



ANNUAL REPORT

2018-2019

Goals

The purpose of RSEDIC is twofold:

1. To impact regional economies, and
2. To provide interdisciplinary research and training opportunities for faculty and graduate students.

These purposes are in direct alignment with the cross-cutting strategic research domain of “Regional engagement for socio-economic advancement” identified in the UBC Okanagan Strategic Research Support Plan 2017-2022. The focus of the Institute is centred on projects that support the dual purposes of the Institute.

In 2018, RSEDIC identified High-Value Agriculture (HVA) as an important theme that supported its goals. The Institute developed a three-year strategic plan that supported HVA research and programming on the Okanagan campus, related primarily to wine in the short-term, and later to other areas such as cannabis and precision agriculture. As part of its efforts, the Institute participated in the development of the proposal for the ICI building.

Institute operations

Governance: RSEDIC is governed by a Director, Associate Director, and Research Project Manager. The budget and operational management is overseen by the Research Project Manager. The governance team meet regularly; the Director and Associate Director communicate Institute priorities to UBC Okanagan senior administration, while the Research Project Manager supports and communicates with RSEDIC project teams. The Research Project Manager has been on parental leave since May 2019.

Membership: RSEDIC identifies primarily as a catalyst for new and existing research projects that engage with regional issues for socio-economic advancement. There is a standing membership that was established when the Institute was initially approved, but there have been no new members and no plans are underway to engage with the membership as such. Rather, RSEDIC views itself as being an institutional asset, an institution that facilitates campus activities in the area of socio-economic engagement without exclusion.

Staff and administration: Since November 2017, RSEDIC has been managed by a Research Project Manager. Funding for this position is provided by the Faculty of Management as an ongoing in-kind support to the activities of the Institute. Additional staff support is expected in 2019-2020 to redevelop the RSEDIC website and increase web presence.

Activities

WINE TERRITORIES

Engaging the British Columbia wine territory

- Completion of the project *Position the BC Wine Industry for International Growth*, supported by Western Economic Diversification Canada, including:
 - Kim Buschert, Malida Mooker, Jacques Olivier Pesme, Roger Sugden and Marcela Valania (2018), *BC Wine Territory Identity* (Kelowna: UBC Faculty of Management)
 - Hosting industry workshops on identity and diversity in the BC wine territory, held in Kelowna, Penticton, Osoyoos, Langley and Duncan, November/December 2018
- Hosting the fifth annual Wine Leaders Forum on *Shaping the BC wine visitor experience. What's new, what's next?*, April 2019, Vancouver Island

Smoke taint in wine

- Smoke from forest fires in the Okanagan Valley has the potential to significantly impact the operations of wineries in the region. RSEDIC supported a major project focussed on understanding and mitigating the effects of smoke taint on wine. RSEDIC funds, supplementing Eminence funds, were used to support a post-doctoral fellow who is spearheading a smoke taint project focused on crop protection. The project involves working with local wineries to smoke, under controlled conditions, 12 different blocks of grapes. The project includes testing an agriculturally approved spray to protect wine grapes from smoke exposure. Initial tests of the spray, assessed as part of a capstone project, showed significant promise.

BC Pinot Noir Celebration

- RSEDIC played a central role in organizing the Okanagan Campus as the venue for the Celebration. As part of UBC's contribution to the event, we organized and hosted a publicly accessible and free "Science of Wine" educational session. The Faculty of Management provided additional staff support for logistics.
- One of the goals associated with our participation in the organization of the event was to support and develop the campus's relationship with members of the wine industry. The educational session and the Celebration were very successful, as indicated by the following note from one of the lead organizers of the BC Pinot Noir Celebration:

On behalf of the organizing committee of the recent BC Pinot Noir Celebration, we wanted to thank you and the various UBC teams that partnered and supported the recent BC Pinot Noir Celebration. As the first year that this event has been held at UBC Okanagan campus, I know there was a lot of work put into the logistics of the event and from our perspective, it went extremely smoothly. This was a multi-faceted event with different formats at various times of the day and in checking with Stephanie Sielmann, our event planner, she shared that you and the whole UBCO team were great. We will still be having a full internal debrief as the focus of the wineries currently on harvest, so we will follow any further comments in the later fall coming out of that session.

