

# Department of Resource Economics and Environmental Sociology



## 2014-15 Annual Report



**UNIVERSITY OF ALBERTA**  
FACULTY OF AGRICULTURAL,  
LIFE & ENVIRONMENTAL SCIENCES  
Department of Resource Economics and Environmental Sociology

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Dr. Peter Boxall

## Leading renewal in REES

This is the first of a new style of Annual Report for the Department of Resource Economics and Environmental Sociology, also fondly known as REES. This also marks a cornerstone piece in the communication and outreach efforts of the Department to our stakeholders beyond the faculty and students in the Department.

I took over as Department Chair in July 2014 following a round of rather heavy cuts to the University of Alberta's budget. The Faculty of ALES as well as REES was not spared in these cuts. However, with misfortune also comes some opportunities and REES was able to respond to the cuts in a manner which in some cases has and will continue to improve the Department and its activities. First we have had renewal of the support element of REES with the hiring of Lucia Secchia and Amy Masand. Both of these women have made substantial contributions to setting new directions for REES and its many followers. These two new positions have replaced the previous support staff element of REES, and their

titles are Manager and Coordinator respectively of a unit focusing on Research and Academic Program Initiatives. This Annual Report is but one example of these new initiatives.

This new unit has had positive impact not only on communication and outreach, but on increasing research funding and support. Research grants and awards for staff and students have increased in this year by over \$2 million. REES academic staff have been diligent in applying for grants from a broad array of funding agencies and the high success rates are testament to the quality of the research questions and methodologies proposed. Publication levels are also high and have led REES to be considered a top Department, not only in Canada, but also internationally. Furthermore our junior faculty members have been prolific and have made significant contributions to the overall Department output. For example, Dr. Henry An's contributions were recognized this year by being offered promotion and tenure.

Another new initiative includes the 3-Minute Thesis Proposal Competition which is held early in September each year and serves to provide presentation experiences for our first year cohort of MSc students as well as get them thinking formally about their thesis research. Supporting this event are prizes provided by the Hawkins Research Award as well as the Annual "Whine" and Cheese held at the Faculty Club.

We have also set a course to formally engage with our graduate student alumni and other key stakeholders. This includes a major focus by the Department on interacting with the Alberta Agricultural Economics Association (AAEA), which happens to be populated by many of our former graduate students. This engagement consists of an annual joint lecture in the fall as well as major support for the AAEA annual conference in Red Deer each spring. Part of the REES contribution to the AAEA meeting is a conference organized and managed by our graduate student association – REESA. Please keep tuned to many other new initiatives that will be rolled out in the months to come!

In other Department news we were saddened by the passing of Professor Jim Unterschultz who was a major contributor to the teaching and research output in REES. He was also a force in the social elements among the faculty, organizing lunches and post 4:30 PM libations at a number of social houses near the campus. Jim will be sorely missed and the Department has established a graduate award in his honour. Donations to this award are being actively sought and if you are reading this and wish to contribute please contact me directly.



**Dr. Peter Boxall**

Chair, Department of Resource Economics and Environmental Sociology

# REES AT A GLANCE

19



ACADEMIC  
STAFF

67



PEER-REVIEWED  
PUBLICATIONS

44



STUDENTS  
CONVOCATED

51

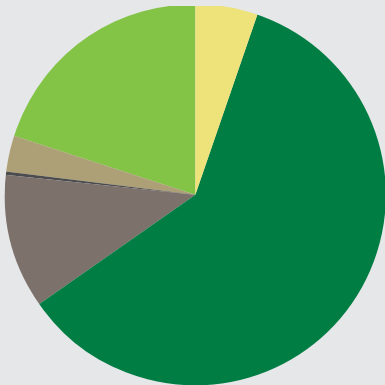


SCHOLARSHIPS &  
AWARDS\*

## Research Funding

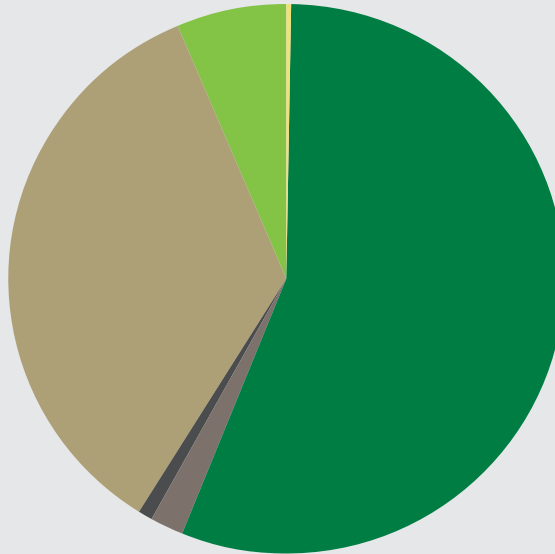
2,646,152

TOTAL VALUE OF  
CONTINUING GRANTS 2014-15



5,450,396

TOTAL VALUE OF  
NEW GRANTS 2014-15



INCREASE IN  
RESEARCH  
FUNDING

2,804,244

### LEGEND

■ Federal Government  
 ■ Canadian University  
 ■ U of A  
 ■ Provincial  
 ■ International  
 ■ Multi-sponsor

\* Staff and student awards blended

\*\* As of September 2015



# Internationally Engaged

57



CURRENT GRADUATE STUDENTS\*\*

# OF GRADUATE STUDENTS PER REGION

MIDDLE EAST 1

EUROPE 2

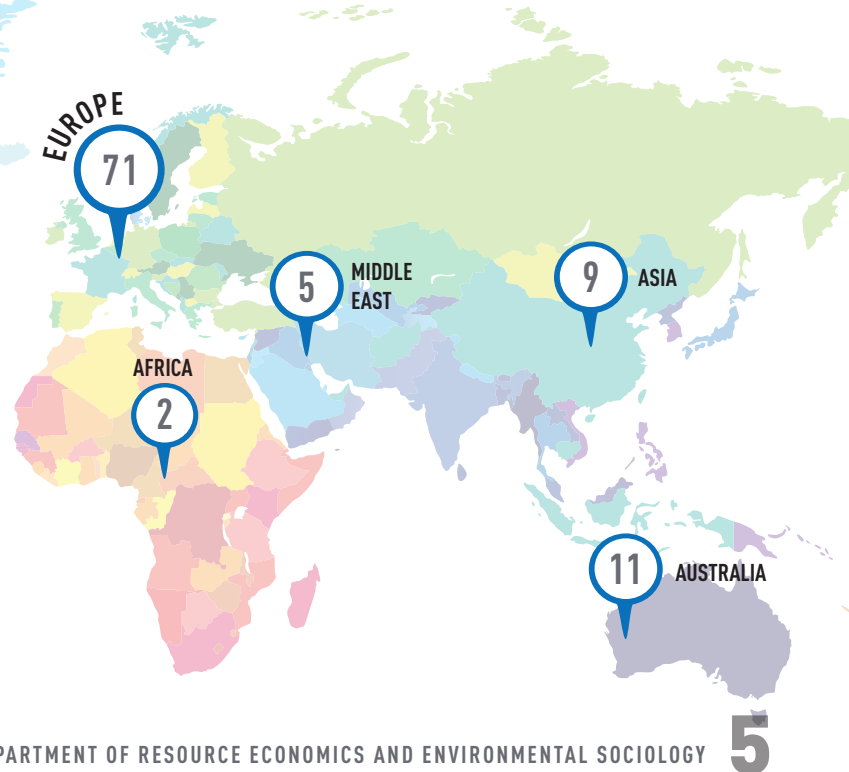
CENTRAL / SOUTH AMERICA 3

AFRICA 10

ASIA 13

NORTH AMERICA 28

383 presentations globally



**A**lthough a small department, we made a number of important service and academic contributions to both the Faculty of ALES and the campus community at large. Two REES academics are currently part of the Dean's Senior Administration team. Professor Vic Adamowicz is the Vice Dean, and Professor Scott Jeffrey is the Associate Dean (Academic). Their experience in numerous capacities is sure to be of benefit to the Dean's senior leadership team in the years to come.

