own garbage/recycling cans into communal garbage/recycling bins. ZeroWaste will also increase waste diversion by collecting organic waste in all kitchenettes in academic and administrative buildings. As well, in addition to the introduction of Eco-takeout containers and the promotion of refillable mugs, CSBO (YORKW!SE, Food Services, and ZeroWaste) have partnered with Residence Life to help reduce food/packaging waste providing reusable sporks (spoon-fork-knife combo) to students living in residence.

Earth Hour Symposium

IRIS co-hosted the first annual Earth Hour Symposium with the student club ECO (Environmentally Conscious Organization which aims to bring together like-minded individuals on campus and engage the broader York community on sustainability issues). Speakers at the one day event included: Faculty of Environmental Studies professors Ellie Perkins on COP15 and James MacLellan on environmental discounting; York's Senior Manager of Environmental Design and Sustainability, Helen Psathas, on energy efficiency and conservation initiatives; and the IRIS Campus Sustainability Action Research team on the waste survey results. The Symposium also featured a lantern making workshop (pictured above), a "de-lighting" ceremony and parade with student club Regenesiis, and a brainstorming session on campus sustainability. IRIS will be repeating this successful event in 2011.

Sustainability Curriculum Development

As a pedagogical institution, the University is actively involved in teaching a wide variety of subjects. IRIS aims to include elements of sustainability in existing curricula and to create new curricula that take a broad approach to sustainability as a discipline or specifically focus on the application of sustainability to a particular subject matter.

International Summer School In Green Building Design

IRIS is working with the university to integrate green building principles into the curriculum and the campus environment. In 2008, IRIS facilitation led to a memorandum of understanding with the World Green Building Council (WGBC), which in turn led to the International Summer School in



Green Building Design, launched in summer 2009, with York International. The intention of the course is to foster literacy in green building strategies in an international context. The undergraduate course is offered through the Faculty of Environmental Studies (FES) by IRIS Core Faculty and Executive Board member Arlene Gould.

Now in its second year, the Summer 2010 course will have more spaces made available to FES students and be run at cost. The course continues to be open to multiple fields—remaining one of the few inter-disciplinary undergraduate courses at York University, and indeed nationally. The course also includes internships. The course features unique interactive workshops, practice design methodologies and tools, collaboration, field trips and cross discipline design charrettes, guest lecturers from experts in green buildings, as well as some classes held at the LEED-Gold Earth Rangers Centre.

Continuing Education

IRIS has led an initiative to develop a non-degree course for human resource professionals to educate them about sustainability. To date strategic planning meetings have been held and the Atkinson Continuing Education program, now part of the Faculty of Liberal Arts & Professional Studies (LA&PS), has agreed to host the program. There is ongoing work to further develop the course.

2009/2010 Speakers Series

With a diversity of well-recognized speakers covering a broad range of topics, the annual IRIS speaker series has proved to be popular in past years. During the 2009-2010 academic year, IRIS hosted speakers on a broad range of sustainability issues, including: sustainable purchasing, green building, microfinance, urban forests and governance. The intention of these events is to engage with students and reach out to alumni and the community, in spreading awareness and providing a space for conversation and networking. This year's speaker series featured the following presentations:

- November 19, 2009—**A Panel on Cradle to Cradle & Green Buildings**—Bob Charette (Concordia University), Lisa Rocha (TRCA), and Frank-Martin Belz (Universitat Munchen, and visiting professor at Schulich). Co-hosted by the Canada Green Building Council Greater Toronto Chapter, and the York University Bookstore.
- January 20, 2009—**Microfinance and Women in Afghanistan**—Mennonite Economic Development Associates (MEDA): Ruth Dueck Mbeba, Microfinance Consultant, and Marilyn Friedmann, (Interim) Vice President, Marketing & Resource Development.
- February 8, 2010—**Panel on Urban Forest Studies in the GTA** followed by the launch of the report [The Value of the Keele Campus Urban Forest](#)—Lionel Normand (Terrestrial Biologist at TRCA), Meaghan Eastwood (Urban Forestry Technician at TRCA) and Dr. Cecilia Tagliavia (Ecology Consultant & IRIS Senior Fellow)
- April 7, 2010—**Book Launch A Perilous Imbalance: The Globalization of Canadian Law and Governance**—Stepan Wood (IRIS Exec Member) and Stephen Clarkson (University of Toronto)

Events Supported By IRIS

In addition to IRIS-led initiatives and events, IRIS has provided financial and/or administrative support for the following events over the past year:

Business & Society Symposium

IRIS financially supported the symposium on [Sustainable Purchasing Policies: Developing and Implementing Living Documents](#), hosted by the Business & Society Program at York University on September 24, 2009. The annual Business and Society lecture was presented by Francisco VanderHoff, the Founder of the first Fair Trade labelling body and the world's largest Fair Trade coffee producers' coop in Oaxaca, Mexico. The full-day symposium also featured presentations from: Lori Stahlbrand (Local Food Plus), Michelle Kortinen (Forest Stewardship Council), Bill Barrett (Sumac Community Worker Co-op, WearFair/Planet Bean), Rob Tiffin (Vice-President Students, York University), Lazar Konforti (Équiterre), Michael Zelmer (TransFair Canada), Trudy Lockyer (Brock University), J.J. McMurtry (Business & Society Program, York University), as well as representative from Trent University and the Canadian Federation of Students. Finally, workshops were offered on a variety of relevant topics by the follow-

ing: Ian Hussey (York University), Patrick Clark (University of Waterloo), Tina Sorbara (Guelph Campus Co-operative), Tegan Moss (Seasoned Spoon, Trent University), Steve Glassman (York University Bookstore), Arlene Stein (Hart House, University of Toronto), Jeff Moore (JustUS! Coffee Roasters), Howard Daugherty (Faculty of Environmental Studies, York University), and representative from Engineers without Borders. IRIS launched the Food report at this event.

2010 Osgoode Hall Graduate Law Students' Association Conference

The Osgoode Hall Graduate Law Students' Association took as its theme for the 2010 Conference [Beyond Law: At the Edges of Law's Ambit](#). At the Conference, law was considered from multiple viewpoints, moving beyond the courtroom, the legislature and the law office, and foregrounding the importance of legal pluralism as well as interdisciplinary work. IRIS sponsored one of the sixteen panels in the two-day Conference, on the topic of "Sustaining Resources, People & the Environment. The panel featured Albert Koehl (Staff Lawyer for Ecojustice) as the Discussant, Patricia Hania as the Chair, and the following panellists: Karen Fernandes (LLM Candidate, Osgoode Hall Law School); Sarah Hamill (PhD Candidate, University of Alberta); Priscila B. Becker (LLM Candidate, Osgoode Hall Law School); Tiffany MacLellan (MA Candidate, Ottawa University); and, Mostafa Mahmud Naser (PhD Candidate, Macquarie University).