I personally attended the UBC education session and thought the presenters did a solid job of relaying sometimes quite complex scientific content in a very digestible manner to the varied audience. What a great opportunity for community engagement around UBC's activities within the Okanagan wine industry. And

thank you for the great communications support. While we may have been a bit late in alumni engagement to make much of an impact with the discount code, the social media content (loved the video, Roger) was fantastic.

We would welcome the opportunity for a debrief from UBC Okanagan's perspective if you'd like, either by email or in person, as we would love to see this venue and event partnership continue. Historically, the event has been bi-annual, so that gives us some planning time again before the next BC Pinot Noir Celebration in 2021. Let us know what feedback you have and how you'd like to provide it.

I recently had the opportunity to attend the International Pinot Noir Celebration held for its 33rd annual event on the campus of Linfield College in McMinnville, Oregon. Much like UBC Okanagan, it's a gorgeous setting and venue for the 3 day event that inspired this local Okanagan version. Linfield College has really embraced the event and the growing Oregon wine industry. Even though it started as a Baptist college originally and was a 'dry' campus, it now offers a Wine Studies Major via the Evanstad Center for Wine Education and other wine related programs.

I believe events like the BC Pinot Noir Celebration continue to offer great opportunities for UBC to partner with and support the BC Wine Industry. Thank you.

Oenoviti

- RSEDIC/UBC participated as members for the first time in the Oenoviti annual conference in Athens. Oenoviti is a network of universities involved in wine research and education. Jacques-Olivier Pesme (Faculty of Management) presented on wine research at UBC Okanagan and on the wine industry in BC.

OCCUPATIONAL STRUCTURE IN THE OKANAGAN NATION TERRITORY

- Research workshop on The Recent Economic and Social History of the Okanagan, June 2019, Community Core of Westbank First Nation, and UBC Innovation Library, Kelowna

BUILDING CAPACITY FOR RURAL HEALTH IN BC'S INTERIOR

- A group of UBC researchers (co-led by Dr. Kathy Rush and Dr. Eric Li) has submitted an Eminence research cluster proposal titled "Advancing Rural Health through Digital Health Technology and Social Enterprise" in September 2019. The vision of this multi-disciplinary cluster is to create a hub of research excellence to advance rural health and healthcare equity by leveraging technology and social enterprises. Where people live matters, especially for rural living children/youth, older adults with chronicity, and Indigenous People who are most affected by health and health care disparities. Additionally, invisible forces, such as socio-economics, history, power, systems and structures (e.g., colonization, institutionalized racism), land, identity, language, and worldviews perpetuate the disproportionate disadvantage of these groups. Technology and social enterprise are two promising solutions for promoting health and inclusive health and social care for disadvantaged rural populations.
- In the academic year 2019-2020, this research cluster aims to build on existing community partner relationships, cultivate new ones, and co-develop a concept map of identified needs/priorities.

UBCO Community-based rural health research

- An UBCO interest group on community-based rural health research (led by Dr. Joan Bottorff) was formed in mid-2019 with linkages to the Regional Alliance for Rural Health. This interest group aims to bring UBCO faculty together with research interests that include collaboration with rural communities to:
 - Support networking, share learnings and findings/methods of ongoing projects, support interdisciplinary collaborations, host talks, sharing information about funding opportunities.
 - Explore funding opportunities to develop a strategy to grow rural community-based health research at UBCO and leverage partnerships available through the RAHR
 - Explore ways to formally establish connections with community organizations/societies

COMMUNITY UNIVERSITY HUB (CU-HUB) PROJECT

- Developed as a joint initiative between the Institute for Community Engaged Research (ICER) and the Regional Socio-Economic Development Institute of Canada (RSEDIC), the Community University Hub (<https://cuhub.geolive.ca>) is a tool that will enable community members and organizations to directly access University researchers and undergraduate students and vice versa. When it launches in Summer 2020, the hub will operate like a virtual library service desk, where a user can identify a problem, question or general area of interest and be referred to or matched with a researcher, student, University unit, or more.
- RSEDIC funds supported two distinct aspects of the project this past year. Firstly, they have paid for the ongoing programming and development costs of the project. Secondly, they paid for associated costs of supporting two Management Capstone projects to:
 1. Research and develop a set of best practices for evaluating CU-HUB.
 2. Organize and facilitate evaluation workshops/focus groups/surveys of the tool.
 3. Evaluate and analyze findings from workshops.
 4. Document and recommend changes and improvements to CU-Hub.These findings have been invaluable to shaping the future direction of the project.

