

ESSENCE

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Health and the Environment



CONTRIBUTORS

Georgia Brander - **Coordinator**
Charlotte Helston - **Head Editor**
Julia Bennett - **Layout Editor**
Julia Berry - **Advertising**
Sol Kauffman- **Martlet Assistance**
Jon-Paul Zacharias - **Copy Editor**

Layout

Julia Bennett
Emma Coldwell
Georgia Brander
Amy Hartzenberg
Sol Kauffman

Editors

Nicole Heron
Malcolm Maclean
Jamila Douhaibi
Melanie Callas
Brianna Meyer
Julia Machin
Emma Coldwell
Greg Medhurst
Ben Mock
Georgia Brander
Beth Bower
Roleen Sevilena
Julia Berry
Emma Wilson

Artwork/Photography

Julia Bennett
Georgia Brander
Kelsey Collins
Elizabeth Cronin
Mila Czemerys
Brianna Meyer
Nicole Fong

Comics

Nathan Ross
Audge Podge
Patrick Murray

Articles

Leat Ahrony
Craig Axford
Elizabeth Bailey
Georgia Brander
Brianna Cerkiewicz
Coral Candlish-Rutherford
Emma Coldwell
Jessica Outhwaite
Elizabeth Cronin
Hilary Decker
Alexandra Denis
Perdita Elliott:
Solara Goldwynn
Jamila Douhaibi
Katie Jones
Audrey Lane Cockett
Mike Lenaghan
Elizabeth Lu
Sarah Marshall
Brianna Meyer
David Norwell
Melia Parker
Kimberley Veness
Andrea Zittlau

Cover Image

Kelsey Collins

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Note from the Editor

CHARLOTTE HELSTON

The etymological roots of the words *health* and *environment* date back many hundreds of years. They date back to a time when humans did not yet harbour concerns for such things as greenhouse gases, global warming, and rising energy demands. Earth’s environment has transformed since then; its present condition is different both visually and functionally. Still, the meanings embedded in the early forms of *health* and *environment* are relevant to the issues we face today, and can help to deepen our understanding of these key words found in any environmental discussion.

The word *health* emerged primarily from Old English (O.E.) which was spoken c. 450 – c. 1100. The O.E. *haelp* implies a sense of wholeness. Restoring and preserving wholeness in Earth’s ecosystems, mindful of the many interconnected processes, is a common teaching in Environmental Studies classrooms. The O.E. *helge* refers to that which is “holy or sacred” and *healan* means to heal. Other early forms relate to notions of happiness, welfare, preservation and safety—all components of a healthy environment, and healthy life-forms within.

The word *environment* has origins in Old French (O.Fr.), spoken c. 900 – c. 1400. The word is derived from the O.Fr. *environer*, which is “to surround, enclose, encircle”. Alone, *viron* means “circle or circuit” and its sister term *viver* means

“to turn”. Think of the earth in motion, turning on its axis, circuiting the sun. Consider the turning seasons, the circular process of decomposition, recomposition, regrowth. The first part of the word, *en*, has roots in ancient Greek, translating simply as “in”. *Environ* can be understood as being in a circle, in circuit, or in turn. Within that turning sphere, that cyclical energy loop, is every type of flora and fauna, every ocean, lake and river, every weather system, every element. Within that circle, is us.

Both *health* and *environment* are broad terms with multi-faceted meanings unto themselves, as well as many connected meanings when paired together. The contributing authors of this issue of ESSENCE have drawn their own personal connections between these words, demonstrating the diverse links between health and the environment. The interpretations range from health of the environment with topics such as conservation, greenhouse gas emissions and misuse of natural resources, to animal health with subjects such as endangered species and the ethics of euthanasia, to human health with matters of food security, mental health and sustainable lifestyles. We hope that in conversing about health and the environment, we may begin to *healan*, or heal, our relationship with every part of this world which encircles us.

Environmental Studies Student Association Update

GEORGIA BRANDER

We had a great fall semester with ESSA, and are definitely gearing up for an equally fantastic spring semester. Despite some growing pains involving some senior members graduating or going on co-op work terms, we managed to recruit many eager new ESSA members, arranged some fun events, developed new collaborations, and made plans for the new year.

ESSA kicked off our new school year with a faculty meet and greet in the ES common room. We had a great time competing in a bridge building competition using old issues of ESSENCE, and ate some yummy food from our potluck. Thank you to all professors and students who came out to make such a fun event!

In the fall we hosted, along with the Ecological Restoration Volunteer Network, a Restoration Information night. It was a huge success with restoration experts and volunteer groups providing valuable information about restoration in Victoria and how you can get involved. If you are interested in learning more about restoration opportunities we’ll be hosting another night this semester so keep you eyes open for more information soon, or email nature@uvic.ca.

Another great event ESSA organized was a bake sale where half of the proceeds went to funding a new banner for ESSA and half went towards a donation to the Dogwood Initiative.

Our pubcrawl this semester was, as usual, a walking tour of local breweries. Check out Kimberly Veness’s article about the event on page 3.

We already have some events lined up for January. We are hosting an Environmental Studies Field School Information night. This event will be a great opportunity to learn about some of the amazing field schools ES offers. We’ll have students presenting on their field school experiences and professors on hand to answer any questions that may come up. Stay tuned for dates and times.

We are also arranging a Grad School Information night. Our hope is this event will provide students with a realistic and informative look at what applying to graduate school entails. This should be a great event for those who are thinking about applying to grad school or are questioning what their next steps should be.

Stay tuned for information about these upcoming events and more by visiting web.uvic.ca/~essa/

The Birth of Slipper Limpets

BRIANNA CERKIEWICZ

When the wintery moon drags the water over datum, limpets lift their lampshades and spawn gametes.

Storm-stirred salt water swirls sperm and ovum, maelstrom mixes and match-makes: external fertilization.

No father no mother, only bubbles and froth. Orphan undulating in open water forging a shell.



LIMPETS ON CALVERT ISLAND

PHOTO BY GEORGIA BRANDER

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Behind the brew: drinking local at Canoe Club

KIMBERLEY VENESS

Crisp, cold, and flavourful are some of the must-have characteristics of a good beer. But how about what is added to the beer, and where it is Bmade? Until recently, it was not often questioned where food came from, or even what was in it. Dinner was simply dinner, fashioned after whatever the cook was craving. Now, with a large portion of the consumer population “going green,” people are inspired to buy organic and local, as well as learn more about what is in their food. Yet, when someone picks up a six-pack, do they think of where it came from, or what is in it aside from the alcohol they are paying for? The Canoe Brewpub is one of Victoria’s most renowned breweries, and on November 4th, a crew of enthusiastic Environmental Studies students set out to learn what it means to drink—locally.

Interior lighting soaked into Canoe’s brick walls and wooded ceiling. Soft and ambient, the chandeliers cast a classy yet cosy feel over the space. Sliding into our seats by the bar, we each received a taster of Amber Lager to entice our palates. Next, three jugs of their signature beer: Red Canoe Lager, Siren’s Song Pale Ale, and Bea-

ver Brown Ale. The Beaver Brown was the group’s favourite—its full-bodied flavour and malty taste lingering in our mouths.

After sampling the beers and snacking on fries, edamame, and a delicious flatbread, we were led into Canoe’s back-room brewery. Seven 12-foot tall silver brewing vessels rose nearly to the ceiling, each with its own label and graph. Vince, our server and tour guide, explained that each vessel contained a different brew. One of the beers currently in the brewing process is Winter Gale, the most anticipated Canoe beer. This specialty beer boasts malty sweetness and undertones of ginger, cinnamon, cloves, and a hint of brandy. It is requested year-round by a chain of thirsty, faithful customers. However, it can only be enjoyed during winter months since it is seasonal.