FES Research Speaker Series

IRIS provided financial sponsorship for a presentation by Professor Michael Dorsey from the Faculty of Science at Dartmouth College on [Carbon Colonialism, Crony-Capitalism & Collusion: Participant-Observations of the Persistence of Neoliberal Swine Flu at the Copenhagen Talks](#). The event took place January 25, 2010.

Association Of Graduate Students In Biological Sciences Symposium 2010

The theme of the 37th annual symposium of the Association of Graduate Students in the Biological Sciences (AGSBS) at York University was X Factor: Women of Biology and Biology of Women. The 2010 Symposium and exhibited work on women's health issues and featured talks by prominent women researchers, including: Dr. Linda Penn, Head of the Division of Cancer genomics and Proteomics at the Ontario Cancer Institute; Dr. Ted J. Brown, Head of the Division of Reproductive Endocrinology and Infertility at the University of Toronto; Dr. Miriam Richards, a sociobiologist with the Department of Biological Sciences at Brock University; Dr. Barbara Vanderhyden, Corinne Boyer Chair in Ovarian Cancer Research at the University of Ottawa; Dr. Theresa Woodruff, Thomas J. Watkins Professor of Obstetrics & Gynecology at the Northwestern University Feinberg School of Medicine and Professor of Biochemistry, Molecular Biology and Cell Biology in the Weinberg College of Arts and Sciences; Dr. Cheryl Arrowsmith, Senior Scientist with the Division of Cancer Genomics and

Proteomics at the Ontario Cancer Institute (OCI), and Dr. Bridget Stutchbury, Canada Research Chair in Ecology and Evolution in the Department of Biology at York University. IRIS supported this event by providing gifts.

Complex Systems Workshop: Agent-Based Modelling

IRIS provided administrative support for this workshop presented by the Faculty of Environmental Studies. Dr. Edmund Chattoe-Brown from the Department of Sociology, University of Leicester, UK presented three plenary lectures: A Simple Introduction to Complex Systems; Modelling Complex Systems: An Introduction to MAM/ABSS in NetLogo; and The Horizon: Prospects for MAM/ABSS in Modelling Complex Social and Physical Systems. Following a catered lunch, some participants continued on to the computer workshops held in the afternoons.

Committee Representation

- [President's Sustainability Council](#) was created in 2008 by President Shoukri with broad representation from across the University to provide input on how to address sustainability issues on a pan-University level. IRIS has a seat at the Council and contributes to provide critical input. Professors Dawn Bazely and Irene Henriques share a seat on this committee.
- [YORKW!SE](#) intends to promote campus stewardship and quality of life through awareness campaigns, and by engaging students, staff and faculty in campus sustainability initiatives around topics such as energy conservation and waste reduction. IRIS has a seat on YORKW!SE and provides advice and expertise.
- **Council of Research Directors** was created by the Vice President, Research and Innovation (VPRI) to bring all the Directors of the 26 different research institutes at York University to discuss common issues and ways to collaborate better and enhance the research environment at the University. In general, IRIS advocates for more inter-disciplinary research to allow for different viewpoints that are needed to tackle the worlds' complex issues. The Council of Research Directors and IRIS believe research needs to be disseminated using appropriate language for different stakeholder groups so that it might be taken up by society at large.
- [Morris Katz Memorial Lecture Committee](#), which selects the speaker for the annual Memorial Lecture. The annual lecture was created by the Chemistry Department in 1990, and sponsored by York Centre for Atmospheric Chemistry (CAC) and the Ontario Ministry of the Environment (OME) and is organized by CAC. The purpose of the lecture is to stimulate research in environmental science.
- **VPRI-led Review of the Research Centres (ORU Task Force Working Group)**
- **Green Paper Working Group on Teaching Innovation and Student Learning** was created by Rhonda Lenton, Associate Vice-President Academic & Vice Provost, to draft a one of several Green Papers that informed

the development of the Provostial White Paper. The [Green Paper on Teaching Innovation and Student Learning](#) was released at the end of 2009, and the Provostial White Paper, [Building a More Engaged University: Strategic Directions for York University 2010-2020](#), was released in April 2010.

In-Kind Organizational Support

In addition to providing financial, administrative or expert support, IRIS provides office and meeting space to other organizations. Since 2004, IRIS has housed the not-for-profit organization [Learning for a Sustainable Future](#). As well, IRIS plans to increasingly provide workspace of sustainability-related student-led organizations, particularly in the Summer term when campus clubs offices are closed.

IRIS E-Presence

The IRIS website, www.iris.yorku.ca continues to be hosted by [Ethical Hosting](#), which is powered by 100% renewable energy provided through [Bullfrog Power](#) and [Planetair](#). The website is constantly updated so that it remains a current and user-friendly resource for researchers, students, community members and anyone interested in sustainability issues. In addition to profiling its many projects, initiatives, members and associates, the website is also a hub for discussing sustainability issues (through our frequent and thought provoking blog posts), or for finding out about local sustainability events. In the last year we also extended our web-presence beyond the website by promoting events, blog postings and other news on Facebook (IRIS - Institute for Research and Innovation in Sustainability) and Twitter (iris.yorku). In an effort to reduce the number of emails sent to our membership, in May 2010, IRIS began a monthly newsletter, highlighting key news items and upcoming events. Design interns developed the newsletter template and other items, such as the Strategic Report, a mind map of Sustainability at York University, the cover to this Annual Report, and an IRIS identity (shown below) with accompanying graphics for use in IRIS publications (featured throughout this report).



5. GRADUATE TRAINING ACTIVITIES/ACCOMPLISHMENTS

Students Receiving Graduate Assistantship and Research Assistantship Funding through IRIS for the 2009-2010 period are:

Graduate Assistants

Two Faculty of Environmental studies Masters students worked with IRIS as Graduate Assistants in a variety of Campus Sustainability and Climate Justice capacities.

- Alexis Esseltine led our annual campus sustainability survey on waste management at York University. Alexis also organized a Waste Challenge to increase awareness about York's waste diversion programs and the Earth Hour lantern making workshop, in which participants were taught how to make lanterns out of salvaged waste materials.
- Hazel Sutton organized the annual Speakers Series, the Earth Hour symposium, and coordinated student engagement initiatives that were included in IRIS's participation at COP15 in Copenhagen. Hazel also contributed to research proposals to do further climate justice work.