PRECISION AGRICULTURE

- A team of UBC-Okanagan researchers (led by Dr. Nathan Pelletier, Dr. Eric Li, and Dr. Zheng Liu) is in the process of developing a research cluster on precision agriculture. This research cluster aims to initiate and facilitate a multi-disciplinary and multi-sectoral collaborative platform to advance the development and implementation of precision agriculture - using advanced remote sensing and information technology - to improve the efficiency, profitability, and sustainability of farming in the Thompson-Okanagan region and beyond. The vision of this cluster is to leverage and connect the research strengths and networks of the UBCO researchers with those of other academic, government, and industry stakeholders in this space, in order to collaboratively design, test and implement an integrated technology and management ecosystem that will enable strategic development of regional precision agriculture. Example applications include: improving resource allocation and efficiency (i.e. use of water, fertilizer, energy, and crop protection product inputs) in

vineyards and orchards using sensor-based technologies; employing integrated pest monitoring and management; and utilizing micro-climate monitoring and forecasting to improve the global competitiveness of regional agriculture while simultaneously addressing food sustainability and security challenges. The overarching goal of this research cluster is to position UBC to contribute strongly to 21st century agriculture, foremost by enabling a globally competitive and sustainable regional agricultural sector through advanced and synergistic technology implementation, monitoring, and management interventions.

Partnership with the Okanagan Kootenay Sterile Insect Release Program

- The UBC research team (led by Dr. Eric Li and Dr. Zheng Liu) has partnered with the Okanagan Kootenay Sterile Insect Release (OKSIR) Program on a project titled “pest damage spatial risk assessment with predictive analytics”. The objectives of this new research program include: (1) to develop a machine learning system to connect historical data with new data management system; (2) to develop a new analytic model to understand the correlations of pest activities and weather condition; (3) to develop a spatial analytic platform to assess how the risk associated with the pest in different growing regions; (4) to develop new sterile insect release and capture devices with the IoT technology; and (5) to explore a new commercialization strategy and revenue model to sustain OKSIR operation and future R&D activities. OKSIR has sponsored Mr. Evan Esch’s enrollment in the IGS Ph.D. program. Evan is currently under the joint supervision of Dr. Zheng Liu (Engineering) and Dr. Eric Li (Management).

Experiential learning projects with Vortex Aquaponics

- A team of management student has partnered with the Vernon-based organization, Vortex Aquaponics, to develop a marketing plan for promoting sustainable food system (aquaponics) to the Okanagan community. The organization also collaborated with an Engineering capstone team in the academic year 2018/2019 to integrate sensor technologies in aquaponics system.

PRAIRIE INDIGENOUS PHILOSOPHY PROJECT

- A collaboration between University of Calgary (Dr. Daniel Voth), University of Alberta (Matt Wildcat) and UBC Okanagan (Dr. Mary Butterfield). This project seeks to make the political, economic, and philosophical work of Indigenous thinkers more accessible to Indigenous communities, as well as to the public at large. The project team received a SSHRC Connection grant (PI Voth, U of C) in 2019 to fund a symposium in Banff, AB, in September 2019, as well as to support the further growth of a research network dedicated to expanding the project. RSEDIC provided financial support to the 2019 symposium, and has a particular interest in the relationship between the increased access to the social and political thought of Indigenous communities and their independent socioeconomic well-being.

Goals for 2019-2020

- Connect with wine territories in Washington, Oregon, Napa Valley.
- Develop policy understanding and analysis re international trade barriers in wine.

- Increase awareness of RSEDIC activities in the Oenoviti network; present on wine territory identity at the Odessa Symposium, 2020.
- Develop further support for the research on smoke taint, including in wine territories beyond BC, and as part of developing international relationships with UC Davis, University of Bordeaux, and University of Adelaide.
- Continue support for development of the CU-HUB.
- Submit an Eminence Cluster proposal on precision agriculture in Fall 2020.
- Develop rural health working groups/special project teams on rural health technologies/innovations and rural health enterprise.
- Develop new partnerships and project teams on creating sustainable food market systems.