REES academics are making important contributions to sustainability across campus. Professor Debra Davidson is the Director of Prairie Urban Farm, aiming to connect the community to food & agriculture. Volunteers on the farm get the opportunity to cultivate and sell produce on a one-and-a-half acre farm located at the U of A's south campus. Professor Naomi Krogman recently completed a term as the Academic Director for the Office of Sustainability, where she consulted on the University's sustainability plan, developed the Sustainability Scholars Program, and oversaw students in the sustainability certificate program.

The Department is actively engaged with academics from around the globe. In October 2015, we hosted Dr. Patrick O'Connor from the University of Adelaide. He is an expert in reverse auctions for conservation and collaborated on Department chair Peter Boxall's current research. While visiting, he also led a number of sessions on career development for graduate students that were very well attended from across the Faculty of ALES.

Professor Brent Swallow and Dr. Feng Qiu hosted Daniel Griffith in June 2015. Professor Griffith visited the University of Alberta as a Fulbright Senior Specialist in spatial statistics and econometrics. He led a number of workshops and sessions, including a short course on advanced topics in spatial statistics, a seminar on autocorrelation and intensive working sessions with academic staff and graduate students in the department.

Through our department seminar series, coordinated by Dr. Bruno Wichmann and Dr. Feng Qiu, we hosted a number of international speakers from the University of Debrecen (Hungary), University of Grenoble (France), Berlin Technical University (Germany), Tufts University (United States), University of Adelaide (Australia), Virginia Tech University and the University of Minnesota. The seminar series offers valuable enrichment opportunities for both faculty and staff, and continues to be a cornerstone of academic development for graduate students.

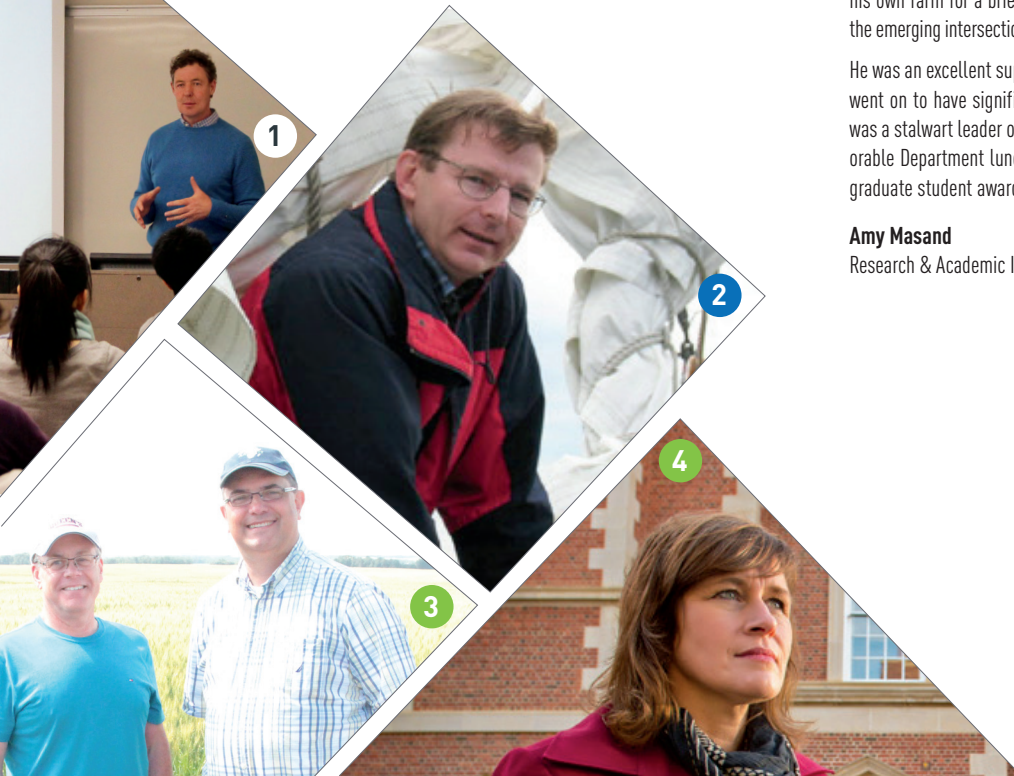
In November 2015, the Department lost a colleague and friend – Professor Jim Unterschultz. Raised on a farm near Fort Saskatchewan, he became the District Agriculturalist (DA) for Alberta Agriculture, before returning to the University of Alberta for graduate studies in the early 90's. Before joining the Department of Resource Economics and Environmental Sociology (REES) as an academic, Jim was a student in the Department, obtaining his MSc in 1991 (alongside current Department Chair Peter Boxall), followed by a PhD in Finance ('95).

Jim had considerable real world experience before joining REES, including running his own farm for a brief period of time. He was widely published in finance and in the emerging intersection between farm level analysis and environmental economics.

He was an excellent supervisor of graduate students, and a number of his students went on to have significant careers in academia and government. Day-to-day, he was a stalwart leader of the 10:00 am REES coffee club, and organized many memorable Department lunches. His memory is being honoured with the creation of a graduate student award which will be granted for the first time next September.

**Amy Masand**

Research & Academic Initiatives Coordinator



- 1 Dr. O'Connor from the University of Adelaide leads a workshop on writing for publication
- 2 Professor Jim Unterschultz
- 3 Dean Stan Blade came along on the annual farm tour in 2015
- 4 Professor Naomi Krogman, Academic Director for the Office of Sustainability

# FACULTY AWARDS

## 2015

Henry An Teaching Wall of Fame  
Faculty of Agricultural, Life & Environmental Sciences

Ellen Goddard Teaching Wall of Fame  
Faculty of Agricultural, Life & Environmental Sciences

Philippe Marcoul Teaching Wall of Fame  
Faculty of Agricultural, Life & Environmental Sciences

James Rude Teaching Wall of Fame  
Faculty of Agricultural, Life & Environmental Sciences

Brent Swallow Graduate Student Supervisor Award  
Graduate Student Association (GSA)

## 2014

Vic Adamowicz Outstanding Journal Article Award  
American Journal of Agricultural Economics

Peter Boxall Distinguished Researcher Travel Award  
University of South Australia

Ellen Goddard Outstanding Journal Article - Honourable Mention  
Canadian Agricultural Economics Society (CAES)

Scott Jeffrey Teaching Wall of Fame  
Faculty of Agricultural, Life & Environmental Sciences

John Parkins International Engagement Award  
Faculty of Agricultural, Life & Environmental Sciences

James Rude Outstanding Journal Article Award  
Canadian Agricultural Economics Society (CAES)



5



6



7

5

Professor Brent Swallow wins the GSA Graduate Supervisor Award (with students Yichuan Wang, Maria Montengro and Haoluan Wang)

6

Drs. Luckert, Marcoul and Parkins with Dr. Njakoi of Heifer International in Tanzania

7

Professor Debra Davidson on-site at Prairie Urban Farm (far right)

7

# ACADEMIC STAFF 2014-15



**Dr. Vic L. Adamowicz**  
Distinguished University Professor, Vice Dean (Faculty of ALES); Environmental Economics, Econometrics, Forest Economics; Director, Alberta Land Institute



**Dr. Ellen Goddard**  
Professor, Cooperative Chair; Agricultural Marketing and Business Program Leader, Consumer and Market Demand Policy Research Network, Agriculture and Agri-Food Canada, Leader of the Consumer and Market Demand Agricultural Policy Research Network.



**Dr. Henry An**  
Assistant Professor, Economics of Technical Change, Development Economics, Econometrics.



**Dr. Lars Hallstrom**  
Professor; Director of the Alberta Centre for Sustainable Rural Communities; Public Health and Politics of Environmental Movements.



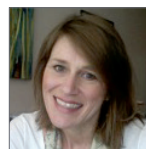
**Dr. Sven Anders**  
Associate Professor; Value-Added Meat Marketing; Member of the ARVI Council



**Dr. Scott Jeffrey**  
Associate Dean (Academic), Professor; Production Economics, Agricultural Business Management.



**Dr. Ellen Biewlawski**  
Professor; Artic Archaeology; Indigenous studies; Negotiations between indigenous groups and Canadian governments (Jointly with the Faculty of Native Studies)



**Dr. Naomi Krogman**  
Professor; Sociology of Natural Resources, International Development, Gender.



**Dr. Peter Boxall**  
Chair and Professor; Resource and Environmental Economics; Leader, Linking Environment and Agriculture Research Network, AAFC.



