

UPDATE

UNBC UNIVERSITY OF
NORTHERN BRITISH COLUMBIA

A Newsletter for UNBC Alumni and Friends – Fall 2008



What's Inside

- Mountain Pine Beetle Projects
- Climate Change and Glaciers
- AIDS Education in Botswana
- Wind Energy and Wildlife
- In Search of Good Food



Executive members of the Northern Undergraduate Student Society in the new Northern University Student Centre.

UpFront

New Executive Team

UNBC has made significant progress in forming a new executive team that will guide the University in the future:



Charles Jago, Interim President
Charles was the President of UNBC between 1995 and 2006. He is also the Chair of Northern Health, the Fraser Basin Council, and the Canfor Pulp Limited Partnership.

Mark Dale, Provost

Mark came to UNBC from the University of Alberta where he was Dean of the Faculty of Graduate Studies and Research and a professor of Botany. As Provost, he oversees the academic programs, Library, Registrar's Office, and other student services.



Eileen Bray, VP Administration & Finance
Eileen is from Thompson, Manitoba, and served as CFO of the Burntwood Health Authority. She is now responsible for the administrative operations of the University.

Gail Fondahl, VP Research

Gail has been a Geography professor at UNBC for 13 years, specializing in the geography of indigenous peoples in northern regions. She is aiming to strengthen UNBC's research connections throughout the North, in Canada, and around the world.



President's Message:
www.unbc.ca/president



Sharing a birthday with UNBC.

A New Generation of Students

Four students never knew life without UNBC. Stephen Bonnett, Crystal Male, Kristjan Mytting, and Chandehl van der Eykel were born on June 22, 1990; the same day that the Government of BC passed the UNBC Act. They are pictured with President Charles Jago, UNBC founder Murray Sadler, and Bruce Strachan, who as the Minister of Advanced Education in 1990, shepherded the legislation that created UNBC.

Basketball Frenzy

It's an exciting season for the Northern Timberwolves basketball teams. The 2009 men's national championships will be held at the Charles Jago Northern Sport Centre in March; the teams have submitted an application to become a part of the Canadian Interuniversity Sport league; and Mike Raimbault has joined the men's team as its new head coach.

New Programs

Changes to the roster of academic programs this year include a new major in Human Resources Management, which is the sixth major in the University's School of Business. Forestry, meanwhile, has been replaced with Forest Ecology and Management. The new degree provides students with more options for customizing their education to include topics related to climate change, conservation, business, and resource planning.

Research Accomplishments

UNBC has surpassed the \$100 million mark for research funding received to date and has earned national recognition as one of Canada's top research universities for the second year running. These accomplishments are remarkable for a young and small university.



On the Cover

Northern University Student Centre

Members of the Northern Undergraduate Student Society Executive are celebrating the opening of the highly anticipated Northern University Student Centre. The 20,000 square foot space, formerly occupied by the Fitness Centre, includes a pub, event space, student lounge areas, meeting space for clubs, and NUGSS offices. The Centre has been more than a decade in the making.

Tackling the Beetle



The Federal Government's new Community Economic Diversification Initiative was created to help communities overcome the challenges posed by the mountain pine beetle infestation. To date, six UNBC projects have attracted more than \$1.3 million in funding.



Terahertz Technology

Funding is allowing Physics professor Matt Reid to lead additional

research that is exploring the application of terahertz technology to mills that are challenged to utilize beetle-killed pine trees. Terahertz waves can be used to see through wood and provide information on fibre quality and moisture content.



Future Fibre Usage

Geography professor Greg Halseth, a Canada Research Chair in Rural

and Small-town Studies, hosted community reps, marketing experts, and industry leaders in September for a workshop that explored how wood fibre would be best utilized in the future to maximize the returns to the economy and the environment.



Business Development

Part of realizing diversification is providing education and

training to the people who will help make it happen. UNBC Continuing Studies is working with the University's Quesnel campus (pictured) to create business development courses for regional First Nations.



Bioenergy System

UNBC is working with the Wood Pellet Association of Canada

to install a wood pellet heating system at the University's I.K. Barber Enhanced Forestry Lab. The pilot project is part of a feasibility study on using the campus as a showpiece for bioenergy.



Non-Timber Options

Rick Holmes of UNBC's Quesnel River Research Centre is working with

Royal Roads University and the Likely Xats'ull Community Forest to identify uses of the forest for non-timber products, such as food, musical instruments, and medicines.



