

The Environmental Studies Association of Canada (ESAC)
Conference
Association canadienne d'études environnementales (ACEE)
Congrès 2010 Conference



May 31st – June 1, 2010

Sustainability in a Changing World

Développement Durable dans un Monde en
Changement



Concordia University, Montreal, Quebec

Message of thanks to Alternatives Magazine, CFHSS and Concordia University

ESAC would like to express its profound gratitude to Alternatives Journal, particularly Marcia Ruby, Nicola Ross, Michael Torrieter, Jessica LaPlante, Isabel Slone and Tegan Renner, for your support. ESAC would also like to express its immense appreciation to the Canadian Federation for the Humanities and Social Sciences (CFHSS) and Concordia University for its active collaboration in the organization of the conference.

Travel Subsidies

If you applied for a travel subsidy please provide a photocopy of your travel receipts to: Michael Torrieter, Alternatives Journal, 200 University Ave W, Waterloo, Ontario Canada N2L 3G1, Toll free: (866) 437-2587 Fax: (519) 746-0292.

NOTE: Please help us go green by bringing your travel mugs and printing this program double-sided for only those sessions you are interested in. We will only have a few china cups available for use at 0.50 per mug rental per health break, as well as compostable cups. As well, we will only have a limited number of printed copies of the full program at the conference, realizing that most people prefer electronic copies to reduce paper wastage. We will have a schedule at a glance available for everyone in printed copy to provide a roadmap of the conference. Thank you for your assistance and understanding of our efforts to go green and to keep costs at a reasonable level.

All the sessions on May 31st and most of the sessions on June 1st will be in the beautiful new EV1 (Engineering, Computer Science and Visual Arts Integrated complex) building at the Concordia University, 1515 St. Catherine West at the intersection of Guy St. Please join us May 31st on the first floor at EV1-605 at 9:00 with all the poster and break sessions at EV2-789.



A Message from the ESAC Conference Chair and ESAC co-President

It is a great pleasure, on behalf of the Environmental Studies Association in Canada (ESAC) Board, to welcome you to our annual conference at Concordia University. In particular I would like to welcome our speakers, notably our Keynote Speakers, Desiree McGraw, Executive Director of the Jeanne Sauvé Foundation and co-founder of Al Gore's Climate Project in Canada; Camilla Toulmin, Director of the International Institute for Environment & Development (IIED); and Bina Agarwal, Director and Professor at the Institute of Economic Growth, Delhi University. We thank CASID, particularly Charmain Levy, for co-hosting with ESAC the two international speakers.

I invite everyone to take full advantage of the rich conference program which provides an excellent opportunity for faculty, students and practitioners, to report on their research, discuss findings and exchange ideas with colleagues from across the country. There are numerous panels and sessions of particular and general interest to members, but might I draw particular attention to a panel featuring Elizabeth May, Green Party Leader with other media gurus that include Wayne Roberts, Monique Beaudin and Nicola Ross on the afternoon of May 31st. In addition I would like to draw your attention to the panel featuring Nilufar Ahmad, Sr. Gender Specialist in Social Development of the World Bank will be presenting on a project I am also involved with on Climate Change and Gender in Bangladesh. This year there are many great panels on food issues related to sustainability. Wayne Roberts, author of the No-nonsense guide to Food, Ellen Desjardins, Alison Bay-palmer and Bryan Gilvesy will be presenting on food policy and sustainability. As well, on June 1st there are a number of other food panels, including one featuring a short participatory video called Growing Hope in Northern Manitoba as part of a session on Food Security and Community Development.

Finally, I would like to invite all members to join us at the Annual General Meeting at lunch on May 31st where the affairs of the Association are decided on. As well, the poster session on May 31st at 5:00 offers conviviality, free wine and food to enjoy the posters and mingle with your colleagues to discuss environmental studies. Also please join us on the evening of June 1st at the ESAC Banquet where, in addition to good food, conviviality and music will be on the menu.

The Conference Chair has been an interesting chore and I would like to thank the many people who helped me in its organization. Asfia Gulrukh and Vanessa Lozecznik were wonderful in taking on the large task of putting together the conference program and corresponding with people. I would also express my gratitude to Jessica Laplante, Marcia Ruby and Chris Ling for always being there to help when needed at the last minute. Your kind assistance was much appreciated. In addition, Chris Ling as co-President and Marcia Ruby as an ESAC board member have provided outstanding leadership and service to ESAC.

Please fully enjoy the ESAC conference.

Shirley Thompson
ESAC Conference Chair and ESAC Co-President

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May 31st 2010		
Welcome note Shirley Thompson and Chris Ling, Presidents of ESAC/ACEE Board May 31 st 9:00-9:30 Room EV1- 605		
Time	Room EV1- 605	ESAC Joint session with CASID Room EV6- 809
9:30-10:30	Gendered Adaption to Climate Change in Bangladesh Panel Chair: Nilufur Ahmad Nilufur Ahmad Shirley Thompson Durdana Islam – discussant	Environmental governance and justice in development Talia Meer Lance W. Robinson & Leslie King Neera M. Singh
Break 10:30-11:00	Health and Snack Break Room EV2-789 Poster presentations and set-up (Room will be available for poster set up from 9 am)	
Time	Room EV1- 605	ESAC joint session with CASID Room EV6-809
11:00-12:30	Food policy and sustainability Chair: Alison Bay-palmer Ellen Desjardins Wayne Roberts Bryan Gilvesy	Gender & Development Issues in Africa Chair: Rebecca Teissen – Discussant: Lotsmart Fongjong Shelly Jones Daniel Ahimbisibwe Theresa Ulicki
LUNCH and AGM (Annual General Meeting). All ESAC members are cordially invited to attend and participate in the governance of ESAC. Lunch will be provided for those attending AGM. 12.30- 2:00 pm, Room EV1-605		
Time	Room EV1-605 ESAC joint Session with CASID	Room EV6-809 Joint Session with CASID
2:00-3:00	Climate Change negotiations -- Rio, Kyoto, Copenhagen and beyond. Keynote speaker: Elizabeth May	Sustainable development in the post-Copenhagen Alejandra Roncallo Beth Jean Evans Julie Drolet
3:00 -3:30	Coffee Break and Poster Presentation Room EV2-789	

Time	Room EV1-605	Joint Session with CASID Room EV6-809 3.45-5.30	
3:30-5:00	Good Science and/or a Darn Good Read: Media Panel Chair: Nicola Ross Wayne Roberts Elizabeth May Monique Beaudin	Gender and Environment Christine Gibb Ishara Mahat Marie Fall	
5:00 – 6:30 and beyond			
Poster Presentations and Awards Room EV2-789 (Complementary wine, beer, non-alcoholic fruit punch and Hors d'oeuvres) Networking, world café and conviviality – Please join us.			
June 1st 2010			
Time	Room EV 1-605	Room EV6- 809	Room EV2-776
9.00-10.30	Energy and Environment Doug MacDonald Sarah Martin Brenda Holzinger	Food security and Sustainable Agriculture Wilhelm Peekhaus Asfia Gulrukh Kamal Chris Ling	Multi-media & discussion room
Time			
10.30-11.00	Coffee Break and Poster presentation Room EV2-789		
Time	Room EV1-605	Room MB1/210	Room EV2-776
11.00-12.30	Environment and Culture Thomas Heyd Alanna F Bonder Katherine Turner Lisa Quinn	Climate Change in Africa Keynote speaker: Camilla Toulmin Joint Session with CASID	Multi-media & discussion room
Lunch Break (on own) 12.30-1.30 pm			

Time	Room EV1-605	Room EV6-809	Room EV1-615
June 1 st 1.30-2:45	Environment and Education Natasha Blanchet-Cohen & Amelie Daigle Kristina Hunter Barbara Davy Kristina Hunter (2 nd paper)	Environment, Film and the Arts Adrian Ivakhiv Ashlee Cunsolo Willox Cynthia Grant Adrian Ivakhiv (2 nd paper)	Gender and forest conservation: The impact of women's participation in community forest governance Keynote speaker: Bina Agarwal Joint Session with CASID
2:45-3:15	Coffee Break and Poster presentation Room EV2-789		
Time	Room EV1-605	Room EV6- 809	Room EV 2 -776
June 1 st 3.15-4.45	Food Security and Community Development Shirley Thompson Asfia Gulrukh Kamal Vanessa Lozecznik Myrle Ballard	Economics and Sustainable Environment Sarah Gagnon-Turcotte Jean Philippe Sapinski Sarla Achuthan Shanto Khan	Multimedia & discussion room – please contribute
June 1 st 4:45-5.00	Closing Up and poster removal/awards, Room EV2-789		
6.00pm	Banquet at Club Espagnol de Québec /Spanish Club, (4388 St Laurent Street) Between Mont Royal and Marianne and walking distance – 5 km from EV Tapas and Dancing with Live Band Papa Zon		