The water used for all of Canoe’s specialty beer goes through a triple filtration system, and is the same water served to guests in the restaurant. The beer is unfiltered, and also naturally carbonated. This means the combination of yeast and sugar naturally releases alcohol and carbon dioxide (CO₂). Vince noted that macro breweries fill their tanks to capacity in order to make the most product in the least

amount of time, and then artificially add CO₂. In contrast, Canoe allows room in its seven silver silos for the CO₂ to naturally form.

Macro breweries also add chemicals to reduce the ‘head’ of their beer, and to provide a longer shelf life. Unlike labels on most cans of food, brewers are not required to list extra additives. So, what exactly are we drinking? Two common additives are betagluconase and propylene glycol alginate, and, although these are considered safe to ingest, it is believed that other, harmful chemicals are added for preservation. Canoe only uses natural preservatives like hops and alcohol. Because of this eco-approach, the specialty crafted beers they sell have a shelf life of one to three months, considerably shorter than conventionally produced beer.

When I asked our guide why Canoe continues to stay small, local, and eco, he replied, “Victoria’s into it, so it just makes sense for us to continue.” And it’s true—this lively little pub won a Canadian Brewing Awards Gold Medal, and was the region’s best pub three years running.

On a student budget it is not always an option to buy organic food and or-



ESSA MEMBERS AT THE ECO-BREWERY PUB CRAWL PHOTO BY JULIA BENNETT

ganic specialty beer to go with it. It is often easier to pick up what is on sale, or choose the cheapest beer possible to really stretch ten bucks. Lucky Lager is a guilty pleasure of mine, and has been my go-to beer for years. The fancy beers available at eco-breweries like Canoe were usually only for special occasions. But since I am “going green” in my attempts to buy

produce at farmers markets and eat less McDonald’s breakfasts, I thought why not apply that green selection to beer? The beer available at Canoe and the other Victoria micros is pricier, but it is also local and natural. If you are thinking about eating environmentally, check out our capital’s local breweries and enjoy drinking sustainably too. Cheers!

Jane pays a memorable Visit to Victoria

KATIE JONES

I first met Jane on the cover of the December 1995 National Geographic issue. There she was, cross-legged, her head bent obligingly for the chimpanzee finger combing her white-streaked hair. I studied her lined face, a judicious mix of trust and caution. “She is so brave,” I thought, “to let that monkey do her hair.”

The more I read about Jane’s life, the more familiar she became: At only 18 months old, Jane tried to sleep with earthworms under her pillow. At four, she hid in a henhouse, waiting to learn how eggs were laid. I identified with Jane’s curiosity. At the age of three, I avidly explored the seashore, poking around at crabs and snails.

Jane grew up in 1930s England: a time of war declarations and bomb shelters. At ten, I didn’t know war, but most nights I hunkered under my goldfish-print quilt, covering my brother’s ears so he didn’t have to hear my parents’ rage. In lives filled with inconsistency, what remains constant is the natural world. Dandelion milk wells from a fresh-cut stalk; a convex droplet shimmers, then bleeds. The child that was Jane, and the child that was me, although lifetimes apart, experienced the same wonders.

At twelve, Jane developed interest in literature, theology, philosophy and biology. She spent her spare time outdoors: at the beach watching weasels hunt along the sandy cliffs, or at a riding school in the country, learning to care for show ponies. She participated in a fox hunt, and decided animals should not be killed for sport. She wrote poetry. She embraced her ecological self.

At thirteen, I leaned towards the bathroom mirror to daub pimples with concealer and to prune errant hairs. I listened for our desktop computer to chime: a new instant message.

In 1957 Jane, 23, waved good-bye to her family, boarded a ship, and set out for Kenya. Jane recalls, “Back then, girls couldn’t do those sorts of things, only boys had adventures,” but she travelled to Africa anyway, meeting famed anthropologist Louis Leaky. She charmed Leaky with her enthusiasm and dedication, and ended up with a grant to study

chimpanzees in Gombe, Tanzania.

At 23 the only thing separating me from home was a plastic bench on the Mayne Queen, a gossip rag and a styrofoam cup of orange pekoe. I held a degree, but knew waitressing was more lucrative than editing or secretarial work. When adventure and opportunity presented themselves, I felt overwhelmed: I’d rather not try than face failure.

In 1986, Jane made an important decision: she stepped back from her work with the chimps of Gombe Stream National Park, and dedicated her life to the well-being of *all* animals. Three-hundred days a year, Jane criss-crosses the globe and maintains a frenetic pace of lecture and travel. Today, October 15th, I will meet Jane Goodall: primatologist, philanthropist, scholar, and my personal heroine. I arrive at Royal Roads and take a seat, front row, right in front of the podium.

In one hand, Jane carries a toy chimpanzee eating a banana, in the other, an eagle-feather fan. She moves up the centre aisle, and I see ceremony in her short measured steps, her confident chin. When Jane reaches the podium, she ignores us, dragging a stool into centre stage. Here, she sets up her stuffed chimp, Mr. H. A nice touch of whimsy, I think. Jane. Goodness.

I try to reconcile what I see in front of me with the Jane I know from pictures and film. Her hair is entirely white now, held neatly with a sterling-silver clip. She wears brown loafers and tailored pants and a cream turtleneck that highlights her lean form. Her face is lightly lined; her journey most heavily etched around her eyes and lips. Jane pays tribute to this journey, greeting her audience just as the chimpanzees of Gombe Stream National Park once greeted her:

“ooh huh ooh huh oooh huh oooh huh OOOOOH OOOOOH”

The ice breaks and Jane smiles in amusement. She lectures about many things: her experiences with the chimpanzees in Gombe, the bush meat trade, animal rights, vegetarianism, environmental degradation and the follies of our global economic system—but mostly, she speaks about the potential of children. She points to the youth who participate in her Roots & Shoots Foundation,



JANE GOODALL AND MR. H PHOTOS BY ELIZABETH CRONIN

children who, with the help of an adult mentor, are making positive change in the communities where they live. These children are the planet’s future, and we adults should model appropriate behaviour for them; we should heal our own relationships with the natural world.

After the lecture, Jane Goodall shakes my hand, and begins scribbling in my copy of *A Reason for Hope*. When she caps her pen, and looks up at me, I find myself word-shy. I mumble the only thing I know how: “Thank you. Thank you for coming to Victoria and speaking with us. Thank you”. She smiles, makes a decisive half-nod, and says “you’re welcome”. And then, she becomes someone else’s “Jane”.

In a few weeks, I will be 26. Half-way through my Environmental Studies pro-

gram, I find that my relationship with nature is changing for the first time in thirteen years. I feel a renewed connection with the natural world, like I am again the little girl feeding bottle-baby lambs, giggling as they butt the plastic nipple, cooing as they murp and nurp, scratching their woolly backs and watching their docked tails wriggle furiously. I am rediscovering my ecological self, in large part, because of Jane. She taught me that my fears of change, of uncertainty, of success or failure, are luxuries that the planet cannot afford. Now is the time to live boldly and to act in the interest of all living things, not just in the interest of myself.

What would the world be like with more curiosity, more bravery, *more Janes*?



Let’s cob: What’s the deal with natural building?

PERDITA ELLIOTT

It is early morning as I bound out of my car in a frenzy—characteristically late. I jog over to the meeting area, arrive wheezing a worried “heyyyyy” and offer a wave to the group. It is an ungainly transition from harried student urbanite to wannabe-cob-builder-extraordinaire. The introductory cob building course at O.U.R. EcoVillage caught my attention a few months earlier. I wanted to test my theory that building my own home was not as crazy as I have been told.