Beetlewood Concrete

The School of Business is partnering with UNBC grad Sorin Pasca to bring

his beetlewood concrete product to market. The market research will identify potential uses and buyers for the new product, which is made by mixing wood chips with cement and water.

UNBC projects target new innovations, bioenergy, training, and emerging uses for wood fibre – all in response to the pine beetle epidemic.

Melting Away

Imagine filling up BC Place Stadium with water. Then empty it. Now repeat the process 8,300 times. This would require 22 billion cubic metres of water, the same amount that BC's 17,000 glaciers are permanently losing **each year**.

This is just one of the findings of a UNBC-led research program exploring the current state – and future fate – of western Canada's glaciers and icefields. "Glaciers are sensitive indicators of climate, and they are also among western Canada's most important freshwater resources," says Dr. Brian Menounos, a UNBC Geography professor who is leading the research program.

The research team is focusing on several glaciers and icefields around BC. At each site, meteorological measurements such as air temperature, wind speed, precipitation, and humidity are being taken to better understand the controls of glacier nourishment and melt. The researchers are also measuring changes in thickness, extent, volume, and movement of hundreds of glaciers throughout the mountain ranges of western Canada. This work requires the analysis of thousands of aerial photos, some of which go back 70 years.

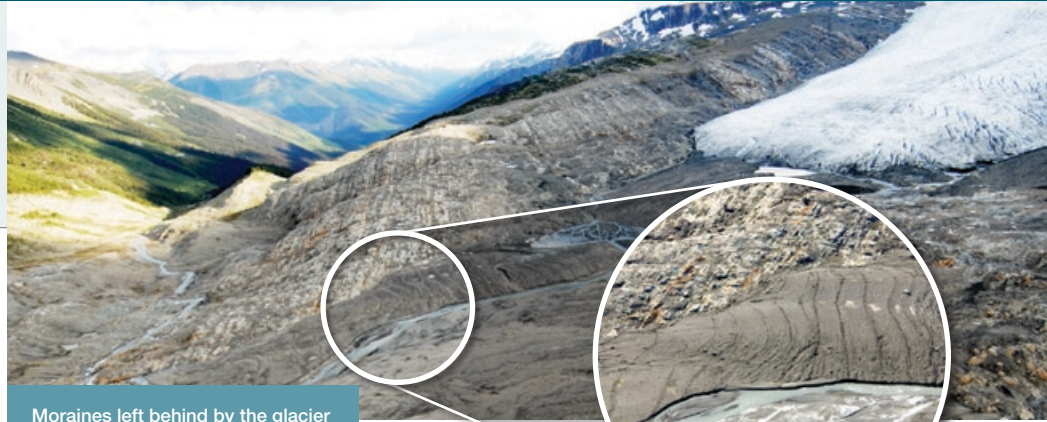
During a recent visit to Castle Creek Glacier southeast of Prince George, UNBC doctoral student Matt Beedle measured changes in the glacier's volume through intensive field work. Just a month before, a pole he had stuck into the glacier with only a few millimetres showing at the top was now exposed to nearly his full height. Using GPS equipment that can measure his elevation on the glacier within a centimetre, Beedle was able to confirm that the thickness of the glacier at that point had dropped more than 1.5 metres through the month of August alone.



PhD student Matt Beedle (left) and professor Brian Menounos examine the moraine left behind by Castle Creek Glacier in 2007.



Changes in glacier thickness are measured using GPS equipment.



Moraines left behind by the glacier document its annual retreat.

But the Castle Creek Glacier is a significant research site for other reasons. As it has been melting, the glacier has been leaving a series of rows of rock and earth (called moraines) that precisely indicate how much the glacier has retreated each year. Similar to tree rings, they extend into the valley 750 metres from the glacier's current edge, providing a unique geological record of this glacier's retreat over the past 50 years. No other glacier outside of Iceland is known to have left such a legacy.

The researchers are about half-way through the five year project. By 2010, they'll be able to predict the rate and magnitude of glacial retreat under various climate scenarios. Their predictions will have implications for freshwater resources, fish habitat, power generation, and even tourism.

The research is being funded by an investment of nearly \$2.2 million from the Canadian Foundation for Climate

and Atmospheric Sciences and cash contributions from universities and network partners such as BC Hydro and the Columbia Basin Trust. Researchers from UBC, SFU, University of Victoria, University of Calgary, University of Washington, federal and provincial governments, Natural Resources Canada, and the Columbia Basin Trust are also taking part.