DAY ONE

Sustainability in a Changing World

Développement durable dans un monde en changement



Day One: May 31st 2010

WELCOME

Room EV1 605

9:00-9:30

ESAC Presidents – Chris Ling & Shirley Thompson

Panel 1: Climate Change Adaptation and Gender in Bangladesh (Joint session with CASID)

Room EV1-605

9:30 -10:30

Chair: **Nilufar Ahmed** – Senior Gender Specialist, Social Development World Bank

Email: Nilufarahmad@worldbank.org

Discussant: Durdana Islam

Email: durdana_islam@yahoo.com

Nilufar Ahmed - World Bank

Email: Nilufarahmad@worldbank.org

Shirley Thompson - Natural Resources Institute, University of Manitoba

Email: s_thompson@umanitoba.ca

Gender, social capital, local governance and climate change adaptation in Bangladesh Study

Focused adaptation measures are needed for women who are more vulnerable than men to climate related impacts due to their social status, cultural norms, lack of access and control over resources and lack of participation in decision making processes. This study of ten climate change hotspots in Bangladesh considered that women bear a disproportionate burden of consequences of climate change because of their marginalized status and dependence on local natural resources. Hotspots were defined as an area most vulnerable to a particular type of climate change related hazard. The hazards in these hotspots include river flood, flash flood, tidal flood, cyclone, salinity intrusion, water logging, drainage congestion and drought. A model that integrated sustainable livelihood and women's empowerment was applied that recognized social capital provide an asset that men more easily than women draw upon in constructing their livelihood strategies, enhancing their capacity to adapt climate change scenario. At a broader scale social capital contributes to the effective operation of networks and channels through which government programs can effectively support rural communities in their efforts to adapt to climate change.

Panel 2: Environmental governance and justice in development (Joint session with CASID)

ROOM EV6- 809

9.30-10.30

Chair: Blane Harvey - **University of Sussex, Brighton, UK**

Email: b.harvey@ids.ac.uk

Discussant: Pablo S. Bose - **University of Vermont, USA**

Email: pbose@uvm.edu

Talia Meer - **Dalhousie University**

Email: talia.meer@dal.ca

Finding the community in Community-Based Natural Resource Management: The case of Ndumo Game Reserve, South Africa

Community-based Natural Resource Management (CBNRM) has gained popularity in recent years as a mechanism for achieving both environmental conservation and poverty reduction simultaneously. In the South African context, CBNRM is further being touted as a means of providing recompense to communities that were forcibly evicted from their traditional land under the conservation program of the apartheid regime, and has emerged as the dominant approach to conservation in the new South Africa. This paper investigates whether the reality of CBNRM in South Africa matches the rhetoric. I focus in on the case of Ndumo Game Reserve, located in the far north of KwaZulu Natal, below the border with Mozambique. My goal is to critically evaluate the costs and benefits associated with CBNRM for the Mbangweni and Mathenjwa communities that neighbour the reserve, based primarily on fieldwork undertaken from June to August 2009, which included thirteen semi-structured interviews with headmen and elders in these communities, and twelve semistructured interviews with local and provincial government personnel and game reserve officials, as well as participant observation. I will use these findings to critically evaluate the success of this project using a combination of conceptual frameworks, incorporating both insights from Adams and Hulme (2008) into what constitutes success' in community-based conservation, and critiques leveled by political ecologists that CBNRM is another instance of neo liberal attempts to commodify nature to the detriment of those living nearby (Igoe and Brockington, 2008). Preliminary findings suggest that there are a number of tensions between the environmental, economic and development imperatives of this CBNRM initiative, which cast doubt over whether all can be achieved simultaneously in Ndumo. I conclude with reflections on how communities can increase their stake and voice within Ndumo and in South Africa more broadly.

Lance W. Robinson - **Vancouver Island University**

Email: Lance.Robinson@viu.ca

King, Leslie A

Email: king1@shaw.ca - **Vancouver Island University**

Where Development meets Environment: Governance Matters

It is widely recognized that environmental sustainability and the reduction of rural poverty are inextricably linked: extreme poverty undermines environmental sustainability and degraded natural environments exacerbate poverty. Indeed, it is this recognition that lies at the foundation of the sustainable development paradigm. On the other hand, doubts have been cast on the effectiveness of the work over the past thirty years to combine conservation and development. Institutions, policies, accountability, participation, and power relations are only a few of the variables mediating the environment-development connection. These variables are increasingly being looked at together under the overarching umbrella of governance. Governance is receiving growing attention in relation to protected areas for example. However, research on governance is just beginning to investigate precisely how it is that governance produces effects. Sustainable Livelihoods thinking provides a framework for identifying impacts at the household level; however, the Policies, Institutions and Processes (PIP) component of the sustainable livelihoods framework remains something of a "black box". This paper uses a governance framework to open up that black box. It is based on emerging finding from Ghana, Kenya and Zimbabwe, including research undertaken in the Protected Areas and Poverty Reduction project. In the paper we identify a number of pathways by which governance produces environment and livelihood outcomes. These pathways highlight a number of dimensions and elements of governance that tend to receive little attention, and thereby suggest possibilities for more nuanced and sophisticated policy and development programming.

Neera M. Singh - **University of Toronto**

Email: neera.singh@gmail.com

Reducing Emissions from Forest Degradation: Equity and Justice Challenges

This paper explores equity and justice concerns within REDD. Drawing from principles of justice, viz. Distributional justice, procedural justice and recognition of local people's identities, knowledge systems, and visions, the paper suggests a focus on equitable distribution of benefits, fair access to decision-making and governance processes and recognition of forest people's identities and relationship with forests. Based on a review of trends from implementation of REDD schemes from the perspective of local rights, the paper suggests that local rights need to be safeguarded as well as space needs to be provided for local rights at multiple scales of governances. Drawing from my research on crossscale organizing of forest communities in Orissa, India, I suggest that REDD regimes need to be complemented by mechanisms to safeguard local rights and include local voices at different spatial scales of governance. In this context, cross-scale organizing of forest peoples becomes one of the means to facilitate improving of their collective bargaining position in the emerging climate change mitigation strategies. In addition to monitoring carbon gains, we need to be vigilant and monitor social gains or equity impacts of REDD regimes.

Panel 3: Food policy and sustainability

Room EV1 605

11:00-12.45

Chair: Alison Bay-palmer - University of Waterloo

Email: Alison.blayplamer@gmail.com

Ellen Desjardins - University of Waterloo

Email: desj2665@wlu.ca

Wayne Roberts

Email: getalife@web.ca

Bryan Gilvesy

Email: bryan@yuranch.com

Increasingly, policy-makers, citizens and academics express a growing sense of urgency about environmental challenges such as climate change and health crises such as obesity. There is also mounting frustration as people search for ways to make a difference but come up short. Within this context, it is valuable to explore ways to connect intention with action as a way to move towards more sustainable communities. One of the problems in realizing this goal is the complex and hard to define concept of sustainability. In this context, food is a useful tool to frame, understand and address sustainability challenges as it translates complicated issues into meaningful ideas, policy and actions. First, as we all eat, food is something everyone understands. Second, food brings together all dimensions of sustainability including environmental, economic, and socio-cultural factors. It becomes clear through local food consumption that we can reduce our impact on the environment by reducing food miles. It is also more widely understood that buying food from local farmers, food processors and retailers keeps money in the local economy. As well, we can grasp the importance of environmental stewardship when we consider the need for clean drinking water and biodiversity, both of which can be achieved through ecologically sensitive, enabled farmers. Social justice issues are also more sharply defined as we compare access to healthy, culturally appropriate food across different communities throughout the province. On-going work by the three panelists will be used to frame questions about food and sustainability. Wayne Roberts will share insights from his ground breaking multi-decadal work on food issues and social justice with a particular focus on his work with the Toronto Food Policy Council. Steffanie Scott will discuss the recently founded Waterloo Food Roundtable and the unique capacity and connections this offers into the regional food system. Brian Cook will elaborate on his work in Toronto with Public Health on a range of current food strategies and innovative approaches to tackling food challenges.

