

# SUPPORTING EVIDENCE-INFORMED PUBLIC POLICY

The Prentice Institute for Global  
Population and Economy  
Report to the Community

**2021-25**

University of  
Lethbridge



the Prentice Institute  
for Global Population and Economy



# FIVE YEARS OF RESEARCH, RESOURCES, AND POLICY INSIGHTS

It is my great pleasure to welcome you to this new publication, which celebrates and elevates the work the Prentice Institute's academic staff, research associates, research analysts, post-doctoral fellows, graduate and undergraduate research assistants, work-integrated learning students, and administrative support staff have completed during the last five years.

The outputs created by our team are vast and diverse—including reports, briefs, guides, policy recommendations, publications, videos, social media campaigns, and other materials covering population and demography, health and well-being, economic development, and natural resources. The topics our team members have studied range from COVID funding relief to health in watersheds, from heritage management plans to voting trends among young people, from loneliness among young adults to rural population movement, and beyond.

There is, however, a thread that ties the scores of projects together, and that thread reflects the goal of John Prentice when he made the donation to found the institute in 2009: to improve knowledge of long-term demographic and economic cycles “to inform the public and cause individuals and governments to make better decisions, thus changing the course of history for the better.”

I invite you to dive in to get an overview of our work since I joined the Institute in January 2021, and gain a sense of the opportunities that await our team and partners in the years ahead. At any point, if you'd like more information about any project or collaborative opportunities, just contact us. You can find all of our publications and projects on our website—[prenticeinstitute.ca](https://prenticeinstitute.ca)—and you are welcome to reach out by email or phone as well.

An enthusiastic thank you goes out to all who have contributed to the Prentice Institute these past five years. You and your work have made a difference. And if this is your first time hearing about us, we thank you for your interest. We would be happy to answer your questions and see if there is a way we could work together on addressing some of the most difficult challenges facing the world.

**Dr. Lars K. Hallström**  
Director, The Prentice Institute



# ABOUT THE PRENTICE INSTITUTE



**The Prentice Institute** is housed at the University of Lethbridge in Alberta, Canada. We conduct research and analysis integrating demographic changes and how those changes impact ecosystems, health, and the economy. Our work provides evidence for the development of policy options in addressing some of the difficult challenges facing the world.



## ABOUT THIS PUBLICATION

**This publication aims to** educate, inspire, and inform readers about the outstanding work achieved by our talented and diverse team of academic staff, research associates, research analysts, post-doctoral fellows, graduate and undergraduate research assistants, work-integrated learning students and administrative support staff. This report to the community provides a snapshot of the last five years of projects, policy proposals, partnerships, student learning experiences, and outcomes overseen by the Prentice Institute. Additional details are available at [prenticeinstitute.ca](https://prenticeinstitute.ca).

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*The Prentice Institute for Global Population and Economy is located on traditional Blackfoot Confederacy territory. We honour the Blackfoot people and their traditional ways of knowing in caring for this land, as well as all Indigenous Peoples who have helped shape and continue to strengthen our community.*

## CONTACT US

If you’d like to learn more about any of these projects, please contact us. We would love to hear from you.

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# WHAT WE DO

**The Prentice Institute works in four focus areas:** population, health, economy, and ecosystems. Research in these four areas uses a population lens to assess how demographic changes impact and influence these policy domains, and vice versa.

## POPULATION

Working from local to global, and assessing change over time, population research with the Prentice Institute involves the study of demography and the life course of various sub-populations. The focus area of population involves research on the impacts changing human populations have on their social, environmental, and economic milieu. Population research also considers those changes and impacts across space and time horizons.

### Featured project:

***Assessing Equity, Diversity, and Inclusion in Lethbridge's Heritage Inventories Using a System Plan Approach: A Thematic Analysis***

By Hannah Laberge and Brie Wilson; Applied Study research project with the City of Lethbridge; January to April 2023.

▶ The City of Lethbridge adopted a new Heritage Management Plan in 2023, which identifies the need to prioritize Indigenous heritage, among other underrepresented groups such as women, racial and ethnic minorities, and the 2SLGBTQIA+ community. Prentice Institute research associates performed a thematic analysis to identify representation gaps in the City of Lethbridge's previous historic inventories and made recommendations for the City to implement an inclusive heritage strategy.

## HEALTH

Health research with the Prentice Institute focuses on the social and environmental determinants of health. The health focus area more broadly addresses how health and wellness are impacted by the intersection of economic, environmental, and social variables.

### Featured project:

***Health and well-being of Hutterite farmers in Alberta: Results from the Sustainable Farm Families Alberta program***

By Henrietha Chibuzor Adandom, Dr. Samuel Mantey Ofori-Dei, and Dr. Lars Hallstrom; published in the Canadian Journal of Rural Medicine, July to September 2023.

▶ This longitudinal study examined the health and wellbeing of Albertan farmers and farming families enrolled in the government-funded Sustainable Farm Families Alberta Program organized by the Farm Safety Centre in Raymond, Alta. This study provided a quality assurance assessment of the effectiveness of the program in improving Albertan farmers and farming families' knowledge and awareness of multiple health risk factors, the skills needed to prevent those risk factors, and their health and wellbeing.

## ECONOMY

The economy focus area integrates research on the dynamics of Canadian and global demography and their impact on economic well-being through migration, culture, and trade. Research in economic development seeks to understand changes in the economic environment as mediated by social, cultural, and environmental factors.

### Featured project:

***The Impact of Automation on Local Communities: Economic Futures of Rural Alberta***

By Dr. Lars Hallstrom, Stacey Haugen, Payton Grant; presented at the Canadian Rural Revitalization Conference in May 2022.

▶ Automated technologies, increased digitalization, and international events, such as COVID-19, are putting pressure on national and local economies to adapt or face rising unemployment and economic downturn. Rural communities are particularly impacted by these pressures as their economies are often built around a common industry, and the lack of access to training opportunities and reliable broadband create significant barriers.

## ECOSYSTEMS

Research in Ecosystems integrates changing human populations with water security; and the limits and catalysts of economic and population growth.

### Featured project:

***Health in the Watershed videos***

▶ The Environment Community Health Observatory Network Alberta created 47 short videos from the "Taking Notice to Take Action: Integrating Environment, Community, and Health" watershed atlas. Check out the videos at: [tiktok.com/@echo\\_ruralab](https://tiktok.com/@echo_ruralab).

# ‘CHANGING THE COURSE OF HISTORY FOR THE BETTER’

## NEARLY 20 YEARS AFTER MAKING HISTORIC GIFT, FAMILY FOUNDERS’ VISION DRIVES ONGOING DIRECTION AND IMPACT OF INSTITUTE

In December 2006, the University of Lethbridge received an **\$8.25 million gift** from John Prentice (LLD ’06), a Calmar, Alta., based agri-business entrepreneur and his wife, Connie Prentice (LLD ’08)—which was at that time the largest individual gift in the university’s history. Then-University of Lethbridge President Bill Cade called the day the gift was announced “the most exciting day of my academic life.”

The gift led to the launch of the Prentice Institute for Global Population and Economy in 2009, and since then, the multi-disciplinary, cross-faculty institute has been dedicated to studying changes in population and their lasting effect on economies, and societies.

At the time of the donation, John Prentice said: “I have chosen to endow the Prentice Institute for Global Population and Economy at the University of Lethbridge because I believe that long-term demographic and economic cycles are under-researched, and that improved knowledge in these areas would inform the public and cause both individuals and governments to make better decisions, thus changing the course of history for the better.”