Glacier Facts (2005)

- BC has about 17,000 glaciers and Alberta has around 800.
- Close to 90% of BC's energy is hydroelectric; melting snow and ice play a significant role.
- Glaciers cover 3% of BC's land mass.
- The largest glacier located entirely in BC is the Klinaklini Glacier, with an area of 470 square kilometres.
- Between 1985 and 1999, the annual amount of water produced from melting glaciers in BC was 22 cubic kilometres.



UNIVERSITY OF
NORTHERN BRITISH COLUMBIA
ALUMNI ASSOCIATION

Alumni News & Events

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New Alumni Association Logo

The UNBC Alumni Association recently unveiled its new logo, which is designed to illustrate the link between UNBC and its grads. Watch for the new logo on products in the UNBC Bookstore.

Family Christmas Celebration

Celebrate the holiday season with fellow alumni! The Annual Family Christmas Party is on **December 3rd** at Prince George's Exploration Place from 6:00 to 9:00 pm. Enjoy tasty treats, warm drinks, and a visit from a special guest. Please bring non-perishable food items for the St. Vincent de Paul Society.

Stay Connected!

UNBC alumni receive special event invitations, Update newsletter, and information regarding employment opportunities. Keep your contact information current by visiting www.unbc.ca/alumni.



Brindis Ogmundson of Prince George graduated with a BSc Psychology in 2006. Her business, Meow Records, was voted "Best Indy Record Store in Canada" in a national contest on CBC Radio Three. The UNBC Alumni Association named Brindis one of its Alumni of the Year for 2008.

UNBC Alumni

The graduating class of 2008 was UNBC's largest to date. 830 students graduated, bringing the total number of UNBC alumni to just over 7,300.

Sean Paterson (BA Economics '02) is Chief Technical Advisor for the United Nations Industrial Development Organization (UNIDO) – Iraq Country Program. He resides in Amman, Jordan.

Roger Dinelle (BSW Social Work '08) is a counselor specializing in mental health and addictions. He works for Northern Health and lives in Prince George, BC.

Barbara Dalflyen (BComm Finance '04) is a senior accountant for Burrowing Owl Estate Winery in Penticton, BC.

Deanna Shaw (BSc Natural Resources and Environmental Management '98) is a silviculturist with Spectrum Resource Group in Prince George, BC.

Patrick Lucas (BA Environmental Studies '03) is a community planner with David Nairne & Associates in Vancouver, BC. He works with coastal First Nations bands, facilitating the creation and implementation of comprehensive community plans.

Mojgan Mohandesi (BSc Biology '01) completed medical school and is currently in his residency at the University of North Dakota in Grand Forks, ND.

Laurie Cordell (BSc Environmental Planning '98) is a sustainability facilitator for the Fraser Basin Council's Smart Planning for Communities program in Cranbrook, BC.

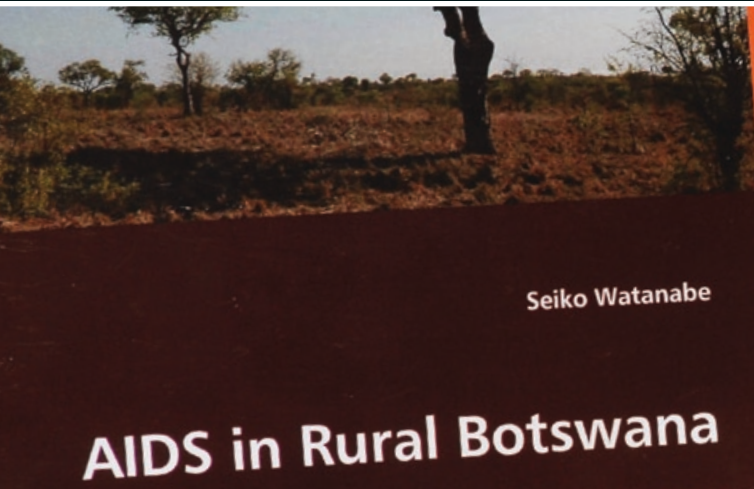
Ryan Stark (BSc Biochemistry & Molecular Biology '07) is a natural resource officer working for the BC Oil and Gas Commission in Fort St. John, BC.

Philip Peters (BComm Accounting '98) is a barrister and solicitor for the Government of Alberta in Edmonton. He is married to fellow graduate **Wendy Peters** (Nee Marks, BA International Studies '98) who is an Internships Coordinator for the Government of Alberta.

