

THE LESLIE HARRIS CENTRE OF REGIONAL POLICY AND DEVELOPMENT



SUMMARY REPORT

BURIN PENINSULA THRIVING REGIONS WORKSHOP #2

College of the North Atlantic – Burin Campus

Burin, NL

February 20, 2020

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Introduction

On February 20th, 2020, the Harris Centre hosted the 2nd workshop for the Burin Peninsula Thriving Regions Partnership Process (TRPP) at the College of the North Atlantic in Burin. Just over 20 people from communities across the Burin Peninsula region came together to

- Listen to presentations from the three researchers selected by the Evaluation Committee; and
- Ask questions, share information and provide additional feedback for consideration by the researchers as they develop their full proposals to proceed with the projects.

This event followed from a workshop held October 29th, 2019 in Marystown during which participants identified the following priority research themes: Realizing Our Tourism Potential; Senior & Child Friendly Communities; Attraction & Retention of Workers & Families; and Ocean Health & Seafood Opportunities (http://www.mun.ca/harriscentre/whatwedo/thrivingregions/Burin_TRRP_Workshop1.pdf). Following the first workshop, the Harris Centre released a call for Expressions of Interest from Memorial University faculty, staff and students to complete research projects focusing on one or more of these priority themes. A fund evaluation committee comprised of local and academic members chose three researchers to move forward in the process and attend this second workshop to share information about their projects, gather feedback, develop local partnerships, and ensure that their projects are relevant for the region. This report provides a summary of the research projects being proposed, as well as the discussion surrounding each project during the workshop.

About the Thriving Regions Partnership Process and this Workshop

The Harris Centre’s Thriving Regions Partnership Process is a new program that has taken the place of its Regional Workshop programming that was undertaken from 2005-2016. This new process includes development of more sustained relationships with people in regions throughout the province, as well as dedicated funding for Memorial researchers to complete projects in those regions. The Thriving Regions Partnership Process is providing an opportunity for Memorial University to work with people on the Burin Peninsula region to help promote a thriving social and economic region through the funding of publically engaged research projects focused on priorities identified by people from within the region.



A local advisory committee is helping plan and promote this process in the Burin Peninsula region, including people from the following businesses and organizations: College of the North Atlantic–Burin; Regional Women in Business Network, Grand Bank Development Coporation); Dynamic Air Shelters; Fortune Hotel; Laurentian Legacy Tours; and NL Dept of Tourism, Culture, Industry and Innovation. (See Appendix A for the list of committee members.)

Following the first workshop, The Harris Centre released a call for Expressions of Interest from Memorial University faculty, staff and students to complete research projects focusing on these priority themes on the Burin Peninsula region. A fund evaluation committee comprised of three local and three academic members reviewed the nine Expressions of Interest that were submitted and chose the following three projects to move forward in the process:

- *Culture, nature and history: identifying sustainable tourism opportunities for the Burin Peninsula.* Marie Louise Aastrup (Geography) and Simone Cominelli (Geography)
- *Protecting Atlantic Salmon Aquaculture Production from Climate-Related Challenges Through Diet Manipulation.* Eric Ignatz (Ocean Sciences)
- *Community based sustainable and equitable employment in aquaculture on the Burin Peninsula.* Dr. María Andrée López Gómez (Sociology) and Dr. Christine Knott (Geography)

The workshop on February 20th included presentations by these researchers on their projects followed by discussion sessions on each project with the workshop participants. The purpose of this workshop was for local community members in the Burin Peninsula region to learn more about the research projects being proposed for their region, and for the researchers to gather feedback and develop local partnerships to help ensure that their projects are relevant for the region. The workshop was attended by over 23 people, mostly from around the Burin Peninsula region (see Appendix B for a list of participants).

Following this workshop, the researchers will submit full proposals by March 13, 2020, which will be reviewed by the fund evaluation committee to ensure that they still reflect the original proposals, while incorporating feedback and potential local partnerships from the workshop. If the committee is satisfied with the proposals, the researchers will receive \$15,000 each to move forward with their projects.

