

BOOK OF ABSTRACTS

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ARCTIC DIVISION - AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Plenary 1

- Dr. Brett Favaro, Memorial University of Newfoundland

Community Futures 1

i. Canadian Inuit Subsistence Culture and the Antinomies of the Mixed Economy

Authors(s): George W. Wenzel, McGill University

From the advent of the fur trade in the Canadian Arctic, it has been predicted that the effect of Euro-Canadian and now globalized cultural and economic pressures would transform the traditional Inuit economy from a system of socially instituted cooperative food production to one in which Inuit labour would be commodified. Instead, the contemporary Nunavummiut subsistence culture has evolved a mixed economy adaptation with two intertwined sectors: one still based in the production, distribution and consumption of socially valued food resources (the "informal" sector) and the other where money is a critical, but scarce, resource and the etically determined economic measure (the "formal" sector). This hybridization is a response to contemporary Inuit reality in which traditional foods are vital to physical and cultural health and money essential for the technologies needed to produce these foods. While the adaptive effectiveness of the mixed economy has been repeatedly demonstrated, certain antinomies regarding the harmony between its sectors have sometime been glossed over, if not outright ignored. This paper examines the inherent tension between the material provisioning and the social maintenance aspects of this adaptation within contemporary Inuit subsistence culture.

ii. Drifting Knowledge

Authors(s): George D. Harris & Iuliana Morar, , University of Calgary

Today's Arctic settlements are under an increasing development pressure as both Inuit and non-Inuit population is steadily growing. While in more southern regions the natural processes are perceived to happen in the background of our lives, in the Arctic these processes are an integral part and cannot be ignored. Over thousands of years of inhabiting the north, the Inuit have learned to adapt their way of life and incorporate them into their living, building a wealth of arctic-living knowledge. Initially modelled after southern principles of urban planning, current planning policies in Nunavut shifted recently to incorporate local social priorities and environmental knowledge of wind, snow, and re-vegetation, however, upon implementation,

conflicting interests between policies call for hard design decisions. The research of Drifting Knowledge narrates the challenges encountered by a large-scale master-planning process in Iqaluit, Nunavut where the work revealed tensions in the planning policies between natural processes, social and economic realities. Through the analysis of a real-life project, this presentation explores the need for a holistic, site-specific, integrated planning process in the arctic that incorporates traditional Inuit knowledge along with scientific evidence and reflects the social logic of the people.

iii. Self-Determination, Sustainability, and Wellbeing in an Alaska Native Community

Authors(s): Heather Sauyaq Jean Gordon, University of Alaska Fairbanks

Alaska Natives are a diverse group of people with different language groups and over 200 tribes. They have a history of colonization and are still a colonized people, but through all this, they still strive for wellness for their people. This project works with an Alaska Native community to explore how tribal members and nontribal members utilize self-determination, either individually and/or as a group, to achieve individual and/or tribal/community sustainability and wellbeing. This project uses the method of ethnographic futures research to conduct interviews about the future. The interviewee talks about their optimistic, pessimistic, and most likely futures, ultimately explaining how to get to the most optimistic future. Focus groups and a community meeting were conducted, following the interviews, to talk about the ideas identified in the interview optimistic scenarios and how to achieve those ideas. These results demonstrate to the tribe what tribal and nontribal members think the tribe can do to improve sustainability and wellbeing, and how to achieve those goals. The data speaks to other peoples, both Indigenous and non-Indigenous, demonstrating how utilizing futures research can engage community members in self-determining acts through planning, and potentially making changes, for an optimistic future.

Community Futures 2

i. Staying in place during times of stress: Case studies from Norton Sound, Alaska

Authors(s): Glenna Gannon, University of Saskatchewan

In the Arctic, climate and the environment are undeniably changing. What this means is that the people who reside in Northern places are being forced to change and adapt to new conditions. In Norton Sound, as in much of rural Alaska, some of the demographic changes that might be anticipated- such as out migration- are not the case, and communities are in fact growing. This research is an investigation into two community case studies from Norton Sound, Alaska that seeks to better describe and understand what factors are driving and enabling people to stay, and what these changes mean for communities. Furthermore, this research helps identify policy

opportunities that would enable communities to adapt to current and future environmental changes in ways that make sense regionally and culturally.

ii. Defining the Role of Social Sanctuary in Arctic Community Development

Authors(s): Vonique Romayne Mason-Edwards, University of Saskatchewan

Abstract Since post World War II the international community has adopted a strategy of global development as a means of preventing and alleviating human suffering. The Gross Domestic Product (GDP) method designed in the 1930's as a means of measuring the size of a country's economy, persisted until the 1990's when the Human Development Index (HDI) was introduced as a supplemental and in some instances, alternative means of measuring a country's development under the United Nations Development Programme. In the postmodern era, countries continue to be measured by their ability to provide socio-economically stable communities for their citizens. As northern countries pursue their international and domestic development mandates, it is increasingly important for policy makers at all governmental levels to be able to accurately measure how well they are providing for their citizens, and to determine with increasing accuracy which bundle of policies, programs and systems will be most useful to rural northern community development and rehabilitation. Developing a valid and reliable index for conducting multidimensional analyses of available data/statistics as a means of predicting with certainty the needs of Arctic communities and consequently improving the nation's capacity for crafting and implementing an effective development policy matrix for rural northern communities is invaluable. There is an undeniably complex dimension to this challenge, as a significant percentage of the population of the North is Inuit, and methods of measuring development must encapsulate indigenous cultural perspectives.

iii. Entrepreneurship in Canada's North: Big Ideas for Small Towns

Authors(s): Prescott C. Ensign, Wilfred Laurier University

If challenging conditions produce economic opportunities (necessity leads to invention), then cold, inhospitable places should produce some 'hot' ideas. For a number of years, scholars and policy makers have been searching for some generalizable truths, some universal advice to help young and old, male and female, Aboriginal and non-Aboriginal, poor and non-poor, etc. to participate in the market economy, make a productive contribution, and generate wealth. Small, isolated towns in Canada, can produce vibrant enterprises. But many ideas and inspirations are squelched by the same surrounding conditions. Is it the person or place that matters? Nature, nurture, and serendipity all might play a role in entrepreneurs launching and growing a business. If universal rules/theories from elsewhere often do not fit, what have we learned and what can we say and do? From successes (and failures) in commerce can we draw inferences and build for the future? In this presentation I will explore a constellation of anecdotal evidence of what is

happening on the ground in Northern Canada and with audience help, perhaps draw some conclusions.

iv. Developing an Arctic Urban Sustainability Index

Authors(s): Robert Orttung, George Washington University

This presentation will summarize the efforts to develop an Arctic Urban Sustainability Index. The Index includes five categories (economic, environmental, social, governance, and planning) and targets approximately 50 Arctic cities with populations of 12,000 or over. The idea is to determine what works and what does not so that best practices can be transferred among cities. So far, the project has developed a set of 20 core indicators and is seeking feedback from Arctic stakeholders to better understand what is most important to them. The central hypothesis for the project is that citizen participation in all aspects of sustainability is crucial to success. While the level of participation varies from cities in Russia to those in Scandinavia, there are opportunities for citizen engagement in all contexts. We are working to figure out the best methods for identifying and measuring the most effective forms of participation.

Arctic Health 1

i. Arctic Microbes: Population Abundance and the Effects of the Warming Environment – a baseline study

Authors(s): Linda Nicholas-Figueroa, Jaime Patkotak, Olive Kanayurak, Ana Stringer & Daphne Mueller, Iᓵsaᓖvik College; Joanna Green, University of Alaska Fairbanks, BLaST

The effects of global warming have been demonstrated to be the most profound in the Arctic, ranging from the increased rate of sea-ice decline to melting permafrost, which causes changes in the microbiota. These microbial changes could lead to a cascade up the trophic levels, ultimately affecting the health of arctic vegetation and animals, and thus the subsistence lifestyle and health of people in the Arctic. The soil is a known reservoir of microbiota and a major driver of microbial diversity within an ecosystem. Soil samples have been collected from the soil and permafrost layers of the Arctic tundra. DNA is extracted using two methods. DNA is extracted directly from soil samples. These samples will be sequenced using the Nanopore MinION next generation sequencer. Samples are also cultured and DNA is extracted from isolated bacterial colonies and will be sequenced for 16S ribosomal DNA. Isolates will be compared to known DNA sequences. Initial results from one isolate map to *Pseudomonas brassicacearum* (a Gram-negative soil bacteria) with known interactions with plants, has been indicated as both a growth promoter or pathogenic in different instances. This result reinforces the need for further research into microbial dynamics associated with changes in the Arctic.

ii. **Remote health systems and climate change in the North: A framework for conceptualizing the impact of climate change**

Authors(s): Paddy Enright, University of Waterloo

Remote communities, such as many of those found in North America's north, often face increased challenges in both maintaining and accessing health systems relative to communities in other regions. Despite the dedication of health professionals and decision-makers, issues related to remoteness and resource constraints (including financial, human and technological resources) often hamper the capacity of remote health systems to provide care. Climate change threatens to exacerbate these challenges by threatening the programs, people and facilities that comprise remote health systems. This paper reviews the anticipated impacts of climate change on remote health systems in the North and utilizes the findings of this review to present a framework to aide in conceptualizing how climate change may impact remote health systems. As complex adaptive systems, the boundaries of remote health systems are dynamic and may be influenced by environmental changes. The proposed framework incorporates considerations on how local characteristics (e.g. remoteness, regional climate fluctuations, etc..) influence both the structure and functionality of health systems. In the context of health policy this paper provides further support for locally developed adaptations aimed at enhancing the resilience of remote health systems.

iii. **Sustainability, health and acceptance of water and sanitation systems in rural Alaska**

Authors(s): Kaitlin Mattos, University of Colorado; John Warren, Jacqueline Schaeffer, Korie Hickel & Mia Heavener, Alaska Native Tribal Health Consortium

The Portable Alternative Sanitation System (PASS) is an innovative water system being evaluated for use in rural Alaska communities without piped water or sewer. The PASS treats self-hauled water onsite and makes use of a waterless urinal and urine-diverting dry toilet and ventilation system. PASS units are expected to improve health in the home by increasing the quality and quantity of water available in the home and decreasing the interactions that households have with waste (greywater, urine and feces). Further, PASS are revolutionary in rural communities because they are relatively inexpensive, non-permanent and mostly portable infrastructure that provide health benefits in the short-term without compromising investment in larger water and sanitation infrastructure. Although PASS provide a promising technical solution to rural water and sanitation issues, there is a growing acknowledgement that sound infrastructure is not sufficient for providing a long-term solution to water and sanitation service. This study examines sociocultural factors, economic support and operation and maintenance criteria that promote household acceptance and long-term sustainability of PASS units installed in five villages in rural Alaska. This analysis will be used to advise engineering and education/behavior change initiatives and inform management of a larger project PASS project in 2019.