The instructor, Elke, asks, “So, exactly what is cob?” She describes the mixture of clay, sand, straw, and water. Cob buildings are inexpensive, fire-resistant and handle seismic activity well. They are also considered sustainable. The clay and sand are by-products of construction in nearby Sooke that would otherwise be considered not useful are therefore discarded. Cob is also creative—straight walls and corners are avoided, and the architect can insert flourishes like coloured glass and carvings in the cob itself. A tour of the

EcoVillage reveals vibrant cob structures that inspire endless possibilities.

Mixing the cob is our first lesson. We bend down and scoop piles of clay, sand, and straw onto shovels. We heave this mixture onto well-worn tarps used to avoid stepping directly in the cob. We pair up, one person lifting each end of the tarp. Stepping forward one at a time, we pound our boots into the tarp to knead the cob, before shifting back to allow the other person to attack from a different angle. I am immediately besotted by this method of mixing, or more correctly, molesting the clay, sand, and straw into workable material. However, I regret wearing my ratty old Converse shoes and not the spider infested boots I had considered in the garage that morning.

We are lucky today. A Marimba band practices in a nearby out-building, and our shifty attack on the cob turns into a rhythmic dance. Our bodies pant back and forth, the cob thwaps on the tarps, and we create our own beat that mingles with the brum-brumm-barumming of the djembes.

Elke’s Spanish assistant Cesar demonstrates how to determine the correct cob consistency. We remove our gloves and scoop up handfuls, rolling little balls to see if it sticks together. We raise it to our ears

“

By the end of the day we will all know how to mix cob and build a firm wall.

”

to hear if the granules of sand sound satisfyingly gritty. We grin like little children mixing mud to eat in a sand box. Cesar’s voice explains the process; I can’t decide whether I am more smitten with his lilting accented words, or the gooey mess oozing through my fingers and exfoliating my pores.

Mixing accomplished, Elke demonstrates how to add height to the root cellar we are building. We have to remove any air bubbles and prevent “splurging”—the bulging outwards of the cob that makes for a lumpy, and structurally deficient, wall. I smooth and level, smear and adjust, making sure the wall is not leaning in one direction or another.

I lose myself to the cob, to the rhythm of pounding and pushing the wall. The smell of earthen clay clouds around me and flecks of dirt dart into my mouth as wet globs whap onto the wall—a delicious farmer’s field on my tongue. I attack the mass of cob with the gusto of a woman starved of self-affirming physical exercise after months of indoor study.

Cantaloupe-sized globs had been pounded into the wall with my thumbs (and occasionally with a wooden mallet we soon entitle the Punisher). I decide my job is satisfactory, the globs now smooth and incorporated with the rest of the structure.

At lunch we sit around to share our food and life stories. Residents of the

EcoVillage wander through the site. Hemp-wearing heart-on-the-sleeve-lovers beam at us and discuss different concepts for the root cellar that will hold their food through the coming winter.

By the end of the day we all know how to mix cob and build a firm wall; how to construct the frame of the building with rubber tires painted with sticky brown “slick”; how to make a cob bench to perch on and windows to let in natural light. I feel slimy, dirty, and sore. I feel more alive than I have in as long as I can remember.

An hour’s drive home and I walk into my wooden box of a room. The sound of the rain is muffled; the smell of pine and moistened earth evaporates. I shiver as the damp vaporizes and my soggy socks squelch along the tile. I slump into the couch. The VCR blinks. The refrigerator hums monotonously, waiting to hold my food for the winter. I let out an unlady-like groan as I fall into a doze and start to drool a little in exhaustion. My last thought is “Am I really cut out for this?” I am not sure, but I will definitely be trying again tomorrow.

Rabbit reminders

ELIZABETH LU

At the University of Victoria, rabbits can no longer be seen frolicking in the grass. Campus grounds are decorated with busy students and tall trees, as ghosts of bygone bunnies haunt the school. According to a UVic news release, over 800 rabbits were shipped to various sanctuaries, notably in Texas and in Coombs, BC. All these rabbits were removed by permit holders by March, 2011. Any hoppers left on school lawns after that point were to be trapped and euthanized to prevent any further overpopulation of rabbits at UVic.

But is it euthanasia?

Dave Shishkoff, the Canadian correspondent for Friends of Animals, believes in knowing the distinction between euthanasia and just plain killing, as “humane” as it might be. He delves into the core of UVic’s final decision to eliminate the school’s rabbit population.

“To capture a healthy rabbit on campus and inject poison in its ear, that’s wrong,” says Shishkoff. “To call that euthanasia is wrong: you can’t euthanize a healthy animal. Euthanasia is the killing of an animal that is typically beyond saving.”

Suspicion rose among animal advocates whether or not lethal injection was even performed on all the rabbits during the cull. Kelly Carson, vice president of Canadians for Animal Welfare Reform, has her qualms. “Even if they did put the needle in the ear as they claimed, and I doubt all of them were done that way; the word euthanization is just absolutely ludicrous in this case. You don’t euthanize healthy animals with their whole lives ahead of them.”

In 2009, statistics measured by the Canadian Federation of Humane Societies showed 41.5 per cent of animals admitted into a Canadian animal shelter were euthanized. Nine percent of these animals were physically or behaviourally healthy, 61 per cent were categorized as physically or behaviourally unhealthy, and 30 per cent were not categorized.

Dr. James Lawson, chief animal health officer of the BC SPCA, says he’s seen a dramatic decrease in euthanasia rates for any animal over the past years for open admission shelters. “If you look at the euthanasia stats for provinces across Canada,” he says, “different animal shelters across Canada, I



WHERE HAVE ALL THE RABBITS GONE? PHOTO BY JULIA BENNETT

mean every reporting animal shelter, the BC SPCA either has the lowest or one of the lowest euthanasia rates.”

But he mentions they still have a problem with the overpopulation of cats. “We can pretty well find enough homes for all the dogs we get, but with cats, people still treat them as disposable.” He conceives this influx of cats within shelters results directly from a lack of owner responsibility. Mainly, the problem stems from people’s disregard in not neutering their cats and in abandoning them; this causes a very similar situation for the UVic rabbits. Both cases will lead to euthanasia when space becomes scarce.

“I think all we can ask is that we educate the public about the word humanity,” says Carson. “It’s a way of life. We’ve got a huge job trying to convince our society. How do you change the way people think?”

The simplest steps will make a tremendous difference through volunteering and getting involved in some way. Dave Shishkoff suggested the “Trap, Neuter, and Release” (TNR) strategy as a solution to UVic’s rabbit problem, rather than killing any that appear on campus. In June 2010, Dr. Lawson helped to organize a workshop at the Vancouver SPCA hospital.

“A lot of veterinarians don’t like to spay and neuter rabbits because the anaesthet-

ic of the rabbit is trickier and much more demanding than say for cats and dogs.” He explains that rabbits are more delicate from a surgical point of view and some veterinarians may be reluctant to perform the operation. As a result of a vet’s uneasiness, prices and fees escalate.

The workshops are designed to allow veterinarians, animal health technicians, and specialists to get more familiar with the technique. Lawson has also been running a TNR program at the SPCA hospital annually for five years, free of charge, for feral cats. Many veterinarians and animal health technicians volunteer for the day to spay, neuter and examine these cats, while treating minor wounds as needed. Cats are another vulnerable animal in danger of overpopulation and the fatal solutions that come with it.

Dr. Lawson strives to change society’s outlook on animal euthanasia, not necessarily through the government, but through enlightening each other.

“The frustrating thing,” Lawson says, “is that, although we are the biggest welfare organization in BC, we don’t get government support to address problems that people have caused. That’s why human education is so important to make people understand that you can’t just write laws, you have to change people’s attitudes.”