Research Assistants

Under the supervision of Dawn Bazely, IRIS's two Research Assistants pursued their Masters in Biology in association with the Gas, Arctic Peoples and Security (GAPS) project and the Effects of White-tailed Deer project.

- In association with the GAPS project, Milissa Elliott recently completed her Masters research focused on invasive plants along the proposed Mackenzie Valley pipeline route in NWT, for which she conducted field work in Fort Good Hope, Norman Wells, Inuvik and Fort Simpson.
- In association with the Deer project, Christie Cestra is in the process of completing her Masters degree work on the effects of deer in Southwestern Ontario

Another GAPS sub-project to be completed in 2009-2010 is "Negotiating Change: Community-Based Mental Health and Addictions Practice in NWT" by Masters student Alana Kronstal. Her study included 15 counselors and wellness workers who serve 8 NWT communities. Their insights and reflections suggest that substance use continues to be a struggle in many communities. On a positive note, practitioners spoke of decreased stigma surrounding disclosure of abuse and many people utilizing counseling to address these issues.

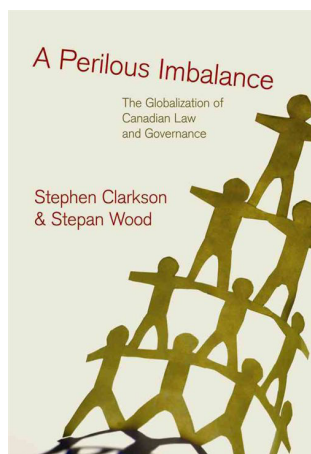
6. PLANS AND PRIORITIES FOR 2010–2011

- Attend COP 16 and host a side event with ECOAR, which will further promote the [Global Climate Justice for Disenfranchised People Web Portal](#)
- Establish the Ecojustice conference as biennial event
- Continue to push for campus sustainability projects by engaging the administration of the University and the York community at large
- Continue to disseminate the findings from our previous campus sustainability research on Food and Waste
- Focus the 2010-2011 Campus Sustainability Action Agenda on the topic of sustainability engagement
- Continue to act on the SCOR recommendations, as per the [Policy, Guidelines and Procedures for the Chartering and Review of Research Centres/Institutes at York University](#)
- Continue to support IRIS Executive members and fellows in representing IRIS at conferences and other events
- Secure more research funding and financial support for administrative and overhead costs
- Build on our role as a sustainability hub at York for individuals within and outside of the York community, by increasing the availability of sustainability resources
- Collaborate more closely with York student clubs and organizations
- Showcase sustainability-related research projects by IRIS members and York faculty and students on the IRIS website, potentially culminating in an annual e-journal
- Create an annual IRIS lecture
- Expand the IRIS membership, including students, staff, faculty, and community members
- Re-establish the IRIS Advisory Committee
- Make available funds to sponsor student participation in conferences

7. PUBLICATIONS

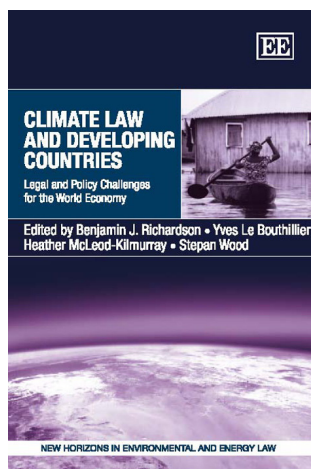
BOOKS

Clarkson, S., & Wood, S. (2009). *A Perilous Imbalance: the Globalization of Canadian Law and Governance*. Vancouver: University of British Columbia Press.



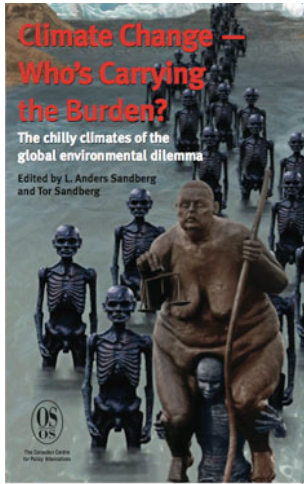
As citizens of a middle power, Canadians know how it feels to be objects of global forces. But they are also agents of globalization who have helped build structures of transnational governance that have highly uneven impacts on prosperity, human security, and the environment, often for the worse. This timely book argues that these imbalances need to be recognized and corrected. *A Perilous Imbalance* situates Canada's experience of globalization in the context of three interlinked trends: the emergence of a global supraconstitution, the transformation of the nation-state, and the growth of governance beyond the nation-state. It shines an urgent light on the dangerous imbalances in contemporary forms of globalized governance, and advocates a revitalization of the Canadian state as a vehicle to pursue human security, ecological integrity, and social emancipation, and create spaces for alternative forms of law and governance.

Benjamin J. Richardson, Heather McLeod-Kilmurray, Yves Le Bouthillier and Stepan Wood (eds.) (2009). *Climate Law and Developing Countries*, in . *Climate Law and Developing Countries: Legal and Policy Challenges for the World Community*. Cheltenham, UK: Edward Elgar.



This timely book examines the legal and policy challenges in international, regional and national settings, faced by developing countries in mitigating and adapting to climate change. With contributions from over 20 international scholars from developing and developed countries, the book tackles both long-standing concerns and current controversies. It considers the positions of developing countries in the negotiation of a new international legal regime to replace the Kyoto Protocol and canvasses various domestic issues, including implementation of CDM projects, governance of adaptation measures and regulation of the biofuels industry. Through a unique focus on the developing world, this book makes a significant contribution to understanding current challenges and future directions of climate law. It will prove a stimulating read for legal academics, undergraduate and graduate law students as well as policymakers interested in the role of developing countries in climate change law. The book originates from an international conference on Climate Law in Developing Countries Post-2012, co-sponsored by the IUCN Academy of Environmental Law, the University of Ottawa Faculty of Law and Osgoode Hall Law School. The book is part of the ongoing mandate of the IUCN Academy of Environmental Law to generate collaborative research on the most pressing issues in environmental law.

Sandberg, L. Anders, & Sandberg, Tor. (2010) *Climate Change— Who's Carrying the Burden? The chilly climates of the global environmental dilemma*. Ottawa: Canadian Centre for Policy Alternatives.