Panel 4: Gender & Development Issues in Africa
(Join session with CASID)

Room EV1-809

11:00-12.45

Chair: Rebecca Teissen - **Royal Military College of Canada**

Email: rebecca.tiessen@rmc.ca

Discussant: Lotsmart Fongjong - **University of Buea, Cameroon**

Email: lotsmart@yahoo.com

Shelly Jones - **State University of New York, College at Potsdam**

Email: jonesk@potdams.edu

Daniel Ahimbisibwe - **Uganda Martyrs University, Kampala – Uganda**

Email: danielahimbisibwe@yahoo.co.uk

Young women meeting the needs of young women through ICT and local knowledge: Explorations of a grass-roots ICT-facilitated business enterprise in rural

The increasing ubiquity, accessibility and user friendliness of ICTs potentially offers opportunities for even the most marginalized populations living in poor, rural areas of developing countries to participate in educational, political and economic activities hitherto restricted by severe geographic, communication and cultural parameters. For girls and women, particularly, whose onerous domestic obligations, cultural restrictions on freedom of movement, and lack of opportunities to engage with the world at large, ICT openness has particular importance for gender equality and empowerment - socially, educationally, politically, and economically (Bakesha, Nakafeero and Okello, 2009; Hawkins, 2002; Jones and Norton, 2008; Mijumbi, 2002; Smith et al, 2008). This paper speaks to the need for "micro" studies concerning ICTs (Thioune, 2003), as well as studies that consider "horizontal organizational structures" (Castells, 2000; Benkler, 2006) that respond to specific local needs (Braga, 2007), by exploring how ICTs have enabled young women in rural Uganda to begin and sustain a small business that was founded on meeting specific needs of girls and women. The business, which produces and supplies reusable menstrual pads, employs "pro-poor", "para-poor" as well as "per-poor" (Heeks, 2008) strategies: It has a website which, in addition to advertising the product line, raises awareness of the challenges faced by girls and women who cannot afford sanitary materials, and also provides opportunities for interested parties throughout the world to buy products to support girls in need of these products. Mixed method data collection includes questionnaires, open-ended interviews and surveys that investigate the importance of ICT for the lives and livelihoods of these young women, viewed through the intersecting theoretical perspectives of the capabilities framework (Sen, 1999), the imagined communities framework (Anderson, 1991; Norton & Pavlenko 2004), and a critical (*digital*) literacy framework (Chivanga, 2000; Street, 2003).

Theresa Ulicki - **Dalhousie University**

Email: ulickit@dal.ca

Perceptions and Responses: Why Policewomen Behave The Way They Do

Since 1994, the South African Police Service (SAPS) has been confronted with the complex task of organizational transformation. This transformation project involves change both internally and in terms of its service delivery. This research, based on over 16 months of fieldwork and more than 100 interviews with policewomen and men, focuses on the process of gender equitable reform in the SAPS in the post-apartheid period. Utilizing the concepts of interests and choice, I explore policewomen's responses to gender inequities and discrimination and the possible explanations for these responses. I argue that policewoman's decisions to

speak out against gender inequities or to challenge discrimination are influenced by the perceived 'safety' and success of doing so. There has been no grassroots effort to collectively organize to promote policewomen's interests. No feminist voice or collective action has emerged among policewomen. Instead, gender equitable reforms have been legally and politically driven. I offer several possible explanations for this state of affairs, all of which relate to an organizational and social environment that undermines the possibilities of gender solidarity and encourages women to seek individual solutions that will maximize their professional and personal aspirations.

Keynote Speaker : Elizabeth May

Room EV1 605

2:00 -3:00

Climate Change Negotiations

Climate Change negotiations -- Rio, Kyoto, Copenhagen and beyond.

Elizabeth May is an environmentalist, writer, activist, lawyer, and leader of the Green Party of Canada. Elizabeth became active in the environmental movement in the 1970s. She is a graduate of Dalhousie Law School and was admitted to the Bar in both Nova Scotia and Ontario. She held the position of Associate General Council for the Public Interest Advocacy Centre prior to becoming Senior Policy Advisor to the federal minister of the Environment from 1986 until 1988. Elizabeth became Executive Director of the Sierra Club of Canada in 1989, a position she held until March 2006, when she stepped down to run for leadership of the Green Party of Canada.

Elizabeth is the author of seven books, including her most recent *Losing Confidence: Power, Politics and the Crisis in Canadian Democracy*. Elizabeth holds three honorary doctorates, and the Elizabeth May Chair in Women's Health and the Environment at Dalhousie University was created in her honour. She has served on the boards of numerous organizations, including the International Institute for Sustainable Development and as Vice-Chair of the National Round Table on Environment and Economy and is currently a Commissioner of the Earth Charter International Council. Elizabeth became an Officer of the Order of Canada in 2005, and was elected as leader of the Green Party of Canada in 2006.

Elizabeth May est environnementaliste, auteure, militante, avocate et chef du Parti Vert du Canada. Elle s'intéresse au mouvement environnemental depuis les années 1970. Elle est diplômée de la Dalhousie Law School et a été reçue au Barreau de la Nouvelle-Écosse et de l'Ontario. Elle a occupé le poste de codirectrice du contentieux au Centre pour la défense de l'intérêt public avant d'être nommée conseillère principale en politiques auprès du ministre fédéral de l'Environnement, un poste qu'elle occupa de 1986 à 1988. Elle a été nommée directrice exécutive du Sierra Club du Canada en 1989, avant de démissionner en 2006 pour se présenter à la direction du Parti Vert du Canada.

Elizabeth May est l'auteure de sept ouvrages, notamment la coécriture de son plus récent, *Losing Confidence: Power, Politics and the Crisis in Canadian Democracy* (2009). Elle est titulaire de trois doctorats honorifiques, et la Chaire Elizabeth May a été créée en son honneur au département des études sur la santé des femmes et l'environnement de l'Université Dalhousie. Elle s'est engagée à divers titres auprès de nombreux groupes environnementaux et organismes consultatifs chargés de faire des recommandations aux universités et aux

gouvernements canadiens. Parmi ces organismes, mentionnons l'Institut international du développement durable et la Table ronde nationale sur l'environnement et l'économie. Elizabeth May a été nommée Officier de l'Ordre du Canada en novembre 2005.



Panel 5: Sustainable development in the post-Copenhagen (Joint session with CASID)

Room EV6-809

1.45-3.30

Chair: Lance W. Robinson - **Vancouver Island University**

Email: Lance.Robinson@viu.ca

Discussant: Larry Swatuk - **University of Waterloo**

Email: lswatuk@uwaterloo.ca

Alejandra Roncallo - **York University**

Email: aler@yorku.ca

The Fourth Moment of the New World Order: Obama, the Environment and a Shift in Capitalist Accumulation

This paper will argue that there is a fourth moment of capitalist accumulation emerging and that it is based on a market approach to the environment. The paper will be focused on the Americas. It will first address President Obama's policies towards the region, then his focus on the Environment and the Copenhagen debate towards the Post Kyoto Protocol Agreement. It will finally touch on Indigenous perspectives on the Environment and more particularly on Copenhagen.

Beth Jean Evans - **Dalhousie University**

Email: bjevans@dal.ca

North-South Relations under the Clean Development Mechanism: Bridging the Divide or Widening the Gap?

The Clean Development Mechanism (CDM) of the Kyoto Protocol has been hailed as the grand compromise of the North-South divide over climate change mitigation for its ability to reconcile the environmental and economic demands of the North with the developmental needs of the South. However, despite its important role in demonstrating the reconcilability of Northern and Southern interests in climate change mitigation, the CDM has primarily been analyzed from isolated economic, environmental, or developmental perspectives; as such, its efficacy in bridging the North-South divide remains poorly understood. This research examines the CDM in a holistic manner acknowledges the broad range of factors affecting nations' decisions to participate in an international agreement to which they are not legally bound. The CDM is therefore reconceptualized as a mechanism which is designed facilitate sustainable development, but rather to increase the likelihood of future Southern nation cooperation in climate change mitigation efforts by demonstrating that their developmental aspirations would be enhanced, rather than inhibited, by participating. An empirical examination of the CDM's project-type and project-location distribution trends analysis of a number of procedural issues shows that significant trade-offs exist between Northern and Southern interests under the Mechanism and suggests that the latter are often sacrificed. On this basis, conclusions are drawn which point to the need for increased attention to, and accommodation of, the interests of Southern nations in the CDM specifically, and global climate change mitigation and sustainable development efforts more broadly.