**Dr. Martin Luckert**  
Professor; Forest Economics, Natural Resource Economics.



**Dr. Debra Davidson**  
Professor; Natural Resource Politics and Governance, Environmental Risk, State Theory, Rural Sociology.



**Dr. Philippe Marcoul**  
Associate Professor; Financial Economics, Industrial Organization, and Contract Theory.





**Dr. Sandeep Mohapatra**  
Associate Professor; International  
Development, Applied Econometrics,  
Agricultural and Trade Policy



**Dr. Feng Qiu**  
Assistant Professor; Agricultural Policy,  
Price and Market Analysis, Agricultural  
Production and Supply, Risk and  
Insurance Modeling



**Dr. John Parkins**  
Professor; Graduate Coordinator; Rural  
Sociology, Environmental Sociology



**Dr. James Rude**  
Associate Professor; Graduate Coordinator;  
Trade Policy, Agricultural Marketing, and  
Price Analysis



**Dr. Brenda Parlee**  
Associate Professor; Canada Research  
Chair; Social Responses to Ecological  
Change



**Dr. Brent Swallow**  
Professor; Climate Change, Economic  
Development, Environmental Economics,  
Property Rights



**Dr. Bruno Wichmann**  
Assistant Professor; Environmental and  
Resource Economics, Industrial  
Organization, Social and Economic  
Networks, Experimental Economics

## Adjunct Professors

Sean Cash

Elwin Smith

Shari Clare

Bodo Steiner

G.K. Hauer

Bill White

Tomas Nilsson

Marian Weber

## Research Associates

Kevin Jones

Hawley Campbell

Evan Miller-Tait

Curtis Rollins

## Postdoctoral Fellows

Jay Anderson

Matthias Staudigel (03/2015 - 03/2016)

Mamta Vardhan (Killam Postdoctoral Fellow)





# RURAL AND ENVIRONMENTAL SOCIOLOGY

# Rural and Environmental Sociology

# RESEARCH

## Areas of Research

**Environmental and Resource Sociology**

**Social impacts of natural resource development**

**Natural resource policy analysis**

**Alternative management frameworks for natural resources**

**Gender and generation issues in natural resource management**

## Current Research

Energy transition in Canada & Energy-Society relationships

Economics and conservation in Alberta

Watershed management and public health

Sustainable consumption

Community-based environmental impact assessment in Tanzania

Determinants of food security in Tanzania

Expert judgements and media framing of the mountain pine beetle in Alberta

Rural Alberta's priority policy research questions

Sustainability planning in rural Canada

Adapting to food safety crises

Indigenous communities and Canada's Oil Sands

Monitoring wildlife health in Northern Canada



*Kelsey Dokis-Jansen*  
MSc, Risk and Community  
Resilience

## Feature Graduate Student Thesis

**“These Trees Have Stories to Tell” Linking Denésq̓liné Knowledge and Dendroecology in the Monitoring of Barren-ground Caribou Movements in the Northwest Territories, Canada**

Using dendroecology (the application of tree-ring analysis to ecological questions) as a scientific assessment tool in combination with oral history analysis to track changes to caribou movement patterns in the traditional territory of the Łutsël K'e Dene First Nation (LKDFN), Northwest Territories, Canada. The approach shows that indigenous ways of knowing can set the basis for identifying the important research questions and methods, and that appropriate and complimentary scientific methods can be used to build upon that framework. This research project is not only about asking questions related to the impacts of resource development to the community Łutsël K'e and the caribou on which they depend, it also demonstrates that Indigenous communities can embrace and implement scientific methodologies while remaining grounded in our own Indigenous knowledge systems and practices. *Supervisor: B. Parlee*

# TRACKING CHANGE

## Dr. Brenda Parlee leads landmark \$2.3 million study

The Mackenzie River Basin, which at 1.8 million square kilometers covers nearly 20 percent of Canada's landmass, has been reported to be one of the most understudied watersheds in the world. Dr. Brenda Parlee's recently awarded SSHRC Partnership Grant "Tracking Change: The Role of Local and Traditional Knowledge in Watershed Governance", is a first for the U of A, since the award was established in 2013. The application process took nearly three years, but the origins of the project are much older. The project builds on her 20+ years of northern research experience on the theme of "tracking change" (monitoring) as well as the strong interest and support of the Aboriginal communities and organizations and governments involved in the project. According to Parlee, the idea for the project came from the communities. She says, "building a partnership from the ground up is what has made the initiative successful to date".

Parlee and her team hope that the project will address some big gaps in the availability of documented local and traditional knowledge about fresh water ecosystems and the kinds of social and ecological change being experienced by subsistence fishing communities. While there has been valuable traditional knowledge research

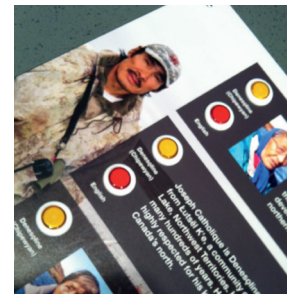
carried out in some areas, on some issues, the landscape is patchy and uneven. Guided by a 1990s study in the western Hudson's Bay (Voices from the Bay) which involved anthropologists such as Dr. Milton Freeman, "Tracking Change" will enable communities from across the basin to work together over 6 years to address questions and themes of common concern.

The project involves many First Nations communities, organizations and governments including those from the Mackenzie's headwaters in British Columbia, Alberta and Saskatchewan (e.g., Prince Albert Grand Council) to communities closer to the Mackenzie's end point at the Beaufort Sea. "It is counter intuitive for some Albertans to realize that water flows north from here - what we do in northern Alberta in the Mackenzie's headwaters ultimately influences those living in the arctic. As such the project is really

interested in understanding the up and downstream implications of resource development as well as some broader stresses on the river basin, such as climate change. Parlee points out that there has been a lot of attention on the impacts of climate change in the high arctic, but little consideration of those in sub-arctic and boreal regions of northern and western Canada".

Over six years (2015-2022), the project will fund local and traditional knowledge research activities in the Mackenzie River basin and sister projects in the Lower Amazon and Lower Mekong River Basins, with the long term goal of strengthening the voices of subsistence fishers and Indigenous communities in the governance of major fresh water ecosystems.

The project developed in recognition that river systems are important social, economic, cul-



Dr. Parlee at Great Slave Lake (Left)  
'Elders are Scientists' installation at the Telus World of Science (Right)

tural and ecological places that contribute to the well-being of communities in diverse ways. River peoples, particularly Indigenous peoples who have well developed fishing livelihoods can offer extremely valuable insights about long term (historic and current) patterns of social and ecological change and the interconnections between the health and dynamics of these river systems and that of river communities.

Although based on oral traditions, this system of observation or “tracking change” is much like monitoring. Like those who live on Canada’s east and west coasts, the ability of Indigenous communities in the Mackenzie River Basin to maintain fishing as a livelihood practice is of social, economic and cultural importance to all of Canada; if this river system is not healthy, how can we be?

Over the course of the project, the research team will train more than 40 students and community researchers, creating collaborations that will extend beyond the 6 year timeframe of the project. Plain language outcomes (eg. guidebooks) and academic contributions (theses, journal articles) are planned. The partnership is unique in scope and focus and is poised to make academic and practical contributions of global significance.