Unfortunately, John Prentice passed away in March 2007, before the institute had fully taken shape. But his initial vision has guided, supported, and inspired more than 16 years of research, data collection and analysis, policy analysis, work-integrated learning, student training and research, and knowledge synthesis, translation, and exchange. Thanks to the Prentice family’s gift, academic staff, research associates, research analysts, research assistants, post-doctoral fellows, summer interns, administrative support staff, and research affiliates have been able to focus on providing evidence for the development of policy options in addressing some of the difficult challenges facing the world—just as John Prentice had envisioned.

### About the Prentices

John Prentice was born in Berwick-upon Tweed in Northumberland, England in 1936. He was educated at Ampleforth College, Yorkshire, and completed his mandatory military service with the King’s Own Scottish Borderers in England, Ireland, Singapore, and Malaya, before spending two years working with the family business, John Prentice and Co., Grain Merchants, in Berwick.

In 1959, he immigrated to Canada where he attended Olds School of Agriculture, later attending the University of Alberta where he graduated from the Faculty of Agriculture with major in Animal Science. That is also where he met his wife Connie, who had grown up in Red Deer Lake and earned a degree in education, majoring in home economics at the University of Alberta. After graduation, the two married, raised their three children on land just north of Calmar, and launched Standard Hog Farms, which went on to great success, as well as a variety of other businesses.

In addition to playing a major role in the Prentice family businesses, Connie Prentice had a long history of community involvement. Active in track and field, Girl Guides of Canada, and 4-H for several years, she also served the University of Alberta as a member of the Senate and medical ethics committee.

John Prentice was not only a successful entrepreneur, but he was also an active volunteer with a number of organizations, including serving as president of the Western Hog Grower’s Association, Director of Unifarm, and a host of other organizations. He also had a large range of hobbies that included history, finance and investing, Frank Lloyd Wright architecture, golf, birding, arboriculture, and bridge.



# LEARNING FOR LIFE

## INSTITUTE PARTNERSHIP CREATES WORK-INTEGRATED LEARNING OPPORTUNITIES FOR STUDENTS TO APPLY THEORY TO VITAL COMMUNITY PROJECTS

For three years, the Prentice Institute and the City of Lethbridge have been partners in opportunity through the City Scholars program, which creates a pathway for students, Institute research affiliates, and City employees to collaborate on projects that support innovation while addressing the challenges and opportunities facing the city. This partnership aligns with the mandate of the Institute to support the development of evidence-based policy to guide Canadians and their governments in addressing difficult challenges.

"Our city of over 100,000 people is home to more than 12,000 post-secondary students at multiple world-class institutions," says Perry Stein, Partner Services Manager for the City of Lethbridge, who launched the City Scholars collaboration in 2022 with Dr. Andrea Cuéllar, Associate Director of the Prentice Institute. "The talent and knowledge that exists in our city and region is inspiring. Accessing that talent and knowledge through strong partnerships allows us to support our community, our institutions, and the people who bring them to life."



Dr. Cuéllar adds: “The Prentice Institute provides an ongoing platform through which City staff, Institute research affiliates, and University students collaborate on projects that affect the quality of life of our community. Other cities in Canada are benefiting tremendously from collaborations of this sort with universities, and in the process training the next generation of urban planners, policymakers, and innovators. Universities, in turn, fulfill the potential to contribute directly, through their academic and research capacity, to their immediate communities.”

Supervised by Prentice Institute research affiliates, students have worked on diverse projects that range from food insecurity to urban heritage, neighbourhood design, land-use bylaws, best practices for the use of artificial intelligence within public services settings, and beyond. The skills and experiences students gain through the City Scholars program supports them as they enter the workforce or pursue further studies. So far, more than 30 students from 16 academic programs have taken part of projects with eight City departments, including applied studies, independent studies, internships, and course-based projects.

Here are highlights of the experiences of two of those students and their City mentors.

“THE PRENTICE INSTITUTE AND THE CITY SCHOLARS PROGRAM ARE VERY GOOD PLACES FOR **GROWING AND ENHANCING YOUR SKILLS**, BOTH SOFT AND HARD.”



## CLARA KHOSRAVIZAD: EXPLORING HOUSING SOLUTIONS FOR LETHBRIDGE

Clara Khosravizad, a second-year master’s student in Urban and Regional Studies at the University of Lethbridge, got off to a great start with the City Scholars program. Originally from Tehran, Iran, Khosravizad started on her second master’s degree in Lethbridge in January 2024 under the supervision of Dr. Wei Xu, bringing with her a bachelor’s degree and master’s degree in sustainable architecture and a keen interest in urban planning.

Since January 2025, she has been working with Dr. Ivan Townshend, Prentice Institute research affiliate, and Matthew Pitcher, the Housing Solutions Coordinator at the City of Lethbridge, on a project that addresses one of the most pressing issues in her field: housing regulations and alternative construction methods.

Khosravizad is assessing the viability and cost-effectiveness of prefabricated, modular, and pre-constructed housing solutions. With rising housing costs and an acute shortage of available units, her project aims to identify regulatory barriers and provide recommendations for future policy and bylaw amendments that would allow for alternative housing construction options in Lethbridge.

“It’s been a very good experience for me,” Khosravizad says. “I’m coming from a megacity [Tehran], but the housing issue is worldwide. It is not something that is limited to Lethbridge.”

Pitcher emphasized the importance of Khosravizad’s work, especially considering the city’s updated Municipal Housing Strategy, which includes a focus on alternative housing construction methods. “This might be one of the hottest topics there is right now,” Pitcher explains. “Significant funds are being directed at it from every level of government, and we are seeing drastic increases in prices and drastic decreases in vacancy rates.”



The collaboration has been mutually beneficial, Pitcher adds, with Khosravizad gaining professional experience and mentorship while bringing fresh perspectives and research into housing solutions. “These types of initiatives are so important,” Pitcher explains, “as they start as knowledge gathering and turn into tangible outcomes.”

One of the most significant learning outcomes of the City Scholars program is the exposure students get to municipal government work. For Khosravizad, working alongside Pitcher and other city staff has provided a good understanding of how policies are developed and implemented at the local level.

“The Prentice Institute and the City Scholars program are very good places for growing and enhancing your skills, both soft and hard,” Khosravizad says. “They give students the opportunity to put their knowledge into practice, and provide the space and opportunity to explore their interests.”



## LIAM HASTINGS: SOCIAL MARKETING FOR WATER CONSERVATION

Another student benefiting from the Prentice Institute and City Scholars partnership is Liam Hastings, a fourth-year political science major at the University of Lethbridge. His project explores the use of social marketing to encourage water conservation in the City of Lethbridge.

"Lethbridge has the least amount of rainfall in Alberta, and its residents use the most water per person compared to Calgary, Edmonton and Red Deer," he explains. "It also has a relatively small watershed compared to the other cities." As part of his research, Hastings investigates how the city can encourage residents to reduce their water consumption without imposing strict regulations.

His approach to this challenge is rooted in social marketing—a field that uses strategies to influence behavior without mandating it. Since November, he has been working closely with Dr. Christy Tu from the university and Mark Svenson, Environmental Manager for the City of Lethbridge, learning about policy design and implementation while contributing his insights into social marketing techniques.

"We've looked at public goods theory and interdependence theory, which explores how people see themselves in relationship to each other and to a limited good like water," Hastings explains. "I've been able to bring a theoretical understanding into the practical world, and it's been a really rewarding experience."

Hastings says he hopes at the end of the project, people will see how water conservation can benefit them, and then act on that knowledge.

Hastings sees the City Scholars Program as a perfect opportunity to gain valuable experience and apply his knowledge in a practical setting. "The work is very rewarding," he says. "These hands-on experiences have taught me a lot more about where I want to be and given me the confidence to pursue it. I think this program is one of the most important things the city and university are working on right now."