Tray raiders unite 21st century waste management

PHOTOS BY MILA CZEMERYS

DAVID NORWELL

Waste—a word that evokes a feeling of disapproval in all of us. However, we all do it on a regular basis. No exception to this is the black stain on campus: residence. I never got the honour of living in the compact social networking hub myself. But now, in the midst of my second year, I find myself going to the residence cafeteria frequently to help with the waste management issue. Tray raiding. We usually go in small groups of two or three; it’s better foraging that way. We act like regular lunch goers but where a normal student goes to the tray rack to put away their “finished” meal, we come in and make sure there’s no good food going to waste. You would not imagine the unlimited fries, full sandwiches, wraps, sushi, pizza and just about everything else the res locals discard. At peak times it is easy to forage a full meal for yourself, and as you eat your plate, another uneaten one presents itself. Now I admit it’s not the most glorified meal plan; being called such things as “skuzzy snacking” and “a good way to get herpes”. But from my experience, I have been consistently impressed by the epic, daily meal finds. Tray raiding puts food on the plate and saves needless waste. Food, health and the environment are intrinsically linked. Affecting one causes a lasting impact on the others.

AUDREY LANE COCKETT

When your only connection to food is a plastic food card it is difficult to be responsible with your food choices. I was largely disconnected from my food last year when while living in the microcosm of confined social interaction that is residence. It is easy to waste or choose unhealthy food when you don’t feel as though you are an implicit part of the system; this feeling is shared with many res-goers. Instead of earth-to-you-to-earth, res is stuck in a cycle of card-to-you-to-tray. I started to break through this disconnect when, one afternoon, I put my tray down only to see a full, untouched apple on the tray next to mine. Without a second thought I snapped it up; that liberating Red Delicious was responsible for shifting my whole paradigm towards interaction with food. From then on I was consistently awe-struck with my ability to have full, and healthy meals, simply from other peoples’ needless waste. Swiping that plastic card was no longer a thoughtless process, and the act of recycling such waste unleashed my detritivore tendencies. I go to school confident I can grab the daily cafeteria special from discarded but delicious tray-raided items from what my friends and I liberate from an otherwise landfill-bound path.

Tray Raiders Unite.
Make our meals a little more difficult
and take a 21st century approach to managing waste.

Using the Buddhist Four Thoughts that Turn the Mind as a foundation for the Environmental Studies student

SOLARA GOLDWYNN

As a student of Environmental Studies, I am immersed in what is going wrong in the world not only in relation to environmental issues, but also to how politics from local to global are interrelated. The “issues” are never-ending, as are the connections between land and people. I notice a common moment of despair each semester, after midterms and before finals, when the weight of the given topic appears to say, “It’s hopeless, the oceans are dying, the land is dying, the bees are dying, so are languages, and culture, the food we eat is poison, the air we breath is toxic, and to top it all off no one cares, especially those in power.” I propose that the Buddhist foundational principles of the Four Thoughts that Turn the Mind (towards the Dharma) could be applied to help the ES student from falling into despair, burnout, or worse, inaction.

The Four Thoughts, also known as the Four Reminders, or Four Mind Changings, are explained below:

Precious Human Birth

Reflecting on your human birth helps to understand that humans are fortunate compared to other living beings in that they have free will and an ability to improve their own life and the lives of others. Merely consuming, or being violent towards others is actually a waste of a human birth. As ES students we can reflect on the fortune of free will as a way to motivate ourselves to create change in the world.

Impermanence

Buddhist teacher Khandro Rinpoche says, “Reflecting on the impermanence of all phenomena should truly give rise to a sense of fear—not a paralyzing fear that keeps us from generating positive tendencies or bringing our potential to fruition, but a genuine sense of urgency in the face of impermanence”. Impermanence is something Westerners have an unhealthy relationship with. We have no problem with disposable things, or changing fads, and yet death or planning for future generations is something that is almost taboo to talk about. Death is the only certainty we have in this world and reflecting on it can be helpful for ES students in order to understand that change is an inevitable thing.

Suffering

The truth of suffering is not difficult to understand. Everywhere we look people are suffering from war, disease, starvation, and loneliness. Ecosystems are being destroyed, people and animals displaced. In the Buddhist tradition, however, we also look at so-called worldly happiness as cause for suffering. Money and consumption, we know from reflecting on impermanence, do not last. Oftentimes even those who have the most wealth feel alienated and consumed with fear of losing their wealth. All things come to an end. Reflecting on suffering can help to motivate the ES student to create positive change in the world. Positive change in this case is not the kind that is based on more consumption or exte-

rior processes, but one that incorporates interiority. Knowing suffering generates compassion, which allows for clarity of action to occur.

Karma

Buddhism is a non-theistic philosophy. Buddhists do not believe in a creator but in the causes and conditions that create certain circumstances that then come to fruition. This is called karma. Karma is often translated as action. Whether good or bad the fruit of the action may not be seen in this life, but in lives to come, or future generations. Poor decisions made by humankind have led to global warming, the effects of which return to harm humankind; this can be observed as a sort of “negative karma”. In the Buddhist philosophy, it is necessary to live a life that has the least negative impact on oneself and others.

Reflecting on the Buddhist Four Thoughts can help Environmental Studies students, as well as the wider student community, grapple with the emotions of distress and depression often generated by course material. It’s important to learn about environmental disasters, but students must also be given the tools to handle them on an emotional level. Contemplating our precious human births, impermanence, suffering, and karma would allow for a wider view of environmental situations. These reflections can apply to people from all backgrounds and would have enormous benefit for positive change in the world.



MAINTAINING MENTAL HEALTH. PHOTO BY GEORGIA BRANDER

Do you know what’s in your cosmetics?

JESSICA OUTHWAITE

When buying a cosmetic or personal care product, such as skin cream, shampoo, deodorant, or soap, do you read the list of ingredients? Many Canadians are unaware of the toxic ingredients contained in our personal care products, and what’s worse is that our labelling regulations do not require manufacturers to list all toxic or harmful ingredients. The ingredients found in some cosmetics have been linked to cancer, endocrine disrupters and reproductive toxicity. In small amounts, science reassures us these substances are not harmful, but these ingredients are in so many products that we are exposed to them in larger quantities than we are aware. A Simon Fraser Professor, Mark Winston, wrote an article in the Vancouver Sun titled “The risks we take wildly exceed the ones we avoid” focusing on risk perception and assessment. He wrote, “We tolerate cars, in spite of their proven risks” and the same can be said for the potions hidden in our cosmetics. Let’s assess the risk some of these chemicals inflict upon human health and the environment.

Three main chemicals found in personal care products are parabens, perfums, and polyethylene glycol (PEG). Parfum, also referred to as fragrance, is common in makeup, shampoo and oral care products. This vague word is code for any of the 3,000 fragrance chemicals used in cosmetics. Manufactures have no legal obligations to disclose specific ingredients, making it impossible to know which of these thousands of chemicals is contained in your shampoo or deodorant. It is proven that many perfums cause allergic reactions, as well as illnesses re-