*Tracking Change planning meeting in Whitehorse (Left)  
Dr. Parlee at Edacho Kué (Right)*

## REES ACADEMICS

Dr. Brenda Parlee (Principal Investigator)  
Dr. Brent Swallow  
Dr. Bruno Wichmann  
Dr. John Parkins  
Dr. Ellen Bielawski  
Dr. Lars Hallstrom

## PROJECT TEAM

Don Pittman – Executive Director, Mackenzie River Basin Board (MRBB)  
Elaine Maloney – Knowledge Mobilization Manager

## PROJECT WEBSITE

[www.trackingchange.ca](http://www.trackingchange.ca)



Dr. Brenda Parlee

## Community-led socio-economic monitoring

While at the University of Waterloo (Master's in Environmental Studies, '98), Parlee developed a community-based monitoring system with a First Nations community based on traditional knowledge that has gone on to generate socio-economic data about changes in community well-being. The system of monitoring and the database, is led and hosted by Łutsël K'é First Nation. It is among the longest-lived examples of community-led socio-economic monitoring in Canada and has generated over 15 years of qualitative and quantitative "data"; in addition to informing local level policy and management, the dataset is useful to outsiders seeking to understand more about Indigenous northern communities and how they are affected by large scale resource development (i.e., diamond mining). In the late nineties, community-based monitoring was a forward-thinking approach – it has now become a popular approach and idea in the social sciences and the natural sciences alike.

Brenda went on to study at the University of Manitoba with Distinguished Professor Dr. Fikret Berkes for her PhD (Natural Resource and Environmental Management, '05). Dr. Berkes is an applied ecologist with an interest in community-based resource management. Her dissertation focused more deeply on the relationship between Indigenous knowledge and practices and community-based monitoring. She explored the gendered nature of knowledge, working with both Gwich'in women from the community of Fort McPherson (who have a well developed knowledge about plants) and hunters from Łutsël K'é First Nation whose knowledge about caribou populations which is well recognized in a variety of resource management contexts in northern Canada.

The collaboration with Łutsël K'é First Nation led to a variety of other research collaborations in the north including a multi year, multi community project on the impacts and responses of northern

communities to changes in the health, population and distribution of barren ground caribou. This work also highlighted the important role that community knowledge –or traditional knowledge – can play in the monitoring and management of both social and ecological change. In some ways this community knowledge is the same but better than more technical and expert driven strategies of data collection. In the case of caribou for example, communities, such as have been observing animals in the same places, using the same methods, using the same indicators for hundreds of years. But the data is not just technically rigorous. Like other communities who have livelihoods that are closely interconnected with the sustainability of their environment, people are particularly sensitive to changes in natural resources. Brenda is guided in this view by the teaching of the late Łutsël K'é First Nation elder Maurice Lockhart who explained: "some people who don't care so much won't notice the change".

The development of the new Tracking Change project builds on this history of working with traditional knowledge holders in northern Canada. Rather than simply working with single communities on short term and isolated projects, however, the tracking change project aims to create opportunities for Indigenous communities in the northern to learn from one another about social-ecological change in the Mackenzie River Basin, as well as in the lower Amazon and Mekong basins. Brenda and the team of more than 24 community organizations and 18 Canadian and international academics also have the goal of building tools and capacity from the project for ongoing monitoring and improved governance with the ultimate interest in contribute to the sustainability of some of the worlds largest freshwater ecosystems.





# ENVIRONMENTAL AND RESOURCE ECONOMICS

# Environmental and Resource Economics RESEARCH

## Areas of Research

**Environmental Valuation**

**Market based instruments and institutional arrangements for environmental protection**

**Socio-economic analysis for natural resources and agriculture in developed and developing countries**

## Current Research

Public policies & biofuel production

Reverse auctions for conservation in Rocky View County, AB

Household willingness to pay for environmentally favorable outcomes (eg. wildlife conservation)

Understanding health risk perceptions and the economic valuation of risk reduction.

Cost-effective ecosystem service provision in tropical ecosystems: hydrological services in Panama.

Influence of networks on environmental decision making (how does social structure impact environmental valuation?)



*Krisha Lim*

MSc, Agricultural and Resource Economics

## Feature Graduate Student Thesis

**How can we help farmers when they are already clever?  
Adaptation and neighbor networks**

The ability of farmers to adapt to changing rural environments in developing countries is an important determinant of welfare. However, farmers' adaptation may be constrained by their adaptive capacity because economic resources, information, and institutions are often weak or missing in these areas. Networks of relationships can potentially ease these constraints and facilitate adaptation by acting as conduits of information and resources. The paper uses a dataset containing information from 2,095 households located across 12 countries in Africa and Asia, examining the importance of network effects, in addition to traditional adaptive capacity elements, including access to information, human capital, financial resources, physical assets, farm and household characteristics, and farming and crisis experience.

*Supervisors: M.K. Luckert / B. Wichmann*

# Alberta's Living Laboratory Wetlands Project

The Alberta's Living Laboratory wetlands project is a multi-year, interdisciplinary research project examining the science and economics of wetland restoration in Alberta. This is a timely subject, because a new Wetland Policy is coming into force in the province, changing the replacement requirements for wetlands lost to development.

In the scientific sphere, the project is using some of the most advanced techniques available to create tools to predict the functions a wetland might provide if it is restored. Once wetlands are restored as part of the project, they will be studied on an ongoing basis, so that the accuracy of these tools' predictions can be assessed. Both the tools and the improved understanding that accompanies them will help inform policymakers and developers as they work with Alberta's new Wetland Policy.

At the same time, an economic study is being undertaken, examining the true cost of restoring wetlands on private land – including the cost of land owner compensation. Using a 'market-based

instrument', the research team will engage with land owners to set the price for restoration. By partnering with land owners, the project will develop a deeper understanding of the factors that influence the cost of wetland restoration, while also testing a system that might allow for more efficient use of wetland restoration budgets. This knowledge will be useful both for policymakers, and for those seeking to meet their restoration obligations under the new policy.

The Alberta's Living Laboratory wetland project is complex, and involves numerous partner organizations. This interdisciplinary project assembles scientists and economists for collaborative work in the field. Thanks to this diversity of expertise, our team is investigating a wide array of research questions. Following is a summary of some of the primary ones:

1. Where are the existing wetlands in Alberta, where are the wetlands that have been lost, and where are the wetlands that could be restored?

2. How do we assign value to current wetlands, and ones that could be potentially restored, under the guidelines of the new Alberta Wetlands Policy?
3. What is the true cost of restoring wetlands, including the compensation of land owners and the process of site selection?
4. Can the use of a Market-Based Instrument maximize the efficiency of a restoration project's budget?
5. What sorts of Market-Based Instruments might be most effective in promoting ongoing restoration of wetlands in Alberta?

*Adapted from Alberta Land Institute website  
(Article by Kenneth Tam)*

## PRINCIPAL INVESTIGATORS

Dr. Peter Boxall  
Dr. Irena Creed (Western University)

## CO-INVESTIGATOR

Dr. Shari Clare

## PROJECT STAFF

Stacey O'Malley - Project Manager  
David Aldred, Technician (Western University)  
Jacqueline Serran, Technician (Western University)

## PROJECT WEBSITE

[restoreourwetlands.ca](http://restoreourwetlands.ca)



(Left) Peter Boxall leads a community meeting, (Right) Students survey a property in Rocky View County, AB



**Dr. Bruno Wichmann**

## “Economists are realizing that networks matter”

**W**hen Dr. Wichmann started his PhD in Economics (University of Tennessee '12), he wanted to write a thesis that was outside of the box. He was studying non-market valuation, but when he combined this research with the economics of networks, he found himself in an emerging field.

Non-market valuation is an Economics field that investigates the value people are willing to pay for things such as clean air and water, and healthy fish and wildlife populations. The Department of Resource Economics has some of the top scholars in this area, including Professors Vic Adamowicz and Chair Peter Boxall, with whom Dr. Wichmann has worked closely.

“Economists are realizing that networks matter” says Dr. Wichmann. Economics of networks is

concerned with understanding economic phenomena by using network concepts and the tools of network science. Network models explain how transactions, favors and communication of information are affected by the structure of the relationships between the participants. Very simply, how one farmer in a community responds to climate change may affect how his neighbor reacts too.

Currently, his research uses survey data to examine how networks affect different agricultural and environmental outcomes. His dream project would be to conduct a randomized control trial in a community over a number of years, to study how social network theory can inform development policy. For example, delivery of a policy intervention (e.g. introduction of a new tech-

nology) to randomly selected agents in a social network would allow for the identification of the effect of network shapes on outcomes induced by the policy (e.g. productivity gains).