Svenson adds: "It's been really good for us, too. Knowing that the Prentice Institute is there has meant we keep our eyes open to where we need assistance on certain projects. It helps us find new perspectives and research that we might not have the time or resources to dive into ourselves."



I THINK THIS PROGRAM IS ONE OF  
THE **MOST IMPORTANT THINGS** THE  
CITY AND UNIVERSITY ARE WORKING  
ON RIGHT NOW."

# EXPANDING THE REACH OF THE UNIVERSITY IN THE COMMUNITY

Stein and Cuéllar both see countless ways all participants in the Prentice Institute - City Scholars partnership benefit.

For the Prentice Institute, Cuéllar says, the partnership allows research affiliates to develop connections for applied research, collaborate with public service experts working in their field of interest, and ground their research and the work of their students in a real-world context.

For the City of Lethbridge, Stein says, the partnership provides employees with access to faculty research expertise, an increased capacity to take on research projects, the opportunity to develop staff mentorship and supervision skills, and the potential for new approaches and practices in their work.

And for students, having one or more experiences as City Scholars allows them to develop workplace skills and apply academic knowledge in a professional setting,

access professional and academic mentorship, network with prospective employers, and learn about municipal governance and business practices.

“It’s a very reciprocal relationship,” says Stein. “Through this partnership, we’ve been able to understand that work-integrated learning is a pathway for community attraction and retention. So students are getting experience working in our workforce, helping us with these interesting projects, and then they actually are more interested in sticking around Lethbridge because of this too.”

This partnership, initially centered on work-integrated learning, has evolved into a broader collaboration between the Prentice Institute and the City. “It goes to show that work-integrated learning is not just about placing students in opportunities,” says Cuéllar. “It is, importantly, about building meaningful inter-institutional partnerships that expand the reach and impact of the University in the community.”



## IN THEIR OWN WORDS

Here’s what other University of Lethbridge students had to say about working with the Prentice Institute and the City of Lethbridge:

“I appreciated that we were treated as students, but also as junior colleagues. This dual relationship with our workplace and academic supervisors meant that there was room for lots of questions and curiosity, while also having clear expectations regarding work output and professionalism.”

“I was able to translate my academic skills to a business or policy world, work on a tighter deadline, and imagine possible career opportunities.”

“The workplace expectations, correspondence with city staff, weekly meetings, and the fact that our final project will be available to the public in 2024 modelled a true workplace environment. As such, I was able to practice, in a relatively low-risk environment, how to meet those expectations.”

“It allowed me to broadly explore municipal government as a viable career option, even though I would like to explore a different department within municipal government in the future.”

“I learned a lot in this applied study, and I hope to seek further employment at the City of Lethbridge when I graduate.”

“I think it is fantastic that the Prentice Institute is sponsoring opportunities like this one.”

“I didn’t feel like just a student when I was working at the city. There were extremely high levels of trust instilled in the students (which I have never experienced before in a workplace), which helped to also trust in my own work. I also enjoyed having a space to work (i.e., going into the office every Friday) as I found it nurtured the collaborative nature of the project.”

“I think that I developed a lot of valuable skills: becoming familiar with the inner workings of municipal government, adaptability and flexibility, communication, public speaking, and disciplined thinking in the work environment.”

“I really enjoyed the work that I did with the city. I was impressed to learn about so many of the projects that planners were undertaking to help make the city a more inclusive space.”

“This experience boosted my confidence and made me realize that what I have learned in university is a valuable skillset.”

FROM THE EDITOR: These testimonials were taken directly from program assessment forms completed by students and are reprinted with their permission.

## LEARN MORE

Learn more about the Prentice Institute Work-Integrated Learning program at: [prenticeinstitute.ca/what-we-do/work-integrated-learning](http://prenticeinstitute.ca/what-we-do/work-integrated-learning).  
Learn more about the City Scholars program at: [lethbridge.ca/careers/city-scholars](http://lethbridge.ca/careers/city-scholars).

## THE POLICY INNOVATION LAB

The Policy Innovation Lab is an experiential learning opportunity organized by the City of Lethbridge and post-secondary partners. The inaugural lab was held in 2024; this collaborative initiative involved participants from City of Lethbridge, the Prentice Institute, and Lethbridge College (now Lethbridge Polytechnic). The theme of the first lab was urban food insecurity and municipal land use policy. The program allowed three undergraduate students from the University and three from the College to research and propose policy recommendations to the City. College students Bruce Ascione, JD Gervais, and Amy-Lee Lateeph, and university students Breanna Little Mustache, Bhawana Pradhan, and Brie Wilson participated in a series of seminars and activities to build their understanding of food insecurity, policy, and urban planning.

Erica Gonzalez, a Graduate Research Assistant at the Prentice Institute, assisted with planning, co-hosted the lab activities with Perry Stein, Partner Services Manager for City of Lethbridge and

Prentice Institute Research Affiliate, in May 2024, and led the work of the university students up to the completion of this project at the end of August. At the end of May, the students presented to City staff their recommendations to amend the Land-Use Bylaw to support urban agriculture initiatives. In August, they delivered a technical report to the City entitled “Decoding Local Food Systems: Addressing Food Insecurity Through Lethbridge Alberta’s Land Use Bylaw.”

The City and Prentice Institute are looking forward to hosting University of Lethbridge students in 2025. This second Policy Innovation Lab will be focused on municipal commemoration policy, as part of the City’s efforts to implement the recently approved Civic Culture Plan. With the Policy Innovation Lab, both partners are advancing innovative approaches to experiential learning and facilitating the engagement of youth in urban planning and the policy making process.

# MOVING THE STATE OF WATERSHED REPORTING FORWARD

## THE HEALTH AND THE WATERSHED ATLAS PROVIDES SPACE TO CONSIDER AND RESPOND TO ENVIRONMENTAL, COMMUNITY AND HEALTH DYNAMICS

The *Taking Notice to Take Action: Integrating Environment, Community, and Health atlas* is one of the largest projects undertaken by the Prentice Institute in the last five years, both in size (it comes in at more than 400 pages) and in scope (it uses a framework of 44 indicators and higher order measures in complement with the UN Sustainable Development Goals, and is intended to catalyze the next generation of state of watershed reporting). Its creation was supported with a combination of resources from the Canadian Institutes of Health Research (CIHR), and the ECHO (Environment, Community, and Health Observatory) Network, the University of Alberta, the University of Lethbridge, and the Battle River Watershed Alliance.



In this Atlas, the Battle River and Sounding Creek watershed, or watershed management, was the “space” in which to consider, and respond to, the combination of environmental, community, and health dynamics. The Health in the Watershed Atlas is an extensive, replicable, and intersectoral assessment of health **in** (rather than the typical “health of”) the watershed.

The combinations of place, people and analyses in the Atlas are intended to reinforce the need to lead and think within our watersheds. The maps and data can highlight the challenges and assets for rural, Indigenous, racialized, and vulnerable communities. The observable inequities are worthy not just of acknowledgement, but action—a guiding thread reflected in the title of the project: Take Notice. To Take Action.

Lars Hallstrom, Director of the Prentice Institute, discussed the creation of the Health and Watershed Atlas in the first of 47 short videos created by the Environment Community Health Observatory (ECHO) Network Alberta on TikTok. Continue reading for highlights of that conversation.