Julie Drolet - **Thompson Rivers University**

Email: jdrolet@tru.ca

Climate change, disasters and sustainable development: Beyond the Copenhagen Accord bridging global and local community responses

Climate change is the most significant environmental, social, cultural and economic threat facing humankind. In 2007, the United Nations Intergovernmental Panel on Climate Change (IPCC) concluded that evidence of global warming is unequivocal: that it is caused by greenhouse gas emissions from human activity and that it is threatening ecosystems, societies, cultures and economies worldwide. Rising sea levels, increased heat waves and drought occurrences, and increased extreme precipitation events have the potential to devastate our quality of life. The United Nations Framework Convention on Climate Change defines climate change as "...a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods." Nationally and internationally, the frequency of natural disasters is increasing. The cumulative effect of these disasters produces a significant personal, material and economic strain on individuals, communities and the fiscal capacity of all levels of governments. Prevention/mitigation strategies can reduce or prevent disasters, losses and emergency response and recovery costs that would otherwise be incurred. British Columbia (BC) is feeling significant effects of global warming. From fires in the Okanagan, to severe wind and rainstorms on the west coast and Vancouver Island, to flooding in Squamish, British Columbians are seeing increasing evidence of how weather change can adversely affect our lives. The paper presented will discuss preliminary findings of this SSHRF funded study that aim to better understand the impacts of climate change on small cities and rural communities in BC by focusing on community responses and adaptations. The global climate negotiations in Copenhagen will be critically reviewed in order to better understand how local communities view problems and solutions and to identify innovative ways to moderate and adapt to climate ch.

Panel 6: Media Panel: Good Science and/or a Darn Good Read **Room EV1-605** **3:30-5.00**

Chair: Nicola Ross-Alternatives Journal
Email: nross@woodrising.com

Wayne Roberts

Email: getalife@web.ca

Elizabeth May

Email: leader@greenparty.ca

Monique Beaudin

Email: MBeaudin@thegazette.canwest.com

Widely accused of scientific dishonesty, Bjorn Lomborg, is nonetheless the author of an award-winning, best-selling, money-making book. The Skeptical Environmentalist, as Lomborg and his infamous book are known, may represent the extreme. But journalists, authors, TV and radio commentators are regularly faced with the dilemma of not bogging down a good story in scientific facts. For, as Stephen Bocking writes in his upcoming article in Alternatives Journal, "While scientists can tell us about the extinction of species and the loss of Arctic sea ice, we need stories to help us make sense of these events.

This panel of three environmental communicators will discuss the tricks of the trade when it comes to good environmental story-telling and news reporting. They will provide advice about how to get stories into the news

and will highlight the best of environmental writing. Nicola Ross, executive editor of Alternatives Journal, will lead the panel in a highly energetic thought-provoking discussion before inviting the audience to join in.

Panel 7: Gender and Environment (Joint session with Room EV6-809 3.45-5.30
CASID)

Chair: Eugenia Pearson – Quick P.R. Consultant Services

E-mail: whymee@bellnet.ca

Discussant: Douglas Brown – York University

E-mail: dbrown@glendon.yorku.ca

Christine Gibb - University of Guelph

Email: chrisgibb@gmail.com

The Gender of Trees

This study explores gendered local knowledge systems in a Ghanaian forest fringe village, elucidating linkages among environmental degradation, loss of local knowledge and gender. It investigated the content and processes of acquisition and transmission of tree-related knowledge, and how these areas differed among community members. Qualitative data were collected in semi-structured interviews, participant photography and workshops. Research findings confirmed the centrality of biophysical and social environments, local practices, belief systems, gender and informal and non-formal learning experiences in shaping tree-related knowledge and management strategies. First, despite the increasing formalization of knowledge and emphasis on formal schooling, and the deteriorating state of the biophysical environment, most of what community members know about trees was learned through social and experiential learning within the local ecosystem. As such, place and personal experiences in informal and non-formal learning environments continued to play vital roles in shaping local knowledge systems. Second, local knowledge was not uniformly distributed in content and depth, but instead corresponded to engagement in daily subsistence and commercial activities. Opportunities to engage in these activities were influenced by the gender division of labour, gender roles and gendered resource tenure systems. Third, study participants' commitment to tree management was affected by a variety of factors – engagement with trees, awareness of trees and their uses, ability to mobilize resources, personal need and/or use for the benefits derived from trees – and was balanced with other commitments. Moreover, their commitment to management and conservation efforts was usually limited to familiar species exhibiting desirable characteristics. Fourth, while there was a potential for formal education to supplement the tree component of local knowledge systems, it cannot be a perfect substitute because of the importance of place. These findings underscore the importance of beginning agroforestry projects with an understanding of within community differences in preferences and needs.

Ishara Mahat - University of Western Ontario

Email: ishara_m@hotmail.com

Gender, Energy and Human Freedom in Nepal

Rural energy in general and biomass, in particular, has a great impact on people's wellbeing especially on the life qualities of rural women as they are directly involved in production and management of household energy system. Energy poverty involves multiple deprivations such as economic, social, cultural and ecological. Using biomass as exclusive source of energy in rural areas of Nepal has a major effect on human capabilities especially of women due to the social and cultural deprivation. For instance, increased use of biomass fuel consumes maximum women's time and labor and affects children and women's health limiting the production and reproduction capacities of women (e.g. inability to be involved in other social and economic activities), which, in turn limits their capacities to access better energy services impacting negatively on the overall life qualities of rural population. Energy is not only about providing better energy services but also enhancing the human capabilities that are deprived, which could be strengthened for the well being of women and their families. The challenges are then to identify energy options that help to address both energy poverty as well as human poverty so as to increase the human freedom and their capabilities for the well being of rural households. This paper aims to analyze the deprivations of energy poverty that are more detrimental in achieving human freedom and human development. This will help to provide an impetus for developing most appropriate energy strategies and policy measures for alleviating energy deprivations and there by to promote the human freedom as well as sustainable energy development.

Marie Fall - Université du Québec à Chicoutimi

Courriel: marie.fall@uqac.ca

Salmata Ouedraogo - Université du Québec à Chicoutimi

Courriel: salmata.ouedraogo@uqac.ca

Femmes et changements climatiques en Afrique subsaharienne

Selon la Banque mondiale, « le territoire africain est particulièrement vulnérable aux changements climatiques, et ce pour des raisons multiples : hyper dépendance vis-à-vis des ressources naturelles, manque d'infrastructures, étendue de la pauvreté et faible capacité de réaction des institutions ». Les changements climatiques sont aujourd'hui une réalité et les femmes en subissent grandement les conséquences. Eu égard à leur statut et leur rôle dans le développement des communautés, elles se trouvent démunies ou impréparées face à certains défis majeurs. Les analyses sur les changements climatiques ne prennent pas toujours en compte la dimension du genre. Or, les femmes, en raison de leur rôle clé dans les communautés africaines, sont celles qui supportent la plus grosse part des externalités négatives que ce phénomène entraîne (désertification, déforestation, événements climatiques extrêmes, accentuation des tensions autour des ressources naturelles, rareté de l'eau, etc.). Cette communication s'intègre dans le thème « Femmes, genre et développement ». Les femmes sont des acteurs clés du développement socioéconomique des communautés. Leurs activités de production sont très dépendantes des ressources naturelles. Les politiques de lutte contre les changements climatiques et l'adaptation des communautés doivent par conséquence prendre en compte leurs besoins et leurs spécificités. Après avoir présenté les manifestations des changements climatiques en Afrique subsaharienne, nous analyserons leurs impacts sur les femmes et les actions ou initiatives pour améliorer leur capacité d'adaptation. Pour ce faire, nous ferons une revue des données et des politiques relatives aux changements climatiques, particulièrement les impacts et les moyens mis en oeuvre en Afrique subsaharienne.