The devastating impacts of climate change are clear. But there are disturbing revelations about how global elites are tackling the issue. Al Gore—on one hand — promotes carbon emissions trading and green technologies as a solution, and—on the other—profits handsomely from his timely investments in those same initiatives. Infamous climate change skeptic Bjørn Lomborg recommends free market solutions to fight global poverty and disease. And it's these solutions that almost exclusively receive the attention of world leaders, so-called experts and media pundits.

Climate Change—Who's Carrying the Burden? rallies the call of climate justice advocates and activists concerned with 'system change not climate change'. This call demands control of local resources, the restitution of past wrongs, and the willingness to conceive and accept different modes of living and seeing. The contributors to this book draw attention to the disparity between climate change and social justice concerns. They seek to confound, confuse and extend what constitutes the meaning of climate change. They juxtapose and make connections between climate change and the chilly climates that exclude and marginalize groups and individuals who live and imagine different ways of interacting that are more respectful of social and environmental relationships.

JOURNAL ARTICLES, BOOK CHAPTERS, PRESENTATIONS

Barbara Rahder

- Rahder, B. (2010). *Knowing Your Place: Gender and Justice in the Work of Social Sustainability*. Urban Affairs Association Annual Meeting, Honolulu, Hawaii.
- Rahder, B. (2010). *Remarks on Charles Cassia: Contributions to Sustainability and Environmental Policy*. Charles Cassia Symposium, University of Ottawa.
- Rahder, B. (2010). *Conversation with Anne Michaels (author of The Winter Vault)*. Toronto Reading Series.

Carla Lipsig-Mummé

a) Scholarly Articles

- Lipsig-Mummé, C. (2010, June). What do We Know? Canadian research and international perspectives on climate change, work and employment, in *What Do We Know? What Do We Need to Know? The state of Canadian research on work, employment and climate change*, York University, 3-7.
- Lafleur, D., & Lipsig-Mummé, C. (2010, March 25-26). *Work in a Warming World: Climate Change and the Dilemma for Labour*. GURN/ITUC Workshop on Climate Change, Impacts for Employment and the Labour Market, Brussels. <http://climate.ituc-csi.org/ituc-gurn-workshop-on-climate>.

b) Keynote and Plenary Papers

- Lafleur, D., & Lipsig-Mummé, C. (2010, March 25-26). *Work in a Warming World: Climate Change and the Dilemma for Labour*. Plenary presentation, GURN/ITUC Workshop on Climate Change, Impacts for Employment and the Labour Market, Brussels.

c) Conference, Symposium and Workshop Papers

- Lipsig-Mummé, C. (2010, July 4-7). *Responding to Climate Change: Work in a warming world and Canadian action-research*. ACSANZ Annual Conference (Association for Canadian Studies, Australia and New Zealand), Armidale, New South Wales.
- Lipsig-Mummé, C. (2010, June 7). *What do We Know? Canadian research and international perspectives on climate change, work and employment*. Paper presented to the Public Panel on 'What do we know? What do we need to know? and published in *What Do We Know? What Do We Need to Know? The state of Canadian research on work, employment and climate change*, York University.
- Lipsig-Mummé, C. (2010, April 19). *The Implications of Climate Change for Work and Employment*, University of Sydney, Political Economy Seminar Series.
- Lipsig-Mummé, C. (2010, April 15). *Work in a Warming World*. University of New South Wales School of Management Lecture Series, Sydney, Australia.
- Lipsig-Mummé, C. (2010, March 10). *Climate Change and Employment*. History Department, University of Toronto-Mississauga.

d) Academic Presentations to Professional and Civil Society Organizations (selected)

Lipsig-Mummé, C. (2009, August). *Climate Change and the Workplace: Negotiating Response to Global Warming*. The National Union Leadership School, Ontario, Canada.

Dawn Bazely

a) Scholarly Articles

Saona, N.M., Albrechtsen, B.R., Ericson, L. & Bazely, D.R. (2010) Environmental stresses mediate endophyte–grass interactions in a boreal archipelago. *Journal of Ecology*. 98: 470–479.

Koh, S., Bazely, D.R., Tanentzap, A.J., Voigt, D.R. & Da Silva, E. (2010) Trillium grandiflorum height is an indicator of white-tailed deer density at local and regional scales. *Forest Ecology and Management*. 259: 1472–1479.

b) Non-Refereed Articles and Reports

Bazely, D., Tagliavia, C. & Cestra, C. 2010. Long-term trends in Rondeau Provincial Park Plant Communities. Report to Ontario Ministry of Natural Resources.

Klenk, N., Bazely, D. R. and Perkins, P.E. *Report of the First International Ecojustice Conference: How Will Disenfranchised Peoples Adapt to Climate Change? Strengthening the Ecojustice Movement*. IRIS Report, York University.

c) Invited and volunteered conference papers, plenary talks and posters

2010	August	Invited participant at the Social Technology Round Table of the 2nd International Conference: Climate, Sustainability and Development in Semi-Arid Regions (ICID + 18), Fortaleza, Brazil.
	August	Invited speaker at an Organized Oral Session: Ecological Society of America 95th Annual Meeting, Pittsburgh, USA - Global Warming: The legacy of our past, the challenge for our future.
	July	Invited speaker on the Perspectives on Climate Change Panel at the “Leadership for Sustainable Communities: Focus on Climate Change” Conference, Faculty of Education, York University, Toronto.
	July	Two Contributed Posters: International Symposium on Fungal Endophytes of Grasses (ISFEG), Kentucky, USA.
	June	Contributed Talk: International Polar Year Oslo Science Conference. My talk was entitled – “The northward movement of native and introduced species along new and existing corridors associated with natural resource exploration and utilisation” with co-authors M. Elliott, N. Saona and P. Marmer
	February	Contributed Talk: International Polar Year Canada Early Results Workshop, Ottawa, Ontario, Canada. “GAPS - Gas, Arctic Peoples and Security (IPY #310)” with Gabrielle Slowey and Julia Christensen
	February	Contributed Poster: Gordon Research Conference – Plant-Herbivore Interactions, Galveston, Texas – “Disappearing Forests: The long-term impacts of white-tailed deer, non-indigenous plant species and high human populations on Ontario’s Carolinian (deciduous) forest communities” - with Andrew Tanentzap, Saewan Koh and Christie Cestra
2009	October	Invited seminar speaker: Department of Biology, University of Western Ontario

d) Forthcoming contributions

1. Tanentzap, A.J., Bazely, D.R., Koh, S., Timciska, M., Haggith, E.G., Carleton, T.J. and Coomes, D.A. (In press) Seeing the forest for the deer: do reductions in deer-disturbance lead to forest recovery? *Biological Conservation*.
2. Bazely, D.R., Tanentzap, A. J. and Heaton, M. (In press) Impacts of White-tailed deer in the Mixed Wood Plains. The Mixed Wood Ecozone Section of the *Ecosystem Status and Trends Report for Canada (Technical Section)*, A Federal-Provincial-Territorial Project of the Canadian Council of Resource Ministers. Hoogensen, G. and Bazely, D.R. (Eds.) *Environmental Change and Human Security in the Arctic*. Earthscan Press, London UK. (Book chapters are in revision)
3. Smith, Andrea L., Bazely, Dawn R. and Yan, Norman. (Revised and submitted) Missing the Boat on Invasive Alien Species: A Review of Post-Secondary Curricula in Canada. *Canadian Journal of Higher Education*.