Arctic Health 2

i. **Telehealth Implementation in Northern Communities**

Authors(s): Heather Exner-Pirot, University of Saskatchewan

Introduction: Northern and Indigenous communities face well documented barriers to accessing health care service. Telehealth-the means of delivering health information and health care through the use of telecommunications technologies, promises to address some of these barriers. There is significant evidence confirming that telehealth provides consistently high quality care at a lower cost. Research demonstrates that telehealth outcomes and patient satisfaction rates are generally found to be equivalent or higher than in-person services. However, introducing new systems like telehealth in large and complex health service bureaucracies presents challenges. Methods: A one day Forum was held to discuss the opportunities and challenges to telehealth implementation in northern and Indigenous communities of Saskatchewan, Canada. Participants included Provincial and Federal Governments, health disciplines, First Nation Councils and Band leaders, administrators and public representatives Results: Telehealth use in most northern and Indigenous communities in Canada remains in an early adoption phase. The technology exists; but the processes and uptake are evolving slowly. Seven core recommendations resulted from the discussions. Issues such as network reliability in northern communities, confusion around payment for services and a redistribution of provision of health services at the point of care in an efforts to keep clients in their home community using telehealth. This presentation will describe a strategic approach to moving forward with a telehealth strategy inclusive of northern, Indigenous communities. Conclusions: For telehealth to be successful and sustainable, it will need to become part of “normal” operations. Post-secondary health sciences programs can be instrumental in normalizing telehealth.

ii. **Rural Youth Health: a comparative study**

Authors(s): Laleah Sinclair & Paul Peters, Carleton University

Rural Canadians access lower quality health care than urban Canadians (Young & Chatwood, 2011). Mental health services in particular have been identified as an important aspect of health care that is more difficult to access in northern, rural, and remote communities (Kielland & Simeone, 2014; Young & Chatwood, 2011; Ossterveer & Young, 2015). The opportunity to compare youth-specific health services in rural Sweden and rural Canada arose as part of an international and inter-disciplinary student research network, the Free Range program (wiispa.org/freerange). Semi-structured qualitative interviews with service providers and municipal level officials conducted in Sorsele, Vasterbotten, Sweden, supplemented by a scoping review on rural youth health, helped to contribute to an existing research project assessing the accessibility of the Swedish youth clinic network (Goicolea et al., 2016). The author is leading the

case study in Sorsele, Vasterbotten, Sweden and will apply the same questions to health service providers, and municipal officials Inuvik, NWT, Canada. The interviews will be transcribed and analyzed for key themes, and results will be compared to assess the similarities and differences in rural health care access for youth, with particular attention paid to the subject of youth mental health.

iii. New Horizons for IASSA: The State and the Future of Arctic Social Sciences

Author(s): Andrey N Petrov, University of Northern Iowa

This presentation by the President of the International Arctic Social Sciences Association will offer an overview of the Arctic Horizons report that outlines major milestones, trends and priorities in Arctic social sciences research. The report resulted from a series of workshops with primarily US researchers devoted to identifying strengths, weaknesses, emerging science questions and funding priorities for social sciences in the Arctic. These findings are placed in the broader international context from the positions of the International Arctic Social Sciences Association (IASSA).

Plenary 2

- David Natcher, Director, Indigenous Land Management Institute, University of Saskatchewan

Arctic Science & Education

i. Scientists in Residency Fellowships

Author(s): Lisa Busch, Victoria O'Connell, Jan Straley & Mary Lou Madden, Sitka Sound Science Center

The Polar Scientists in Residency Fellowship (SIRF) removes the obstacles that make it difficult for scientists to relay their research to students and citizens in rural Alaska. The National Science Foundation-funded SIRF at the Sitka Sound Science Center has improved science communication for scientists working in rural Alaskan communities and increased scientific literacy among rural community members. By providing facilitated outlets for community engagement, and one on one science communication training, SIRF is assisting Arctic scientists in relaying their research findings. A four week mini sabbatical for scientists allows researchers to work on a variety of areas including developing new research ideas, analyzing data, getting a paper ready for publication while learning to navigate in a small town. The Fellowship assists researchers in connecting with community members, leaders, and students in a way that is geographically, and culturally appropriate. It provides citizens time to get to know researchers and to learn about current Arctic research and scientific ideas. The outcomes of this fellowship are: an increase in

state standardized test scores in Sitka, better communication from scientists and an expansion of career paths for rural students.

ii. Rethinking Science and Environmental Education: An Indigenous Perspective

Author(s): Ranjan Datta, University of Saskatchewan

A challenge facing many Indigenous schools, especially those that serve culturally- diverse populations is the disconnection between schools and students' home communities. A key to environmental education is Indigenous knowledge-oriented science education. Despite their obvious significance, Indigenous knowledge-focused environmental education approaches remain relatively neglected in science education. The purposes of this paper are to help to address this gap based on a community-based science and environmental education program offered in the Dene First Nation community in Saskatchewan, Canada. Through this example, this Indigenous knowledge-oriented approach seeks a partnership between students' experiences of learning science in the community and school by synthesising critical and place-based learning. An Indigenous knowledge-oriented land-based learning of science and environmental challenges all educators to reflect on the relationship between the kind of education they pursue and the kind of places we inhabit and leave behind for future generations.

CANADIAN RURAL REVITALIZATION FOUNDATION CONFERENCE

Plenary Session – Conversation Café: CRRF & the Future of Rural

Host: Craig Pollett, Municipalities Newfoundland and Labrador

With speakers Bill Reimer, Concordia University and Sarah Breen, CRRF

Plenary Session – Community Navigators

John McArthur, Pheasant Rump First Nation

Plenary Panel – Rural Mental Health

Duane Favel, Mayor, Village of Ile-a-la-Crosse

Karen Dyck, Psychologist, former Director of the Rural and Northern Psychology Program, University of Manitoba

Megz Reynolds, Farmer and Mental Health Advocate

Rural Labour Force Development

i) Refugees in New Brunswick: Experiences of the settlement process

Presenter(s): Mikael Hellstrom, University of New Brunswick

Studies on refugee reception in third tier cities and rural areas generally agree that refugees often leave these less densely populated areas in favour of major metropolitan areas. The first two years of residence are key to retention. If the refugee has not left the area by then, they are much more likely to stay permanently (Carter, Morrish, & Amoyaw, 2008; Donato, Tolbert II, Nucci, & Kawano, 2007; Fonseca, 2008; Hugo, 2008; Krahn, Derwing, & Abu-Laban, 2005).

New Brunswick is the only province in Canada with a declining population. The provincial government has made it clear that it considers the demographic issue a primary concern (Government of New Brunswick, 2014), and sees refugee reception as a potential way to break this trend. Retention of the accepted refugees is thus a particularly prioritized issue here. This paper details refugee experience of settling in New Brunswick, showing issues refugees identify as barriers to settlement, as well as the suggestions the respondents presented as potential solutions. They discussed their foreign work experience, the services they appreciated, the primary barriers to employment, their suggestions for solutions and finally their reflections on whether they are going to stay in New Brunswick or not.

ii) Recruiting Talent to PEI: Results of a Survey

Presenter(s): Laurie Brinklow, University of Prince Edward Island

The government of Prince Edward Island (PEI) has embarked on a strategy that links economic growth and prosperity to population growth, with immigration as a key component. Now the Department of Workforce and Advanced Learning wishes to target Islanders who have lived on PEI previously but now live elsewhere. In order to develop effective, evidence-based policy to encourage their repatriation, it is important to better understand why they moved away, and what they see as the opportunities and barriers to returning.

In early 2018, the Institute of Island Studies (IIS) designed and administered a survey in partnership with the Department. Consisting of 26 questions, a link was sent electronically to alumni from PEI post-secondary institutions; posted to the WorkPEI Facebook page; and included in the IIS's newsletter. A total of 683 respondents painted a picture of why they left and what it would take to come back, with results ranging from education and jobs to lifestyle and family.

This research has implications for rural communities: how can the data be used to help build healthy and prosperous communities? This paper explores some of the findings and follow-up in developing evidence-based policy that supports repatriation as an economic development strategy.

iii) Labour Supply and Demand Trends in Canadian Fish Harvesting Industry

Presenter(s): Rick Williams, Canadian Council of Professional Fish Harvesters

The fishing industry in most regions of Canada is experiencing sustained economic growth due to rising global demand for seafood. Demographic (age profile) and labour supply challenges are significant barriers to realizing economic growth opportunities in rural coastal communities.

Innovation, Business Development & Social Enterprises**i) What works in business incubation? Lessons and best practices for rural**

Presenter(s): Tara Vinodrai & Amy Arbuckle, University of Waterloo

Business incubation and acceleration have become widely used tools in economic and community development. Yet, there are a wide range of approaches to the design and delivery of business incubation and acceleration processes. Drawing on research and findings from a multi-year study of business incubation in North America funded by the Ontario Ministry of Agriculture, Food and Rural Affairs, this presentation reviews emerging best practices and models in business incubation, highlighting the range of approaches being used to support start-ups and new venture creation in smaller places. Based on case studies of success and failure in rural communities, it draws together lessons for economic development practitioners and civic leaders

in rural communities who are invested in the long term sustainability and prosperity of their communities.

ii) Coworking Takeover Week

Presenter(s): Mary Doyle, Rural on Purpose

Coworking Takeover Week is a pilot project developed by Rural on Purpose. Rural on Purpose is a social enterprise working to create economic opportunities in rural communities by exploring high impact workforce trends.