DAY TWO

Sustainability in a Changing World

Développement durable dans un monde en changement



Day Two:

June 1st 2010

Panel 8: Energy and Environment

Room EV 1-605

9.00-10.30

Doug MacDonald-University of Toronto

Email: Douglas.macdonald@utoronto.ca

Understanding the power of the oil and gas industry to influence Government of Canada climate-change policy

The proposed paper will examine political activity by the oil and gas industry intended to influence Government of Canada climate-change policy from ratification of the United Nations Framework Convention on Climate Change in 1992 to the present. The focus will be upon the federal government policy decisions since implementation of the first Canadian climate-change program in 1995 which represent the most significant wins and losses for the industry lobbying effort. Examples include the 1995 government decision to rely on voluntarism rather than law or economic instruments (the industry wins); 2002 Kyoto ratification (the industry loses); the 2002 guarantee, still in effect today, to limit industry costs to \$15 per greenhouse gas emission tonne (the industry wins); the Harper government 2007 decision to abandon its original climate change policy and essentially adopt the previous Liberal government plan to regulate the industry (the industry loses); and the 2008 Harper government decision to delay its regulatory policy until the US federal government acts (the industry wins). The paper will explore this research question: "How do we explain these fluctuations in the power of the oil and gas industry to influence climate-change policy decisions made by the Government of Canada?" Analysis will be based on a pluralist perspective, which sees business as a powerful but non all-dominant policy actor. Both the structural power (that held by the industry before it acts, resulting from such things as economic importance) and agency power (active lobbying) of the oil and gas industry will be examined. The research method will be a combination of secondary literature review, review of relevant news media accounts and review of primary documents generated by the industry and other relevant policy actors. It is hoped the paper will contribute to both academic understanding of climate change policy making and improved Canadian policy.

Sarah Martin

Email: sjmartin25@gmail.com

Changing Political Economy for a Sustainable World: A case study of food and oil

With global supplies of oil and natural gas past their peak, concentrations of atmospheric carbon dioxide at record highs, and the dominant model of capitalist production wreaking global environmental havoc, images of the future look very bleak. We *homo sapiens* have become a geologic force capable of destroying the very planet that has sustained us. In this paper, we ask what is the role of political economy in the face of today's interrelated crises of capitalism, energy, climate and food security? We make an urgent plea for further work falling under the broader umbrella of Environmental Political Economy. The task of today's environmental political economist is to work towards *structural* changes to our political and economic architectures in order to yield healthier balance within and between the natural and human spheres. By using the industrial food system as a case study, we argue that environmental political economy must include not only theoretical interventions, but calls to action based in praxis. Herein we problematize the global industrial food system to illustrate the interrelated crises of capitalism, energy, climate and food security. In calling for structural changes to this capitalist model, we point to and are encouraged by the emergence of multiple community responses and new governance models such as food sovereignty. While the classical political economists interpreted the world, the point of environmental political economy in the 21st Century must be to change it!

Brenda Holzinger

Email: brendaholzinger@gmail.com

Scale Shift in Eastern North American Electricity Conflicts and the James Bay Hydroelectric Development Project

Contemporary electricity policy conflicts in northeastern North America constitute the most recent episode in an ongoing fight over the generation and transmission of electricity--and its effect on the environment--that spans nearly 50 years, and affects a geographic area that reaches from the American Piedmont and mid-west all the way to the indigenous Canadian tribal lands of northern Quebec adjacent to Hudson Bay. However, in order to fully understand the current conflicts, policy choices and activist strategies, it is necessary to appreciate the interaction of local, national, and transnational factors over the last fifty years. The James Bay Hydroelectric Development Project provides a unique and effective lens for this analysis because it is an excellent example of how a confluence of particular local, national and transnational factors creates a specific trajectory of subsequent policy choices, conflicts and activist strategies. The James Bay case also demonstrates the significant power of scale shift, a specific process of social movement mobilization achieved by expanding or decreasing the number of actors involved in a conflict, the area over which their coordinated claim making ranges, and the level of government targeted for change. Although Charles Tilly and Sidney Tarrow argue that upward scale shift is the key process of movement mobilization, the James Bay case study and contemporary electricity conflicts illustrate the significance of using scale shift in either direction—upward or downward—as the most effective strategy to fight complex environmental issues at every level from the local to the global.

Panel 9: Food security and Sustainable Agriculture

Room EV6- 809

9.30-10.00

Wilhelm Peekhaus- University of Illinois

Email: wpeekhau@illinois.edu

Critical Reflections on Agricultural Biotechnology and Sustainability

Claims by multinational agrochemical (the self-styled 'life sciences' companies) corporations that their products are being designed to solve ecological and food shortage problems provide ready discourses grounded in ethics that occlude the efforts made by these same companies to secure state subsidies and a relaxed regulatory environment, in which genetically engineered organisms are assessed by governments in the same fashion as traditional health and food products. Biotechnology companies actively invoke information dissemination practices that predominantly emphasize the favorable and sanitized aspects of this new technology and its applications. Such corporate strategies provide companies a window of opportunity to sell as much of their genetically engineered products as possible in an attempt to integrate them so deeply into markets that potential regulated withdrawal would result in such a degree of economic upheaval that it is no longer considered a viable policy option. Situated against this broader backdrop, this paper has a threefold purpose. The first is to report on research that examines the way that one company in particular, Monsanto, is employing various new social media as part of its efforts to construct a discourse that frames agricultural biotechnology as one of the key solutions to sustainability and environmental challenges to global climate change. The second goal is to elaborate on some of the emerging scientific literature that challenges many of the claims being advanced by the biotech giants, particularly as they relate to some of the negative

environmental implications of genetically engineered crop varieties. Finally, the paper will outline how the Government of Canada's dual role as promoter and regulator of these technologies is stymieing its ability to evaluate adequately this developing body of science.

Asfia Gulrukh Kamal - Natural Resources Institute-University of Manitoba

Email: asfia.gulrukh@gmail.com

Food insecurity in Northern Manitoba: Aspects of network oriented subaltern strategies of localization

In recent years, northern Manitoba communities showed increased capacity to negotiate greater access over the Northern local food system with the support of various regional and national community based organizations. In this paper, drawing empirical insight from food security household survey as well as interviews with the people from the several northern Manitoba communities conducted by university of Manitoba in summer 2009, I explore the particular practices through which a local model to secure food sovereignty is imagined and persuaded. In what follows, I elaborate on the historical and cultural context that brought all different actors together in local negotiation of poverty and unequal access to natural resources. In the end, drawing theoretical insight from Arturo Escobar, I propose these practices as "network oriented subaltern strategies of localization."

Chris Ling – Royal Roads University

Email: chris.ling@royalroads.ca

The Multifunctionality of Agricultural Landscape in the Urban Fringe

The paper presents an analysis of agricultural land on Vancouver Island, BC, Canada that is both in high demand for development and that is subject to agricultural conservation agreements in partnership with a Land Trust. Data was collected that related to value farmers placed on different landscape units on their farms and analyzed to derive the ecological, production, economic, cultural, and social functions of farm landscape features identified by individual farmers. The overall functionality, rather than simple productivity, of agricultural land, as stated by the farmers adds to the understanding of the importance of ecological and cultural features of farms that are not normally considered in planning and property assessment valuations. We then consider how this may inform in a wider discussion of community vitality.

Panel 10: Environment and Culture

Room EV1-605

11.00-12.45

Thomas Heyd - University of Victoria

Email: heydt@uvic.ca

Culture, climate change and responsibilities: Human security in the light of defeatism and complacency

I will point out, there are good reasons to believe that individuals as well as societies have responsibilities to act on climate change. Paradoxically, knowledge of the increasing certainty about climate change, and of the severe harm that it may bring to large portions of the world population, may lead individuals and communities to fall into a paralising defeatism. Such defeatism, furthermore, may be accompanied by complacency, due to assumption that, given our societies' institutional, scientific and technical capabilities, we can wait to address problems until they actually become evident. I suggest that defeatist and the complacent attitudes may have serious effects insofar as they interfere with our prudential and ethical responsibilities, thereby possibly leading to failure in the application of entirely feasible reduction, mitigation and adaptation measures. The result may be much increased economic, human and ecological costs. I close by briefly pointing out that there

may be ways to address these problematic attitudes, and conclude that this calls on additional approaches of acting on one's responsibilities regarding climate change.