e) Engagement with the Broader Public and Policy Vehicles

- | | | |
|------|----------|--|
| 2010 | March | Invited speaker: Annual Grey Bruce Woodlot Conference, Elmwood, Ontario, Canada. My talk was entitled – “ <i>Disappearing forests? The long-term impacts of white-tailed deer on Carolinian (deciduous) forest communities</i> ” |
| | February | Panel Convener and Moderator for the Living Plants, Liveable Communities: Exploring Sustainable Horticulture for the 21st Century Symposium, Royal Botanic Gardens, Hamilton, Ontario. Convened panel - “Valuing the Living and Creating Natural Capital in the Built Environment - are we Doing Enough?”
http://www.rbg.ca/cisb/2010symp/02a_natcap.html |

Donald Arthur Dippo

a) Book Chapter

Dippo, D., & James, C. (2010). The Urbanization of Suburbia: Implications for Inner-Suburban Schools and Communities, in Roger Keil, Patricia Wood, Douglas Young (Eds.). *In-Between Infrastructure: Urban Connectivity in an Age of Vulnerability*. Kelowna: UBC Praxis (e) Press.

b) Journal Article

Dippo, D. (2010, January). From Refuge to Polis: Shifting the Rationale for Religiosity in Schools. *Educational Policy*, 24, 216 - 220.

c) Presentations/Workshops (Scholarly and Professional)

Dippo, D., Gaymes San Vicente, A., & San Vicente, R. (2010, May). *Critical Thinking in the Classroom*. The Role of Critical Thinking in Education International Conference, Helsingborg, Sweden.

Basu, R., Dippo, D., Millard, M., Peters, M., & Young, J. (2010, February). *Education and Forced Migration*. George Webster Public School, Toronto.

Basu, R., Dippo, D., Duran, M., & Young, J. (2010, February). *Education and Forced Migration*. Forest Manor Public School, Toronto.

Dippo, D., Duran, M., McGrath, S., & Millard, M. (2010, February). *Education and Forced Migration*. Firgrove Public School, Toronto.

Dippo, D., Ippolito, J., Schechter, S., with Lorraine Otoide (2010, February). *Researching and Building Community in Education*. Faculty of Education, York University, Research Speaker Series, Toronto.

Ellie Perkins

a) Book Chapters

Moraes, A., & Perkins, E. (2009). *Etica, Genero e Classe Social na Política Participativa de Agua*. In Gislene Aparecida dos Santos (ed.). *Etica, Pesquisa e Políticas Publicas*. São Paulo: Editora Rubio.

Moraes, A., & Perkins, E. (2009). *Deliberative Water Management: Women's Experience in Brazil*. In A. Salleh (ed.). *Eco-Sufficiency and Global Justice*. London/Melbourne: Pluto Press/Spinifex Press.

b) Journal Articles

Perkins, E. (2010, February 27). Public participation in watershed management: international practices for inclusiveness. *Physics and Chemistry of the Earth*. <http://dx.doi.org/10.1016/j.pce.2010.02.004>

Perkins, E. (2009). Pedagogies of resistance: community-based education for women's participation in watershed management in São Paulo, Brazil. *Canadian Woman Studies, special issue on Women in Latin America*, 27 (1).

c) Papers in Refereed Conference Proceedings

Perkins, E. (2010). *Equitable, Ecological Degrowth: Feminist Contributions*. Paper presented in Barcelona 2010 Degrowth conference proceedings, www.degrowth.eu.

d) Papers Presented at Conferences

Perkins, E. (2009, November 16-19). *Brazilian-Canadian synergies in participatory development, ecojustice, and watershed management: recent experiences*. Brazilian Association for Canadian Studies, Goiania, Brazil.

Perkins, E. (2009, October 21-23). *Watersheds as spaces for public participation: ecological economics, international 'best practices,' and social equity*. Canadian Association for Ecological Economics, Vancouver BC.

e) Conference Activities

Perkins, E. (2010, July 15). Invited panel speaker, "Leadership for Sustainable Communities: Focus on Climate Change" conference, co-sponsored by the York Institute for Research and Innovation in Sustainability and the UNESCO Chair in Education for Sustainability, York University.

Perkins, E. (2010, May 6-7). Invited workshop participant, "Slower by Design, Not Disaster: Managing Without Growth," York University.

Perkins, E. (2010, May 21-24). Invited keynote speaker, Friends World Committee for Consultation, Northeast Regional Gathering/Atlantic Friends Gathering, University of New Brunswick, Fredericton, "Working together towards morality: Diversity and economic perspectives."

Perkins, E. (2010, March 26-29). Invited plenary panel participant, 2nd International Conference on Socially Sustainable Degrowth, Universidad Autonoma de Barcelona, Spain, “Climate change, the economic crisis, and the possibility of prosperity without growth.”

Perkins, E. (2009, Dec. 11-17). Head of York University’s 7-member observer delegation to the United Nations Copenhagen conference on Climate Change (COP-15). Speaker or chair at several scheduled “side events” in conjunction with the Copenhagen conference.

Perkins, E. (2009, October 18). Chair of the opening session of a panel on “The Canada Visiting Research Chair in Brazilian Studies Program: Past Successes and Future Opportunities,” University of Goiás, Goiânia, Brazil.

f) Addresses, Panels and Talks

Perkins, E. (2010, March 24). Post-COP15 Debrief” presentation during York University’s Earth Hour Symposium.

g) Media Presentations

Perkins, E. (2010, March 26-29). Interviewed on Feminist Ecological Economics and Degrowth by writers for The Broker (Amsterdam); Directa (Barcelona); and several other publications and broadcasters, at the Barcelona Degrowth conference.