The perspective Dr. Wichmann brings is allowing him to engage in important research with established academics. In 2014, he co-authored an article with his former supervisor Professor William S. Neilson, on social networks and non-market valuations, which was published in the *Journal of Environmental Economics and Management*, the top journal in the field. Last summer, Dr. Wichmann (PI) & Department Chair Professor Peter Boxall (Co-Applicant) were awarded an Insight Development SSHRC grant to study the integration of social networks into conservation auctions.

Through his research on networks, Dr. Wichmann has also engaged in a wide variety of projects across the Department. He has worked with Professor Brent Swallow in India to study income diversification and social network effects. In addition, he is involved in Dr. Parlee's SSHRC partnership grant “Tracking Change,” aiming to analyze the data obtained from years of monitoring in northern communities, and inform future policy decisions.

Dr. Wichmann has found the Department to be a welcoming place, rich with opportunities for mentorship and collaboration. Apart from his personal research accomplishments, guided by established professors in the department, he has completed three graduate students and thinks of these relationships as academic partnerships.



**ECONOMICS *of***  
**AGRICULTURE, FOOD AND AGRIBUSINESS**



## Economics of Agriculture, Food and Agribusiness

# RESEARCH

### Areas of Research

**Food and consumers**

**Demand analysis**

**Regulation issues**

**International food trade  
and policy**

**Agribusiness implications**

**Agriculture and agribusiness  
finance**

**Production and marketing**

**Economic, policy and  
business analysis**

### Current Research

Effects of fertilizer inputs and use of improved varieties on crop yields (barley & canola in Manitoba)

Effects of export restrictions on price volatility of grain and oilseed crops

Social consumption and price rigidity of quality differentiated private label goods.

Public perception of genetically modified (GM) foods

Producer coordination and improved spatial efficiency of GM and non-GM crops

Willingness to pay for country-of-origin labelled beef

Impact of education on wage distribution by gender in India's formal labor market

Consumer trust and buying behavior – how does the public respond to new products, processes, technologies and regulations related to the food system?



*Haoluan Wang*

MSc, Agricultural and  
Resource Economics

### Feature Graduate Student Thesis

#### Examination of Agricultural Land Conservation in the Alberta Capital Region, Canada

Some of the province's most productive agricultural land has been converted due to rapid population growth, economic development, and conversion of agricultural land into alternative land uses. Little is known about what values are being gained and lost as a result of agricultural land conversion. Wang used remote sensing data (from 2000 to 2012) and a choice experiment survey to analyze the optimal use of financial resources for agricultural land conversion in the Alberta Capital Region. *Supervisor: B. Swallow*

# How much land are we still farming?

## Economic evaluation of farmland conversion and fragmentation in Alberta

This three-year project focuses on the economics of fragmentation and conversion of agricultural land to non-agricultural uses in Alberta. The objective of the research is to assess and quantify the economic impacts and implications of land fragmentation and conversion for policy and planning.

To engage with this complex issue, the project team is conducting four related studies that focus either on the province as a whole, or on two areas within the province: the Capital Region around Edmonton, and the Highway 2 corridor linking Edmonton and Calgary.

The first study makes use of Geographic Information System (GIS) modeling and remote sensing analysis to identify patterns of land use and land use change over time, with the results informing the other projects.

The second study undertakes an economic analysis to identify factors (relating to both

ownership and policy) that impact conversion in both the province as a whole, and in the specific study sites.

The third study uses statistical techniques to examine the economic relationships between conversion and a variety of influencing factors, including land values.

Finally, the fourth study defines and evaluates the public values associated with, and the public interest in, goods and services associated with the lands in the Capital Region.

Taken together, the results from the four studies will be used to identify how current policies impact the level and rate of conversion and fragmentation, and to identify policy and planning options that may assist in future management of fragmentation and conversion in Alberta.

*Adapted from Alberta Land Institute website  
(Article by Kenneth Tam)*

### PRINCIPAL INVESTIGATORS

Dr. Scott Jeffrey  
Dr. Brent Swallow

### CO-INVESTIGATORS

Dr. Feng Qiu  
Dr. Arturo Sanchez-Azofeifa

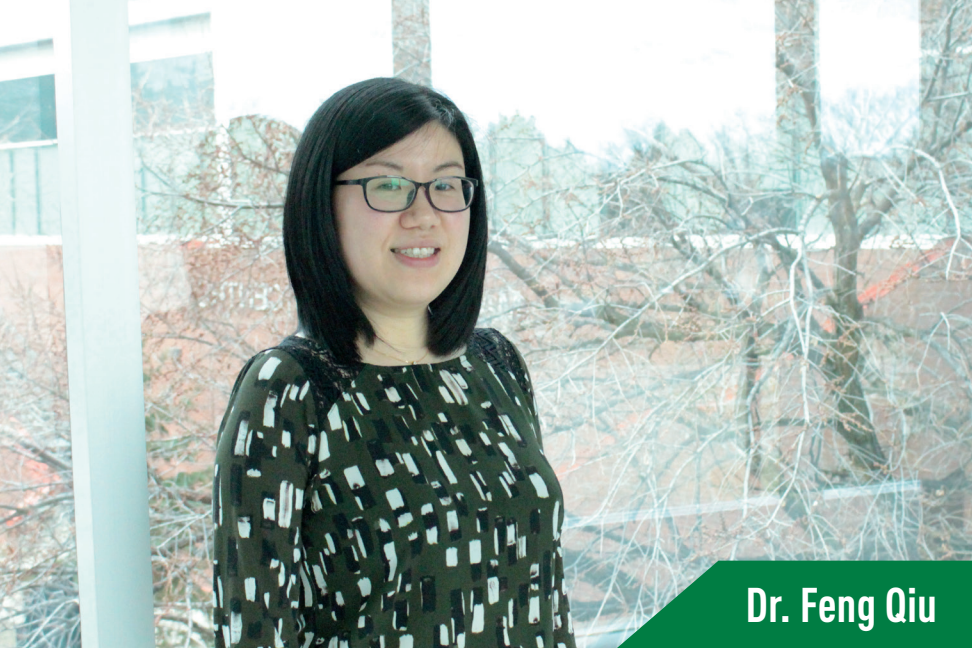


*(Left) Dr. Feng Qiu with a student visiting irrigation districts in Southern Alberta  
(Right) Distinguished Professor Vic Adamowicz, Director of the Alberta Land Institute*



WEBSITE

[albertalandinstitute.ca](http://albertalandinstitute.ca)



Dr. Feng Qiu

## Land fragmentation & fresh food access

After completing her undergraduate degree in International Trade, Feng Qiu intended to become a businesswoman, like her mother. She started her PhD directly after undergraduate studies at North Carolina State. Initially, she viewed Agricultural Economics as “only about beef and crops.” She worked as a research associate with Professor Barry Goodwin, and learned that the fields of study within Agricultural Economics were much broader than she initially thought. Dr. Qiu worked on an insurance design project, allowing her to investigate how policy affects farmers and crop yields, in particular strawberry farmers.

Her current research focuses on land use. She notes that traditional economic data is “highly aggregated,” meaning that groups of observa-

tions are replaced with summary statistics. She incorporates spatial and time lapse modelling, to create a more nuanced analysis regarding land use. For example, she is tracking changes in land use in Alberta, particularly in the corridor between Edmonton and Calgary, where some of the most fertile agricultural land is found.

“Although the amount of agricultural land in Alberta has reduced only 5% between 2000 and 2013, the highest quality agricultural land is being developed, and is getting replaced by less fertile grasslands.” There is also rapid loss of agricultural land in the Edmonton-Calgary corridor. Her spatial analysis (using ArcGIS) allows her to visually communicate how land use has changed in Alberta over a period of ten years.

Another key area of her research is studying access to fresh, healthy, affordable food in Edmonton and Calgary. Along with Professor Brent Swallow and research associate Haoluan Wang, she identified food deserts in both cities, and is currently working with the City of Edmonton, developing a plan to improve access in these areas. A food desert is a neighbourhood with high need for healthy and affordable food with limited access.

One proposed solution is subsidizing the development of farmers markets, although their seasonality is challenging. Another solution is providing bus tickets to residents in “food deserts” to improve their access to supermarkets. There is no one solution that will fix this problem, and Dr. Qiu is working closely with city policy makers to create a comprehensive plan.