Research Projects, Discussion and Feedback

Culture, nature and history: identifying sustainable tourism opportunities for the Burin Peninsula

Presenter: Simone Cominelli

Sustainable tourism (ST) encompasses activities that have low environmental impacts, allow tourists to experience local culture and ecology, is supportive of the local economy, and allows future generations to have equal chances to enjoy tourist destinations as we do today. ST includes various types of nature-based tourism such as ecotourism which is centered around the natural history and cultural heritage of an area. ST relies on engaging in local culture, consuming local products and cuisine, hiking, photography, bird watching, and many other activities. As rural communities represent “older ways of life and cultures that respond to the post-modern tourist’ quest for authenticity”, ST initiatives can help retention and attraction of the workforce, provide new rural livelihoods through the production of local products, arts, and crafts, as well as through providing accommodation and tourist-guides. ST draws people away from activities harmful to biodiversity, can decrease vulnerability and increase skills, and can enhance ecosystem services.

The Burin Peninsula (BP) provides unique opportunities for the development of this form of tourism combining Newfoundland’s unique rural culture and natural heritage. Projected towards the Grand Banks and facing both Placentia Bay and Fortune Bay, the BP is an ideal area for the development of whale and nature watching activities with a historical perspective, as the area includes former whaling stations (Little St. Lawrence and Rose Au Rue) as well as current and former fishing communities and extensive hiking trails. Collaboration with local businesses, NGOs and organizations focused on promoting local development, cultural heritage and education (e.g., Burin Peninsula Arts Council, Burin Peninsula Trailway Board Inc.) will be a key aspect for the development and implementation of the project.

Ensuring successful ST means providing authentic experiences where tourists can enjoy the natural history and local heritage of the area they visit. In order to do so, understanding tourists’ motivations for visiting a certain area, and their satisfaction with their visit is key. Our project will conduct a gap analysis based on understanding existing tourism offers and tourists’ perceptions of the BP, alongside local storytelling.

Gap analysis compares current tourism offers with tourists' expectations and perceptions, providing a baseline for addressing any potential lacks in the current tourism scene, enhancing strong points of current tourism, and providing insights on the human dimensions of tourism which is directly relevant to the destination branding and marketing of BP. Furthermore, stakeholder engagement is key to ensuring ST, and tourists make up an important stakeholder group. As such, it is important to not only work with local stakeholders in the development of tourism in the BP, but also to understand why tourists come to the BP, what kind of activities they undertake, how satisfied tourists were with the various tourism offers, tourists' knowledge of local cultural heritage and ecology, and tourists' wishes for future tourism. Human Dimensions (HD) of recreation and tourism provides a useful framework for understanding motivations and satisfaction of tourists and ensuring that their perspectives are involved in the management of the BP. Under the HD framework, we propose to conduct a gap analysis, develop a questionnaire to identify tourists' motivations and satisfaction, and working in collaboration with local community stakeholders, we will draw on our experience in storytelling and photography to co-create a representative collection of local stories on the unique cultural and ecological heritage of BP.

The results will be used to identify opportunities to expand tourist offers in the BP, but also guide the creation of storytelling materials aimed at marketing both BP's cultural heritage and natural assets.

Comments, Questions and Discussion:

- There was a study done a few years ago by Dr. Mark Stoddardt that seemed to be asking similar types of questions through focus group interviews in the region; will you do a lit review that includes looking at similar past processes in the region? (Legendary Coasts has talked with providers over the years re similar topics; maybe connect with them.)
 - ↳ S: The gap analysis will start with a lit review
- Engagement with both Legendary Coasts and Heritage Run Tourism Association will be critical and extremely valuable.
- It seems that a potential weakness of the gap analysis is that it is based on what visitors already know about opportunities in the region; won't get at what they don't know.

- What is the plan for conducting the survey?
 - ↳ S: we may start with known destinations; e.g., sites listed on NL Tourism website
- If survey had a full list of available attractions, could learn what opportunities people/visitors were and were not aware of
- Having the fuller inventory of places/attractions could be very valuable for those of us in the region as well so that we all know what is available; promote the full region to our clients/visitors.
- How will you identify less well known attractions and places? These often get overlooked in these sorts of processes.
- Are you looking for feedback on potential locations?
 - ↳ S: yes; please send me suggestions via email.
- If collaborating with tourism association(s), is it possible for this project to evolve?
 - ↳ S: We can modify the survey based on their input
- What are the options for evolving/going beyond the current project scope and timing? → How can we make this sustainable??
 - Where will the stories go?
 - Who will maintain/update?
- You may find that while we have attractions and even infrastructure, but are weak on programming; may want to be aware of this (not just about inventory of places).