Leanne Wiltzie (BA Anthropology – Honours '08) is pursuing a master's degree in Medical Anthropology at the University of Victoria in Victoria, BC.



Sommelier Robyn Brunneski (BA English '05) hosted an evening of wine tasting during Homecoming.



Seiko Watanabe

AIDS in Rural Botswana



Seiko Watanabe graduated from UNBC with a master's degree in International Studies in 2006. Her book on AIDS in Rural Botswana is based on her thesis and has recently been published by a German company.

Cultural Complexity

Botswana is a small country with a big problem. One-quarter of its adult population has HIV/AIDS, believed to be the highest national rate in the world. UNBC grad Seiko Watanabe went there in 2003 to spend a year as an HIV/AIDS educator and researcher and her experiences have recently been published. "I saw a young mom who had just given birth to twins slowly dying because she did not have enough to eat. I saw a young woman dying alone because her family members did not want to look after her. The devastation was palpable and I felt the urge to obtain a deeper understanding of what it would take to make a difference," she says.

She traveled on sand tracks in the country's northern and most rural district armed with a flipchart, television, VCR, and a generator donated by foreign aid. The region is home to the San (known as Bushmen) but it has a very diverse population. Over the course of



Botswana is located in southern Africa



her work and research, she held community meetings involving more than 700 people who face considerable barriers related to language, education, and culture. The common denominators, however, include extreme poverty, gender inequality, traditional beliefs that contribute myths about becoming infected with HIV and how to be cured, marginalization, and a reluctance to deal with the problem of HIV/AIDS because of stigma and outright fear. Without untangling these issues, says Seiko, treating HIV/AIDS as a medical or behavioural issue will not work in southern Africa.



Just by talking, she feels that she made a difference.

"The discussions focused on the virus, how it is spread, and what steps can be taken to prevent it," says Seiko. "The more people heard, the more they talked to each other and to me. In turn, I learned. These people have taught me so much about life, humility, defiance, joy, and sorrow. The experience changed my life forever."



Seiko held workshops involving more than 700 people, sharing knowledge about the HIV/AIDS virus.

UNBC Donations

Office of University Advancement

UNBC, 3333 University Way
Prince George, BC V2N 4Z9

Phone: 250-960-5750
Toll-free: 1-866-960-5750
Email: advancement@unbc.ca

We are located in room 1065 on the main floor of the Administration building.



Tanner Shaw and Nick Fuchs received \$5,000 transfer awards from the I.K. Barber Foundation in 2008. Both students transferred to UNBC from the College of New Caledonia in Prince George.

Giving to UNBC

Support students! Purchase a 2009 wall calendar featuring photos of northern BC. www.unbc.ca/giving.



NMP students Kathryn MacKinlay and Peter Eppinga.

Supporting Future Physicians

Thanks to donations to the Northern Medical Programs Trust (NMPT), fourth year Northern Medical Program students can receive grants to help cover the high cost of their education.

This semester, the Trust has provided \$22,000 to 17 NMP students who are taking rural electives across northern BC. The students have travelled to Fraser Lake, Fort St. James, Dawson Creek, Hazelton, Smithers, Fort St. John, and Queen Charlotte City to study in their intended disciplines.

The NMPT is a partnership involving UNBC and 20 communities in response to the critical shortage of health care professionals in northern BC.

Recent Gifts to UNBC

BC Hydro Awards

As part of its community outreach program, BC Hydro has established three \$1,500 awards for students from northern BC majoring in Environmental Studies with a minor in Global Environmental Change.

NCMA Scholarship

The North Central Municipal Association has established two \$500 scholarships for students studying Public Administration, Commerce, or Community Development.

Talisman Energy Scholarship

Talisman Energy has established two \$1,000 scholarships for aboriginal students that are involved in community service.

Planned Gift

UNBC is grateful for the thoughtful foresight of the late Dr. Alvin and Mrs. Janey Mooney in establishing a generous planned gift for UNBC. This year, the Dr. Alvin and Mrs. Janey Mooney Scholarship will benefit students who have graduated from a high school in Fort St. James, Vanderhoof, Fraser Lake or a surrounding rural area.



Charles Jago with donors Keith and Lynne Andersen.

Donor Appreciation

UNBC donors Keith and Lynne Andersen are two of more than 200 supporters that were recognized at UNBC's annual donor appreciation evening, held in October. In 2007/08, UNBC received nearly \$3.7 million in pledges and gifts.