Studies show that within a decade the majority of our workforce will be freelance, and 18 per cent of all freelancers currently live in rural areas. The Rural Coworking Pilot engages, educates and collects data from community members over a 10-week period ending with a Coworking Takeover Week, where the town "becomes" a coworking community for one week.

Business owners have a chance to test a potential secondary income stream by creating space in the under-utilized areas of their business in which freelancers can work. Freelancers and home-based workers get a chance to connect and collaborate with other remote workers, as well as their local business community.

The pilot tests a rural solution to building a freelance support ecosystem. It involves the entire community, explores business expansion and retention opportunities and provides an alternative to the standalone coworking centre that is statistically unsustainable in rural communities. The pilot tests for desirability (Does the community want it?), feasibility (Can they build it?) and viability (Is it financially sustainable?)

Capacity Building Session - Identifying Competencies for Rural Policy Practitioners

Organizer(s): Gary McNeely, Brandon University & Rural Policy Learning Commons

One of the key deliverables for the Rural Policy Learning Commons is a graduate certificate in rural policy. As a foundation for this certificate, a research project was undertaken in 2015 and 2016 with the goal to identify subject areas that are essential for attaining competency in rural policy. This workshop has two key components: (1) a report on the project's research findings, and (2) a group discussion among the workshop participants guided by a series of open-ended questions pertinent to identifying competencies for rural policy practitioners.

1. The research project involved a comparative analysis of 22 Canadian Masters of Public Policy (MPP) and Master of Public Administration (MPA) programs and the learning outcomes presented at the 2015 International Comparative Rural Policy Studies (ICRPS) summer institute. The scan of 22 MPP/MPA programs revealed a marked absence of policy training focused on rural issues and yet an important

congruence in the learning offered in the MPP/MPA programs and the summer institute. The analysis showed that training in analytical tools and socio-political contexts is foundational for policy design and implementation. However, acquiring competency in rural policy also requires coursework centred on rural policy sectors.

2. The capacity building focus of the workshop is a self-reflexive exercise, asking participants to discuss and report on a set of questions:
 - a. What knowledge sets, skills, and attitudes are expected of rural policy practitioners?
 - b. What gaps in knowledge, skills, and attitudes appear to be evident among rural policy practitioners?
 - c. What organization and/or institutions offer training in these areas?
 - d. Are rural and public policy conceptually, politically, or practicably distinct?

Rural Health

i) **Resilient rural health systems: A review of interventions and resources aimed at building climate resilience in rural health systems**

Presenter(s): Paddy Enright, University of Waterloo

Canada's rural areas are under increased pressure to maintain the health systems needed to protect and promote the wellbeing of rural residents. This building pressure can be attributed to numerous often interrelated factors, including: aging demographics, declining economic opportunities, increased occupational risks, an increased burden of mental and physical illness, and increased risk of all-cause mortality. Increasingly, climate change is being added to this list. Climate change threatens to bring novel challenges (e.g. Lyme disease) but also to intensify the pressure already being felt by rural communities and health systems (e.g. wildfires in economically disadvantaged forestry-sector dependent communities). Health systems are characterized by the World Health Organization as being made up of the people, institutions and resources devoted to protecting and promoting health, organized under established policies and norms. In already strained rural areas, climate change not only creates an increased need for health systems, but threaten the very people, institutions and resources that these systems rely upon.

This building pressure makes it clear that Canada's rural health systems must adapt to climate change to build the resiliency needed to protect and promote rural health now and in the future. This paper reviews English language peer-reviewed and grey literature related to both climate change and health adaptation interventions (e.g. policies and programs) and resources (e.g. toolkits and guidance documents) targeted at rural health systems. The identified interventions and resources are discussed and assessed for their effectiveness and utility in rural Canadian health systems. Recommendations are made for enhancing the effectiveness of climate change

and health adaptation efforts in rural health systems and possibilities for further research into climate resiliency in rural Canadian health systems is discussed.

ii) Exploring Telehealth for Building Community Capacity and Well-being in Northern and Remote Indigenous Communities

Presenter(s): Joelena Leader, University of Saskatchewan

As technological systems play greater roles in bridging gaps in health care access and delivery for remote regions, it will be increasingly critical to identify innovative and successful digital health models that can lead to long-term sustainable programs. The adoption of telehealth solutions in northern and remote Indigenous communities are growing, however, implementation barriers and structural constraints from policies, resources and technological factors continue to affect the sustainability of programs and services. Previous research has tended to focus on the efficiency and cost effectiveness of telehealth in facilitating healthcare, yet more work needs to be done to present a complete picture of users' needs and perspectives in relation to the socio-cultural and technical factors shaping telehealth use in rural and remote Indigenous community contexts. This presentation examines the strengths and barriers for implementing telehealth technologies within Indigenous cultural contexts utilizing best practices based on an in-depth review and synthesis of academic, policy, and grey literature. I propose that the mutual shaping of technology and society approach serves as a path forward for exploring users' perspectives and socio-cultural factors shaping the ways in which technologies are designed, implemented, and used, and alternatively how technologies affect our construction of social values and meanings.

iii) Building Capacity, Promoting Health: The Story, Accomplishments and Challenges of Gateway Centre of Excellence for Rural Health

Presenter(s): Heather Mair, University of Waterloo; Scott Brown, University of Guelph

Many people view rural Canada through the lens of the rural idyll, picturing green fields, forests, endless lakes and fresh air, and small friendly communities that are populated by kindly people who look out after each other. And while there is perhaps a kernel of truth to this description, this is an idyllic vision that fails to capture the realities of rural life in Canada. Many rural communities struggle to maintain adequate human and financial resources to continue to deliver services to their residents while being faced with contracting economies, out migration of young people, and an ageing population.

One area that separates rural people from their urban counterparts is their health, wellbeing and healthcare infrastructure. Those occupations often associated with rural people (farming, fishing,

mining and forestry) have high levels of occupational risk and are some of the most dangerous jobs in the economy. Rural people have a shorter life expectancy and higher morbidity rates. They also have higher levels of chronic diseases such as high blood pressure, arthritis/rheumatism and diabetes and are twice as likely to be hospitalized for diabetes than their urban counterparts (Lauzon, 2016). These chronic diseases are exacerbated by the fact rural Canadians, adults and children, have higher rates of obesity. Rural people also suffer from higher levels of depression, have higher rates of suicide, are more likely to self-report that they are in poor health, and have higher rates of accidents that lead to death or disability. Their health and wellbeing are often compromised by geographical isolation and limited access to adequate healthcare services, healthcare professionals and a policy environment that has an implicit urban bias. Add to this a dearth of investment in rural health research relative to urban environments, and it is clear rural Canadians are at greater risk for poor health, regardless of age or sex and this is unlikely to change.

This presentation provides a counterweight and tells the story, the success, and the challenges of the Gateway Centre of Excellence for Rural Health. Gateway started as a not-for profit 10 years ago in Huron County, Ontario, and despite the challenges they have faced over the years, they have been innovative and highly successful. The presentation will tell Gateway's story, highlight their successes, and document their challenges. We will include a discussion of their organizational structure, research enterprise, educational innovations, and knowledge mobilization activities. We conclude by offering our assessment of their impact upon the region and consider how lessons from Gateway lessons can be extended to other rural locales.

Reference: Lauzon, A. (2016). The rural learning challenge: Meeting the health needs of rural residents through ICTs. In (V.C.X. Wang ed.) Handbook of Research on Advancing Health Education through Technology, IGI Global.

Rural Youth Outmigration

Panelists

Is Rural Youth Outmigration a Problem?

Karen Foster and Hannah Main, Dalhousie University

Whither Rural Youth: A look at the number who stay, the number who leave and the number of return migrants

Ray D. Bollman, Brandon University & Memorial University

Rural Food, Farming & Production

i) Farmers 'Welfare depiction in the pro-GMOs (genetically modified organisms) Literature on African farmers

Presenter(s): Yassine Dguidegue, University of Missouri



This paper focuses on proponents of genetically modified (GM) crops for Africa who argue that there are social benefits experienced by adopters of the technology. The paper presents the proponents' sources of evidence, research methods, contextual background, and their research networks. The paper serves the purpose to grasp how arguments on the social welfare experienced by GM adopters are portrayed by GM proponents; it also serves the purpose to critique and respond to grand claims made about the technology in relation to addressing farmers' social needs. This is accomplished using two main methods: meta-analysis, and citation network analysis. Meta-analysis is used to grasp the main tenets of GM proponents' arguments on GM benefits: presentation of major claims on social and health benefits of GM technology, deployed research methods, temporal and geographic context of data, and authors' disciplinary and institutional backgrounds. Citation networks analysis is used to identify major scholarly works which advance such claims and how much they influence the policy arena, namely policy institutions which advance claims promoting GM social benefits.

ii) Growing Agricultural Communities in Northern Ontario: Lessons from Anabaptist Farmers

Presenter(s): Sara Epp, University of Guelph

Issues of food security are heightened in northern Ontario, as the agricultural activities are limited and networks for the distribution of fresh, local food tend to be informal and not widely utilized. Within northern Ontario, large pockets of underutilized agricultural land are available and some communities are experiencing an agricultural renaissance. Given the availability of land and relatively low land value, farmers from southern Ontario are moving to the north to rework old farmland and with this move, improving access to locally produced food. One particular community moving to the north are Anabaptist farmers from southwestern Ontario. More commonly referred to as Old Order Mennonites, and easily identified by their use of a horse and carriage for personal transportation, their migration to the north has resulted in the growth of six rural communities. Their motivation to move to northern Ontario is related to the abundance of large tracts of inexpensive farmland and future opportunities for their children to own farms; such opportunities were not deemed possible in southwestern Ontario. As a result of this movement, many northern communities now have access to fresh produce, such as melons and corn, not previously grown locally. While their successes in agriculture have come with challenges, northern communities and northern farmers can learn from their experiences to improve food security and access to locally produced, fresh food.

iii) **Taking up the plow (again)? Exploring the history and resurgence of First Nations farming practices and food production in the Canadian Prairies**

Presenter(s): Peter Friedrichsen, University of Saskatchewan

The Canadian Prairies are known as a centre of agriculture, but the experiences of Indigenous peoples are rarely included in this narrative. This research will investigate past and present Indigenous farming and food production practices using Central Saskatchewan as a case in exploring First Nations building their own food systems and using food production as a driver of community development. Historical data will be collected using archival research, document review, and semi-structured interviews with Elders who hold knowledge of past farming practices. Contemporary data will be gathered through semi-structured interviews with the individuals or “champions” and organizations who are spearheading First Nations food system initiatives in Central Saskatchewan. A case study of Muskeg Lake Cree Nation will use participant observation, semi-structured interviews, and focus groups to investigate the knowledge, ideas, and interests of community members about farming and food production in their community, including an emergent “Food Forest” initiative. I hope to bring regional champions (including those from Muskeg Lake) together to discuss and deliberate upon the initial research findings and think about the ways by which farming, gardening, and other forms of local food production could be used in innovative ways to support development pathways among local First Nations.