*Protecting Atlantic Salmon (*Salmo salar*) Aquaculture Production from Climate-Related Challenges Through Diet (Nutritional) Manipulation*

Presenter: Eric Ignatz

Given the importance of the salmon aquaculture industry to the province's economy and coastal communities, especially on the Burin Peninsula and in the Fortune Bay area where significant expansion

is on-going, it is vital to ensure this industry's continued success and sustainability. As seen recently, increases in ocean temperature can lead to massive losses of salmon that not only adversely affect company profits and employment, but also have consequences for the environment and public trust. One potential way to avoid such future events is through the manipulation of diet components that are fed to farmed salmon to improve their thermal tolerance and production performance at elevated temperatures.

Previous research has shown that temperature can impact fish nutrition and tissue composition, and that fish fed specific dietary ingredients can tolerate higher water temperatures. Providing additional dietary cholesterol is one option available, as it has been shown to prolong fish survival at high temperatures. Increasing dietary cholesterol can also increase astaxanthin (a carotenoid typically added to salmon diets for fillet pigmentation) blood transport and retention in salmon, which may also benefit final product quality and thermal tolerance. For example, it has been previously reported that salmon reared at high temperature lose fillet colouration, and astaxanthin has anti-oxidant properties which would protect the fish from tissue damage at high temperatures. Furthermore, cholesterol is important for maintaining cell structure. This is relevant, as cell membrane composition (which cholesterol helps strengthen) and fluidity are directly impacted by environmental temperature, with increasing temperatures responsible for weakening structure and ultimately cell death. For these reasons, we are interested in studying the inclusion of additional dietary cholesterol in farmed Atlantic salmon diets to determine whether this strategy can improve the thermal tolerance of these fish. Building upon ongoing research conducted through the Mitigating the Impact of Climate-Related Challenges on Salmon Aquaculture (MICCSA) project and the Ocean Frontier Institute (OFI), that involves numerous industry and academic partners, the current proposal would provide novel insights to help the provincial aquaculture sector to continue to expand sustainably. Further, this research would build upon the Burin Peninsula's tradition of working on the sea and help to ensure that the region has future seafood-related employment and economic opportunities regardless of what environmental changes lie ahead. Thus, it fits well within the theme targeted by this funding opportunity ('Ocean Health & Seafood Opportunities') that focuses on the Burin Peninsula.

The Laboratory for Atlantic Salmon and Climate Change Research (LASCCR) at the Ocean Sciences Centre is fully equipped to perform the necessary experiments to study how nutritional manipulation affects salmon performance (i.e., growth, feed conversion ratio, stress, survival, immune response) at high temperature. With the current capabilities of the LASCCR, we will be able to test three different dietary

inclusion levels of cholesterol alongside a conventional control diet. Temperature will be controlled to mimic the natural progression of temperature increases during the spring and summer in Newfoundland waters (i.e., from ~ 10°C at ~ 0.2 °C day⁻¹) to keep the results of this study as applicable to the Burin region as possible. Standard growth performance indicators (i.e., fish growth rate, condition factor, feed conversion ratio, etc.) will be measured during the experiment, alongside measurements of the circulating (plasma) levels of the stress hormone cortisol, fillet composition (i.e., lipid and fatty acid levels and profiles) and tissue gene expression. An immune challenge experiment will also be performed as the fish reach 20 °C to assess whether the inclusion of additional dietary cholesterol has any effect on the ability of salmon to effectively mount an antibacterial immune response. This latter work is meant to broaden the research scope of the project, and to provide a better overall assessment of the effect of these novel diet formulations on the salmon. Subsequently, the remaining fish will continue to be exposed to temperature increases of 0.2 °C day⁻¹ until survival in each group reaches 50%. This will aid in determining the optimal dietary inclusion rate of cholesterol that promotes thermal tolerance in salmon.

Comments, Questions and Discussion:

- How does the higher cholesterol levels being tested here compare to diets of wild salmon? Will higher cholesterol levels impact humans via consumption?
 - ↳ E: Hard to know cholesterol levels in wild salmon diet. We will be testing flesh for different factors from the fish in this project.
- What is the source of the cholesterol you will be adding to the food?
 - ↳ E: Sean Tibbets (ORC, Halifax) will be formulating the feed; I don't know specific source for cholesterol, some animal-based product
- So the purpose is both to keep the fish alive and test their flesh?
 - ↳ E: yes, we will be doing a variety of health tests on the fish throughout the course of the experiment
- One slide showed a lower risk here in Newfoundland; so why then are we getting die-offs here?