Alanna F. Bonder, Lakehead University

Email: ecoscholar@yahoo.com

Where in the world is Salad Fingers? An ecocritical reading of David Firth's ecogothic webtoon

In ecological literature "home" is not necessarily defined simply as place (location) but space (a place of psychological and physical interaction) which challenge imaginary, cultural and mythological definitions of the human-nature relationship often either romanticized, denigrated, erased, and/or left unmarked within texts which fail to recognize the differences between articulations of landscape and biotic communities. While ecofeminist poets avidly engage in body politics and in exploring connections between the mind-body-spirit, other writers, including male ecological writers, suffer from marked ecological guilt as inheritors of a imperialist, violent, and sexist past. As Deborah Slicer argues, "before it's safe for either women or men to go back into the home, [...] we must come to terms with the complex and destructive social meanings of the body, of that ecosystem with which we are self-identical and about which most of us are virtually ignorant ("Body" 108). In David Firth's post-apocalyptic vision of physical and psycho-spiritual space notions of geospatial relationships (to place, community, nature, and language) are questioned and revisioned. Borrowing from an evolving gothic tradition, Firth's *Salad Fingers* predicts an inevitable ecocrisis of mammoth proportions. Interpreting *Salad Fingers* as ecogothic allows us to consider cultural fears of the postmodern as the ultimate prisoner of a collective ecological consciousness. As post-postmodern and post-feminist and maybe even post-postcolonial (or post squared) that this kind of free-floating within and without meaning creates new kinds of anxieties and fears. What is the alternative when left with the free-fall of postmodern conditions and conditioning? No sacred spaces, no wilderness ventures, no urban gardens, no weeds in the sidewalk, and as such, *Salad Fingers* shows a space wherein a deeper understanding of the self, the subject, or the natural world is vacant—it's just more empty (internal and external) space.

Katherine Turner- Natural Resources Institute, University of Manitoba

Email: umturn22@cc.umanitoba.ca

Supporting Cultural Practice Through Business Development: Community Perspectives on Establishing A Cultural Tourism Enterprise in Hartley Bay, British Columbia

This paper explores Hartley Bay community member responses to a community-generated cultural tourism development proposal. Members of the Gitga'at First Nation on the Northwest Coast of British Columbia have managed their lands and marine areas to ensure sustained productivity of local resources and the health of their community for countless generations. Today, many Gitga'at still actively maintain their relationships with the natural environment. Local food, particularly from harvest camps in the spring and fall, continues to supply a large portion of many people's nutritional needs. The spring and fall camps, by providing highly valued customary foods, are vital sites of skill development, cultural learning and family time. In recent years, however, internal and external pressures, including changes in the local economy and the adoption of Western style work and school schedules, have begun to make wide community participation in the camps more challenging. Consequently, the community is exploring ways to ensure that the seasonal camps and the opportunities they provide remain a central part of the Gitga'at way of life. Establishing a community-owned cultural tourism enterprise to subsidize the camps is one option that is being considered. A number of

questions arise with such an enterprise: Is tourism development the best avenue for achieving the community's objectives? What kinds of tourism would provide lasting benefits? And, how does the community define those benefits? This project tries to understand how members of the community determine suitable uses of land and marine resources and the appropriate application and sharing of local knowledge in a contemporary context. The experience of the Gitga'at represents an important case study in the field of bioeconomic development, illustrating one community's strategic engagement in the market economy and the challenges of balancing cultural, community and environmental integrity.

Lisa Quinn - Natural Resources Institute, University of Manitoba

Email: ljquinn@hotmail.com

Exploring consumer transitions to more sustainable clothing practices


Along with air, water, food and shelter, clothing is essential for human survival, providing physical protection against the elements and bodily injury. Clothing also fulfills an array of psychological and social needs, as our apparel is integrally linked to our self-image and a medium for communicating with others. Unfortunately, conventional-modes of producing, consuming, maintaining, and disposing of apparel have significant impacts on the environment. Throughout their lifecycle, garments place considerable strain on natural resources, generate harmful emissions, effluent and solid-waste, and may jeopardize the health of workers, communities surrounding agricultural and production sites, and end-users. These impacts are exacerbated by the frequency and volume of apparel items being purchased and the short time span clothing is worn before being disposed of, in what is often, an unsound manner.

The focus of this paper is on the actions that concerned consumers are taking to reduce their "clothing footprint". More specifically, it examines the experiences and learning processes which led these consumers to adopt more sustainable clothing practices. Mezirow's transformative learning theory provides the theoretical foundation for this exploration, offering an explanation of how learning and critical reflection can lead to a transformation in a consumer's attitudes and behavior. Interviews and surveys with 30 committed consumers determined that roughly two thirds of the subjects had either undergone or were in the midst of a transformative learning process. Furthermore, the findings provided insight into the range of sustainable clothing practices consumers were engaged in, the motivations and learning associated with their decisions to adopt these behaviors, and the barriers they faced in altering their.

Panel 12: Key Speaker/ Camilla Toulmin
Climate Change in Africa

Room MB1/210

11:00-12:45

<p>Panel 28 – Local: MB1/210 June 1st – 11:00 AM – 12:45 PM</p>	<p>Keynote Speaker</p>
	<p>Camilla Toulmin Climate Change in Africa Changement Climatique en Afrique</p> <p>Chair: Kevin Dunn Hobart & William Smith Colleges, USA</p> <p>Discussant: Simon Carter - IDRC</p>

Camilla Toulmin, International Institute for Environment and Development

Climate change is a major challenge focus all, but for African countries it represents a particular threat and will hit the poorest hardest. Camilla Toulmin will talk about a range of threats and opportunities from natural disasters to biofuels; from conflict to the oil industry and asks what future there might be for Africa in carbon-constrained world.

Natasha Blanchet-Cohen-Concordia University

Email : Natasha.blanchet-cohen@concordia.ca

Amelie Daigle-Concordia University

Evaluating civic engagement in creating green neighbourhoods in Montreal

This paper will examine an initiative undertaken in two boroughs of Montreal to involve stakeholders in designing a green management plan [« Quartiers verts, actifs et en santé »] to provide for a healthier transportation system for youth and communities facilitated by the Center for Urban Ecology of Montreal (CEUM).

Specific questions to be explored during the evaluation research were:

- What are the strategies that provide for the creation of a management plan that is participatory?
- What is the impact of the interventions on youth?
- What are the conditions and indicators that allow for political and structural influence?

Research tools included:

- Evaluation meetings with CEUM staff and key representatives from local organizations to assess, document, and plan intervention activities
- Key informant interviews with key representatives from local organizations
- Observation
- Surveys with youth and activity participants

Significance: This research is significant in the context of urbanization and given that the sedentary lifestyle of youth is one of the biggest reason for obesity and threat to their health (Demers, 2008; Ewing, Schmid, Killingsworth, Zlot and Raudenbush, 2003; OMS, 2004). A rapidly changing world requires behaviors, not only shifting the way we manage our neighborhoods but how we engage youth, communities, professionals and decision-makers in the process (Chawla, 2003).

Implications: The evaluation raises important questions on the process of engaging citizen's in a collective plan that will contribute to community health, the significance of adapting strategies to specific cultural realities, and the important role of the intermediary organization in fostering awareness as well as engagement. The relationship between these two concepts was also interesting in this study and will be reflected on as it relates to the broader literature.

Barbara Davy

Email: barbdavy@sympatico.ca

Canada's Plan for Dealing with Climate Change

Academics, politicians and environmental activists widely agree that global warming is caused by greenhouse gas emissions and must be restricted to 2 degrees Celsius above average temperatures prior to industrialization to avoid radical and possibly catastrophic climate change. Yet we have not seen the political will to reduce emissions to stay within this limit. Environment Canada's existing regulatory framework laid out in "Turning the Corner" is better than nothing, but we can, and should, do more. This framework for a Canadian cap and trade system, which is not yet an official set of regulations governing industrial action, sets emissions-intensity targets rather than firm caps on emissions. We need to pass this framework into law as soon as possible to get greenhouse gas emissions regulations of any kind governing industry, and then

negotiate firm emissions caps by sector. When setting policy for emissions reductions, we need to do the math to get to the 2 degree limit target. We have the technology to reduce emissions to stay within the 2 degree limit; what we lack is the political will to force the change to a low-carbon economy. Using data provided by Environment Canada to the United Nations I calculate that the government will need to implement far more stringent emissions regulations covering more economic sectors in order to do Canada's part in restricting global warming to a 2 degree rise above pre-industrial levels. Based on the Stern report and a report issued by the Pembina Institute and the David Suzuki Foundation, as well as analysis by industry leaders, I argue that emissions reductions can be achieved without significant economic hardship.

Kristina Hunter- Faculty of Environment, University of Manitoba

Email: umturn22@cc.umanitoba.ca

Experiential Learning in Environmental Education

This course changed my life. » Not the usual student comment for a University course, but surprisingly common for students completing experiential learning courses. The University of Manitoba course Wildlife and Ethnoecology of the Manitoba Coastal Region takes students on a ten day field experience. Students arrive by train or airplane in Churchill, Manitoba and then fly by helicopter to the remote Wapusk National Park where they learn about the flora, fauna and human history in the area, participate in ongoing research and complete their own research project. Learning by seeing and then doing is certainly a large portion of the power of experiential learning; however, it can also be suggested that some other portion of the course is at play when the students commune with nature in a way that they have never done before. We explore some of the factors reported by students in their personal reflections on their course experience and what it meant to their university environmental education.