CHEMICALS OR CLEANLINESS? PHOTO BY JULIA BENNETT

lated to chemical sensitivity. PEGs or “ethoxylated ingredients (those substances that typically feature -eth in their name) are found in numerous cosmetic creams. The chemical ‘1,4-Dioxane’—commonly referred to simply as dioxane—is both abundant in skin creams and classified as potentially carcinogenic. The loophole is that dioxane is a chemical by-product. PEGs are put in skin cream to make the skin more permeable, however, the ethoxylated ingredients can react with other components or ingredients causing the toxin 1,4-Dioxane to be created. By-products or impurities, defined as those

chemicals that react with others and create new chemicals, are not required to be listed in the ingredients. Parabens are used in makeup, soaps and creams. They are believed to be endocrine disrupters (chemicals that interfere with the hormone system) and reproductive toxicants which affect the development and functioning of the reproductive system. Parabens are also harmful to wildlife and aquatic ecosystems due to biological magnification. Most products that contain parabens, including shampoo and soap, are washed down the drain entering into the hydrological cycle. Once re-

leased into the environment, the path of a paraben can go from plankton, to fish, to birds or land animals, contaminating the entire food chain. In each transfer, the accumulation of chemicals increases. How can these toxic chemicals exist in the products we use in our daily lives? For starters, public knowledge concerning the health effects of cosmetics is essentially non-existent. It is expensive and laborious for scientists to study the many different ways chemicals could potentially react with each other. With these ingredients found in all sorts of items it is also difficult to measure the quantity of substances ingested into the human body and what their potential effects are. Though Winston’s article about risk didn’t specifically focus on cosmetic ingredients, the basic premise is the same. We drive cars, smoke cigarettes, drink alcohol and buy and use products that have harmful toxins in them and hardly think twice, but discuss genetically modified foods (as Winston does in his article), nuclear waste or oil spills and people are much more aware of the dangers. Society frequently waits for the scientific community to be 100 per cent positive about risks before we stop taking part in that risk or activity. Until it is a proven poison, we will continue to consume. Safe until proven toxic? There are scientific facts warning us of the effect toxic ingredients in our cosmetic products have—causing cancer and disrupting the reproductive system to name a few—but the issue is science says “it may cause” and society is looking for “it will cause”. But by the time this message is directed, irreparable damage will be caused. There are steps we can take towards

better transparency in the cosmetics industry. Science has provided us with information about the potential risk of these chemicals, and research will continue to further enhance our knowledge. Using this research for public education purposes is essential in raising awareness. When perceiving a risk, society needs to be better informed about the facts, and understand that science may not always be able to prove a fact with absolute certainty. Acknowledging the inherent danger of a risk, even when it isn’t 100 per cent proven, is a prudent step. Strengthening labelling regulations would allow consumers to be better informed. Missing, or hidden items on the ingredient list prevents shoppers from making healthy decisions about what they buy, and what they wash down the drain. Restricting and regulating harmful toxins will improve both human and environmental well-being. Canadians have become accustomed to poor labelling and ingredient lists that look like scientific garble, and our acceptance of this has disillusioned our perception of the risks associated with parabens, parfum, and PEGs in cosmetic merchandise. Lisa Gue, the environmental health policy analyst at the David Suzuki Foundation, says, “Our environment extends beyond the confines of water, soil, and air; it also encompasses where we live and even our bodies themselves, where residues of countless chemicals are applied to or excreted from the skin.” When we poison ourselves, we poison the environment. But when we take action to protect ourselves from toxic chemicals, we in turn protect the environment from those same substances.

Little steps can lead to big changes

GEORGIA BRANDER

In the fall of 2010, I had the privilege of embarking on the quintessential student adventure: volunteering in Africa. Before my departure I was plagued with fees, immunizations, orientations, booklets, worried parents, sunscreen-shopping, and nervous anticipation, but finally on September 6th, 2010, I landed in Gaborone, Botswana.

Not many people know where Botswana is, so let me place it for you. It is above South Africa, to the East of Namibia, to the West of Mozambique and parts of Zimbabwe, and cradled from above by Zimbabwe and Zambia. It is officially a middle-income country, with a low population of around 2 million, and is characterized by its diamonds and tourist destinations such as the Kalahari Desert, the Okavango Delta, and Chobe National Park. Unfortunately, Botswana

is also known for its high rates of HIV/AIDS. Incidence rates are often reported as high as 30 per cent, with orphan rates being the highest in Sub-Saharan Africa.

The effects of HIV/AIDS are widespread, with the most obvious being the immediate impacts on health. With HIV comes the challenges of prevention strategies, treatment options and adherence, dealing with stigma, discrimination, and poor education, and the social, cultural, and political ramifications of such a destructive epidemic. Driving through the capital city of Gaborone, one can see the efforts being made in some of these areas. These include large billboards encouraging people to use condoms or undergo circumcision, Tebelopele clinics where free testing and counselling are offered, and countless NGOs working to eliminate HIV/AIDS and assist those already afflicted.

Stepping Stones International is one of

those NGOs. Stepping Stones International runs an after-school program for youth aged 12–18 who have been classified as orphans or vulnerable children. These circumstances are almost always the result of HIV/AIDS. Programs include life skills, study skills, gardening, sports, leadership, and mentoring, all with the hopes that the participants will excel in school, at home, and in their everyday lives. HIV/AIDS is a reality for most of the participants: many have family members who have passed away or are sick, and some of the participants may be HIV-positive as well. Stepping Stones, through its programming, attempts to renew hope among its participants, and teach them to embrace life and its many opportunities. It was with Stepping Stones that I embraced the opportunity to volunteer, first working on life skills programming for the centre, and then on a variety of projects from writing an environmental manual, restarting the composting program, assisting with the recycling program, and working as a counsellor at the yearly life skills camp.

It is easy to assume these youth are all suffering, that their lives are hopeless, sad, and empty. However, this stereotype is misleading, so relinquish any preconceptions about poor, starving, big-eyed African children. Stepping Stones International pulses with positive energy, stemming from their inclusive, educational, and fun atmosphere. The participants are eager—usually less so for math homework than football—but eager and willing to work hard nonetheless.

The benefits of Stepping Stones International go far beyond the work they do at



PHOTOS BY GEORGIA BRANDER

their main centre in Mochudi, a village not too far from Gaborone. Stepping Stones works with the community and schools to provide a positive environment for people of all ages. Recycling programs offer leadership and stewardship roles for participants, and community cleanup days foster pride, cooperation, and education. The environmental effects of recycling and community garbage cleanups extend beyond solely ecological benefits. The participants at the centre learn leadership skills, build valuable interpersonal and job skills, and make connections in the community.

Working for Stepping Stones was a profound learning experience. From the

incredibly hard-working staff and volunteers, to the participants who worked tirelessly to bring positive change into the lives of the children, the atmosphere was one of progress. Working there was an intense race of trying to teach while giving back as much as I had learned. Not only are the participants benefitting, but so is the entire community of Mochudi. As the holistically rooted program continues to grow, and as participants leave the program to pursue post-secondary education, the benefits will expand to Botswana as well.

Visit www.steppingstones.org for more information.

Dimensions of health and informal recycling

SARAH MARSHALL

Informal recycling is a widespread activity among the global poor, particularly in the global South (developing countries). Informal recycling, as a process, involves collecting, sorting, and commercializing recyclable materials from waste streams, with the aim of generating or supplementing income. The process itself involves recyclers, known as Catadores (pickers) in Brazil, or as Binnars in the global North—such as in Victoria, Canada. What all informal recyclers have in common is the important role they play within their community by removing recyclable material from the waste stream that would otherwise end up in landfills or incineration plants. Informal recyclers continuously benefit their communities by cleaning up waste materials and by reducing the amount of garbage in their streets and waterways.

While informal recyclers positively affect their communities, they consequently put their own health at risk while performing these services. Due to their informality, these individuals are often exposed to hazardous working conditions as they collect contaminated waste materials in unsafe and unsanitary conditions without proper equipment. As a consequence, social health issues arise with informal recycling. Informal recyclers are among the most marginalized and stigmatized portions of the population, regularly viewed as “waste pickers” rather than as “environmental service providers”.

While informal recyclers sacrifice their own health, they help to improve the health of their communities and surrounding environment. Uncollected waste can produce serious environmental health

impacts. It can contaminate water and lead to the spread of insects, rodents, and fungus, which transmit infectious diseases.

In Brazil alone, estimates show there are between 800,000 and 1 million informal recyclers. These people base their livelihoods on resource recovery, performing this activity either on an individual or collective basis. Through door-to-door collection, these recyclers act as environmental agents in generating awareness for responsible consumption within the local community. They further contribute to redirecting recyclable resources, thereby reducing environmental impacts that result from waste disposal. By collecting and removing items from the waste stream, recyclers also reduce the extraction of virgin resources and thus indirectly contribute to resource and energy conservation.