**We'll start by asking to you explain how a project of this scale and magnitude came to be, what exactly it is, and who you envision using something like this.**

The Health and the Watershed Atlas was designed in collaboration with the Battle River Watershed Alliance. It was designed to help move the state of watershed reporting forward, both for that watershed and for watersheds around the province and across Canada. The idea is to move away from just hydrological questions—water quality and quantity—and instead, look at bigger picture issues as well as those water quality and quantity kind of concerns. This allows us to think about things like social impacts, ecological impacts, relationships with agriculture, relationships with oil and gas, or exploration or extraction. It also gives us a much bigger and more comprehensive picture of how the human footprint and the interaction with the environment in the watershed actually takes place.

**The Atlas includes many maps and has great esthetic appeal. It's comprehensive, but also has great ease of use. Were there many others involved in this project, and where did the funding come from?**

There was a large team working on this Atlas, which is over 400 pages of images, tables, text, and of course, the maps—there are over 110 maps in the atlas. We had a team of about 15 people who worked on this project over a number of years, ranging from people doing the mapping itself and working with raw data from the province, to people who were writing text and running editorial services, to people doing annotations and the bibliography and indexing. It was a really great team. And all this work was funded through

a combination of Canadian Institutes for Health Research, which is the federal funding agency for health-based science and medical science in Canada, as well as well as funding from Prentice Institute here at the University of Lethbridge, and also with some additional funds from other funders like the supporters of the Battle River itself.

**The data researchers used for this project was all publicly available data. So is the Atlas something that you could anticipate could be created in other parts of Alberta, Canada or even globally?**

Yes, that is, in fact, part of the intention of the way that we designed both the initial framework and the Atlas itself is that we do use data that are available in the public domain. So in theory, any watershed or similar organization could replicate the Atlas. It would take quite a bit of work. They would still have to work with the raw data and select it for their particular watershed. But it's something that we had always hoped could be done, either to scale up at a fully provincial level or within the different watersheds here in the province or across Western Canada.

The framework is derived in part from the Sustainable Development Goals set up by the United Nations. It's something that we had hoped to be used to help watersheds measure what's happening. This is part of the taking notice to take action—to understand, from an observatory function, what's taking place at the human, environmental, and health interface, and then ideally, to inform public policy or decisions by watershed management groups or ecological or health-based groups, to have more evidence-informed decision making and to understand how things are changing over time.

THE IDEA IS TO **MOVE AWAY** FROM JUST HYDROLOGICAL QUESTIONS—WATER QUALITY AND QUANTITY—AND INSTEAD, LOOK AT BIGGER PICTURE ISSUES AS WELL AS THOSE WATER QUALITY AND QUANTITY KIND OF CONCERNS.



**If other watersheds or jurisdictions were considering creating a healthy watershed Atlas such as this, could they use the measures and indicator wheel model your team use? Or is it region-specific?**

They could absolutely work with what we’ve already done. They can take that and then drill down in more detail, depending on the kind of data that they have available to them. Each data set is different—we have about 400 data sets sitting in the background for this kind of work, so sometimes you have to get into different scales in terms of doing the mapping and the analysis, but they could absolutely replicate this. Or if they wanted to, they could contact us, and we could replicate it for them.

**Working with the Battle River Watershed Association, using the Battle River and Sounding Creek watershed as a case study area, is there anything that came out of this study that you or the other researchers were not expecting?**

We had a sense in the background that there were dynamics, particularly from an economic and from an energy sector standpoint, that were pretty pronounced on the landscape. We drilled down into looking at just how intensive both agriculture in certain areas as well as oil and

gas exploration and extraction have been. We’re looking at about one drilled well per every square kilometer from the entire watershed. It’s about 47,000 wells and approximately 47,000 kilometers. So we knew it was intensive, but that kind of puts things into a different context. You don’t see pump jacks or derricks or rigs necessarily scattered every single square kilometer. But there’s a lot of activity from the energy sector in that part of the province.

**As one of the leads on this project, is there anything you would consider if you were just starting this project now that you hadn’t previously considered.**

We did do a lot of scoping to see if other people have done things similar to this, and there aren’t many initiatives like it. People have started these kinds of initiatives and typically not finished them because they’re really, really big, and quite expensive. So we were very lucky to have the funding support from the ECHO network and from CIHR to actually do a project of this size. I would definitely caution somebody, or would think about trying to take this on if I were on my own, without significant supports or help. To start from scratch would be a really difficult initiative. This took almost four years to do from start to finish. So you need to be aware of what you’re signing up to do before you do it.

**Is there anything else that you would like to share about the case study that led to the creation of this comprehensive health in the watershed Atlas?**

This goal from the watershed itself—what they’ve actually adopted this as their state of the watershed report of 2022 and for the next 10 years—was to see was a way of understanding how watersheds and integrated watershed management can actually be thought about, measured, and understood, both from the standpoint of integration, from the standpoint of measurement, from the standpoint of tracking and taking notice, but then also starting to think about where the spaces are that we may need to apply interventions or change if we can.

**For those interested in this health in the watershed Atlas Project and the resulting Atlas, where would they be able to find more information about it?**

There’s a digital PDF of the Atlas available at the Prentice Institute website—it’s fully indexed and lovely. We do also have some hard copies available that are available at a very reasonable price—far below cost because we want people to have them. And they’re also available in, both institutional libraries including at universities, and at different school divisions across the province.



## HEALTH IN THE WATERSHED VIDEOS

In addition to reading the findings in the Atlas, you can explore 47 short videos created by the Environment Community Health Observatory (ECHO) Network Alberta on TikTok. Go to [tiktok.com/@echo\\_ruralab](https://tiktok.com/@echo_ruralab) to learn more.

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# MILESTONE MOMENTS

## TEN STORIES FROM THE PRENTICE INSTITUTE YOU WON'T WANT TO MISS

1

### INSTITUTE HOSTS NATIONAL CONFERENCE ON LIVING WELL IN RURAL CANADA

The Prentice Institute for Global Population and Economy cohosted the Canadian Rural Revitalization Foundation Conference (CRRF) at the University of Lethbridge in June 2023, bringing nearly 100 participants from across the country together for the first in-person CRRF conference since 2019.

The conference theme was *Moving In, Moving on and Moving Up: Living Well in Rural Canada* and included presentations from Prentice Institute research staff Rachel McNally, Stacey Haugen, Joshua Passey, Nick Yarmey, Ogochukwu Onyeso, Brie Wilson, Henrietta Adandom, Dr. Adebiji Boco, and Dr. Lars K. Hallstrom.

The conference included presentations, posters, and panels that addressed the question of what it means to live well in rural Canada and examined the key factors, issues, and responses that shape and define well-being in rural places. It focused on wellbeing as an interdisciplinary concept, with a focus on dynamics of environmental, physical, economic, social, emotional, psychological, and economic aspects of wellbeing.

The posters, panels, and presentations addressed a broad scope of topics, including many that align with the broad mandate of the Prentice Institute: population health and quality of life; the role of natural resource development in rural and urban futures; demographic changes related to mobility and immigration; the role of youth in sustaining rural communities; the changing reality of rural work and employment; food security and environmental sustainability; and the role of arts, culture and heritage in community life and wellbeing.

Participants Dr. Wayne Kelly, Dr. Gary McNeely, and Iain Cowie from the Rural Development Institute at Brandon University called it an incredibly generative experience, leaving their team feeling inspired and invigorated, armed with fresh ideas and new connections.

▶ **OUTPUT**  
National conference

2

### RESEARCH ON LONELINESS AMONG YOUNG ADULTS HAS IMPORTANT POLICY IMPLICATIONS

**Loneliness—the subjective experience of social isolation**—is a pervasive social issue, negatively affecting individuals across the life course. Loneliness and its consequences have largely been studied in older populations. Yet, recent data indicate that loneliness is on the rise among young adults globally, including Canada. The economic consequences of loneliness among young adults are increasingly being recognized.