Rural Renewable Energy

i) **Aboriginal business leaders' perceptions of biomass energy innovation**

Presenter(s): Ryan Bullock, University of Winnipeg; Melanie Zurba, University of Winnipeg; John Parkins, University of Alberta; and Max Skudra, Canadian Council for Aboriginal Business

This research examines the views of Aboriginal business leaders from forestry and energy firms regarding biomass energy innovation and analyzes how current perceptions influence framings of biomass industry and policy opportunities. The application of frame analysis enables new understanding of perceptions of the biomass energy sector, including preferences and expectations surrounding biomass energy innovation and growth. Accordingly, this research analyzes Aboriginal business leaders' beliefs and attitudes used to identify perceived problems and solutions for developing biomass energy. Our approach enables points of agreement and disagreement among leaders to be compared. Twenty-three interviews with specialized informants were undertaken with forestry and energy representatives identified through the Canadian Council for Aboriginal Business natural resource industries directory. Comparisons among sectors and firms offer new understanding whether and how biomass energy is perceived by different groups, and what ameliorative measures might hold the most promise with respect to improving current understanding of biomass energy potential. Main outcomes include the advancement of knowledge concerning the nature of similarities and differences in beliefs and

attitudes about biomass energy, and the production of strategies to promote renewable biomass energy awareness and opportunities.

ii) Friends In Low (Carbon) Places: Supporting Clean Economies for Rural and Indigenous Canadians

Presenter(s): Diane Adams, University of Saskatchewan; Lindsay Colley, Ryerson University

The role of rural and Indigenous (R&I) communities in the low-carbon energy future is important to all of Canada. There are substantial risks and opportunities in Canada's low-carbon energy transition. Both experts and young R&I Canadians hope for a positive low carbon future for their communities. But they worry their vision will not be realized on our current path. Our research and consultation with experts and young R&I leaders revealed several strategic priorities and policy recommendations that support a just transition to a prosperous low-carbon future for R&I communities.

KEY THEME RECOMMENDATIONS

1. Engaging Rural and Indigenous Communities in Policy Development
2. Planning for the Role of Energy in Economic and Social Development
3. Building Resilience for a Low-Carbon Future

iii) Energy Co-management in Community led Renewable Energy (CBR) Projects: A Policy Gap between Canada and European Union

Presenter(s): Mohammad Nazrul Islam, Grenfell Campus Memorial University

Co-management is a governance system which consists of the sharing of responsibilities, entitlements, decentralized institutional rules and agreements between the state and local community for maintaining certain resources. Community-led renewable energy (CRE) is a kind of collaborative energy management where the state, regional and other nongovernmental organizations have been involved. Literature shows that some CRE projects have been more successful than others. However, little comparative research is out there to explain why some are successful and some aren't; and very few of studies focus on the co-management aspects of CRE. This study explores the patterns of co-management including policy regulations, ownership structure, stakeholder's participation and decision-making processes of CRE both in Canada and European Union (EU) using the summative content analysis method. This study found that different EU countries have applied various effective policy tools like Feed-in-Tariff (FIT), Feed-in-Premium (FIP), Community and Renewable Energy Schemes. Consequently, different renewable energy co-op and community-based ownerships models have been developed and local residents can be engaged in the highest level of the participation ladder. Most of the Canadian renewable energy policies, in contrast, are more technocratic and accelerate "energy developer" oriented commercial ownership as compared to the EU. Therefore, public

participation in these renewable energy projects is like "Decide-Announce-Defend Model". Strong decentralized governance, awareness raising, and policy reformation should be increased for prolific renewable energy co-management in the Canadian context with lessons to be learned from the EU experience.

Panel - Policy Capacity for Rural and Remote Regions: The Northwest Saskatchewan

Panelists

Razak Abu, Post-Doctoral Fellow, Northwest Saskatchewan Policy Unit

Darrel Burnoff, Regional Project Director, Northwest Saskatchewan Policy Unit

Capacity Building Session - Beyond Serendipity: Building Capacity for Strategically Connecting Research to Policy and Practice

Facilitator(s): Peter Smith, Canadian Centre for Rural Creativity; Ruth Mealy, Canadian Rural Revitalization Foundation

Have you ever wondered how to get your research into the hands of policy makers or how to influence practitioners? Researchers create new information on a regular basis but too often this research never reaches the key audiences. Too often this exchange of information happens serendipitously, rather than as planned practice.

In this capacity building workshop leading experts in connecting research to policy makers and practitioners will share their collective wisdom. The session will review key methods for making meaningful connections, how to identify key audiences, and how to structure research findings so they are useful beyond the academic. Participants are encouraged to bring an example of their research as the session will be hands-on, with opportunities to apply newly learned strategies to your research!

Rural Sustainability

i) **Regional sustainability in rural Newfoundland: An ongoing research-community collaboration**

Presenter(s): Brennan Lowery, Grenfell Campus Memorial University

The proposed presentation will share an ongoing research-community collaboration in rural Newfoundland that is four years in the making. The presenter will describe his involvement in this initiative in the Bonavista region, a rural coastal region on the east coast of Newfoundland. This region has received province-wide attention due to its economic and social revitalization based in the growth of sectors like tourism, niche products, the arts, and a variety of other activities that are bringing new residents and investment to the region. In 2014, researchers and

regional leaders began working together on an initiative to assess the sustainability of the region using indicators of key ecological, social, economic, and cultural factors. This project has followed an asset-based approach, seeking to highlight the regions' strengths and identify opportunities for mobilizing these capacities to solve identified challenges. To that end, regional leaders recently organized a community-based forum on built heritage – one of the region's key assets – and how it can spark new place-based development opportunities. The presenter will discuss this project through the lens of collaborative governance and consider how rural regions can pursue such initiatives through a multi-stakeholder approach that highlights collaboration between communities, sectors, and internal and external partners.

ii) Commodifying underdevelopment? Rural cultural tourism

Presenter(s): Hannah Main, Dalhousie University

Across Canada and indeed the world, continued globalisation and urbanisation is putting strain on rural areas. Policymakers are balancing between fiscal responsibility and maintaining an appropriate level of service in these areas, and they look to economic development strategies to solve their problems. In rural communities, the danger is that economic development policies, while ostensibly bringing financial and employment benefits, may displace local ways of life. Tourism is a popular economic development strategy, but communities struggle with promoting tourism without sacrificing local traditions. Cultural tourism, which commodifies local culture as part of a tourist experience, is one way to avoid the creative destruction that new initiatives bring. But cultural tourism presents another set of challenges: Do rural people want their culture to be sold? How does cultural tourism change the way people represent their culture to outsiders? How does cultural tourism change the way visitors view the place they stay? Who chooses what aspects of culture are profitable? What is lost when the folk culture is leveraged as a commodity?

I examine rural cultural tourism as an economic development tool using Nova Scotian communities as case studies. In Nova Scotia, tourism has long been a part of many rural communities, and lessons from these communities shows us that while rural tourism may be profitable, we must look more closely at who profits from rural tourism and what is lost in the process.

iii) Why Rural Canada needs Post Office Banking

Presenter(s): Brenda McAuley, Canadian Postmasters and Assistants Association (CPAA)

Bank branches are closing and pulling out of rural Canada, forcing rural residents to travel to access basic postal services. A campaign has been underway for several years to bring back the

postal bank in Canada to increase financial inclusion and shore up revenue for Canada Post. A motion to that effect is underway in the House of Commons (M-166). However, although they are the hearts and often the sole means of connection for rural communities, hundreds of rural post offices have been closed over the past two decades, shutting off the potential to revitalize rural communities by offering better jobs and services through innovative use of the vast Canada Post retail network. The presentation will examine the state of affairs for post offices and bank branches in rural Canada; look at some of the innovative ways in which rural post offices have been expanding their services in other countries; and suggest ways for rural residents to support the postal banking campaign.

Rural Health

i) **The importance of a sense of belonging and place attachment for the retention of rural health professionals – Findings from Australian qualitative research**

Presenter(s): Catherine Cosgrave, University of Melbourne

Australia and Canada face significant challenges in providing adequately staffed rural health services. Research into factors affecting retention of rural health professionals has identified retention is a complex combination of organisational, professional and social/personal factors. Yet, the majority of studies have largely ignored the latter. Recent research has found that social/personal factors are a major retention determinant. My research confirms this and has found that sense of belonging and place attachment significantly affect retention. Building on these findings I have developed a 'whole-of-person' rural retention improvement framework.