Gabrielle Slowey

a) Book Chapter

Slowey, G.A. (2009). A Fine Balance: First Nations and the Dilemma of Development, in Annis May Timpson, (ed.) *First Nations First Thoughts*. Vancouver: University of British Columbia Press, 229-247.

b) Conferences

Slowey, G.A. (2010, June 7-12). *Challenging communities: Arctic governance and resource exploration in the Canadian North*. Paper presented at the IPY Oslo Science Conference. Oslo, Norway.

Slowey, G.A. (2010, June 1-3). *A New Day for the NWT?* Paper presented at the Canadian Political Science Association Meetings. Concordia University, Quebec.

Slowey, G.A. (2010, February 16-18). *Navigating the Waters of Interdisciplinary Collaboration: How Human Security Provided a Chart and Routes for our Assessment of the Impacts of Oil and Gas Development in the Northwestern Canadian Arctic*. Panel presented at the International Polar Year Canada Early Results Workshop. Ottawa, ON.

Slowey, G.A. (2010, February 8-10). *Going Global or Staying Local? Indigenous-State Relations in Canada and Aotearoa*. Paper presented at the Canada and New Zealand: Connections, Comparisons, and Challenges Conference. University of Victoria, Wellington New Zealand.

Slowey, G.A. (2009, November 3-5). *Education and the Importance of Self-Government in the NWT*. Paper presented at the Northern Governance Policy Research Conference. Yellowknife, Northwest Territories.

Irene Henriques

a) Book Chapters

Henriques, I. (2010). How can sustainable environmental stewardship enhance global competitiveness?, in Subhash Jain and Ben Kedia (eds.), *Enhancing Global Competitiveness Through Sustainable Environmental Stewardship*. Edward Elgar Publishing, Northampton, MA.

Henriques, I., & Sadorsky, P. (2010). Voluntary Environmental Programs: A Canadian Perspective, in Peter deLeon and Jorge Rivera (eds.), *Voluntary Environmental Programs: A Policy Perspective*, Lexington Books/Rowman & Littlefield: New York, 265-290.

b) Journal Articles

Henriques, I., & Sadorsky, P. (2010). Can environmental sustainability be used to manage energy price risk? *Energy Economics*, In Press.

Darnall, N., Henriques, I., & Sadorsky, P. (2010). Adopting Proactive Environmental Strategy: The Influence of Stakeholders and Firm Size, *Journal of Management Studies*, In Press.

c) Presentations

Henriques, I. (2009, August 7-13). Moderator, *What you measure is what gets done: The importance of developing appropriate sustainability metrics*. 69th Annual Meeting of the Academy of Management, Chicago, Illinois.

Henriques, I. (2009, July). *Environmental Responsibility and the Major Multinational Corporation: A Stakeholder Approach*. Walden University and Aspen Institute, Business and Society: A Web Conference Series. (This was a webinar)

Kevin McKague

McKague, K., et al. (Forthcoming 2010). Growing Inclusive Markets. *Journal of Enterprising Communities*.

McKague, K. (Forthcoming 2010). Dynamic Capabilities and Institutional Entrepreneurship. *Journal of Enterprising Communities*.

McKague, K., et al. (2010). The IRC in Sierra Leone: The Path to Scale for an Alternative Micro-franchising Model. University of Michigan [Case prepared for William Davidson Institute, Case Code: 1-429-097 and Case Date: July 26, 2010, available at <http://www.globalens.com/casedetail.aspx?cid=1429097>].

Mark Winfield

a) Journal Articles

Gaudreau, K., Gibson, R., Markvart, T., Taylor, J., & Winfield, M. (2010). Implications of Sustainability Assessment for Electricity System Design: The case of the Ontario Power Authority's Integrated Power System Plan. *Energy Policy*, 38, 4115-4126.

Winfield, M. (2010). The Nuclear Juggernaut: In the midst of a recession, Ontario's government is at an energy crossroads. *Alternatives Journal*, 36 (1).

b) Presentations

Koveshnikova, T., & Winfield, M. (2009, July). *The Impact of the Ontario Energy Board's Total Resource Cost Test on Local Distribution Company Electricity Conservation and Demand Management Initiatives*. Toronto: Faculty of Environmental Studies.

Taylor, A., & Winfield, M. (2009, September 12). *Tax Expenditures and Environmental Sustainability in Canada: Two Case Studies*. Paper given at the Osgoode Hall Law School's Tax Expenditures and Public Policy in a Comparative Perspective Conference.

Richard Saunders

a) Book Chapter

Saunders, R. (2010). Geologies of Power: Blood Diamonds, Security Politics and Zimbabwe's Troubled Transition, in M. Clarke and C. Bassett (eds.). *Legacies of Liberation: postcolonial struggles for a democratic Southern Africa*, Toronto: Fernwood and Johannesburg: HSRC Press, accepted for publication.

b) Journal Article

Saunders, R. (2010, July). Zimbabwe: Liberation Nationalism, Old and Born Again. *At Issue E-Zine* (Africa Files, Toronto).

c) Published Report

Saunders, R. (2009, September). *Conflict Diamonds from Zimbabwe*, Amsterdam: Niza/Fatal Transactions.

d) Invited Lectures and Papers

Saunders, R. (2010, June). *Geologies of Power: Blood Diamonds, Security Politics and Zimbabwe's Troubled Transition*. Paper presented in South African Contemporary History and Humanities Seminar Series, University of the Western Cape, Bellville, South Africa.

Saunders, R. (2010, May 5). *Diamond Illusions and Political Realities in Zimbabwe*. Paper presented in Wolpe Memorial Trust Open Dialogue Series, "Zimbabwe: Current Realities", University of Cape Town, Cape Town, South Africa.

Saunders, R. (2010, January). *Zimbabwe's Blood Diamonds*. Presentation sponsored by the Department of African Studies, The Centre for Research on Latin America and the Caribbean, and the Extractive Industries Research Group, York University, Toronto.

Saunders, R. (2009, December 3). *Contesting Sub-Imperialism: South African Investment and Regional Resistance*. The Baraza Lecture, Center for African Studies, University of Florida, Gainesville, Florida, USA.

e) Roundtables, Seminars and Conferences

Saunders, R. (2009, November). *Civil Society and State in Africa - on the web and in the classroom*.

Presentation in “Making Make Education for Democracy a Reality in our Courses”, a departmental Seminar in the Department of Political Science, York University.