In this scoping review, we asked what the existing research tells us about the economic impacts and dimensions of loneliness among young adults between the ages of 15 and 35 in Canada and internationally. This review assessed and synthesized the available evidence on the economic impacts of loneliness and interventions targeted to reduce loneliness in young adults, highlighting gaps and areas for future research. A systematic search was conducted for quantitative and qualitative evidence in peer-reviewed journals and grey literature published in English or French, between January 2012 and June 2022.

Few studies have examined the economic impact of loneliness among young adults aged 15-35 years. Key findings include:

- **Research assessing the economic implications of loneliness is at an infancy stage.** Despite the economic implications of loneliness being increasingly recognized across research fields, there is a dearth of empirical research assessing it among young populations.

- **There is a lack of Canadian literature on economic impacts of loneliness in young adults.** This review identified no Canadian study that assessed the impacts of loneliness on economic outcomes among young adults. Thus, there is an urgent need to collect Canadian data to investigate the effects of loneliness and its impact on economic outcomes—both among young adults and the general population.

- **Loneliness is associated with economic outcomes in young adults.** Loneliness was found to be directly associated with fewer employment opportunities, lower income, a higher rate of university attrition and lower academic achievement. The indirect consequences of loneliness include increased use of community/university services, general practitioner visits and hospitalizations.

- **Interventions to tackle loneliness in young adults fall into four categories.** These are psychology based (cognitive therapy, mindfulness messaging, positive psychology, cognitive behavioural skill-building exercises, etc.); skills development (coping behaviors, and education and enrichment of relational skills); social support (social identification, psychosocial school program, social participation, group work); and stress management (social-emotional skills, vitality intervention).

There is a need for more evidence on loneliness and its economic consequences among young Canadians to evaluate and inform future interventions. Other policy implications include developing programs that encourage prosocial behaviour and appointing a high commissioner of loneliness to coordinate actions.

**AUTHORS:** Adebiji G. Boco, Lars K. Hallstrom, Samuel Mantey Ofori Dei, Ogochukwu K. Onyeso, Lisa-Marie Swanepoel, Brie Wilson

▶ **OUTPUTS**  
Knowledge synthesis report, policy brief, poster, presentation

# 3

## INTERACTIVE WORKSHOPS ON RURAL MIGRATION

**Historically defined by movement**, rural Canada is diverse and movements to and from rural regions, towns, villages, and small cities are often defined by the distinct geographical, economic, and demographic factors of each place. Additionally, international immigration policies have significantly impacted population movements to and from rural and smaller communities both historically and today.

More recently, national and provincial immigration and refugee resettlement policies have resulted in an increasing number of newcomers arriving in rural places. Yet, attention to these movements, particularly the movement of migrants and refugees to rural areas, remains largely understudied and the impacts of such movements are not well understood.



This project addresses this knowledge gap. Funded in part by a Connections Grant from the Social Sciences and Humanities Research Council (SSHRC), this project brought stakeholders and academics together through a set of interactive workshops across Canada to discuss questions of rural-urban mobility, migration and resettlement, and the realities of life in rural and smaller communities.

The objective of this project was to build collaborative conversations between diverse groups of people. Rather than holding a traditional conference with primarily academic presentations, this project was organized around a series of facilitated workshops, or dialogue circles, across the country. Held in Lethbridge, Alta., Prince George, B.C., Antigonish, N.S., and Ottawa, these workshops brought together a diverse group of participants, including researchers, scholars, policy-makers, resettlement and immigration workers, practitioners, and local decision-makers.

The last workshop was held in Ottawa as a way to facilitate a conversation on federal policy and the role of the

national and provincial governments in rural immigration policy. These participants emphasized the economic contributions of newcomers and focused on existing immigration pathways rather than disrupting the system or advocating for change.

The workshops provided a space for participants to discuss, share, and learn from each other about the “rural problematique” in their own context and locale. They also contributed to the long-term outputs produced by this project, particularly a virtual knowledge creation and sharing platform, open-access policy-briefs, and interactive, publicly accessible maps visualizing patterns of rural-urban migration.

**AUTHORS:** Lars Hallstrom, Rachel McNally, Stacey Haugen, and Sydney Whiting

**OUTPUTS**  
 Workshops, interactive reports, open access policy briefs

# 4

## ALBERTA'S PENSION FUTURES

In September 2023, the Alberta government released the **LifeWorks report** detailing the possibility of a withdrawal from the Canada Pension Plan. Since then, a number of questions have been raised about the content of the original report, the implications of adoption, the process for decision-making, and both the politics and optics of the proposal.

As the province rolled out telephone town halls on this report and potential referendum in November 2023, the Prentice Institute for Global Population and Economy hosted an online panel on the report, the implications, the politics, and the realities of the possible change to Alberta's (and Canada's) pension system.

The panel was moderated by Dr. Lars Hallstrom, Director of the Institute, and featured:

- **Dr. Jared Wesley**, Professor of Political Science at the University of Alberta, Associate Dean of Graduate Studies, and member of the Black Faculty Collective at the University of Alberta
- **Dr. Trevor Tombe**, Professor of Economics and research fellow at the School of Public Policy at the University of Calgary and Co-Director of Finances of the Nation
- **Dr. Trevor Harrison**, emeritus Professor of Sociology at the University of Lethbridge.

The online seminar included questions to guide the panelists as well as questions from the more than 130 people in the online audience. At the conclusion, Hallstrom said: “I think it's great to see people engaging in and looking for different perspectives on this. We encourage you to stay engaged and continue to pay attention to our government and the evolving debates around this important issue.”

**OUTPUT**  
 Webinar





## 5 CHARTING PATHWAYS TO RESILIENCE IN MENTAL HEALTH AMONG YOUNG ADULTS DURING COVID-19

The COVID-19 pandemic has led to a wide range of **negative impacts** on physical and mental health among individuals, and those impacts vary across different stages of the life course. Studies have shown that youth have experienced greater negative impacts on their mental health due to COVID-19, with researchers finding that Canadian youth between the ages of 15 and 24 were 76 per cent less likely to report excellent or very good mental health during COVID-19 pandemic than those aged 65 years and older—even after adjusting for important factors that influence mental health.

As a response to these challenges, the Prentice Institute launched a research project that aims to examine the broader impacts of COVID-19 upon young adults in Canada, with a particular emphasis upon the causal linkages between structural or systemic disruptions triggered by the pandemic. This research is particularly concerned with improving our understanding of the systems and individual level impacts of COVID-19 upon key and vulnerable sub-populations, young adults who are from, living in, or returned to rural, ex-urban and remote communities.

More specifically, this research assessed the following research questions:

- **How do socio-demographic variables** compound the mental health impacts of COVID in Canada?
- **What are the characteristics** of educational, economic, and familial disruption that compound mental health impacts across different sub-populations of young adults?

- **To what extent gender** moderates the influence of socio-demographic disruptions on mental health among young adults in Canada?
- **How do we situate the social dynamics** of rural vs urban at a familial and systems level? How do related factors (distance, isolation, religious orientation/ political orientation) affect mental health in these settings?
- **What strategies do young adults** adapt to become resilient to the mental health impacts of COVID-19? Do these coping strategies among young adults vary significantly across their socio-demographic characteristics and geographic location (rural-urban, and province)?

Some of the findings of this research were published in the article, “COVID-19 social and economic disruptions, mental health, and coping behaviours among young Canadians: a structural equation model” in the January 2025 issue of *International Journal of Adolescence and Youth*.