I am currently working in partnership with two public-health services in rural Victoria to develop a health workforce strategy to improve retention. I have interviewed eligible health staff, key informants from each health service and local community members. This interview data and my framework have been drawn on to develop context-specific retention interventions; these are currently being trialled. This presentation will focus on community and/place-based issues and the community strategies being trialled. The challenges and opportunities for rural communities to take an active role in addressing workforce shortages will be discussed. This presentation has broad relevance for rural communities and local governments interested in exploring innovative approaches for addressing professional workforce shortages in their communities.

ii) **Women's Access to Health Care System: A scoping review of the Barriers to Breast and Cervical Cancer Screening in rural Canada**

Presenter(s): Reyhaneh Golestani, Carleton University

Accessibility of gender-equitable, efficient and appropriate health services for rural communities is an issue that has received considerable attention. However, the focus in small, often isolated villages and communities is most often narrowed only on geographic accessibility. This research

highlights that geographic accessibility is only one factor to consider when analyzing women's health needs in rural communities. To illustrate this, a scoping review was undertaken to answer the question: What are the barriers and facilitators for breast and cervical cancer screening in rural and remote communities? Breast and cervical cancer as two of the most frequently diagnosed cancers in women, and at the same time the most preventable cancers with effective screening tests for early detection (Ahmad, Stewart, Cameron, & Hyman, 2001). This paper is a comprehensive attempt to highlight the existing literature about breast and cervical cancer screening in rural Canada. This review identified key themes about existing barriers that may inhibit access to cancer screening for women in rural Canada and provides a conceptual framework of gender-based access to care for small, rural communities in Canada. Themes beyond geographic distance include concerns regarding the screening process, such as, time and cost related issues, perceived emotions, and health literacy. Our findings show that materials addressing accessible, free of charge and easily available breast and cancer screening procedures, mobile screening interventions, same-sex health providers and self-sampling programs could improve the early screening.

iii) Northern Care for Vulnerable Elders/Seniors

Presenter(s): Bonita Beatty, University of Saskatchewan

Northern Indigenous Caregivers need help in caring for their frail loved ones, especially the elders/seniors. That is the message of a recent small study entitled the northern Aboriginal Caregivers project (2016-2017) which explored the experiences of Indigenous family caregivers accessing healthcare services for their elders/seniors in north-eastern Saskatchewan. Good health is a daily struggle for many elders/seniors with multiple, chronic health conditions (diabetes, respiratory and cardiovascular problems, dementia). The cascading effects of these can often force elders into city healthcare facilities that do not accommodate their needs. The research findings identified many issues that families and elders/seniors encountered in accessing needed healthcare services especially in the hospitals and long-term care facilities. Key recommendations suggested the provision of health education (staff, families), plans to address the language, culture and jurisdictional barriers, to increase social and economic supports, and to ensure culturally safe environments for the frail elders/seniors. Canada has not properly addressed Indigenous elder/senior health services either. A 2011 Parliamentary report noted the need to build capacity for delivering palliative care to Indigenous communities, including research and education that better accommodates their socio-economic and cultural needs. The study suggests healthcare systems, both at the reserve level and in the cities, need to better coordinate their healthcare plans to address the needs of frail northern Indigenous elders/seniors.

Beyond Pipe Dreams: Successes, Challenges, and Opportunities for Alternative Drinking Water and Wastewater Systems in Rural Canada

Panelists

Robert Patrick, University of Saskatchewan

Cameron Curran, University of Guelph

Kelly Vodden, Grenfell Campus Memorial University

Sarah Minnes, Grenfell Campus Memorial University

Many rural communities across Canada have drinking water and wastewater systems that are either private (e.g., drinking water wells, septic systems) or deviate from municipally operated piped infrastructure models (e.g., trucked water). The proper maintenance and operations of these systems are important for not only human health, but also environmental health. This panel explores the successes, challenges, and opportunities for these alternative water and wastewater systems. The panel will consist of four speakers from across Canada. Kelly Vodden (Memorial University of Newfoundland- Grenfell Campus) will outline challenges and opportunities for private well management found in the small rural town of Black Duck, Newfoundland and Labrador. Sarah Minnes (Memorial University of Newfoundland) will discuss capacity limitations for source water protection for private wells in Ontario found in her doctoral research project. Cameron Curran (University of Guelph) will outline preliminary findings from a collaborative research project investigating the role of best practices for septic system maintenance in protecting rural water quality in Canada. Lastly, Dr. Robert Patrick (University of Saskatchewan) will discuss findings related to First Nation communities and challenges related to household water cisterns, trucked water, as well as septic "shoot-outs". The panel will allow for ample discussion on this important rural issue, and will provide considerations for what can be done broadly in rural and remote areas for sustainable and healthy drinking water and wastewater systems.

Capacity Building Session - A Walk on the Wild Side

Organizer(s): Randy Johns, Keewatin Community Development Association

More than half of Saskatchewan is northern boreal forest; it is a virtual cornucopia of foods and nutraceuticals with over 350 edible boreal plant species. Viewed in contemporary terms as a 'wasteland or moose pasture', a Walk on the Wild Side will share emergent opportunities inherent to the northern food ecosystem – as well as the culturally and sustainable approaches being utilized to capitalize on what the land is providing. This session will include leveraging their traditional uses in healing as well as the illustrated growth potential for exporting several key non-timber food items outside the region – and in some cases – outside of Canada. The focus will be on four species of interest with both R&D and commercial potential: birch fungus, sarsaparilla, fireweed and wild rice.

Panel Presentation – Vitality and Veracity of Rural Research Centres

Panelists:

Greg Halseth, University of Northern British Columbia
Brennan Lowery, Grenfell Campus Memorial University
Valencia Gaspard, University of Guelph
Ruth Mealy, Canadian Rural Revitalization Foundation

The vitality and sustainability of rural communities in Canada requires supports, policies, practices and people, dedicated and creative people. Rural research centres seek to aid in supporting rural vitality by offering needed information through researching on the benefits of investments, innovation, and durability of rural life, as well as sustaining important partnerships with diverse networks of stakeholders in rural regions. This panel will share recent survey results from the RPLC network that is inviting collaboration among Canadian rural research centres, the Rural Research Centres Network (R2CN). Among other findings, the R2CN is inviting more engaged research through community partner collaborations and working creatively to better leverage the resources and insights of rural research centres (RRC). The report writing and data collection and policy advocacy work that emerges from RRC has had great impact in Canada and elsewhere. Might we be in a time for reinvigoration and repositioning of these centres for a more central role in the discourse on the vibrancy of rural life? Come share your ideas on the importance of facts driving policy along with the power of story telling and community building for rural life in Canada.

Tools for Rural Community Development

i) **Facilitating Return to Rural Communities with Online Tools and Support**

Presenter(s): Heidi Watson, Heidi's Occupational Therapy & The Canadian Electronic Health Information System

The Electronic Health Information System helps health professionals start and run efficient, paperless, private practices anywhere in Canada. We do this by providing online courses, websites, client directed scheduling, health record charting, transcription and editing services, and billing software. We also support health professionals in business planning, marketing, and many other business topics. Working in a rural private practice myself, I am very aware of the many opportunities and demands for more health services in the rural areas. Word of mouth and networking in small communities has made my practice very successful. I believe my success can be replicated in other rural communities. Rural youth must move into urban centers to attend university. Once they are new graduates with heavy student loans, they don't get to see the rural opportunities and they seek out employment in urban centers, usually near where they were trained. This leads to oversupply in urban centers and chronic shortages in rural communities. Through my own experience and E-HIS, I work to support and facilitate health professionals in

returning to our rural communities, starting private practices, and filling the gaps in the local public health system.

ii) Parkland County – Planning tools for shared prosperity

Presenter(s): Carol Bergum, Planning and Development, Parkland County AB

Parkland County, a rural municipality west of Edmonton, offers a vibrant atmosphere with an assortment of farming properties, country residential acreages, a diverse range of small and large businesses and a multitude of recreational opportunities. Supportive and effective planning and development policies and regulations are essential to ensure complete communities with a population of 32,097 across an area of 242,595 hectares.

Discover some practical planning and development tools the County has put in place, or is developing, to facilitate economic diversification and prosperity in this rural community:

- Priority policy areas to facilitate and focus investment strategically for hamlets, agriculture, recreation and industry
- Specialized land use bylaw districts and uses to facilitate economic development from the small farm to a large industrial park
- Process enhancements and collaborations to facilitate a partnered approach to encourage major business investment and community development

iii) Coal in Coronach: Heritage as a Tool for Community Resilience

Presenter(s): Kristin Catherwood, Heritage Saskatchewan

This presentation will focus on the motivation, methodology, processes, and lessons learned from the living heritage project, "Coal in Coronach." Coronach, Saskatchewan, population 700, is by most markers a thriving community however, its coal industry has only a decade left, and once it goes will take 300 paychecks with it. Though this looming reality is well known in Coronach, it had not yet been a topic of everyday conversation, much less future planning. Completed in 2017, the Coal in Coronach living heritage project approached the question of the community's future through its coal heritage. By celebrating and recognizing the importance of coal to the community's past and present, citizens can begin to grapple with the reality of a future without coal. Approaching questions of community sustainability and resilience through a lens of heritage enables communities to shift perspective on contemporary issues. Rooting a community in its identity helps inspire innovative solutions for the future.

The project incorporated elements of the UNESCO Convention on the Safeguarding of Intangible Cultural Heritage and was grounded in sustained, meaningful community engagement. It brought the larger community, including youth, together around a common topic which has relevance for the whole community. The project's success provides inspiration and a clear process for how

rural communities can use heritage as a tool in the struggle against the pressures of shifting economies and changing demographics.

Rural Resilience

i) **Siblings and their impact on rural youth**

Presenter(s): Dianne Looker, Acadia & Mount Saint Vincent Universities

A lot has been written about the effect of family on youth decisions, especially for youth in rural areas. Families provide support and resources for youth; resources that allow them to stay or to leave, and to return to their home community in times of stress. Much of the research on families in rural areas has focused on parents; their attitudes, their levels of education, their encouragement of further education, and more generally the resources they do (or do not) have available for their children. However, most youth have at least one sibling; many have more than one. Siblings provide an important part of the context in which rural youth make decisions about their education and geographic mobility, yet we know little about the role of siblings in these decisions.

This paper provides some detailed information about siblings and how a sample of youth in rural and urban Nova Scotia describe their relationships with their siblings and the impact siblings had on their life course decisions. Data are from a longitudinal survey of youth, who provided information at ages 17, 21 and 29. Detailed qualitative quotes complement the numeric survey data from these participants. Preliminary results show that 95% of the youth have siblings; two thirds have an older sibling. Just under a half have a sibling who has attended or is attending some form of post-secondary education. Thus, siblings are a rich source of information (accurate or inaccurate) about the advantages and disadvantages of various post-secondary options.