It is evident that these recyclers contribute to environmental health through reducing pressures on raw resources, removing waste from eventual land filling or incineration, as well as enhancing community health by generating environmental awareness and removing unsightly waste from the street. Unfortunately, their immediate communities often disregard their important environmental role, and instead, it is common for these people to become marginalized and disempowered, rendering them socially and economically excluded from the rest of the community.

To tackle both the issues of waste management, and the issues surrounding informal recycling, a system of inclusive or participatory waste management was brought forth and implemented in Brazil. The system involves formalizing recyclers into cooperatives and providing them with a means of alleviating many of the risks



A COOPERATIVE RECYCLER IN BRAZIL

PHOTO BY JUTTA GUTBERLET

associated with informal recycling. Co-ops create a space where recyclers can sort and bring their waste, instead of having to perform these activities in the street or in their homes. The cooperatives provide the recyclers with a sense of empowerment and social inclusion, helping to steer perceptions of these recyclers away from being social nuisances, to viewing them as environmental service providers. Further, cooperatives provide the recyclers with higher earnings, simultaneously advancing both their economic and social status. Health risks related to selective waste collection are also managed and mitigated through the cooperative system.

Communication between the recyclers

and local government has facilitated the creation of a formalized waste management system. The benefits of this are demonstrated through the recognition of recyclers as service providers, and by providing them with adequate remuneration, and improving working conditions. Funding from local government can provide personal protective equipment for workers, as well as equipment such as carts, which allows for an easier waste collection process for the workers.

Informal recyclers, be they Catadores in Brazil or Binnars in Canada, ought to be appreciated, not overlooked. They play a valuable role in preventing heedless waste, and perhaps a greater role

in showing us the flaws of our current waste-stream system.

A Final Note:

Inclusive waste management in Brazil is the focus of a project in the University of Victoria's Community Based Research Lab, in conjunction with the University of São Paulo. Under supervision from Dr. Jutta Gutberlet, many Masters and PhD students have contributed to this project, entitled Participatory Sustainable Waste Management (PSWM), as well as other, similar projects. If you are interested in learning more about these projects, or about selective waste management in general, please visit our website at cbrrl.uvic.ca, or contact the CBRL on campus.

UVIC students get dirty for clean water in Honduras

BRIANNA MEYER

Turning a passion for drinking into real-world thinking is a central attitude behind the UVic Global Water Brigades (GWB). In Victoria, water is not an immediate concern. When lacking gumboots and gortex, water can feel more like a nuisance than a life-altering resource. At the global level, however, umbrellas aren't the solution to real water issues.

Crossing borders, languages and cultures, a group of 16 UVic students will travel to Honduras this February, 2012 to construct a sustainable clean water project. Working alongside Honduran community members, children and students from across North America, UVic will help craft unique solutions to rural water access, storage and treatment problems.

Global Brigades, the world's largest student-led global health and sustainable development organization, makes this type of work possible. Their vision is "to improve quality of life, by igniting the largest student-led social responsibility movement on the planet."

Water Brigades is one of nine programs Global Brigades offers. Medical, Dental and Public Health also have active UVic chapters this year. Travelling to Honduras is the culmination of six months of fundraising and lifetimes of passion for

the individuals on the UVic GWB team. From diverse academic backgrounds, students are coming together for the cause of clean water.

Water is a basic human right that is denied to far too many people. The water issues Hondurans face vary from community to community. Agricultural contamination and a lack of proper water treatment seriously threaten the health of Honduran citizens, particularly those living in rural communities. A lack of education on how the water system functions enhances these issues.

Community education is a key component of the Global Brigades program. It is a bottom-up approach towards sustainability, with community members actively shaping the type of system they want. Basic sanitation and health councils are formed in each community to reiterate the lessons and maintain the system after the departure of GWB teams. While in Honduras, UVic GWB will work on educating the next generation with the help of community members (and Spanish translators, of course).

Not all the fun takes place inside the classroom. Brigade members can look forward to spending hours digging trenches in the Honduran heat, installing house connections, building new dams, and improving existing storage facilities. Each project is a demonstration in teamwork,

with various parts being completed by different universities. Underlying each project is a foundation of sustainability. This term is tossed around quite a bit in environmental literature and across headlines today. Picking through what is greenwash and what is legitimately sustainable is no easy task. GWB makes sustainability quite clear: access to clean water, distributed through efficient infrastructure, to households where residents are educated on why clean water is important.

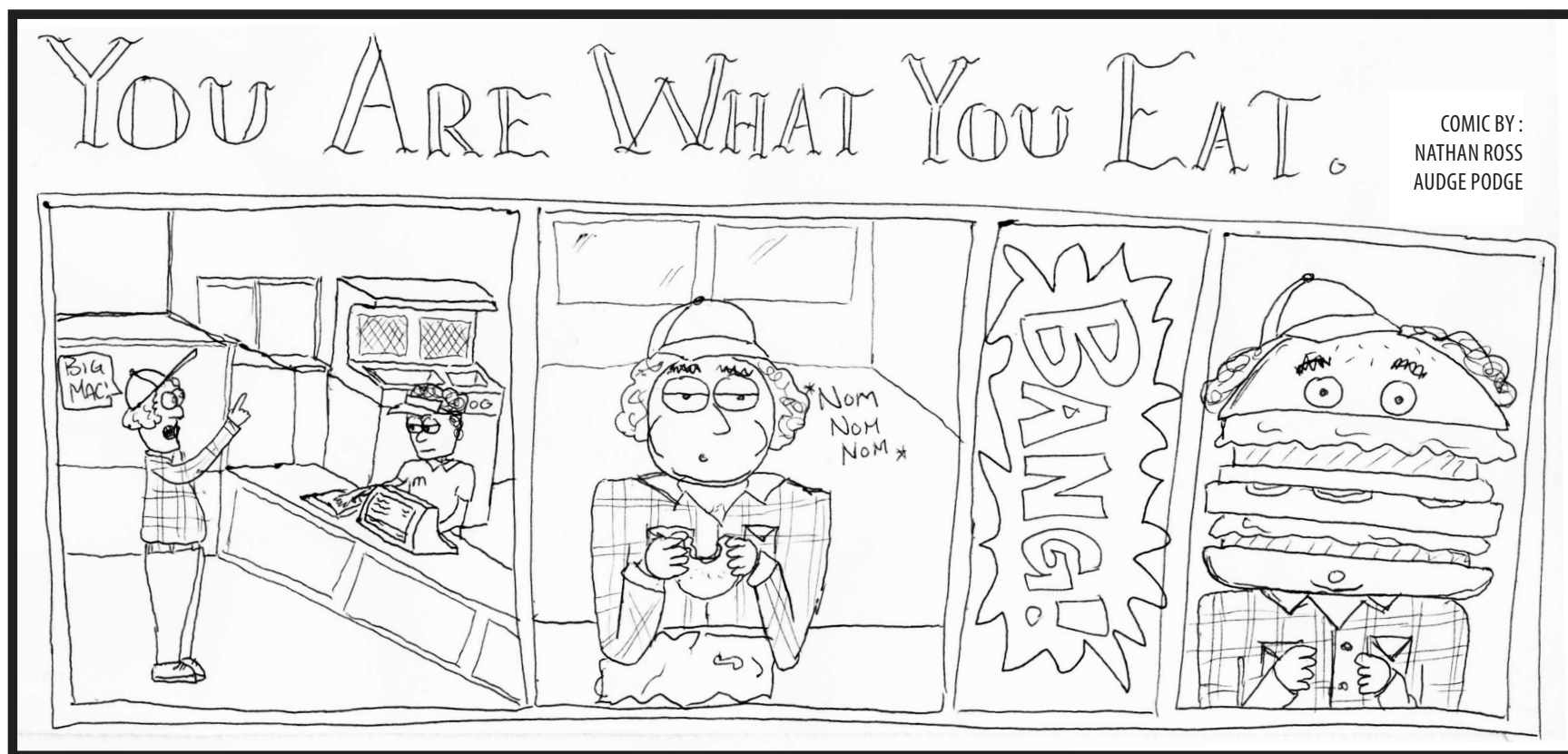
UVic GWB 2012 President Arianna Klus defines sustainability by looking into the future: "Sustainability means that each following generation knows and respects the system we put in place, and can continue to pass this knowledge on to following generations." Sustainable visions are embedded in UVic GWB projects and in the minds of its members.