Panel 12: Environment, Film and the Arts

Room EV6-809

1.45-3.30

Adrian Iyakhiv - University of Vermont

Email: aivakhiv@uvm.edu

The Anthrobiogeomorphic Machine: Toward an Ecophilosophy of the Cinema

In *The Open: Man and Animal*, Giorgio Agamben (2004) refers to the ongoing cultural construction of 'the human' in contradistinction to 'the animal' as the 'anthropological' or 'anthropogenic' 'machine.' This 'optical machine,' he writes, is 'constructed of a series of mirrors in which man, looking at himself, sees his own image already deformed in the features of an ape. Homo is a constitutively "anthropomorphous" animal ... who must recognize himself in a non-man in order to become human.' In this paper, I present a model of cinema that expands on Agamben's notion by drawing on Martin Heidegger's description of the human as a world-bearing being and of language, poetry, and art as 'world-disclosing,' and on a Whiteheadian/Deleuzian understanding of the universe as a lively and eventful place in which subjects and objects are persistently coming into being, jointly constituted in their process of becoming. Cinema, accordingly, is a machine that produces or discloses worlds. It is, at once, anthropomorphic in producing a cinematic version of or resemblance to the human and thereby generating a social 'subject-world'; geomorphic in producing a spatially organized or territorialized material 'object-world'; and biomorphic (or animamorphic) in producing an apparent world of animate, life-like and interperceptive forms. Cinema thus discloses a world of subjects, objects, and things in between. These

three registers map onto 'three ecologies,' in Felix Guattari's (2000) terms, that make up the relational ontology of the world: the social, the material, and the mental or perceptual. Each of these variously reflects, refracts, comments on, and reverberates within the world outside the film, such that films add a diffractive overlay of meanings onto the world that pre-exists them and, in the process, set up an interactive oscillation between the two. Various forms of film theory interrogate aspects of this set of relations, but an ecophilosophy of the cinema, I argue, can place all of them within the frame of reference of our relationship to the world, or earth, at large. Through an ecocritical, 'world-disclosing' analysis of Andrei Tarkovsky's *Stalker* (1979), I suggest that cinema 'stalks' the real world, and that our appreciation of its potentials should involve a kind of 'stalking' of its effects in the material, social, and perceptual dimensions of the world from which cinema emerges and to which it returns.

Ashlee Cunsolo Willox-University of Guelph

Email: ashlee@uoguelph.ca

Changing Climate, Changing Health, Changing Stories: Digital Storytelling for Sustainable Health Research and Promotion in Rigolet, Nunatsiavut

For Canada's Northern regions, climate change poses challenges to the health and well-being of residents. Inuit communities are particularly vulnerable to environmental changes, as many Inuit continue to live lifestyles closely tied to, and reliant upon, the natural environment. Communities have reported climate change impacts on access to safe fresh drinking water and traditional foods, increased UV exposure, decreased physical activity, unstable travel conditions, ice changes, and unpredictable weather patterns, all of which impact health (physical, mental, emotional, and spiritual), well-being, and sustainability in these regions. In 2009, and using an EcoHealth framework, the Rigolet Inuit Community Government in Nunatsiavut, led a community-driven, participatory, storytelling project which examined the impacts of climate change on human health and adaptation strategies. The community of Rigolet worked with researchers, epidemiologists, and a not-for-profit organization to use digital media to gather stories and data about climate change in the region, the climate-health relationship, sustainability issues, and current and possible adaptation strategies. These 'digital dialogues' formed an innovative and powerful platform for health media campaigns and for analyzing the impacts of climate change on health in Inuit communities. Rigolet residents also expanded research capacities and increased confidence to independently examine and study climate-related issues. This presentation will discuss the process of utilizing digital media to document and share stories about the effects of climate change on health and sustainability, as well as the research results emergent from this project. Examples of the digital health media created through this project will be screened, followed by a discussion of utilizing digital stories not only to conduct research about climate-health relationships and sustainability and adaptation strategies in Aboriginal communities, but also to create culturally-relevant health media. Finally, the importance of community-led and community-based participatory projects to promote on-going, sustainable public health research, development, and programming will be considered.

Cynthia Grant

Email: cyngrant@gmail.com

The 'Unreal' and the 'Real' in Film/Media about the Environment: Taking up Current Catastrophic (un)Realities:

The blockbuster film *Avatar* presented a phantasmagoric fable that might have transformed consciousness and promoted greater understanding of a variety of environmental issues. On the other hand, the very real devastation of the BP Gulf of Mexico oil disaster might have led to a radical public re-conception of the dangers of technological 'advances' in a time of peak oil. Yet, neither did due a complicated set of factors. Contemporary documentaries shed light on everything from dolphin kills (*The Cove*) to the raping of natural landscapes (*Manufactured Landscapes*) but the reach of these remains unclear. Corporate interests attempt to spin and limit. In May, the filmmaker of *Crude* was ordered by a federal court (U.S.) to hand over raw footage to Chevron, causing prominent documentary filmmakers to request that the upper court reverse this. Film has a unique power to educate, to expose truths whether that be in fiction or reality, and, possibly, to mobilize in a critical era.

Adrian Iyakhiv, University of Vermont

Email: aivakhiv@uvm.edu

Modernity, disenchantment, and an ecospirituality to come: Seeing Light in the Cracks of Charles Taylor's 'Immanent Frame'

According to a well established narrative, technological modernity has disenchanting the world and created rifts between humans and nature, spirit and matter, body and soul. Many celebrate this as a liberation from the shackles of faith and superstition, while others accept it as the price to pay for the benefits of modernity, but a critical tradition, which includes Martin Heidegger, Max Horkheimer and Theodore Adorno, and numerous religious and environmental thinkers, laments this disenchantment and advances critical analyses that would reverse or revalue that which has been ostensibly lost in the process. A growing number of thinkers, however, including Gilles Deleuze, Bruno Latour, and Stuart Kaufmann, reject the dichotomy of enchantment/disenchantment and argue for a more positive valuation of human-technological relations, a view rooted in an understanding of the universe as open, emergent, and in a state of ceaseless becoming. Canadian social philosopher Charles Taylor's celebrated book *A Secular Age* (2007) presents an exhaustive analysis of the "malaises of modernity," including a wide-ranging account of the constitution of modern secular subjectivity and the "conditions of belief" shaping it. Inspired by Heidegger's critique of modern technology, but undergirded by Taylor's nuanced Catholicism, the book posits a categorical opposition between "transcendence" and "immanence," an opposition he aligns with religious belief and disbelief. Among Taylor's critics are those who argue for a "third way" between "religious transcendents" and "exclusive humanists," an alternative option that, in the words of one critic, "fuses enchantment with a worldly orientation to religion and politics." Political theorist William Connolly has articulated the most sustained defense of such a "radical immanence" which sees the universe as open, creative, and pluralistic and advocates a "reverence for the protean diversity of being." This paper compares Taylor's critique of modernity's "immanent frame" with Connolly's "immanent naturalism." It examines their respective views in light of current environmental and eco-religious/spiritual movements and speculates on the contours of a possible environmental religiosity/spirituality for the twenty-first century.

Keynote Speaker 2: Bina Agarwal: "Gender and Forest Conservation: The impact of women's participation in community forest governance:

Room EV1 605

3.30-4.45



Gender and forest conservation: The impact of women's participation in community forest governance

Bina Agarwal - University of Delhi, India

The impact of women's participation in community forest governance. Economists studying environmental collective action and governance have paid little attention to gender, while research on gender and the environment in other disciplines has focused mainly on women's near absence from such governance institutions. Bina Agarwal's recent work reverses the focus by examining the impact of women's presence in community forestry institutions. A central question she explores is: would enhancing women's presence in such institutions improve forest conservation and regeneration?