Understanding the impact of siblings can help rural families and those advising rural families to better identify options for rural youth that will feed their success as well as (hopefully) the well-being of their home community in the long run.

ii) **Building resilience for rural LGBTQ+ Youth and their communities**

Presenter(s): Stephanie Gariscsak, University of Guelph

When evaluating the lived experiences of rural LGBTQ+ youth, it comes as no surprise that their mental health and wellness is consistently rated lower in comparison to their urban, heterosexual counterparts (Tjepkema, 2008). The research design focused on developing a qualitative, exploitative, and phenomenological approach to understanding the lived experiences of this marginalized population. The goal of this research project was to explore the lived experience of LGBTQ+ youth residing in rural communities. In order to satisfy these requirements, body mapping was utilized as the data collection tool. Body mapping is defined as the creation of life

size images through the use of creative mediums such as drawing and painting (Cornwall, 1992). The main principle behind this technique is to encourage participants to challenge established truths and promote emergent discourses and reflection upon their lived experiences. Participants were collected for this study utilizing convenience sampling of youth attending drop-in programming with local community partners and were between the ages of 13-18 and enrolled in an Ontario Secondary School. A consistent theme identified within the body maps collected was the importance of developing strategies for maintaining resilience within this marginalized population. The main outcome of this presentation will be to understand strategies for building resilience within rural LGBTQ+ youth, as well as understanding the significance of community-based capacity building to serve this marginalized population.

iii) Transitioning to the new rural cannabis economy

Presenter(s): Tracey Harvey, Selkirk College & University of Guelph

The Government of Canada has indicated the legalization of recreational cannabis will take place by July 1st, 2018 under the Cannabis Act, Bill C-45. Key commitments of the Act are to keep cannabis out of the hands of youth and to move profits out of the pockets of organized crime. Up until now cannabis has played an important, but hidden role in the socio-economic fabric of the interior of British Columbia, particularly in the Kootenay region. As the Kootenay region prepares for the implementation of the incoming act, there is a recognized challenge posed by the lack of available best practices, particularly related to rural places. There is both a need to understand social implications related to cannabis legalization, and a desire to advance economic opportunities of this emerging industry. This project explores the socio-economic implications, focusing on the challenges and opportunities that will accompany legalization. Objectives include: 1) Develop an improved understanding of the emerging social and economic impacts of cannabis legalization; 2) Share lessons learned from other jurisdictions and facilitate the consideration of policy options; and 3) Explore emerging applied research, training and education needs and opportunities. Expected social outcomes include a better understanding of the individual health and overall social effects of cannabis legalization, such as youth use, dependence, hospitalizations, and driving under the influence of cannabis. Economic outcomes include information to support better regional-level decision-making, a better understanding of the economic potential and the potential impact to the workforce. Together the expected outcomes will provide empirical evidence for informing local, provincial, and federal cannabis policy. Knowledge mobilization strategies will ensure stakeholders have the opportunity to contribute to and discuss key findings.

Lunch Keynote: Farming and the Rural Economy: The Past, Present, and Future

Darrin Qualman, Food and Climate Researcher

Rural Development & Agriculture

i. **Shared stories: teachings around the meaning of food sovereignty from rural and Indigenous communities**

Presenter(s): Kathleen Kevany, Dalhousie University; Danielle Robinson, University of Guelph; Stephen Penner, University of Guelph

What roles might local, regional, provincial governments in Canada be fulfilling to support sustainable rural communities and food sovereignty? And what roles might rural communities be playing in bolstering Canadian food sovereignty? What delicious opportunities are emerging from food production designed to support sustainable rural communities and food sovereignty? As climate change is the greatest health, justice, and environmental issue of this time, how are disparate food sector actors orchestrating a timely shift to sustainable and sovereign food systems and outcomes? Food sovereignty movements call for the protection and valuing of local, artisan and rural food cultures as an alternative to the onslaught of cheap and imported processed foods. The movements' support for diverse local and traditional food knowledge and stories, and food production systems may serve to strengthen local economic development, regional collaboration, as well as improve the quality of food produced and consumed. Food sovereignty might not only be about defending food cultures but also about reinvigorating and rebuilding on the land activities for more sustainable outcomes. This may necessitate working to enhance 'food literacy' and modifying consumer tastes. Part of food sovereignty and food literacy are the re-valuing of whole and minimally processed foods; increasing the demand for 'real', fresh, local and organic foods; and developing gardening and food preparation skills.

ii. **Foncier et coordination agricoles: des actifs inséparables pour la construction territoriale dans les espaces péri-urbains**

Presenter(s): Mikael Akimowicz, Brandon University

La composante agricole des espaces périurbains a longtemps été perçue comme une réserve foncière. Aujourd'hui, cette dernière est plutôt considérée comme une ressource à protéger. À l'échelle de l'exploitation agricole, ces enjeux se traduisent par un ensemble d'opportunités et de contraintes auxquelles doivent s'adapter les agriculteurs. Pour cela, les agriculteurs définissent des projets en mobilisant leurs représentations du monde. Dans cette communication, nous proposons d'éclairer l'importance de la coordination des acteurs du développement agricole des espaces périurbains pour la préservation du foncier agricole et le maintien d'un secteur agricole dynamique.

Nous nous intéressons à la fois aux projets développés par les agriculteurs, afin de comprendre les mécanismes de leur adaptation face aux évolutions de leur contexte productif, et par les organismes de développement agricole, afin d'identifier les orientations portées par les organismes du territoire. À travers le prisme des décisions d'investissement, nous analysons

l'impact de deux politiques publiques, l'interSCoT toulousain en France et la Ceinture de Verdures de l'Ontario au Canada. Pour cela, nous avons recueilli les cartes mentales des décisions d'investissement lors d'entretiens avec les agriculteurs que nous avons croisés avec les témoignages des acteurs du développement agricole récoltés lors d'un focus group.

Les résultats montrent que:

- la préservation du foncier agricole périurbain n'est pas suffisante au maintien d'un secteur agricole dynamique
- il existe un manque de coordination entre les différents acteurs des deux territoires examinés (outils de travail inadaptés)

Porteurs de visions de l'activité agricole parfois divergentes, les actions respectives des acteurs manquent parfois de cohérence. Un travail de fond pour faire converger les représentations futures des acteurs du territoire semble nécessaire.

iii. **What People Say: Application of Rural Definitions and Descriptors of Community in Ingersoll, Ontario**

Presenter(s): Neil Stoop, University of Guelph

A definition of rural is necessary to develop, implement, and evaluate policy as well as to inform research. Definitions of rural are often sorted into four broad categories: descriptive, socio-cultural, rural as a locality, and rural as a social representation. Within the categories, various definitions exist, each with strengths and weaknesses. Researchers and policy makers debate the effectiveness and appropriateness of rural definitions in various situations. This research initiative seeks to understand how rural is used and defined by residents of Ingersoll, Ontario and explore the implications of this understanding for local development, public policy, and research. Ingersoll is the smallest still growing census agglomeration in Ontario with a population of 12,577. Based on this population, Ingersoll does not qualify as either census rural nor rural small town. Citizens of Ingersoll were surveyed to understand how they describe their community and relate their community to the concept of rural. The survey results were compared to common definitions of rural found in academic literature and government policy and programming.

Panel Presentation – Putting Rural on the Agenda: The Prominence and Priority of Rural Issues and Opportunities in Policy Making

Panelists

Matteo Vittuari, University of Bologna

Patrick Lévesque, Office of the Third Party, Prince Edward Island

Ryan Gibson, University of Guelph

Jane Atterton, Scotland's Rural College

Kristof Van Assche, University of Alberta

Rural Water Issues

i) **Water, land, and indigenous engagement in governance**

Presenter(s): Warrick Baijius, University of Saskatchewan

The degree to which land use planning is integrated with watershed planning varies in time and space, leading to significant differences in environmental outcomes, often dependent on planning and management regimes. Many indigenous and rural communities experience negative impacts from poor water quality or insufficient water quantity at an acceptable quality, though this is not always due to 'environmentally determined' factors. Wetland drainage and conversion of native prairie to agriculture, along with forestry and agriculture along the southern margins of the boreal zone, have led to significant declines in water quality and quantity for rural indigenous populations within Treaty territories. Further, loss of access to traditional territory, resources, and sacred areas has impacts on culture and community health, and may contravene indigenous and Aboriginal rights.

Historically, structural barriers have prevented indigenous peoples from voicing their concerns, sharing their knowledge of impacts, and offering their perspectives on socio-ecological relationships within planning processes. Recent changes have shifted planning and management to be more participatory and inclusive of Aboriginal and Treaty rights holders. However, First Nations participation in planning, and recommendations from those processes, do not always lead to the environmental changes needed to support rural indigenous health. This presentation reports on a community-based planning process in a small Manitoba First Nation. Faced with a changing environment and ecology, and dissatisfied with slow progress through provincial action, the Nation chose to undertake a planning process to identify key valued areas, gather knowledge about changes in water and land within those areas, and develop a plan of action to address their concerns.

ii) **Watershed health and cumulative impacts assessment: Managing for ecological health**

Organizer(s): Tara Lynne Clapp, Rural Policy Learning Commons

Since the early nineties, many jurisdictions have struggled with how to assess and manage cumulative impacts in the review and assessment of project proposals. In the practice of regulatory environmental review, impacts are primarily evaluated on a project-specific basis. Several provinces have attempted to develop an approach to assessing and monitoring cumulative environmental impacts. Typically, "valued components" are identified to reduce the complexity of the data required. These have often been charismatic species whose habitat needs are relatively well understood. However, this approach may not reflect the fundamental requirements of ecological productivity and ecosystem health. More recently, practitioners have

suggested that the assessment and monitoring of ecological units are required to limit and manage cumulative environmental impacts. In this presentation, I will review the use of water and watersheds as a valued component in cumulative impacts assessment and management.

iii) Healthy water, healthy community

Presenter(s): Robert Patrick, University of Saskatchewan

Access to safe drinking water for many First Nation communities in Canada remains a serious problem. At any one time, approximately one in five First Nation communities is on a boil water advisory, some lasting for over a decade. There are many technical, institutional and political factors contributing to the water quality problem. To "fix" the water quality problem will require action at multiple scales and across numerous agencies and programs. One such program, source water protection planning, aims to protect a water source from the threat of water contamination. Source water protection is a land and water planning activity that first identifies threats to a water source and then seeks to reduce, or eliminate, those threats through land management actions. Riparian fencing, well-head protection and landfill relocation are all examples of management actions. Across the Canadian prairie several First Nation communities have engaged in source water protection planning. This presentation will provide an overview of these planning initiatives while outlining early success stories as well as some ongoing challenges.