Dr. Qiu enjoys engaging with the public. “I like working with the local people from organizations like the City of Edmonton, the food bank and farming associations.” She also finds mentoring graduate students very rewarding. “My first year of supervising students, both of my students (Darren Haarsma and Miao Zhen) won awards for outstanding MSc thesis from the Canadian Agricultural Economics Association (CAES).” Although Dr. Qiu has only been with the department for a few years, she is already making an impact in the community and helping to build important strategic partnerships.



**STUDENTS *and* ALUMNI**



The department has mentored some exceptional students throughout 2014 and 2015. Carley-Jane Stanton was awarded a Rhodes Scholarship in November 2015. She was one of three students chosen from the University of Alberta. Carley-Jane is majoring in Agricultural and Resource Economics. She first engaged with the Department while taking a REES course "The Plate, the Planet and Society." Later, she worked as a Research Assistant on Brent Swallow's food security project in India. She is actively engaged in the community, completing a placement with sustainable Edmonton, founding the Alder Food Security Society and taking on leadership roles at the Southwest Edmonton Market and the Edmonton Food Council.

PhD student Yichuan Wang holds a Vanier Scholarship worth \$50,000 in funding over three years, coming to the Department after completing a law degree at the University of Victoria and a Master of Laws at Berkley. She's hoping to make strides in northern cooperative watershed management under the guidance of her supervisor Professor Brent Swallow. Wang says "I am deeply grateful to learn from Brent and Professor Brenda Parlee who is also on my committee," said Wang. "Their deep expertise in institutional economics and social-ecological systems, compassion, and deep generosity in empowering intellectual growth make me feel like the luckiest student ever."

The annual undergraduate capstone presentations continue to produce outstanding work, allowing students an opportunity to explore research and the possibility of graduate studies. In 2014, five students discovered that placing posters conveying technical advice and social appeals in computer labs at the university reduced paper consumption. Alyssa Cumberland, Claire Doll, Katrina Bissonnette, Tanishka Gupta and Yuan Shi found conservation behavior increased by 8.5 per cent after placing posters in the ETLC and Rutherford South treatment labs, and had positive spillover effects in nearby labs.

Graduate students in REES are well prepared for their careers, thanks to a number of enrichment activities available outside of their standard coursework. Since 2014, the department has held three 3 minute thesis competitions. The concept for the competition was developed at the University of Queensland in 2008, and has spread globally since its inception. The competition provides a valuable opportunity for second-year Masters students to identify the key points of their research, and communicate them in plain language. Each summer, students visit a number of farming operations on the Annual crop tour. For many of them, it is their first time on a farm in Canada.

The Resource Economics and Environmental Student Association (REESSA) continue to provide valuable opportunities for graduate students to develop and engage. Along with the Alberta Agricultural Economics Association (AAEA), the two groups held their first joint conference. REES graduate students helped organized the event, while connecting with alumni who now sit on the board of the AAEA. At the conference, students got the opportunity to share their research findings, while meeting industry leaders. Throughout the year, REESSA also holds a range of social events such as the Annual Chili cook-off (benefitting the Brett Cortus memorial scholarship) and Heritage Night (celebrating the multiculturalism of REES graduate students).



- 1 Rhodes Scholarship winner  
Carley-Jane Stanton
- 2 3 Minute thesis winner (Fall 2015)  
Anita Laryea with supervisor Sven Anders
- 3 Chair Peter Boxall with Travis W. Manning  
book prize winner Kaitlyn Cyr



# STUDENT AWARDS

Allen, Shannon	Queen Elizabeth II Graduate Scholarship (Doctoral)
Appiah, Alfred	John Proskie / B.J. McBain Memorial Scholarship
Bennett Cooke, Arlana	Queen Elizabeth II Graduate Scholarship (Master's)
Bentley, Angela	Henry Kroeger Memorial Grad Scholarship
	Queen Elizabeth II Graduate Scholarship (Master's) '15
	Queen Elizabeth II Graduate Scholarship (Master's) '14
Bergstrom, Apryl	Queen Elizabeth II Graduate Scholarship (Master's)
Boaitey, Albert	MacAllister Schlrshp in Agriculture
	Queen Elizabeth II Graduate Scholarship (Doctoral) '15
	Queen Elizabeth II Graduate Scholarship (Doctoral) '14
Brown, Bijon	Canadian Dairy Commission Graduate Scholarship '15
	Canadian Dairy Commission Graduate Scholarship '14
Bruce, Stephen	John Proskie / B.J. McBain Memorial Scholarship
Cyr, Kaitlyn	Queen Elizabeth II Graduate Scholarship (Master's) '15
	Queen Elizabeth II Graduate Scholarship (Master's) '14
Dairon, Matthew	Queen Elizabeth II Graduate Scholarship (Master's) '15
	Queen Elizabeth II Graduate Scholarship (Master's) '14
Delafield, David	Queen Elizabeth II Graduate Scholarship (Doctoral)
Doll, Claire	Walter H Johns Grad Fellowship
D'Souza, Amabel	Queen Elizabeth II Graduate Scholarship (Master's)
Godfrey, Todd	John Proskie / B.J. McBain Memorial Scholarship
Laryea, Anita	John Proskie / B.J. McBain Memorial Scholarship
Le, Stephanie	Canadian Dairy Commission Graduate Scholarship
Lim, Krisha Rose	AAEA Master's Scholarship
	Walter H Johns Grad Fellowship
Lloyd-Smith, Patrick	John and Patricia Schlosser Environment Scholarship
	President's Doctoral Prize of Distinction '15
	President's Doctoral Prize of Distinction '14
Maruta, Admasu	Brennan Memorial Graduate Scholarship in Forestry
Ngo, Sandra	Queen Elizabeth II Graduate Scholarship (Master's)
Novak, Lucas	AAEA Master's Scholarship
	Queen Elizabeth II Graduate Scholarship (Master's) '15
	Queen Elizabeth II Graduate Scholarship (Master's) '14
Spicer, Neal	Queen Elizabeth II Graduate Scholarship (Master's)
Wang, Qi	University of Alberta Master's Scholarship
Wang, Yichuan	Dr William A Fuller Memorial Graduate Scholarship
	President's Doctoral Prize of Distinction '15
	President's Doctoral Prize of Distinction '14
Xie, Lusi	University of Alberta Doctoral Recruitment Scholarship
Zeppa, Victoria	Walter H Johns Grad Fellowship
Zheng, Yanan	John Proskie / B.J. McBain Memorial Scholarship



5 Dr. Henry An with 2015 REESA President Lucas Novak



6 Students on the 2014 Crop Tour

7 Annual Crop Tour in Kingman, AB



# PARTNERSHIP WITH THE AAEA

## Department collaborates with the Alberta Agricultural Economics Association

The Alberta Agricultural Economics Association (AAEA) and the Department collaborated on a number of successful events in 2014 and 2015. The AAEA was founded in 1984 with the mission to enhance and facilitate the exchange and dissemination of knowledge, information and ideas between professionals in agriculture and agri-food industry in Alberta.

Professor Brent Swallow and Dr. Feng Qiu both sit on the board of directors, and a number of REES alumni are also involved in various capacities, including Reg Norby (Director), Lukas Matajovsky (President), Zoia Komirenko (Program Chair), Catalina Solano (Communications Chair) and Dawn Trautman (Sponsorship Chair).

2015 marked the first year of the jointly held AAEA-REESA Conference: "Visions 2015 - Economic Impacts: Perspectives on Trends in Agriculture, the Environment and Society." See the facing page for the full conference program.

In November 2015, the Department and the AAEA hosted Brett Gellner, a REES alumni and current CIO of TransAlta Corp. He gave a presentation on "Canada's move to integrate sustainable energy technologies." See below for a full summary.

The Department and REESA and both grateful for the continued support of our actively engaged alumni, and will continue to collaborate on future initiatives together.

still in the early stages of integrating alternative energy technologies on a large scale, during the second annual joint lecture of the Alberta Agricultural Economics Association and the Department of REES.