Sheila Embleton

a) Edited Conference Proceedings

Ahrens, W., Embleton, S., & Lapierre, A. (2009). *Names in Contact: Names in a Multi-Lingual, Multi-Cultural, Multi-Ethnic World*. Proceedings of the 23rd International Congress of Onomastic Sciences, Toronto, August 17-22, 2008. [both CD and on-line in Y-Space].

b) Book Chapter

Embleton, S., Uritescu, D., & Wheeler, E. (2009). The Stability of Multidimensional Scaling over Large Data Sets: Evidence from the Digitized Atlas of Finnish. *Mélanges en l'honneur de Juhani Härmä*, Mémoires de la Société Néophilologique de Helsinki, ed. Eva Havu, Mervi Helkkula & Ulla Tuomarla, 101-108.

Embleton, S., Uritescu, D., & Wheeler, E. (2009). Data Management and Linguistic Analysis: Multidimensional Scaling applied to Romanian Online Dialect Atlas. *Issues in Quantitative Linguistics*, Studies in Quantitative Linguistics 5, ed. Reinhard Köhler, Lüdenscheid, Germany, RAM Verlag, 10-16.

Embleton, S., Uritescu, D., & Wheeler, E. (2009). Lessons from Digitizing a Linguistic Atlas. *Distorsionari in comunicarea lingvistica, literara si etnofolclorica romaneasca si contextul european*, eds. Luminita Botosineanu, Elena Danila, Cecilia Holban and Ofelia Ichim, Iasi, Editura Alfa.

Embleton, S., Uritescu, D., & Wheeler, E. (2010). How do I know if I am right? Checking quantitative hypotheses. *Text and Language: Structures, Functions, Interrelations. Quantitative Perspectives*, ed. Peter Grzybek, Emmerich Kelih & Ján Mačutek, Vienna: Praesens Verlag, 49-56.

c) Article in (Refereed) Conference Proceedings

Embleton, S., Uritescu, D., & Wheeler, E. (in press). Identifying Dialect Regions: Specific features vs. overall measures using the Romanian Online Dialect Atlas and Multidimensional Scaling, *Papers from the Methods in Dialectology XIII Conference, Leeds, 2008*, Clive Upton (ed.).

d) Book Review

Embleton, S. (2010). Contributions to the Science of Text and Language. Word Length Studies and Related Issues', *Zeitschrift für Rezensionen zur germanistischen Sprachwissenschaft*, Peter Grzybek, (ed.), 2 (1), 69-74.

e) Newspaper Article

Embleton, S. (2010, January 15). Need to Create an Attractive Profile for Canadian Education. *India Abroad*.

Embleton, S. (2010, June 21). Friends at York University honoured Varpu Lindström. *Vapaa Sana*.

f) Conference Presentation

Embleton, S., Uritescu, D., & Wheeler, E. (2009, September 14). *RODA: Analytic vs. Interpretive Data in Geolinguistic Variation*. Sixth Congress of Dialectology and Geolinguistics, University of Maribor, Slovenia.

Embleton, S., Uritescu, D., & Wheeler, E. (2009, September 18). *How Do I Know If I Am Right? Checking Quantitative Hypotheses*. Sixth International Conference on Quantitative Linguistics, University of Graz, Austria.

g) Invited Conference Presentation

Embleton, S. (2009, September 26). *Canada as a Small Country*. International Conference on The University in a Small Country and Global World, University of Latvia, Riga.

Abner, B., Brewer, G., Embleton, S., & Miller, B. (2009, November 5). *York Strike Experience*. FBS (Faculty Bargaining Services) Annual Workshop, CAUBO (Canadian Association of University Business Officers) meeting, Toronto.

Embleton, S. (2010, February 3-5). *Education System in Canada, and the Role of Multiculturalism*. Invited Opening Keynote Address, International Seminar on “Land of Promise: Stories of the Immigrant in Multicultural Canada”, Centre for Canadian Studies, Jadavpur University, Kolkata, India.

Embleton, S., Uritescu, D., & Wheeler, E. (2010, April 15 – 17). *Generalized Online Dialect Atlas*. International Linguistics Association Annual Meeting, New Paltz, New York.

h) Seminar Presentation

Embleton, S. (2009, October 22). *Canada – India Education Relations*. National Law University of Delhi.

Embleton, S. (2009, October 26). *Canada's Role in International Education*. Department of Education, University of Jammu, Jammu & Kashmir, India. [teachers from all over India were also present, as part of a teacher orientation program]

Embleton, S. (2009, October 26). *Mathematical Models in Dialectology*. Department of English, University of Jammu, Jammu & Kashmir, India.

Embleton, S. (2009, October 27). *Education System in Canada*. Center for Canadian Studies, University of Delhi (South Campus), India.

Embleton, S. (2009, October 30). *Canada's Role in International Education*. Himachal Pradesh University, Shimla, India.

Embleton, S. (2010, January 25). *Canada – India Education Relations*. Faculty of Social Sciences, Banaras Hindu University, Varanasi, India.

Embleton, S. (2010, January 29). *Education System in Canada*. Dr. Ram Manohar Lohia National Law University (RMLNLU), Lucknow, India.

Embleton, S. (2010, January 29). *Education System in Canada*. IIM-Lucknow, Lucknow, India.

Embleton, S. (2010, February 8). *Legal Education System in Canada*. National Law University, Jodhpur, India.

Embleton, S. (2010, April 11). *Higher Education in Canada*. Aravali Institute of Technical Studies, Udaipur, India.

Embleton, S. (2010, April 14). *The Health System in Canada, and Comparisons to Rajasthan*. IILM Academy of Higher Learning, Jaipur Campus.

i) Roundtable Presentation

Invited by PM's Office as one of three Canadians to participate with PM Harper in roundtable on "Canada India Higher Education Cooperation, in November 17, 2009, New Delhi, India, as part of PM Harper's 3-day mission to India.

Embleton, S. (2009, December 6). *Environmental Education in Canadian Schools and Universities*. International Conference on Environmental Issues in Emerging and Advanced Economies, panel presenter for panel "Strategies for Environmental Education and Planning, India, Canada", organized by Reaney Centre for Canadian Studies, Gujarat University, Ahmedabad.

co-organizer and panel presentation – AUCC-Shastri workshop, "Canada-India Graduate Mobility Workshop", New Delhi, India, December 14-15, 2009.

Invited by Government of Quebec to organize and chair the two academic roundtables during Premier Jean Charest's mission to India, February 2010. Education Roundtable, Mumbai, February 2, 8:30-12:00; Seminar on Educational Reform in India, New Delhi, February 5, 14:00-15:30.