Panel Presentation - Canada In a Changing Climate: Rural and Remote Communities

Panelists

Sean Manners, Grenfell Campus Memorial University
Kelly Vodden, Grenfell Campus Memorial University
Amy Kipp, University of Guelph

Panel Presentation - Community Driven Research

Panelists

Sturgeon Lake First Nation
Valerie MacLeod & Vivian Ramsden, University of Saskatchewan
Community of Cumberland House
John Desjarlais, University of Saskatchewan

Rural Labour Force Development

i) Investigating Precarious Employment in Rural Ontario

Presenter(s): Valencia Gaspard, University of Guelph

Precarious employment is a form of unstable work characterized by "high levels of uncertainty, low income, a lack of control over the labour process, and limited access to regulatory

protections” (Noack & Vosko, 2011, p.3). Often experienced as contract work, involuntary part-time work, low wage work and unincorporated self-employment with no paid help (Bollman, 2017) precarious employment contrasts the identifiers typically associated with a standard employment relationship, which are: “access to training, regulatory protections and social benefits, decent wages, and a social wages” (Noack & Vosko, 2011, p.3). There is a well-developed body of literature providing evidence that there are negative health, economic, and social impacts related to precarious employment in urban centres, while little consideration has been given to the particularities that might make the rural work experience different.

Rural employees for example, are more likely to be underemployed, are more likely to re-enter the labour market after having a break in employment and earn lower wages while experiencing a lower cost of living than their urban counterparts (Bollman, 2015; Vera-Toscano et al., 2004). These differences, along with issues of transportation, population, and industry, highlight how investigating precarious employment in urban centres may not capture the full rural experience of the same trend.

ii) A community development approach to prosperous labour force development

Presenter(s): Greg Halseth, Laura Ryser & Marleen Morris, University of Northern British Columbia; Sean Markey, Simon Fraser University

Current approaches to labour force development have focused on the economic side of the ledger. Investments have typically been based upon assessments of industrial labour demands in the short- to near-term future and sought to satisfy those demands through short-term training or skills upgrading initiatives. While useful for plugging gaps in the existing economy over the short term, such an approach fails to develop the type of workforce that rural places need to be successful in the future. This presentation focuses upon a community development approach to questions of labour force development. As such it emphasizes three things. The first is the need to understand one’s place or region in the contemporary global economy. The second is to understand the processes of change occurring within both the economy and our community demographics, all with a focus on the needed elements of a future workforce, namely that it be a learning workforce that is resilient and adaptable in a rapidly changing world. The third is a structured long-term investment strategy towards building a resilient learning workforce.

iii) Community-led Education and training programs in First Nations to build healthy homes and a healthy workforce

Presenter(s): Shirley Thompson, University of Manitoba

Community-led, project-based education is transforming community development, employment opportunities and housing, as well as building capacity locally in two remote First Nations. A SSHRC talent grant program is funding education stipends for youth in Garden Hill and

Wasagamack First Nations, which are two fly-in communities in northern Manitoba, to undertake a 15 month Boreal Home Builders Course. SSHRC normally funds graduate students but in this case 80% of the funding will go to fund entry-level post-secondary level students in First Nations. A number of social enterprises and post-secondary programs in Manitoba are assisting with this applied adult education to resolve development challenges and build sustainable enterprises, such as sawmills and farms, to provide permanent jobs and programming. As part of the 15 month training program students will build two houses in each community using local wood and get certificates in small motors, wilderness safety, forestry, sawmill grading, chainsaw, housing maintenance and carpentry, with the opportunity to challenge level 1 carpentry apprenticeship. These micro-certificates will reward each stage on the way towards the students' program diploma and facilitate their move into the labour force. This project will inform policy regarding rural housing, education and food issues.

Rural Data & Digital Technologies

i) You win some, you lose some: lessons learned from a community-based research project on digital technologies in rural communities

Presenter(s): Wayne Kelly & Mikael Akimowicz, Brandon University

In the current digital age, planning for economic and social development in a rural community triggers new opportunities and challenges. The Rural Development Institute at Brandon University embarked on an 18-month community-based research project to help four rural communities in southern Manitoba better understand the opportunities and challenges that they are facing related to digital technologies. We engaged specifically with businesses to better understand digital technologies and economic development; with seniors, who represent a growing share of rural population with specific needs and capacities; and with youth a critical population that communities struggle to retain despite their importance for the future. Additional community groups, like newcomers, were also mobilized to help the community research team understand other issues and contexts for digital technologies in a rural setting.

In addition to sharing some of those results, this presentation aims to discuss important lessons and reflections on the process of community-based research. The choice to use a Community-Based Research approach was successful in this project, albeit not without significant challenges. Community members helped co-lead the research process ensuring that the research questions and research tools suited each of the participating communities. However, challenges arose around timeframes and overall research priorities. Integrating the feedback and digital research interests in to the original project idea from four different communities triggered misunderstandings and delays in the project. Engaging community as co-leaders resulted in confusion for other stakeholders around the project's research priorities and ultimately required a revision of the initial research plan. In this presentation we explore what success and failure

look like when communities and researchers work together to explore digital technologies in a rural setting.

ii) Opportunities and Obstacles for Open Data in Rural Canada

Presenter(s): Alex Petric, University of Guelph

Open access to government data has become more common across industrialized countries in the 21st century. Several cities have shifted to more open forms of government and some rural areas in Canada have pursued similar initiatives. Open Data, as a tool, can allow for a wider and more even conversation surrounding the direction and growth of a community among its various members and organizations. This research seeks to understand the opportunities and challenges for Canada's rural communities in implementing more open access to their local data systems, particularly given their unique rural character and the characteristics that follow from this. This work involves a survey of and a series of follow-up interviews with municipal actors to learn about their experiences in their communities and their perspectives on this topic.

iii) Data Analytics for Rural Transformation (DART)

Presenter(s): Nelson Rogers, Community Ingenuity

In the face of evolving open data and e-government initiatives, small municipalities and community organizations are having to deal with the challenges of turning the high volume of data output into useful information in support of rural community development. In 2015, the Big Data for Small Places (BD4SP) program was developed to enable the effective use of data for rural community development - using a capacity-building approach to data access and analysis.

In 2018, an innovative enhancement to the BD4SP program is being developed by Community Ingenuity in collaboration with the Algonquin College Data Analytics Centre and the County of Frontenac. Data Analytics for Rural Transformation (DART) - a low-cost, user-friendly tool for the integration and visualization of data relevant to rural community development. Many data sources have menus defined by departments and agencies without recognition of the unique characteristics of rural areas and small towns. Often these data sources are static, historic (looking backwards - not projecting future trends) and include a region or municipality but rarely a sub-municipal zone.

DART will enable a municipality or community organization to access and integrate commonly used data sources, even if in different formats, query the data through simple menus as defined by the user group, and see the results displayed in simple charts, graphic representations, or on a map of their area. If required, the data can be presented at the neighbourhood or village (sub-municipal) level. The results will be valuable in assessing community needs and opportunities, planning services, tracking results of initiatives, and enhancing evidence-based decision-making.

Panel - South Bay War Veterans Park: Our Lands, Our People - Respecting Traditional Métis Practices and a Traditional Place of Gathering Places in a 21st Century Context

Panelists

Gerald Roy, Northern Village of Île-à-la-Crosse
Lenore Swystun, Prairie Wild Consulting Co.
Samantha Mark, Prairie Wild Consulting Co.

Plenary Panel – Water Governance: A Prairie Perspective

Phil Loring, University of Guelph
Sarah Breen, University of Saskatchewan
Helen Baulch, University of Saskatchewan
Lalita Bharadwa, University of Saskatchewan
Robert Patrick, University of Saskatchewan
Graham Strickert, University of Saskatchewan

Plenary Panel - Reconciliation and Rural Development

Neil Sasakamoose, Battlefords Agency Tribal Chiefs
Shaun Soonias, Saskatchewan First Nations Economic Development Network
Ray Orb, Saskatchewan Association of Rural Municipalities

Poster Contributions

i) **Catching the train? Digital Technologies usage in Rural Manitoba**

Presenter(s): Mikael Akimowicz & Sherine Salmon, Rural Development Institute -
Brandon University

Digital technologies represent new opportunities for development in rural communities. Unfortunately, the expectations for these digital technologies as a panacea for rural communities, economic and otherwise, have not always been met. Many rural communities have been slow to adopt these technologies or achieve meaningful outcomes, further contributing to the urban-rural digital divide. Researchers have identified the use of digital technologies as an important area requiring better understanding in order to realize their potential for expanding and developing capitals.

In this presentation, we investigate the opportunities and barriers associated with the use of broadband in three rural communities of Southern Manitoba. Our theoretical framework is based on the community capitals, which include, natural, built, financial, political, human, social, and cultural capitals. We intersect this framework with four dimensions of digital technologies access (infrastructure, costs, skills, and usage) which overlap several community capitals. Data collection

relies on a mixed-methods approach comprising 1/ a quantitative survey to assess the infrastructure, affordability, skills, and usage of digital technologies in these three communities and 2/ qualitative data collection including interviews with business representatives and focus groups with youths and seniors.