Focusing on the challenges and opportunities for integrating sustainable energy with traditional energy technologies, Gellner explained that globally, there has been a movement towards reducing carbon emissions and incentivizing alternative forms of energy through long term contracts, cash grants and tax breaks.

The challenge, he said, lies with the inconsistency of alternative energy sources, such as wind and solar power.

"Reliable power sources [such as natural gas] need to be a complement to wind and solar power because they are unpredictable" said Mr. Gellner.

There are also price considerations, such as affordability of power for the consumer, and obtaining a return on investment for power companies, he said. In some communities in California, energy prices have increased 30 per cent, following the integration of wind and solar power.

TransAlta is the largest wind power provider in Canada, with a foundation in gas, coal and hydro power. One of the biggest coal plants in Alberta will be closing in 2019, with many others to follow between 2020 and 2030.

### AAEA & REES Joint Lecture: Brett Gellner

Canada must learn how to manage the costs and competitiveness of energy from other countries if it wants to maintain its economic growth and standard of living, according to a top TransAlta executive.

Brett Gellner, CIO of TransAlta Corp and President of TransAlta Renewables, said Canada is



*(Left) Alumni Reg Norby with Brett Gellner at the AAEA / Department joint lecture  
(Right) Visions 2015 conference in Red Deer, AB*

## Visions 2015 Conference Program

### **AAEA and RESSA Session #1: Economic Overview (Chair: Lukas Matejovsky)**

Todd Hirsch, ATB Alberta Economy 2015: Who Should Worry... and Who Shouldn't?

David Weber, Serecon Alberta Farmland - Bubble or Bargain?

### **AAEA Session #2: Public opinion and Social License (Chair: Catalina Solano)**

Sean Royer, ARD Achieving Social License in Agriculture

Dr. Jill Hobbs, U of S Private Standards for Food Safety and Quality: Is the Glass Half Full or Half Empty?

Darcy Fitzgerald, Alberta Pork Alberta Pork and Social License

### **REESSA Session #2: Food, Market and Institutional Structure (Chairs: Hawley Campbell and Sandra Ngo)**

Nishanthy Balasubramaniam - Egg Pricing

Megan Egler - Food Aid Analysis

Yang Yang - Cultural Values and Food Technologies

Sandra Ngo - Willingness to Pay for Vitamin A

Victoria Zeppa - Institutional Innovation in Indonesian Farmer-Trader Exchange

Maria Montenegro - Land Use Change in Peru

Wes Lu - Climate Change and GDP in Alberta

### **AAEA Session #3: Research in Agriculture (Chair: Dr. Henry An)**

Gordon Cove, ALMA Advancing the Livestock and Meat Industry in Alberta

Brian Beres, AAFC Navigating the Intersection of Agro-nomic Research and Economic Implications

### **REESSA Session #3: The Alberta Landscape (Chairs: Matthew Dairon and Alfred Appiah)**

Haoluan Wang - Periurban Agricultural Land Valuation

Angela Bentley - Farmland Valuation Modeling

Dareskedar Amsalu - Irrigation Rehabilitation Program

Marcus Becker - Nutrient and Groundwater Management

Manikarnika Kanjilal - Wetland Restoration Opportunity Costs

### **AAEA Session #4: Developments in Agriculture (Chair: Danny LeRoy)**

Dr. Nick Savidov, ARD New Developments in Sustainable Agriculture: Aquaponic and Beyond

Dr. Oparinde Adewale, HarvestPlus Agriculture and Health Nexus with Biofortification lens

Dawn Trautman, Gentec The Application of Genomics: Emerging Challenges and Opportunities in Livestock Production

### **REESSA Session #4: Panel Discussion on Economic Careers**

#### **Evening Program**

(MC: Reg Norby, Speaker Introduction: Brent Swallow)

Banquet Speaker: Dr. Thomas Johnson, University of Missouri: Measuring Economic Impacts in Agriculture, the Environment and Society



(Left) AAEA members at the Brett Gellner lecture (Centre) REES students attending the conference (Right) PhD student Mani Kanjilal presents on "Costs of Wetland Restoration."



# 2014-15 THESES

## Masters and Doctoral

Angel, Angela. 2014. "Voices from the Shadows: Investigating the Identity and Wellbeing of Male Mobile Workers in the Contemporary 'Boom-Sphere' Context of the Alberta Oil Sands." Master in Science. 202 pp.

Cadgas, Ali. 2014. Adoption of BMPs and technical efficiency in Canadian canola production. MAg. 55pp.

Campbell, Brett. 2014. Aggregate Resource Extraction: Examining Environmental Impacts on Optimal Extraction and Reclamation Strategies. MSc. 87 pp.

Campbell, Hawley. 2015. Ethanol Production from Hybrid Poplar in Canada: A General Equilibrium Analysis. MSc. 107 pp.

Chen, Minjie. 2014. Using Discrete Choice Models to Estimate Non-market Values: Effects of Choice Set Formation and Social Networks. MSc. 76pp.

Dairon, M.R. 2015. Exploring southern Alberta energy discourses and web-based survey data quality issues: An application of Q-methodology. MSc, 105 pp.

Danso, George K. 2014. Water trading: Irrigation technology adoption and economic impact of transboundary water reallocation. PhD. 292 pp.

Dokis-Jansen, Kelsey. 2015. "These trees have stories to tell": Linking Denesoline knowledge and dendroecology in the monitoring of barren-ground caribou movements in the Northwest Territories, Canada. MSc.

Haarsma, D. 2013. Spatial Analysis of Agricultural Land Conversion and its Associated Drivers in Alberta. MSc. 110 pp.

Halter, G.J. 2014. A Review of Alberta Agriculture and Alberta Water Law. MAg, 75 pp.

Johny, Judit. 2014. Economic roles of social networks in rural India. MSc. 109 pp.

Kanjital, Manikarnika. 2015. Agricultural Producers' Costs of Adoption of Wetland Restoration Beneficial Management Practice: Estimation and Spatial Transferability. PhD. 314 pp.

Kessler, Anna. 2014. Social Contexts of Environmental Practices: How Sustainable Development Discourses and Trust Mediate the Use of Genomics in the Alberta Beef Industry. MSc, 110 pp.

Kim, Hyun No. 2014. The demonstration and capture of an ecosystem service value: Three different methodological approaches. PhD. 153 pp.

Li, Zheng. 2014. Benefit-cost analysis of NIRS feeding initiative for the Alberta dairy and beef cattle industry. M.Sc. 161 pp.

Lim, K. R.G. 2015. How can we Help Farmers When They Are Already Clever? Adaptation and Neighbor Networks. MSc. 61pp.

Long, Amanda. 2014. Can Hybrid Poplar Plantations Reduce the Cost of Achieving Caribou Conservation Goals? MSc. 131 pp.

Lu, Wei (Wes). 2015. The impact of climate shocks on Alberta's economy: a vector autoregression analysis. MSc. 126 pp.

Mason, R.F. 2015. Investigating Cultures of Food Security: Traditional Ecological Knowledge and Gender in Rural Kongwa, Tanzania, MSc, 104 pp.

Matin, Anahita Hosseini. 2014. Canadian Consumers' Preferences for Food Products Produced By Novel Technologies. MSc. 199 pp.

Myae, Aye Chan. 2015. The political economy of animal testing and traceability in response to transmissible spongiform encephalopathies (TSEs). PhD. 308 pp.

Nelson, Paul. 2014. "Dine Local: Analyzing the Practices of "Locavore" Chefs in Alberta." MSc. 78 pp.

Ngo, Sandra. 2015. Consumer Preferences for Vitamin A Sources in India and Canada, MSc. 208 pp.

Ngwenya, K. 2014. Gender-differentiated Innovations in Response to Climate Change: Evidence from Smallholder Agriculture in 4 countries in East Africa. MSc. 129pp.

Noga, W. 2014. Two Papers on the Cost Effectiveness of Conservation Programs. MSc Thesis. 210 pp.