Ewert Lecture

The fifth annual Dr. Bob Ewert Memorial Lecture and Dinner will be held on April 4th at the Prince George Civic Centre. The event will feature Gwynne Dyer, a renowned journalist, columnist, broadcaster, and lecturer on international affairs.

Mapping the Skies

The race is on across Canada to harness emissions-free sources of energy such as wind. Several wind farms are under consideration or are being constructed in BC in areas from the Peace River region to the South Okanagan and Vancouver Island. Many of British Columbia's ridgelines and valleys act as natural funnels that concentrate air streams, making them potential locations for wind farms.

"Unfortunately, hundreds of thousands of birds and bats also use the powerful gusts found along these 'wind highways' to expedite their migrations," says UNBC Ecosystem and Science Management professor Ken Otter.

Otter and his fellow UNBC researchers have been using radar technology and other methods to track the routes, flying altitudes, and species of airborne wildlife in the area of a wind farm near Chetwynd, BC. This enables them to create maps that can help wind energy companies avoid placing turbines in the middle of high traffic areas or where they might threaten wildlife.

"Environmental consultants Jacques Whitford AXYS Ltd., working on behalf of wind developer EarthFirst Canada Inc., has sponsored students to help conduct the research vital to this project. They have also covered a portion of the logistical costs, such as helicopter rentals, radio equipment, and additional crew deployments," says Dr. Otter. This funding has been critical to attracting other research investments from Environment Canada and the Natural Sciences and Engineering Research Council.

He adds that when you consider the sheer number of wind farms planned or currently under development, the collision of nature and technology presents a potential threat to wildlife. Private investments are making it possible to keep the sky safe for its traditional inhabitants while we continue down the road to a cleaner, greener future.

With support from donors, UNBC researchers are mapping flight patterns of birds and bats so energy companies can avoid placing turbines in high traffic areas.

UNBC professor Ken Otter and master's student Naira Johnston use this radar antenna to monitor the traffic of airborne wildlife.





Anthropology professor Farid Rahemtulla led the archaeological dig near Fort St. James.



The Big Dig

First Nations and UNBC students participating in an archaeological dig west of Fort St. James, BC have uncovered clues that provide insight into the way of life of the people who lived in the area hundreds and even thousands of years ago. The excavation site was selected by the Nak'azdli Band based on oral histories indicating it was the location of an ancient village.

Students have unearthed hundreds of artifacts and an “earth oven” used to cure types of rock useful in making tools and weapons. Pieces of charcoal were also found, which can be used to carbon date the site and reveal the approximate time period that people lived there.



\$100,000 Scholar

Cherisse Seaton, a UNBC student pursuing a doctoral degree in Psychology, has received the most valuable scholarship ever awarded to a UNBC student. She was awarded a Joseph-Armand Bombardier doctoral scholarship from the Social Sciences and Humanities Research Council of Canada (SSHRC) valued at \$35,000 per year for three years; a total value of \$105,000.

UNBC Grad Joins Cabinet

James Moore is the first UNBC grad to be named to the Federal Cabinet. He was first elected as a Member of Parliament when he was only 24 years old, becoming the youngest elected MP in British Columbia history. James graduated with a BA Political Science in 2000.



Silver for Hedges

UNBC grad Bo Hedges helped power Canada to a silver medal in wheelchair basketball at the Paralympic Summer Games in Beijing this year. Bo and his teammates won all of their games before falling to Australia in the gold medal match.

People in the News

The Canadian Council for the Advancement of Education awarded UNBC a silver medal for the content and design of the new UNBC website. Universities from across Canada participate in CCAE's annual awards program. www.unbc.ca



Rising Star of Research

UNBC undergraduate student Gareth Hopkins took home first place in the Discovery Division of UBC's Rising Stars of Research conference, in which more than 500 students from across Canada applied to participate. Gareth's research

involves the eating habits of the Warren Root Collar weevil and will help identify ways to protect young tree saplings from the insects.

Aid in Uganda

UNBC employees Tony Donovan and Chris Opio recently returned from Uganda where they oversaw the installation of six new water wells in rural villages. Donovan and Opio are founding members of a Prince George charity called the Northern Uganda Development Foundation, which raises money for life-sustaining infrastructure in Uganda's struggling northern region.