The preliminary results show that:

- The lack of infrastructure to support coverage and connectivity can lead to security issues
- Access costs are higher in rural areas, where extra equipment is needed to boost signals and services are not always delivered
- Skills are mostly self-taught, which fits the entrepreneurial attitude of most business representatives but can result in fears among seniors who tend to learn more slowly
- Integration of digital technologies is fast-paced in every domain of everyday life (education social life, economic activity)

ii) **Social Enterprises in Rural and Northern Ontario**

Presenter(s): Prescott C. Ensign, Wilfrid Laurier University

Social enterprises (SEs) play a vital role in Canada's rural and northern communities. Most operate as non-profit organizations, use market approaches, and generate revenue from services or goods to support goals that address social, cultural, and environmental issues. As provincial and federal governments make reductions to programs providing social services to local communities, rural and northern residents who already have fewer resources from which to draw will be especially affected. Non-profit social enterprises will be called on to take up the slack. Steps are currently being taken in Canada to encourage their development (Government of Ontario 2015).

A review of literature reveals a limited number of in-depth studies on non-profit SEs. Most research on social enterprises has focused on: SEs located in urban settings; compiling aggregated survey data (numbers, locations, services, stakeholders, etc. of existing SEs) rather than data on individual SEs; and individual social entrepreneurs (personal characteristics, commitment, etc.). We seek to fill this gap and advance existing knowledge about non-profit SEs located in rural and northern regions. In particular, data are presented on makerspaces in community libraries.

Our goal is to provide a more comprehensive picture of the social enterprise as an organization. The primary aim is to understand the impact that context/ecosystem has on a social enterprise as it develops. The primary objectives are to: understand the contextual factors or ecosystem of a SE; describe and analyze organizational factors of a SE (structure, leadership, management, capitals, resources, stakeholders); and to examine the relationship between context/ecosystem

and social enterprise development. Our research framework approaches SEs from institutional, structural embeddedness, ecosystem, and structuration perspectives.

iii) “We Need New Bloodlines and New Immigrants Could Be Good”: Connecting Refugee Farmers to the Agriculture Industry in NL

Presenter(s): Mohammad Nazrul Islam, Grenfell Campus Memorial University

Newfoundland and Labrador has received two hundred refugees in every year across the world, who have experienced various traumas in their life cycle before coming to Canada. They also have distinct cultural knowledge and practices including livelihood patterns, food, and farm practices. Thus questions arise about how much refugees are integrating with mainstream culture and can utilize their acquired cultural knowledge for overall community development. Newfoundland and Labrador is one of the most food insecure provinces due to the out-migration, aging population, lowest population density, lack of agriculture practice compare to the other Canadian provinces. Therefore it is important to know proper initiatives for overcoming these problems. Immigration could be a good alternative; however, very few studies have been done on the prospect and potentiality of refugee in local development particularly on agricultural development in Newfoundland and Labrador. This study attempted to fill this research gap by exploring farmer perceptions about the scope and potentiality as well as the barriers to cultural integration of refugee farmers in the agriculture sector. To meet the objective of the study different qualitative techniques such as 12 in-depth interview and five focus group discussions were used. Data has been collected from local farmers and other different stakeholders for example government official, local leaders, academician, and the employee of the nonprofit organization. The study found that most of the local farmer has positive perceptions about the refugee farmers including their potentiality to bring new knowledge, diversify farming, and the good source of labor for rural Newfoundland and Labrador. They were also interested to hire them with accommodation and transportation or to arrange these in future. However, they perceived that language and Canadian occupational culture are key challenges for refugees to cultural integration in the agricultural sector. Different trades training including tractor safety, general maintenance, driving licensing, greenhouse operation and pesticide applicator and English as a second language (ESL) program could be useful for refugee farmers.

iv) Think Outside the Mailbox: postal banking works for all of us

Presenter(s): Brenda McAuley, Canadian Postmasters and Assistants Association (CPAA)

Bank branches are closing and pulling out of rural Canada, forcing rural residents to travel to access basic postal services. A campaign has been underway for several years to bring back the postal bank in Canada to increase financial inclusion and shore up revenue for Canada Post. A

motion to that effect is underway in the House of Commons (M-166). However, although they are the hearts and often the sole means of connection for rural communities, hundreds of rural post offices have been closed over the past two decades, shutting off the potential to revitalize rural communities by offering better jobs and services through innovative use of the vast Canada Post retail network. The presentation will examine the state of affairs for post offices and bank branches in rural Canada; look at some of the innovative ways in which rural post offices have been expanding their services in other countries; and suggest ways for rural residents to support the postal banking campaign.

v) Structural Issues in Policy Interventions for Attraction and Retention of Farmers in Newfoundland

Presenter(s): Abdul-Rahim Abdulai, Grenfell Campus Memorial University

Among the rising challenges to agriculture and food production efforts in Newfoundland and Labrador (NL), and in many parts of the world is the demographic decline; manifested in aging and decline in farmer populations. This challenge has necessitated deliberate interventions to attract and retain people in the agricultural sector. While these interventions-policies, plans, programs, strategies etc.- are evident in Newfoundland (NL), there exist limited research efforts to take a closer look at the focus areas and to identify structural issues that hamper the effectiveness of such policies. To advance research and policy, I examined current and recent interventions that aim to attract and retain farmers in NL, with particular emphasis on structural barriers to the effectiveness of these policies. Semi-structured interviews with farmers and officials and interviews policy were used to complete the research. I argue that it is not the lack of efforts that undermine farmer attraction and retention, but socio-cultural elements and structural challenges in intervening policies resulting from lack of attention to farmers' needs. In the end, among other things, the government must incorporate beneficiaries into policy design and implementation; acknowledge varied farming models in policy; and seize partnerships opportunities to attract and retain farmers.

vi) Exploring a Regional Approach to Drinking Water Management as a Potential Solution to Water Management Challenges in The Strait of Belle Isle in Newfoundland

Presenter(s): Vincent Chireh, Grenfell Campus Memorial University

There has been a growing concern among water managers, researchers and users in the past decades over the quality and quantity of drinking water supply especially in rural Canada. There is evidence of challenges with water infrastructure, water management as well as standards, regulations and policies that guide the administration of public water supplies. We conducted a research to assess the prospects in adopting a regional approach in managing any aspects of the drinking water systems as a solution to the water challenges to deliver safe and clean drinking

water to residents. As a community-based participatory research, we employed a qualitative method of data collection and analysis rooted in the new-regionalism concept of development. We interviewed 18 persons in-charge of drinking water supply in 10 communities in The Straits of Belle Isle region in Newfoundland and 5 resources persons in Water Resource Management Division of the Ministry of Municipal Affairs and Environment in Newfoundland and Labrador. Thematic and content analytical methods were used to analysis both primary and secondary sources of data collected. In this study, we identified and discussed among other themes, current water challenges facing and their potential solutions expressed particularly by the people of The Straits of Belle Isle in Newfoundland. Additionally, the prospects of a regional approach in water systems management as well as the conditions and actors required for the successful adoption of such an approach were also explored.

vii) Building the Future: Rural Infrastructure and Regional Economic Development

Presenter(s): Ashleigh Weeden, University of Guelph, Sarah Breen, University of Saskatchewan, Ryan Gibson, University of Guelph, Sheri Longboat, University of Guelph, Sean Markey, Simon Fraser University, and Karla Uliana, Ontario Ministry of Agriculture, Food and Rural Affairs

Communities of all sizes must balance fiscal realities, changing economies, aging infrastructure, changing demographics, and a challenging climate as they work to manage their core infrastructure assets and accommodate and/or address new infrastructure and service demands. Given these challenges, are rural Ontario communities capable of responding to infrastructure pressures and opportunities? How does that capacity – or lack thereof – affect a community’s current and future long-term economic development? Funded by the Ontario Ministry of Agriculture, Food and Rural Affairs through the University of Guelph-OMAFRA Research Partnership, this research initiative will examine the capacity of different communities in rural Ontario to respond to infrastructure pressures and how these responses impact their short and long-term economic well-being. Running from 2018-2021, the research team will use surveys, workshops, content analysis, and case studies, to develop recommendations for addressing these issues through both immediate and long-term policy alternatives. This research initiative will directly support rural Ontario’s economic vitality by providing three key benefits: enhanced understanding of the diversity and varying levels of rural community capacities, improved and more nuanced public policy, and enhanced rural infrastructure development programming.

viii) Making a Difference: Provincial Policy Reflections on Knowledge Mobilization

Presenter(s): Ashleigh Weeden & Ryan Gibson, University of Guelph

Governments across Canada struggle to develop and implement robust, flexible, and effective rural policies and programs to meet the ever-changing contexts of rural communities. Critical to

understanding how policymakers are addressing this challenge as they design, implement and/or evaluate rural policy and programming is examining if and how they use research evidence – and what kind of evidence – they use to inform this process. Through interviews with policy makers across Canada, this project investigates knowledge mobilization processes and relationships between academic research and the public policy process for rural policy decision makers. This research will directly contribute to improving rural development public policy in Ontario by providing critical information about current challenges to and opportunities for more effective knowledge mobilization in designing, implementing, and evaluating successful rural development policies and programs.

ix) Rural 2.0: Place-Based Rural Community Innovation Systems

Presenter(s): Ashleigh Weeden, University of Guelph

We live in an era obsessed with innovation. So much so that in 2016, the Government of Canada began work on a new national ‘Innovation Agenda’ with the following proposition: “Innovation is a Canadian value. It’s in our nature, and now more than ever, it will create jobs, drive growth and improve the lives of all Canadians. It’s how we make our living, compete and provide solutions to the world. We have the talent, the drive, the dedication and the opportunity to succeed. So, what’s next?” However, as every public consultation on the Innovation Agenda took place in a major city and produced initiatives with names like ‘the Smart Cities Challenge,’ it seems like ‘what’s next’ is a national innovation conversation so steeped in unquestioned urbanism that it fails to even acknowledge, let alone include, rural Canadians. This doctoral research project will use a comparative case study approach to investigate the complex relationships at play in place-based rural innovation systems and provide grounded, illustrative narratives for informing public policy. Key questions include:

- What are the different models of rural innovation systems?
- How do place, policies, and people influence the ability of rural communities to leverage innovation ecosystems and seize their digital destinies?
- What can Canada learn from international examples of innovation ecosystems done right?
- How do we integrate rural communities into an Innovation Agenda that includes and inspires all Canadians?