UVic GWB is about far more than just optimistic words, developing intimate relationships with shovels, and trying your tongue at the Spanish language. Spending reading break digging trenches alongside people half-way across the world may not seem picturesque. It is by no means a vacation—despite the delightfully large hammock-to-person ratio—and yes, you do get dirty. But isn't getting dirty what reading break is all about?



PHOTO BY BRIANNA MEYER

For more information about Global Brigades and how to get involved visit: <http://www.globalbrigades.org/>
For UVic chapter questions: uvicgwb@gmail.com



COMIC BY:
NATHAN ROSS
AUDGE PODGE

Water wasting wakeup call

LEAT AHRONY

In winter, warm water embraces your icy skin; in summer, it cools your boiling body. You can survive without food for weeks, but not without water. Our planet hosts powerful waves and towering glaciers, but how much *fresh water* is readily available to humans? About 2.5 per cent, and the rest is salt water.

Drip. Drip. Drop. Drop. Splash! The clear bead makes its landing, decorating the metal sink with shiny crystals of H₂O. One after the other, they land, until a puddle forms. Now zoom yourself out from the unique molecular structure, and look at the bigger picture. It is called water leakage, a problem easily fixed by simply tightening the faucet. When we will learn to appreciate these precious beads of H₂O?

My heart races with the running bathroom tap water. I know my mother is

brushing her teeth, but *must* she turn it on FULL volume? *Must* she leave the water running while brushing her teeth? I want to scream, "Turn it off!"

My parents say I'm a fanatic about becoming greener.

While my father washes the dishes, I reach over and turn down the level of water.

"Save water Dad. You don't need the tap on full volume."

"Do you have to do this *every* time? Can't I wash my dishes peacefully without any of your interruptions about saving water? With so much rain, it is okay to waste a little."

"And if everyone thought like you, what do you think would happen? What if all the rivers on earth ran dry?"

We understand the wastefulness of things like paper and water. We put out our blue bins, we recycle. We turn off the lights. But what about the wastefulness

of water? Should we wait till the world will fight over the last drop? For the last century, everyone has been saying, "It's okay to waste a little," but over time, a little starts to add up.



When will we learn to appreciate these precious beads of H₂O?



When resources are rich and plentiful, conservation does not cross our minds. It isn't until we see the end of the road that we realize, *Oh, I guess this wasn't going to be abundantly available forever ...*

This situation is happening with many natural resources. Oil was once cheap, but now people think twice as they scan their gasoline bills. Water was *once* plentiful.

When water becomes scarce—and it will—prices will fluctuate like a roller coaster; this will affect food prices worldwide. However, an increase in price will make humans appreciate water, just like it made them appreciate oil. If water became expensive, you would wash your car with a bucket, not a hose, fix the water leakages, and take shorter showers.

Imagine a world without H₂O: there would be no reason to take your children out to see the bright red salmon swimming in streams and rivers. What once gushed with fresh clear water would be a dried out piece of land. Without H₂O, there would be no luscious ripe apples to pick from trees. There wouldn't be any trees at all! No insect would crawl. No

snake would slither, and no bird would fly. Earth would be deserted. Imagining this gives me goosebumps, and knowing this could happen terrifies me. The Dead Sea is running dry. Aquifer levels are falling due to extreme pumping of water. The world has over seven billion people, and we are all thirsty.

Our days are filled with the sounds of water: the spray of the garden hose, the flush of the toilet, the drip of the leaky faucet. But one day, the taps could run dry.

Forget about oil. Forget about looking good in the mirror. Stop wasting. Stop growing water-hungry crops such as cotton in bone-dry areas. Everybody is busy. Everybody has challenges and difficulties, but this is a global crisis. One person's voice will not suffice. But if we all speak out together, the pressure will be on, and a tide of change will sweep the globe.

GOOD THINGS GROWING



ANDREA ZITTLAU, GARDEN COORDINATOR

Small-scale, local, organic food production is increasingly recognized not only as a way to move towards greater environmental sustainability, but as a method to build more resilient communities and economies, and to connect us to our bodies and the land. Food security is an especially hot topic here on Vancouver Island where we import over 90 per cent of our food—astonishing considering we have the mildest climate in the country and only 50 years ago we produced 85 per cent of our food.

These are issues many of us, as university students, learn about in school. Though we continue to discuss and research the problems, many of us also yearn to put what we've learned into practice, or to gain practical skills and get our hands dirty—a form of education often lacking within the academic system. From ES 200's focus on food, to the 2010 guerilla gardening events, to the multiple proposals for educational farmland, there's no shortage of interest in growing food at UVic.

What many students don't know is that they have access to garden space right here on campus. It's true—and no, I'm not suggesting they dig up the quad! This fall, the Campus Community Garden (CCG) is able to provide more gardening space and resources to the UVic community than ever before.

The CCG has grown in many ways since its humble beginnings in 1996. Begun by ESSA (the Environmental Studies Students Association) as a few plots on a site nestled behind parking lot 7 and the Technology and Enterprise Facility on the outskirts of campus, the original garden site eventually accommodated 50 plots. During that time, its management was passed to Family Housing and then to a UVSS club.

The garden recently went through a growth spurt, both physically and financially. With the old site pegged for development by the university, a new location with 90 plots has been cultivated across from the UVic athletic fields and Mackenzie Ave. Thanks to all the undergrads who voted “yes” at the UVSS election in April, the CCG is now a constituency group which receives over \$20,000 per year. This funding is used to support a greater number of gardeners, provide additional infrastructure and increase outreach efforts.

While most plots are rented by individual university students, faculty and staff, there

are many communal spaces as well. The four “Giving Garden” plots are reserved for food bank donations and volunteers who don't have their own plots. A variety of berries have been transplanted from the old site, and new crops such as asparagus, native plants, and a permaculture “food forest” with fruit and nut trees will be added in the spring. Other plans for the future include building compost bins, a greenhouse, an outdoor kitchen and decorative garden art.

The CCG is also working to broaden its reach and strengthen the campus community by providing plots for a number of organizations and programs including:

- UVSS Women's Centre
- Students of Colour Collective
- UVic Sustainability Project
- Intervarsity Christian Fellowship
- Child Services
- Indigenous Governance
- ES 321: Ethnoecology

So how can campus foodies get in on this gardening goodness? One easy way is to come out to one of our work parties, which take place at the garden alternating Thursdays 2:30-4:30 and Sundays 1:00-3:00. We're also looking for folks who are keen to take on management of different areas of the garden, organize workshops and events, or pursue project ideas.

The full loop of working soil, sowing seeds, harvesting, feasting, and replanting connects us with the food we eat and the land it grows from. The garden is characterized by both plants and people. Members help the garden flourish, and as it thrives, rewards of fresh food are in turn reaped by the gardeners. Below are a series of anecdotes shared by a diverse range of individuals who help make up the garden's blossoming community.