Chair: Ben White - **Erasmus University Rotterdam**

Discussant: Jane Poupart - **University of the West Indies**

Panel 13: Food Security and Community Development in Northern Manitoba (Joint session with CASID)

Room EV1 605

3.30-4.45

Chair: Shirley Thompson - **University of Manitoba**

Email: thomps04@cc.umanitoba.ca

Discussant: Shirley Thompson - **University of Manitoba**

S. Thompson, R. Klatt, V. Lozeznik, K. Wong and A. Gulrukh

<http://vimeo.com/8114019> (22 minute version)

VIDEO: Growing Hope in Northern Manitoba's Aboriginal Communities

This participatory video delves into the food crisis faced by Aboriginal people in northern Manitoba and offers realistic and optimistic solutions. A household food security survey of 534 households in 14 communities revealed a food insecurity rate of 75% that is eight times the food insecurity rate in Canada. This situation is due to limited selection of healthy foods in stores, expensive food prices, escalating transport costs, uncertainty of travel with winter roads not freezing over, high poverty rates and a decline in the use of country foods due to regulations limiting use and culture change. Despite these issues people living in small communities in Northern Manitoba are growing hope. New gardens are being planted, greenhouses are popping up and children are being taught traditional indigenous planting methods. As well, harvesting using

traditional methods of beaver snaring, ice fishing and goose hunting provide country foods that nourish, valorize traditional culture and promote active living.

Asfia Gulrukh - Natural Resources Institute, University of Manitoba

Email: asfia.gulrukh@gmail.com

Northern Manitoba Food Insecurity

Rural livelihoods analysis can empower rural communities and policy advisers by identifying the attributes of adaptive capacity that can be enhanced through individual and collective action. This study looks at the application of this analysis to gendered impacts of climate change in ten Bangladesh hotspots. Hotspots were defined as an area most vulnerable to a particular type of climate change related hazard. The hazards in these hotspots include river flood, flash flood, tidal flood, cyclone, salinity intrusion, water logging, drainage congestion and drought. Adaptive capacity is an emergent property that depends on the diversity of assets and activities from which rural livelihoods are derived, and the flexibility to substitute between them in response to external pressures. Diversification at a household or business level often complements economic specialization within a household, and economic specialization in any one set of activities can facilitate investment in other forms of capital from which future livelihoods can be derived. This approach complements more dynamic concepts of resilience for which specific understanding of causal relationships and local thresholds or “tipping points” is required. Why are people in Northern Manitoba eight times more likely to be food insecure than other Canadians? A recent (2009) survey of 534 households in First Nation Reserves and Aboriginal and Northern Affairs communities by University of Manitoba found 75% food insecurity. This rate can be compared to 9.2% for the rest of Canada. This rate reveals a food security crisis. This study is the first to rates of food insecurity on reserve. Rights to food and other basic needs will be discussed.

Vanessa Lozeczniak – Natural Resources Institute, University of Manitoba

Email: valozez@gmail.com

Growing Hope using participatory video

Many Aboriginal people in the north told their stories of the barriers of extremely high food prices, poverty and either lack of healthy choices in stores or lack of a store in many First Nation and Northern Affairs communities. Through video this message was taken across the north to amplify the voices of people in the remote communities, most of who suffer from food insecurity. Despite poverty, these people in small northern First Nation communities and Northern Affairs communities are growing hope by: planting gardens, starting greenhouses, teaching children and families traditional Aboriginal ways and gardening, involving elders and sharing the feast through traditional community freezers and community dinners. Trying to get the message right by replaying and revisiting communities resulted in not only a movie but a charter of rights.

Panel 14: Economics and Sustainable Environment Room EV6- 809 3.30-4.45

Sarah Gagnon-Turcotte

Email: sarah.gagnon.t@gmail.com

Transfert de technologies environnementales et droit international

Afin de minimiser les impacts négatifs des changements climatiques, la réduction des émissions de GES est impérative. Une grande part de ces réductions passera par le déploiement et l'adoption de technologies environnementales. Plusieurs sont déjà disponibles, cependant leur accès n'est pas toujours facile dans les pays en développement (PED), alors même que plusieurs d'entre eux se trouvent déjà ou prendront place parmi les plus grands émetteurs. Pour pallier à cette problématique, le droit international, dont la Convention-cadre des Nations Unies sur les changements climatiques (CCNUCC), accorde une place importante à la question du transfert de technologies (TT) entre pays du Nord et du Sud. Cependant, considérant que le TT est un processus principalement économique, le droit international de l'environnement est-il le médium approprié pour influencer le transfert de technologies environnementales vers les PED? Qu'en est-il du droit international économique, encourage-t-il lui aussi le TT ou l'empêche-t-il en réduisant le champ d'action des gouvernements nationaux? Finalement, comment les PED peuvent-ils tirer profit du droit international pour accélérer l'adoption de technologies vertes? Ce sont à ces questions que nous répondrons au cours de notre présentation. Nos conclusions s'appuient sur des recherches effectuées dans le cadre d'une maîtrise en droit international dont le cadre théorique est le débat entourant la relation entre le commerce et l'environnement en droit international. Notre recherche s'appuie sur l'étude de la littérature scientifique et des documents officiels de diverses institutions internationales afin d'analyser le droit international économique et celui de l'environnement ainsi que leurs impacts sur la sphère étatique. Confrontés à l'échec de la Conférence de Copenhague, il est impératif de trouver des solutions qui ne s'appuient pas uniquement sur un effort diplomatique nouveau. En nous basant sur les règles de droit déjà établies, nous espérons offrir une solution pratique et applicable dès maintenant par les gouvernements des PED.

Jean Philippe Sapinski- University of Victoria

Email: sapinski@uvic.ca

The earth system, planetary boundaries, and the mechanisms of economic growth

The recently delineated concept of planetary boundaries (Rockström et al. 2009) brings forth crucial questions as to the relationship between the global economic system and the global ecosystem in which economic relations take place. Expanding the idea of limits to growth (Meadows et al. 1972, 2004), the planetary boundaries paradigm describes a number of biophysical thresholds below which human activities should be kept to avoid dangerous qualitative changes of state in the global ecosystem. Considering these newly identified and quantified thresholds together with the global economic system appears fundamental to address questions of sustainability, especially in areas such as climate change or biodiversity loss from the destruction of habitats. However, despite a solid understanding of the biophysical phenomena behind environmental degradation, the global socio-economic mechanisms underlying these phenomena, namely the drivers of economic growth, are seldom analyzed in a systemic way when discussing sustainability issues.

Sarla Achuthan- B.K School of Business Management

Email: bkschool@illinois.edu

Corporate and the Eco- environment - An Indian experience

Of late there has been number of discussions and debates on the role of corporates to protect the environment beyond legal requirements. Environment responsibility encompasses activities going beyond the letter of law, developing innovative methods for recycling, pollution control, ensuring health and safety of every employee who works on the premises of the company and improving the life of the people in the community where the company is located by using natural resources judiciously.

The methodology consists of studying the company's policies, efforts and activities regarding the eco environment in the small, medium and large size organizations.

The objectives of the study will be,

1. To understand how Indian companies are discharging their responsibilities towards environment on a sustainable basis.
2. To identify the types of sacrifices are being made by the companies to have positive impact on the environment.
3. To enumerate types of green initiatives are practiced by the companies?
4. To list the efforts are being made by the companies to disseminate the environmental education and advocacies.
5. To judge how well the companies adhere to environmental reporting and other compliances on a beyond the basic requirements.

The above mentioned objectives will help to give an in depth understanding of the corporate environment responsibility which may help the community and policy makers.

Shanto Khan - Natural Resources Institute, University of Manitoba

Email: shantois@yahoo.com

Green Microcredit & its Implication on Sustainable Livelihood

Bangladesh is developing country with an estimated 145 million people in an area of 147 thousand sq. km.. According to Bangladesh Bureau of Statistic's poverty study 42.1% people live below the poverty line. Microcredit and microfinance institute are playing a major role in poverty reduction and also in creating livelihood opportunities. The primary goal of microcredit programs is to provide means for the poor to have a way out of poverty. In order to achieve its goal it targeted the poor women in the rural area who did not have any collateral; because, due to lack of collateral this women could not access the formal credit system and were forced to take money from the local moneylender which often leads to chronic poverty. The credit is given to the women in small groups which allow them to manage and help each other in decision making in terms of business investment and their livelihood choices. Microfinance institutes are not restricted in only microcredits. They have other goals such as to help the poor people to diversify their primary and secondary occupation, build capacity and create awareness regarding various social and environmental issues. Using DFID livelihood framework this paper will attempt to examine the direct relationship between livelihood improvement and microcredit. It will further investigate how the recipients of the microcredit can use it in a more environmental friendly way to sustain their natural and financial capital.