- Ntoni, Jonathan Okyere. 2015. Technology adoption by Ontario dairy producers: productivity-enhancing versus cost-minimizing technologies. M.Sc. 111 pp.
- Omosa, Eileen. 2014. "Negotiating Rural Land Tenure: An exploration of influential factors in Maasai household decisions to hold land as individual property in Ewaso Kedong, Kenya." PhD. 249 pp.
- Paddison, R.M. 2015. The Paradox of Fragmentation in Regional Resource Management: Implications for Cumulative Effects Assessment in Alberta. MSc. 245 pp.
- Paul, Sharon. 2015, Contribution of Home Gardens to Household Income in Kerala, India, MSc. 129 pp.
- Paddison, R. 2015. The Paradox of Fragmentation in Regional Resource Management: Implications for Cumulative Effects Assessment in Alberta. MSc. Thesis. Department of Resource Economics and Environmental Sociology. University of Alberta, Edmonton. 236pp.
- Rollins, C. 2015. Exploring preferences for poplar biotechnology and integrated choice latent variable models. MSc. 95 pp.
- Shooshtarian, A. 2015. Economics of Hybrid Poplar Plantations in Western Canada for Bioethanol Production. MSc. 98pp.
- Thompson, Y. 2014. Smallholders' willingness to accept to avoid deforestation in Cameroon MSc. 144pp.
- Tshuma, P. 2014. Potential factors affecting competition for private land between Forestry and Agriculture in Canada. MSc. 94pp.
- Vorona, Mykhailo. 2015. The prospects for the advanced low altitude remote sensing systems in precision agriculture. MBA/M.Ag. 62 pp.
- Wang, Haoluan (2015). Examination of Agricultural Land Conservation in the Alberta Capital Region, Canada, M.Sc., 202 pp.
- Work, J. 2014. Prospects for Plantations of Improved Poplars in Alberta: Price Behaviour and Competition for Land. MSc. 83pp.
- Xie, Shuoyi. 2014. Farm-level costs and benefits of beneficial management practices for irrigated crop production systems in southern Alberta. MSc. 199 pp.
- Zhao, Jinna. 2015. A Theoretical Ambiguity Model of Demand for Weather Index Insurance and Implications for Weather Index Insurance Market Development in Developing Countries. MAg. 98 pp.
- Zhen, M. 2014. Two Essays on Market Interdependencies, Price Volatility and Volatility Spillovers in the Western Canadian Feed Barley, U.S. Corn and Alberta Cattle Markets. MSc. 166 pp.
- Zigah, G. 2014. Social Networks and Economic Behavior: Impacts of gifting in Tanzania. MSc. 109pp.



# PUBLICATIONS

## Journal Articles

Adamowicz, W., M. Dickie, S. Gerking, M. Veronesa, D. Zinner. 2014. Household Decision-Making and Valuation of Environmental Health Risks to Parents and their Children. *Journal of the Association of Environmental and Resource Economics*. 1(4): 481-591.

Amati, C., Parlee, B. and Krogman, N. Experiences of Opportunity in the Northern Resource Frontier. *Northern Review*. 41: 181-206.

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Ambec, S., Langinier, C. and Marcoul, P. 2015. Spatial Efficiency of Genetically Modified and Organic Crops. *Strategic Behavior and the Environment*. Vol. 5: pp 31-59.

An, H. and R. Carew. 2015. "Effect of Climate Change and Use of Improved Varieties on Barley and Canola Yield in Manitoba." *Canadian Journal of Plant Science*. 95: 127-139.

Anders, S. and C. Schroeter. 2015. The Economics of Diabetes, Diet-quality, and Obesity. *Frontiers of Endocrinology – Diabetes*, 6 (33): <http://dx.doi.org/10.3389/fendo.2015.00033> (open access).

Anders, S. and M. Beye. 2015. Social Consumption and Price Rigidity of Quality-tier Differentiated Private Labels. *Applied Economics Letters*, 22 (11): 911-915.

Anderson, J., Long, A., and M.K. Luckert. 2015. "A financial analysis of establishing poplar plantations for carbon offsets using Alberta and British Columbia's afforestation protocols". *Canadian Journal of Forest Research*. 45(2): 207-216.

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Biesbroek, Robbert, Johann Dupuis, Andrew Jordan, Adam Wellstead, Michael Howlett, Paul Cairney, Jeremy Rayner & Debra Davidson. 2015. Opening up the black box of adaptation decision-making. *Nature Climate Change* 5, 493-494.

Bunch, M., Parkes, M., Zubrycki, K., Venema, H., Hallstrom, L., Neudorffer, C., Berbés-Blázquez and Morrison, K. 2014. "Watershed Management and Public Health: An Exploration of the Intersection of Two Fields as Reported in the Literature from 2000 to 2010." *Environmental Management*. 54(2): 240-254.

Clare, S., N. Krogman, K. Caine. 2014. "The "balance discourse": A case study of power and wetland management." *Geoforum*. 49:40-49.

Coles, D., Frewer, L.J. and Goddard, E. 2015. Ethical issues and potential stakeholder priorities associated with the application of genomic technologies applied to animal production systems, *Agricultural and Environmental Ethics* 28 (2):231-253.

Dassanayake, W. Luckert, M. and S. Mohapatra. 2015. Heterogeneity of Household Structures and Income: Evidence from Zimbabwe and South Africa. *Journal of Policy Modeling*. 37(4): 668-692.

Davidson, Debra J., Andrews, J. and Pauly, D. 2014. "The effort factor: Evaluating the increasing marginal impact of resource extraction over time." *Global Environmental Change* 25: 63-68.

Davidson, Debra J. and Gismondi, M. 2014. "Footprints in the Oilsands: A Double Diversion with global repercussions." *Sociological Imagination* 50(1): 13-34.

Davidson, D.J., Jones, K.E. and J.R. Parkins. 2015. Food safety risks, disruptive events and alternative beef production: a case study of agricultural transition in Alberta. *Agriculture and Human Values*, Online First, 8 May. P. 1-13.

Dunggleby, W.D., Williams, A. Holtzlander, L., Thomas, R., Cooper, D., Hallstrom, L.K., Ghosh, S. and O-Rourke, H. 2014. Hope of Rural Women Caregivers of Persons with Advanced Cancer: Guilt, Self-Efficacy and Mental Health." *Rural and Remote Health*. 14:2561.

Flint, C. and N. Krogman. 2014. "Contemporary Water Issues in Rural America." Pps 190-207 in *Rural American in a Globalizing World: Problems and Prospects for the 2010s*. Eds. Bailey, C. L. Jensen, E. Ransom. Morgantown, WV: West Virginia University Press.

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- Hobbs, J. and Goddard, E. 2015. Consumers and Trust: Overview for Special Section Food Policy, Volume 52, April, Pages 71-74
- Hossack, F. and H. An. 2015. "Does Payment Type Affect Willingness-to-Pay? Valuing New Seed Varieties in India." *Environment and Development Economics*. 20: 407-423.
- Huddart-Kennedy, H. Krahn and N. Krogman. 2014. "Egregious Emitters: Disproportionality in Household Carbon Footprints." *Environment and Behavior*. 46(5):535-55.
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- Johnson, P., Krogman, N., Johnson, L. and Cassady St. Clair, C. 2015. "Dead Ducks and Dirty Oil: Media Representations and Environmental Solutions." *Society and Natural Resources*. 28(4):345-359.
- Jones, Kevin, and Debra J. Davidson. 2014. "Adapting to Food Safety Crises: interpreting success and failure in the Canadian response to BSE." *Food Policy* 49: 250-258.
- Kaler, A. and J.R. Parkins. 2015. Food, Donors and Dependency Syndrome(s) in South Sudan. *Sociology of Development* 1(3): 400-416.
- Kilemo, D.B., J.R. Parkins, I.I. Kerario, and S.J. Nindi. 2014. Making community based environmental impact assessment work: Case study of a dairy goat and root crop project in Tanzania. *International Journal of Development and Sustainability* 4(4): 767-783.
- Kits, G., W.L. Adamowicz and P.C. Boxall. 2014. Do conservation auctions crowd out voluntary environmentally friendly activities? *Ecological Economics* 105:118-123.
- Li, L. W. Adamowicz and J. Swait. 2015. The Effect of Choice Set Misspecification on Welfare Measures in Random Utility Models. *Resource and Energy Economics*. 42:71-92.
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## Journal Articles (con't)

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