- ↳ E: I can't say for sure; there are different factors affecting fish health, so it could be many different reasons. It is important for aquaculture industry to be aware of all factors affecting fish health and use all tools to address
- Are you using the same source of your salmon as Grieg uses?
 - ↳ E: No; same type/breed of salmon, but we are getting ours from a different source
- This seems like primarily a lab-based research project taking place in St. John's. Consider if there are any other opportunities to engage with members here in the region.
- If you need a local place to do some of the work, perhaps consider and connect with Dr. Mike Graham, Ocean Wave Energy lab

Community based sustainable and equitable employment in aquaculture on the Burin Peninsula.

Presenter: Dr. María Andrée López Gómez

Building on current research ongoing on the South Coast of NL looking at social licence and employment in aquaculture, this proposed research will aim to engage and work with communities on the Burin peninsula who are hoping to benefit, both short and long term, from the development of aquaculture through the Greig NL project at Marbase. This study will cover two of the priority areas identified by the Burin peninsula participants: 1) Attraction and retention of workers and families, and 2) Ocean health and seafood opportunities. The study also has the potential of touching upon issues related to "senior and child friendly communities" as attractive work and sustainable use of local resources has the potential of creating social and economic opportunities that improve the livelihoods of communities including seniors and children.

The Burin peninsula, like many other regions in Newfoundland, suffers from population decline. In 2016, the population consisted of 19,795 inhabitants and projections reveal that this number will decrease to 14,000-16,000 inhabitants for 2,036. Not surprisingly, attraction and retention of workers is one of the main issues that concerns communities on the Burin peninsula, a region rich in maritime resources. The Grieg NL project and related economic development in the seafood sector holds the potential to attract and retain workers and families and to further create economic opportunities in the local seafood

sector. Grieg NL is expected to generate 440 direct jobs and 380 jobs in affiliated sectors. However, concerns around labour shortages due to the small population and potential skills mismatch raise questions about how the aquaculture industry will fulfill these jobs. In addition to understanding and ensuring employment opportunities, it is also important to work with communities to understand how the Burin Peninsula population could benefit from the development of aquaculture in their region, as well as the impact of fish farming to local businesses and fish harvesters. Our research project has the following goals:

- To understand the needs of the community in terms of work and education
- To identify opportunities for social and economic development related to seafood production and harvesting
- To identify strategies of recruitment that will benefit the community in the short and long-term
- To identify infrastructures needed to accommodate local and foreign workers

This proposed research project offers an exciting and critical opportunity to connect highly experienced researchers with community relevant organization and key informants (Mayors, councilors, employment councilors, FFAW, aquaculture reps from GriegNL, Marbase reps, education reps, etc.) residing or focusing on the Burin peninsula, to create grounded and applicable research catered to developing viable and healthy communities and economies in the region. As we would like to engage in participatory methods with willing communities, we would first set up meetings (3) in 2020, to set objectives and desired outcomes of community and industry stakeholders. These initial meetings will inform our methods and approach going forward. In addition to the meetings, we will conduct interviews with government and industry stakeholders as well as with community members to:

- Understand the beliefs, perspectives and expectations of the community with regards to the development of the seafood industry
- Understand the needs of the community in terms of work and training
- Identify the recruitment strategies used by government and industry to fulfill positions in the aquaculture industry
- Identify opportunities for local marketing of seafood (farmed and harvested).

The objectives of this proposed research will be co-created with community and industry partners. Our initial goals, which may be adjusted after our meetings, include:

- Understanding and addressing issues of recruitment & retention of the aquaculture workforce
 - Understanding labour shortage [current workforce, potential employment opportunities, gaps in training, education, skill etc., and quantitative numbers; recruitment strategies company and community level, TFWP etc., Seasonal work patterns,]
 - Immigration/migrant workers [worker and potential long-term community members: attraction and support for international workers and their families]
 - Education/Training
- Understanding and addressing ocean health and seafood opportunities for sustainable aquaculture and employment
 - long-term, secure, full-time vs part-time, non-precarious work opportunities; local vs non local workforce; sustainable industry practices, risk mitigation and ramifications for employment, sustainable ocean management for other ocean users (fish harvesters, recreational etc.)