**AUTHORS:** Ogochukwu Kelechi Onyeso, Adebiji Boco, Md Kamrul Islam, Alexander Darku, and Lars K. Hallstrom



## 6

## CARRYING CAPACITY SURVEILLANCE: INDICATORS AND FRAMEWORKS FOR EQUITABLE SUSTAINABILITY

The **scope, volume, and availability of data to assess the Earth’s carrying capacity** has increased significantly. However, there are several barriers to the use of such data and their linkage to public policy, which present significant challenges for understanding, modelling, and using environmental, community, economic and health data—and linking public policy, decision-making and practitioner perspectives with such data. This creates a fundamental challenge for the frameworks and models that seek to better understand the impact of human action and consumption upon social, ecological, economic, institutional, and health systems.



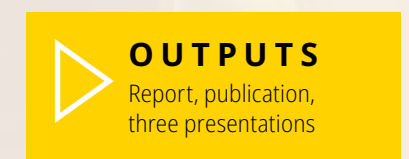
This study, which was supported by a Social Sciences and Humanities Research Council Knowledge Synthesis Grant, asked an important question: How can the data within these frameworks be best measured, interpreted, and used to both understand the “state” of carrying capacity data and measurement and also leverage policy performance as a response?

This project used a scoping review method to inventory and assess 109 peer-reviewed and non-academic studies from across the globe, including 46 Canadian studies. The findings broadly suggest that very little is known about carrying capacity and society in Canada or globally. Key implications for policy change moving forward include:

- **Attention needs to be paid to how carrying capacity** is conceptualized, the different understandings of carrying capacity and the application of carrying capacity at scale—from the micro and local to global population and planetary health. How carrying capacity is understood is important because it helps determine well-targeted policies and assumptions, which underlie government programs and research priorities.

- **Policy-makers must pay attention** to explicit linkages and integrated measurements across sectors, including ecological, health, socio-demographic and economic factors. Despite repeated and ongoing calls for integrated approaches and measurements of carrying capacity, this is not happening within the research community. The importance of integration cannot merely be stated, but must also actively measure and compare data consistently across sectors, regions, and population dynamics
- **Standardization of indicators,** measurements and data collection is needed nationwide. Cross-sectional and longitudinal data must be identified, collected, and measured across the country while recognizing the importance of local values and interpretability. National targets and indicators, which speak to local contexts and complement international goals, should be developed to promote consistency and comparability across jurisdictions.

**AUTHORS:** Lars Hallstrom, Stacey Haugen, Payton Grant, and Timi Emiloju



7

## RESEARCH AFFILIATE AND TEAM DEVELOP APP FOCUSED ON YOUTH HEALTH AND EXERCISE

With more than \$1.5 million in funding from the Canadian Institutes of Health Research (CIHR) awarded in 2022 and a grant from the Prentice Institute, Dr. Richard Larouche and his team have developed an app-based questionnaire and are determining its accuracy in measuring physical activity among 8- to 17-year-olds in 14 countries from six continents. In addition, the team are collecting data on active play for the first time in many of these countries.

Larouche, an Associate Professor in the University of Lethbridge's Public Health Program and research affiliate of the Prentice Institute, collaborated with Dr. Mark S. Tremblay, a senior scientist at the CHEO Research Institute in Ottawa, to lead a group of 25 co-investigators as they sought to compare physical activity levels within and between the countries.

The study involved eight stages. First, the team completed a review of the pros and cons of current questionnaires. Next, the team developed a first draft of the new questionnaire and asked experts and lay people in the 14 countries to review it. Based on these initial results, the team developed a new version of the questionnaire and translated it into the main languages of each country.

Next, the team completed a pilot-study with 30 children and one of their parents in each country. Finally, the team began the main study with 500 children and parents per country. The research team are recruiting participants in urban and rural areas that differ in wealth, and are comparing their questionnaire data to a precise movement sensor ("accelerometer").

Larouche says the team expects the new questionnaire will facilitate the measurement of physical activity globally. Their sample will be the largest and most diverse ever collected to assess the accuracy of such a questionnaire. The primary beneficiaries of this research include researchers, public health officials, and policymakers who focus on childhood and adolescent health.

Larouche and the team presented the Global Adolescent and Child Physical Activity Questionnaire (GAC-PAQ) at a Prentice Institute event in January 2025. That presentation can be found on the institute's website. More information about the questionnaire can be found at [gac-paq.com](http://gac-paq.com).



8

## CARDIOVASCULAR DISEASE REPORT IN SOUTHWEST NIGERIA FOCUS OF DR. OLU AWOSOGA'S COLLABORATION

**Nigeria is reported to have a high cardiovascular disease-associated mortality rate**, highlighting the need for prompt and all-encompassing public health interventions to curb cardiovascular disease prevalence. Research suggests that the first step in preventing and managing cardiovascular disease perception and moderate/high-risk levels.

Previous studies in Nigeria have reported the prevalence of some risk factors, but no studies have reported a population cardiovascular disease risk level nor estimated the perception score. With support from the Prentice Institute, Dr. Olu Awosoga and colleagues undertook both quantitative and qualitative data collection and analysis as well as focus groups involving adults in six communities in Southwest Nigeria who had no history of diagnosed cardiovascular disease.

Their research found that few community-dwelling adults had a poor cardiovascular perception, while half had a moderate/high-risk level. Rural dwellers and Ogun state residents had lower perception scores than their counterparts, while men and residents of Lagos state had higher risk scores. Having a

secondary education or below, living in rural areas, and living in Oyo and Ogun states predicted having a low perception score. The predictors of high-risk scores were being male, increasing age, and residing in Lagos and Ogun states. The results of the focus group discussions showed that participants had good knowledge and perception of cardiovascular diseases as they correctly identified the risk factors and preventive measures.

The researchers concluded that the proportion of participants with moderate/high-risk levels is concerning, and so they recommended that public health campaigns and medical outreaches be conducted regularly to sensitize people about the disease and promote its early diagnosis. These measures may reduce the CVD prevalence and mortality rate.

Dr. Awosoga is an applied and professional statistician with more than 35 years of post-secondary teaching experience as well as a Professor in Health Sciences at the University of Lethbridge and a former Board of Governors Teaching Chair. He has been a research affiliate of the Prentice Institute since 2011.

9

## WORK-INTEGRATED LEARNING AND RETENTION IN LETHBRIDGE

**University of Lethbridge students Taylor Manns and Sydney Whiting** took their shared interest in municipal planning, design, policy, and governance, and—with guidance from supervisors at the Prentice Institute and the City of Lethbridge—spent a year working on a project that could help shape the future of work-integrated learning in Alberta.

The primary goal of the research assistants was to understand the role of work-integrated learning in filling labour market and skill gaps faced by employers. Working with university student Parisa Boroumand and recent grad Amy Cran, they also sought to learn if work-integrated learning was a viable tool to promote retention in cities.

The team used a mixed methods approach, conducting interviews and focus groups with local employers, work-integrated learning offices at Alberta post-secondaries, and alumni from the University of Lethbridge and Lethbridge Polytechnic. They also surveyed alumni to understand the role work-integrated learning played in their decisions to stay in or leave

Lethbridge once they graduated. They presented their findings and recommendations in August 2024.

The project provided some memorable experiences. “It was great to collaborate with the City and learn more about the practical challenges of policy implementation, urban planning, and community development,” said Manns. “It was also great to work directly with Perry Stein, who continuously introduced us to new projects and people.”

Whiting added that they also encountered a few surprises. “At times, it was a challenge to balance the perspectives of our three different populations in the study,” she said. “Each had its own priorities and challenges when it came to student retention, risk mitigation, and labour market development, so we spent a lot of time reflecting on how this project could best serve everyone’s needs while also maintaining the integrity of the research. Although a challenge, at the times we were able to find fair balances between competing perspectives, it felt very rewarding.”