Pacific Leaders

Graduate students Claudette Bois and Gail Millar have received prestigious Pacific Leaders Fellowships from the Government of BC for their research on traditional land use and air quality. Claudette is in her second year of a

PhD and is studying soil science while Gail is in her second year of a master's degree and is exploring air quality issues.

Environmental Appointments

Ecosystem Science and Management professor Kathy Lewis has joined BC's Working Roundtable on Forestry, which works to identify key issues and opportunities facing the forest sector. Meanwhile, UNBC's Communications director Rob van Adrichem and master's student Danielle Smyth were appointed by Premier Gordon Campbell to the Citizen's Conservation Council on Climate Action for the Cariboo-Prince George region.



Hydro Innovation Winners

UNBC grad Geoff de Ruiter and UNBC Environmental Engineering professor Steve Helle recently took first place in the BC Hydro PowerSmart Innovation Challenge.

Their submission tackled the question of how UNBC could reduce its energy consumption. Their plan recommends a detailed energy audit of the campus, efficiency upgrades, plus additional insulation and ventilation retrofits in campus residences.

Chinese Connections

UNBC Environmental Science and Engineering professors Jianbing Li and Ron Thring are collaborating with Chinese scientists on research that will help to develop new bioremediation technologies for petroleum-contaminated soils. The research will focus on identifying the effectiveness of non-toxic agents that will address the shortage of environmentally friendly remediation techniques. The project is one of 13 BC-China research projects that are being funded by the BC Innovation Council and China's Ministry of Science and Technology. The program was announced in Beijing by Premier Campbell leading up to the Olympic Games.



Climate Research

Youmin Tang, UNBC's Canada Research Chair on Climate Prediction, has been awarded \$185,000 for his groundbreaking research on preparing for the effects of climate change. The funds, provided by the Canadian Foundation

for Climate and Atmospheric Sciences, will support research on novel mathematical models that will improve our ability to predict the weather many months ahead.

In Search of Good Food

Several years ago, when people noticed that I did not eat meat, they often asked if I was vegetarian. I responded, “No, I just don’t eat meat.” I didn’t object to eating meat; I just stopped trusting the quality of the meat available in grocery stores. Not eating meat seemed like a better choice than what was being offered.

The more I learned about the food choices available to me, the more difficult it became to know what to buy. There appear to be arguments for and against virtually every food choice. As well, every food choice impacts not only the planet but how people relate to each other. Over the past fifty years, our food purchases have linked us more and more to people and places around the globe, and less to our neighbours and backyards.

After some soul searching I devised a label to identify my set of food choices: *goodfooditarian*. I eat ‘good food.’

The idea of ‘good food’ stands in contrast to the many news stories about deaths from tainted food, whether it’s the recent listeriosis outbreak from packaged meat products, melamine in Chinese milk and instant coffee, salmonella from Mexican tomatoes, or E. coli from Californian spinach. In the midst of these stories, Canadians are assured that inspection systems are operating effectively and efficiently, in spite of reduced public oversight and greater reliance on private self-regulation. Repeatedly, we are assured that those responsible for food safety know what is good for us.

Ultimately, everyone’s food choices are replete with values. People act upon these values on a daily basis by choosing what food to buy,

The idea of ‘good food’ stands in contrast to the many recent news stories about deaths from tainted food.



UNBC professor David Connell at the farmers market in Prince George.

where to buy it, and how much to spend. But what choice do we have to purchase what we think is ‘good food’? For many, the global food supply is one big system dominated by corporate interests. To these corporations, ‘good food’ choices are restricted to what returns the highest profit, at the expense of providing a range of food choices.

Farmers markets offer at least one option, and the increasing number of markets indicates that people are using these markets to exercise their right to ‘good food.’ Research I conducted shows that people who shop frequently at markets have a much broader set of values that influence their food choices than people who shop less often. Also, the act of shopping at a farmers market itself is a quality of ‘good food.’ In other words, a farmers market is not only a place to buy ‘good food’ but also an expression of what many people believe is ‘good food’ – a place where the food is hand-picked the same day from a farm down the road; a place where you know the name of the farmer and meet to socialize with friends.

That food is good is not at issue, but how society produces, processes, distributes, and consumes food, is at issue. If we wish to take a step toward being a healthier society then we must be willing – and able – to exercise food choices that you and I believe are good for us and good for society.



David Connell

David Connell is a professor of Environmental Planning at UNBC. His research focuses on community theory, local food systems, sustainable practices, and small business development. Recently, he led a study showing that BC’s farmers markets contribute more than \$118.5 million to the provincial economy each year.