Comments, Questions and Discussion:

- Looking at the whole peninsula? Or mostly focusing on locations close to Grieg; i.e., Marystown and St. Lawrence?
 - M: Looking at the whole region
- This is important and necessary research; often see projections for jobs created, but rarely follow up on what actually produced and related spin-offs.
- Wouldn't Grieg already have a fair idea regarding workforce availability?
- Will you be working with Grieg?
 - ↳ M: Yes, we will be reaching out to them.

- Suggest consider that we are looking at an aging workforce in the Burin region; this will impact availability and reframing of needs.
- As you identify potential workforce, guessing it will be older, even semi-retired; many of these will be in part-time and/or flexible hours:
 - Will this be something you look at in this project; i.e., identify barriers to and needs for flexible/part-time work (e.g., child care).
 - There is a group in the province working to promote seniors going back to work; might be a good group to connect with.
- Seems like for a lot of younger people, fishery is not a “go to” career preference; certain stigma with the “fishery”
 - Aquaculture is different in that it offers potential for a steady/year-round employment; interesting to see how younger people view this job/professional opportunity
- You mentioned immigration → we have had previous projects looking after the fact; we need to do better to anticipate what people are looking for and need in order to come and stay.
 - ↳ M: It would be helpful to connect with local organizations working on this in the Burin region
- At the recent Women’s Leadership Conference here in Marystown, question was raised → what can we do to help younger people decide and find a career they want? One response was to support ways of younger people to try things out, learn and grow into the job as they build confidence that they can do it (e.g., job shadowing, apprenticeship, mentoring). Consider looking at these in this project.
- Will you be looking at jobs related to aquaculture outside of Grieg (e.g., new facility in Marystown)?
 - ↳ M: yes; looking at which jobs, where and qualities

Next Steps

The researchers will submit expanded research proposals by March 13, 2020. These will be reviewed by the Fund Evaluation Committee to ensure that the projects still reflect what was originally proposed, while also incorporating local input and the development of community partnerships. Once the projects are approved, the researchers will receive their \$15,000 in funding and move forward with their projects. The researchers will continue to engage with people in the region throughout their projects, and an additional session will be planned when their projects are at or near completion to share results and discuss next steps.

About the Harris Centre

Named in honour of the late scholar and former Memorial University President Dr. Leslie Harris, the Leslie Harris Centre of Regional Policy and Development was established on October 1, 2004. Dr. Harris was known for his integrity and independence, while making a practical contribution to Newfoundland and Labrador. The Harris Centre continues this commitment as Memorial University's hub for public policy and regional development. It links Memorial faculty, staff, and students with the people of Newfoundland and Labrador and supports research, public engagement, and teaching in areas of regional policy and development. Working with all units at Memorial, the Harris Centre builds connections, encourages informed debate and supports collaboration, enhancing the University and the province through mutually beneficial partnerships. Since its inception, the Harris Centre has developed a suite of knowledge mobilization and public policy tools and has increased the university's presence in communities and region across the province.

<https://www.mun.ca/harriscentre/whatwedo/thrivingregions/>

Appendix A – Burin Peninsula Thriving Regions Core Planning Team

Trevor Bungay, Economic Development Officer – Marystown Field Office, NL Dept of Tourism, Culture, Industry and Innovation

Vanessa Jackman, Business Development Officer, College of the North Atlantic – Burin

Judy Peach, Co-ordinator, Regional Women in Business Network, Grand Bank Development Coporation

Kay Riggs, Chief Operating Officer, Dynamic Air Shelters

Brian Rose, Business Owner/Operator, Fortune Hotel

Carl Slaney, Owner/Guide, Laurentian Legacy Tours

Appendix B – List of Attendees

Jack Browne

Dawn Brushett

Simone Cominelli

Michael Cumben

Angie Dober

Everett Farwell

Bojan Fürst

Kurt Gamperl

Patti Giovannini

Kay Graham

Eric Ignatz

Vanessa Jackman

Theresa Jarvis

María Andrée López Gómez

Abby Moss

Chris Paterson

Judy Peach

Jeff Pittman

Brian Rose

Sandra Shallow

Carl Slaney

Nora Tremblett

Denise Withers