Both said they encourage other students to take advantage of work-integrated learning opportunities with the Prentice Institute.

“Through our Mitacs Internship and our Applied Studies, we had access to some great opportunities for professional development—from attending conferences to graduate-level training in mixed methods research practices—and we have been supported through our ongoing work with the Prentice Institute to keep learning and growing as young scholars,” said Whiting.

Manns added: “This experience has sky-rocketed our professional development and has helped to increase our confidence in the workplace exponentially.”



### OUTPUTS

Public presentation, knowledge synthesis report, policy recommendations

10

## RESEARCH ASSOCIATES’ WORK EXAMINES TEACHER RETENTION AND ATTRITION

**The Alberta Teachers’ Association initiated a research partnership** with the Prentice Institute in the fall of 2023 to increase the Association’s capacity for studying teacher retention and attrition. As part of that work, Prentice research associates Carly Heck and Melissa Wilk recently completed a narrative review on the concept of classroom complexity, a policy scan of Alberta’s education landscape over the past 30 years, and a realist review, which was informed by focus groups with actively employed teachers.

Grounded in a systems-based model that is sensitive to the individual, interpersonal, institutional, and infrastructural dynamics at play in teachers’ career decisions, Heck and Wilk identified a lack of systematic, comprehensive, and longitudinal monitoring of teacher supply, demand, and attrition in Alberta, which is a still-unfulfilled goal stated by Alberta Education

in 2011. Their analysis of existing research also revealed a known absence of consistent methodology in studying teacher labour dynamics, particularly in high-income countries. Given these major knowledge gaps, especially in the context of worsening teacher labour shortages, there is an urgent need to better understand the who, where, when, and why of teacher attrition to inform leadership and policymaker decisions.

The next phase of their research throughout 2025, which is funded by the Prentice Institute and the Alberta Centre for Labour Market Research, will involve conducting a survey of teachers in Alberta to assess demographic, work environment, and labour market factors in teacher retention and attrition. Heck and Wilk will use a statistical method known as “multilevel analysis of individual heterogeneity and discriminatory accuracy,” a novel quantitative approach for studying

intersectionality. This method can account for the nested structure of the data, allowing them to untangle the effects of individual experience and demographic factors from the effects of the school environment.

The result will be an estimate of the likelihood of attrition for each unique segment of the teacher population (e.g., teachers with less than five years of experience teaching in public schools in rural areas), which will be used to identify factors associated with a higher likelihood of attrition. The knowledge created by this work will have potential to support the Alberta Teachers’ Association, the Alberta Centre for Labour Market Research, as well as the Government of Alberta in addressing issues of labour market disruption, capacity building, and equity.



# OUR PEOPLE

**The Prentice Institute for Global Population and Economy** is made up of a talented and diverse team of academic and administrative staff members, research associates, research analysts, post-doctoral fellows, summer interns, support staff, and work-integrated learning students. They include:



**Dr. Lars K. Hallström, Director**  
lars.hallstrom@uleth.ca

## ACADEMIC STAFF

**Dr. Lars K. Hallström** is the Director of the Prentice Institute. His background is in political science and in addition to his directorship, he is also a faculty member in the University of Lethbridge's Political Science department. Dr. Hallström was born in Edmonton, Alta., but due to his father's work in the oil industry, he and his family left Canada shortly after and he spent most of his childhood living in Europe and the United States before returning to Canada as a teen. After a year of university studies and playing rugby in the United Kingdom, Dr. Hallström obtained a Bachelor of Arts in Political Science at the University of Calgary in 1995 and earned a Master of Arts and a Ph.D. in Political Science from Purdue University in Indiana. He began his academic career at St. Francis Xavier University in Nova Scotia as a Professor of Political Science and Canada Research Chair in Public Policy and Governance. Dr. Hallström joined the University of Alberta in 2009 and was the first Director of the Alberta Centre for Sustainable Rural Communities until December 2020, when he came to the University of Lethbridge and took over the leadership of the Prentice Institute.



**Dr. Andrea M. Cuéllar, Associate Director**  
andrea.cuellar@uleth.ca

**Dr. Andrea M. Cuéllar** is an anthropological archaeologist, an Associate Professor of Anthropology, and an Associate Director of the Prentice Institute. She earned a Bachelor of Arts in Anthropology in 1997 from the Universidad de los Andes in Colombia, and a graduate certificate in Latin American Studies, a Master of Arts, and a Ph.D. in Anthropology in 2006 from the University of Pittsburgh. She joined the University of Lethbridge in 2006, where her research and teaching focuses on the anthropology of food; food systems and human-environment relations; historical ecology; land use history; agrarian history; regional-scale approaches in archaeology; comparative study of social complexity and social inequality; and more. In 2022, Dr. Cuéllar joined the Prentice Institute and leads the Work-Integrated Learning program and initiatives related to internationalization and community partnerships, fostering applied learning and research collaborations locally and internationally. Since 2018, she has also supported the City of Lethbridge Historic Places Advisory Committee (HPAC) in the formulation and implementation of an inclusive heritage management program. Her research in the Ecuadorian Upper Amazon is centered in understanding long-term human-environment relations with a focus on forest management and agroforestry, land use history, and human-mediated ecological dynamics linked to food systems.



**Dr. Alexander Darku, Associate Director**  
alexander.darku@uleth.ca

**Dr. Alexander Darku** is an Associate Professor of Economics at the University of Lethbridge and an Associate Director of the Prentice Institute. He earned a Bachelor of Arts (Honours) in 1992 and a Master of Philosophy in 1995 from University of Ghana. He then earned a Master of Arts in Economic Policy Management in 1999 and a Ph.D. in Economics in 2005 from McGill University. At the undergraduate level, he teaches courses in international trade and finance, economic development, intermediate macroeconomics and advanced macroeconomics. At the graduate level, he has been involved with applied econometrics, advanced macroeconomics, and advanced trade theory. Before coming to the University of Lethbridge in 2006, he taught as a Faculty Lecturer at McGill University and as an Assistant Professor at Concordia University. In addition, he has served as an economist/consultant to the World Bank from 1998 to 2002, and worked as an economist/consultant to Price Waterhouse Coopers in Ghana from 1995 to 1997. His research focuses on how international trade affects economic growth and income distribution in the developing world, and on the role of international capital flow and exchange rate in the determination of current account balances and economic development in developing countries.

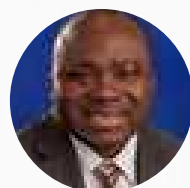
## ADMINISTRATIVE STAFF



**Patricia Macklin, Program Manager**  
patricia.macklin@uleth.ca

**Patricia Macklin**, the program manager for the Prentice Institute, provides oversight and implementation of the Prentice Institute's funding streams for affiliates. She also contributes to the implementation of the institute's research; knowledge synthesis, translation, and exchange; and other operational projects. A graduate of the University of Alberta, she has a Master of Science degree in Rural Sociology, and has a long history of working in both academic and government settings, including time within the Ministry of Agriculture and Rural Development at the Government of Alberta, and the Alberta Centre for Sustainable Rural Communities.

## CURRENT RESEARCH ASSOCIATES



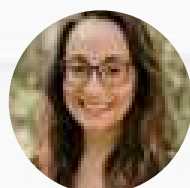
Dr. Adebiyi Boco

**Dr. Adebiyi Boco** is a demographer and a Research Associate at the Prentice at the University of Lethbridge. From January 2021 to December 2024, Boco held a faculty position as an Assistant Professor in the Department of Sociology at the University of Lethbridge.



Lanie Parr, BSc.