Chair/Discussant – Panel of Southam Fellows who had visited Finland, Massey College, University of Toronto, March 25, 2010.

Discussant – "Asian-Canadian Collaboration in Education: Pathways of Enrichment", Sixth Annual Asian Heritage Month Education Roundtable and the Eighth Annual Asian Heritage Month Lecture at University of Toronto, Ontario Institute for Studies in Education, University of Toronto, May 19, 2010.

Panel presentation – "Models for on-the-ground engagement in India: offshore campuses, joint programs, articulated undergraduate programs: Panel to explore case studies", AUCC Workshop, "Advancing Excellence in Strategic Engagement with India", Ottawa, June 10, 2010.

Small group discussion leader – "Modalities for mentoring new Indian higher education institutions, from IITs to new central universities", AUCC Workshop, "Advancing Excellence in Strategic Engagement with India", Ottawa, June 10, 2010.

Member of Working Group – "How can we encourage more student and personnel exchanges between Canada and emerging economies / developing countries?", "Fostering the Global Bioeconomy: Canada's Health Biotechnology Collaboration with Emerging Economies", IDRC (International Development Research Centre), Ottawa, June 14, 2010.

Stepan Wood

a) Articles and Book Chapters

Richardson, B.J., Tanner, G., & Wood, S. (2010, May- June). What Ever Happened to Canadian Environmental Law?, CLPE Research Paper No. 12/2010, online: *Social Sciences Research Network*, <http://ssrn.com/abstract=1595097>, forthcoming in *Ecology Law Quarterly* (Top Ten download in Environmental & Natural Resources Law, Environmental Economics, Environmental Law & Policy, and International Environmental Law eJournals).

Wood, S. (2010, May-June). In Defence of the Sphere of Influence: Why the WGSR should Not Follow Professor Ruggie's Advice on Defining the Scope of Social Responsibility. Online: *Social Sciences Research Network*, <http://ssrn.com/abstract=1607438> (Top Ten download in the following SSRN eJournals and Topics: International Environment of Global Business eJournal, Strategy & Social Policies eJournal, INTL Subject Matter eJournals All Papers, International Business Strategy & Structure eJournal, International Business & Management Network, Business Practices & Ethics, Global & Regional Governance, Global Strategy & Tactics, Policy Environment, Moral & Ethical Practices, and Social Responsibility Practices).

Clarkson, S., & Wood, S. (2009, November & December). NAFTA Chapter 11 as Supraconstitution. CLPE Research Paper No. 43/2009, online: *Social Sciences Research Network*, <http://ssrn.com/abstract=1500564> (Top Ten download in Treaties & Other Sources of International Law Topic).

Le Bouthillier, Y., McLeod-Kilmurray, H., & Richardson, B. J. (2009). Introduction: Climate Law and Developing Countries, in Benjamin J. Richardson, Heather McLeod-Kilmurray, Yves Le Bouthillier and Stepan Wood (eds.). *Climate Law and Developing Countries: Legal and Policy Challenges for the World Community*. Cheltenham, UK: Edward Elgar.

b) Papers Presented

Wood, S. (2010, February 25-27). *Defining the Boundaries of Business Responsibility for Human Rights Abuses*: ISO 26000, the UN Special Representative on Business and Human Rights, and the 'Sphere of Influence' debate. Presented at Canadian Business Ethics Research Network (CBERN) Symposium on Business and Human Rights, Toronto.

Stuart Schoenfeld

a) Publications

Schoenfeld, S. (2010). In press: Environment and Human Security in the Eastern Mediterranean: Regional Environmentalism in the Reframing of Palestinian-Israeli-Jordanian Relations, in P. H. Liotta, David Mouat, Judith Lancaster, Bill Kepner and David Smith (eds.). *Achieving Environmental Security: Ecosystem Services and Human Welfare*. Amsterdam: IOS Press.

Schoenfeld, S. (2010). Pending: Nature Know No Boundaries? Notes towards a future history of regional environmentalism. Chapter 19 in Alon Tal, Daniel Orenstein, and Char Miller, eds. *Israel's Environmental History*, University of Pittsburg.

Abitbol, E., & Schoenfeld, S. (2009). Constructing an Adaptive Regional Vision of Water Development in the Jordan River Basin,” in Deborah Sandler and Clive Lipchin, eds., *The Jordan River and Dead Sea Basin: Cooperation Amid Conflict. Proceedings of the NATO Advanced Research Workshop on Water Resources and Infrastructure in Areas of Conflict and Extreme Conditions*. Berlin: Springer.

b) Electronic Publications

Schoenfeld, S. (2010). Current: Environment and Climate in the Middle East. Blog and resource page. <http://mideastenvironment.apps01.yorku.ca/> successor to MIDEASTENVIRONET.

Schoenfeld, S. (2010). COP15: The entitled, the resentful and the powerless. Institute for Research and Innovation in Sustainability, York University. <http://www.iris.yorku.ca/2009/12/cop15-the-entitled-the-resentful-and-the-powerless/>

c) Conference Presentations

Schoenfeld, S. (2010, July 13). *Contrasting Regional Environmentalisms in the Eastern Mediterranean*. Presented at the International Geographic Union Regional Meeting, Tel Aviv, July, with Jonathan Rubin.

Schoenfeld, S. (2010, July 2). *A University Program as a Bridge to Social Movements: A Regional Environmental Institute in the Middle East*. Presented at Canadian Sociology Association, Montreal.

William Found

Berbés-Blázquez, M., & Found, W. (2010, June 15-16). *The Sugar-Cane Cultural Landscape of the Caribbean Islands: Tracking a Social-Ecological System from the 16th to the 21st Century*. A paper prepared for the Workshop on Social-Ecological Resilience of Cultural Landscapes. Berlin-Brandenburg Academy of Sciences and Humanities Berlin, Germany.

8. STATEMENT OF OPERATIONS 2009–2010



STATEMENT OF OPERATIONS 2009–2010

Total Revenue	482, 676
Internal Funding	16, 901
Government Funding	449, 250
Corporate/NGO Funding	6, 525
Contracts	10, 000
Total Expenses	188, 324
Research Expenses	186, 424
Supported Events at York	1, 900
Surplus for the current year	294, 352
Carryforward from 2008–2008	201, 634
Carryforward from 2009–2010	495, 986

Notes to the Statements of Operations: The above income statement includes the IPY GAPS project figures using its fiscal year of April 1 2009 to March 31 2010, which is offset one month from all other figures, which are for May 1 2009 through April 30 2010, as per the York University fiscal year.



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