**Lanie Parr**, who earned a Bachelor of Science in Earth Sciences from the University of Calgary, provides research and editorial support on various projects at the Prentice Institute.



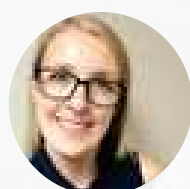
Stacey Haugen, M.A.

**Stacey Haugen** is doctoral candidate at the University of Alberta. Her research focuses on immigration and refugee resettlement to rural and smaller places in Canada.



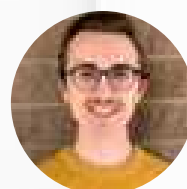
Melissa Wilk, BA, MA

**Melissa Wilk** has experience in a range of government settings and is now pursuing a Ph.D. in Political Science at the University of Alberta. She joined the Prentice Institute in 2023.



Carly Heck, M.Sc.

**Carly Heck**, who holds a Master of Science degree in Global Health Nursing, has a wide variety of work and research experiences that centre on the values of empowerment, equity, and quality of life.



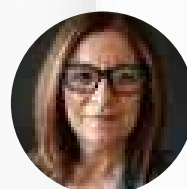
Nick Yarmey, MSc.

**Nick Yarmey** has provided GIS mapping, quantitative data analysis, and data visualization for the Prentice Institute since 2021. He earned a Master of Science from the University of Connecticut.



Breanna Little Mustache

**Breanna Little Mustache** is an undergrad student pursuing philosophy at the University of Lethbridge. She joined the Prentice Institute in 2024 and is currently working on project doing Community Capitals Asset Mapping with the City of Lethbridge.



Dr. Sonia Zarrillo

**Dr. Sonia Zarrillo**, an archaeologist and paleoethnobotanist, studies plant domestication and dispersals, agricultural systems, and cultural evolution in the Central and Northern Andes and adjacent tropical forest regions.

## CURRENT RESEARCH ASSISTANTS

**Shada Aborawi** is pursuing a Bachelor of Arts in Political Science and a Bachelor of Education in Social Studies education at the University of Lethbridge. She started working with the institute in October 2024.

**Tatum Adair** is a third-year student at the University of Lethbridge, working on a Bachelor of Science in Agricultural Studies degree, with a concentration in Agricultural Business.

**Erica Gonzalez** earned a Bachelor of Arts, focusing on Biological Anthropology and Archaeology, at the University of Alberta, and is now working on a master's in Anthropology at the University of Lethbridge.

**Clara Khosravizad** earned a bachelor's degree and a master's degree in sustainable architecture in Iran before moving to the University of Lethbridge to start a second master's in Urban and Regional Studies.

**Anna Leismeister** is studying Political Science at the University of Lethbridge. She has been a part of the City Scholars program done in collaboration with the Prentice Institute.

**Victoria Lopez** has been working with the Prentice Institute since October 2024. She is her final year of studies at University of Lethbridge, where she is majoring in Political Science and Government.

**Taylor Manns** has been working with the institute since May 2023. She is in her final year of her Bachelor of Arts in Urban and Regional Studies program at the University of Lethbridge.

**Bhawana Pradhan** is in the midst of completing her Bachelor of Health Science and Bachelor of Management degrees at the University of Lethbridge. She started working with the institute in May 2024.

**Sydney Rolfe** is in her final year of studies at the University of Lethbridge, where she is majoring in Political Science and History. She has worked with the Prentice Institute since 2023.

**Sydney Whiting** is working to complete a Bachelor of Arts in Political Science from the University of Lethbridge. She has worked with the institute since September 2023.

## RESEARCH AFFILIATES

**Any University of Lethbridge faculty member, or faculty of any other accredited academic institution, may apply to be designated as an affiliate of the Prentice Institute.** Affiliate members from the University of Lethbridge who were active in early 2025 are listed below under their area of focus. To connect with these scholars, go to [prenticeinstitute.ca/about-us/research-affiliates](https://prenticeinstitute.ca/about-us/research-affiliates).

### Economy

Dr. Debra Basil  
Dr. Pascal Ghazalian  
Dr. Helen Kelley  
Dr. Miranda Leibel  
Dr. Danny Le Roy  
Dr. Bahareh Mosadegh Sedghy  
Dr. Richard Mueller  
Dr. Patrick Wilson  
Dr. Rossitsa Yalamova

### Ecosystems

Dr. James Byrne, retired  
Dr. Justin Raycraft

### Health

Dr. Olu Awosoga  
Dr. Julia Brassoletto  
Dr. Cheryl Currie  
Dr. Jon Doan  
Dr. Peter Kellett  
Dr. Richard Larouche  
Dr. Bonnie Lee  
Dr. Brenda Leung  
Dr. Toupey Luft  
Dr. Claudia Steinke  
Dr. Janice Victor

### Population

Dr. Kristine Alexander  
Dr. Jodie Asselin  
Dr. Yale Belanger  
Dr. Reginald Bibby  
Dr. Jeremy Cunningham  
Dr. Sandra Dixon  
Dr. Gideon Fujiwara  
Dr. Elizabeth Galway  
Dr. Inge Genee  
Dr. Michelle Hogue  
Dr. Robert LeBlanc  
Dr. Miranda Leibel  
Dr. Dan O'Donnell

Dr. Tom Perks  
Dr. William Ramp  
Dr. Daniela Sirbu  
Dr. Ivan Townshend  
Dr. Wei Xu  
Dr. Patrick Wilson  
Dr. Julie Young



The Prentice Institute accepts applications for affiliation year-round. Learn more about how to apply at [prenticeinstitute.ca/about-us/become-an-affiliate](https://prenticeinstitute.ca/about-us/become-an-affiliate), and get connected today.

# WANT TO LEARN MORE ABOUT THE PRENTICE INSTITUTE?

**The Prentice Institute conducts research and analysis** integrating demographic changes and how those changes impact ecosystems, health, and the economy. Our work provides evidence for the development of policy options in addressing some of the difficult challenges facing the world and focuses on:

## RESEARCH

The Prentice Institute supports and conducts research focused on changes in human populations and the potential impacts of these changes on social, environmental, and economic factors. We communicate our research in effective ways to stimulate further research and to enable individuals, governments, and corporations to make informed decisions.

## DATA COLLECTION AND ANALYSIS

The Prentice Institute has expertise in the collection and analysis of demographic data. We provide data services, including a variety of forms of data collection, analysis, and visualization. We have done contract analysis work for NGOs and municipalities.

## POLICY ANALYSIS

The Prentice Institute is charged with not just conducting research around the bigger questions of the 21st century, but with the broader goal of providing resources to inform public policy.

## WORK-INTEGRATED LEARNING

The Prentice Institute Work Integrated Learning (WIL) program currently involves a partnership with the City of Lethbridge City Scholars program (learn more about these experiences on p. 8). Our WIL program started in 2022, and from the start it has incorporated features around access, equitability, quality, and dissemination pertaining to the experiential opportunities that it facilitates. We also run a unique experiential learning opportunity through our Policy Innovation Lab.

## KNOWLEDGE SYNTHESIS, TRANSLATION AND EXCHANGE

Knowledge synthesis, translation, and exchange (KSTE) involves combining, assessing, and disseminating the results of research with an eye to informing decision making. Within academia, that involves informing, advancing, or improving research agendas, theory, or methods. Beyond academia, that includes informing public debate, policies, and practices; enhancing and improving services; and informing the decisions or processes of people in business, government, the media, practitioner communities, and civil society.

## LET'S WORK TOGETHER

If you'd like to learn more about working with the Prentice Institute—whether as an industry partner, a research affiliate, or a student looking for work-integrated learning opportunities—contact us.

### **The Prentice Institute for Global Population and Economy**

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