Old garden photos by Andrea Zittlau



Learning the Hard Way

Katie Williams, Community Garden Member

Within a week of obtaining a plot at the new garden site, my plot-partner and I had eagerly planted some garlic and camas bulbs, finishing with a fine layer of compost sprinkled on the surface.

I've never gardened before and soon learned that you're meant to separate the garlic cloves before planting, and also that “lasagna gardening” (adding layers of organic material, rather than dusting the surface with compost) is a more effective way of ensuring luscious soil in the summer. As a newbie gardener I'm not sure what the garden will look like next year, but we're hoping for juicy tomatoes, herbs and edible flowers—and some slightly squashed garlic.

Revolutionizing Food

Matt Loewen, UVic Sustainability Project

The UVSP will be using two plots at the CCG for its new project called “Food Revolution: Everybody Eats!”, or the FREE Meal Program for short. Right now in Victoria—and the surrounding region—there are many people without enough to eat. We need a Food Revolution to ensure that Everybody Eats!

We will attempt to combine four ideas into one food relations project by: (1) finding access to land in backyards and public plots (like CCG) for small-scale organic gardens, (2) finding the skills/resources/tools/people required for growing the food, and then creating local, organic vegetable gardens, (3) finding volunteer learners/teachers for ongoing garden care and (4) seeking people to harvest, cook, and eat together at an accessible and free community meal!

Confronting Climate Change

Holly Stewart, Community Garden Member

Whether you're a veteran vegan or a “Meatless Mondays” newbie, every meal is our opportunity to be part of the solution to reducing greenhouse gas emissions resulting from the industrial food system. Local movements such as farmers markets, organic and community-based gardens (such as UVic's CCG) support families taking food choices back into their own hands.

A season of working the soil of our family's Campus Community Garden plot culminated in the awed look on my daughter's face as she harvested golden potatoes, squash, green veggies and herbs. At this point, such small plots are only supplementary to family groceries, but pivotal in terms of education and reclaiming connection with our food.

Cultivating Tradition

Trevor Lantz, School of Environmental Studies

In October, students in Environmental Studies 321 (Ethnoecology) planted approximately 300 camas bulbs in one of the plots at the new garden site. This garden will give students a chance to harvest and taste this culturally important plant. Class activities to maintain the camas garden will provide opportunities for students to learn about plant management techniques.

In the long-term this project will also plant material for student restoration projects in ES 341. I also hope the camas garden will provide a way to facilitate increased student involvement in the Campus Community Garden.

Creating Safer Spaces

Mandee McDonald, UVSS Women's Centre

The Women's Centre's vision is to create social change through political action, education and support of the University of Victoria's women students. In keeping with this vision, our plans for the plot are threefold: to create a safe(r) space for women to learn about urban food production and sustainability, to facilitate a space for women to network and engage in dialogue about various issues affecting our lives, and to basically hang out, have fun and get exercise in the garden.

None of us are expert gardeners, so we'll learn together as we go and hopefully grow some tasty veggies and beautiful flowers. We leave most of our harvest in the Women's Centre for people to take as they need. We are grateful to have this space, and are really excited for another season of gardening shenanigans.

Get Involved

To find out more about how you can volunteer or get your own plot, send us an email at ccgarden@uvic.ca or stop by our office in the SUB, room B118. You can also keep in the loop about upcoming workshops and events by checking out our website web.uvic.ca/~ccgarden or Facebook page. Join the mailing list for updates on events and projects.

True confessions of a restoration junkie



ELIZABETH CRONIN HARD AT WORK



VOLUNTEERS ON MT. DOUG.

PHOTO BY ELIZABETH CRONIN

ELIZABETH CRONIN

On a dark January morning in 2008, in a small suburban park in Saanich, I got my first taste of organized restoration volunteering. I told myself I would just try it once—I was working on a project about an invasive plant for an ecology class and needed some real world experience to liven up my presentation. My plan: get in, remove some broom, get a few photos and get out. But this work party with the Garry Oak Restoration Project (GORP) would not be my last. I had felt the tranquility of the park, the warmth of the people and the rush of the kill. I needed more.

Soon I was helping other GORP volunteers assault invasive plants every weekend, waking up as early as 8 a.m. on cold Saturday mornings to get my fix. The rush of ripping at long vines of ivy, slicing through woody stumps of broom and slashing at the dense roots of orchard grass filled my mind. The spirited optimism and friendly conversation of other volunteers—many of whom were at advanced stages of restoration dependency—helped fuel my growing obsession.

The species and seasons of the Garry oak ecosystems we worked in had me bewitched. Spring brought paper-thin pink petals of satin flowers, small yellow sprays of spring gold and deep blue stars of camas flowers. Summer bleached the meadows yellow and turned the fresh oak leaves to a dark leathery green. As fall approached the rattle of camas seed-pods filled the meadows and fat round acorns and perfectly cut oak leaves crinkled under foot. Troops of tiny chirping bushtits feasted on the drooping seeds of oceanspray bushes. Winter fringed every plant with frost and turned our ears pink, until the green spikes of camas leaves returned to the meadows. The kaleidoscope

of colours, smells and sounds of these ecosystems thrilled me, and my next fix could never come soon enough.

Removing plant matter also took on a narcotic thrill. The work of killing invasive plants was soothing in its destructiveness. Looking down from my tranquil surroundings, I would project all the evil in the world onto a gently swaying stand of Scotch broom. Then, descending on it with the shining blades of my loppers, I would chant—softly enough that the retired couple attacking blackberries further down the meadow couldn’t hear—the rock band Dope’s classic lyrics: “Die motherf*cker die motherf*cker die!” Perhaps the most satisfying of all was throwing the bodies of defeated invasive plants into giant triumphant piles infused with sap, sweat and soil.

I began introducing innocent people to the restoration addiction: my roommate, my sister, my girlfriends. We would set out early in the morning together and share tools and stories while we worked. This progressed quickly to inviting acquaintances and then strangers to GORP.

I preached about restoration in my university classes, to people on the bus, to anyone who would listen. Shy at first, my evangelical fervor soon took over and many joined me. If guys showed interest in me at parties or at school I lured them to volunteer events. I smiled sweetly. I manipulated them. I avoided mentioning my boyfriend until they had heard my pitch for GORP, or until they were hard at work in some small park.

After a few years I secured a co-op job at Fort Rodd Hill with Parks Canada and pushed restoration on hundreds of people—naval officers, retired people and even young children. There was nothing more exhilarating than adding a new person to my email list, so I could notify

them of every opportunity to support their restoration habit. I spent almost all my time outside, spiraling further down to earth and bringing others with me. Twigs and leaves in my tangled hair, dirt under my cracked nails and a look of feverish bliss on my weathered face, I had reached the height of my restoration addiction.

Lately, indoor pursuits like reading, researching and studying have drawn me out of my restoration high. Yet still, the old mania often returns and I find myself clawing with bare fingers at the ivy growing menacingly up the trees near the library or frantically putting up recruitment posters around campus. Unhinged mutterings of invasive plant names that escape my lips while looking out car or bus windows give me away as a recovering restoration addict.

Not everyone who tries ecological restoration becomes as dependent on it as I did. But it is impossible to say who will try it once, and wind up zealously wrestling with a root ball the size of their head deep in a blackberry thicket covered in twigs and mud while they bleed from the tiny wounds the plant has made in retaliation ...

That’s why I urge you to stay away from websites like www.saanich.ca/gorp, and avoid using the following emails to find out more about restoration: frh.volunteer@pc.gc.ca (Parks Canada), jenny.eastman@saanich.ca (GORP Saanich), and nature@uvic.ca (UVic Ecological Restoration Network).

Note about the author: *Elizabeth Cronin actually believes restoration to be one of the most healthy and positive aspects of her life—despite the fact that she can get carried away at times—and would recommend it to everyone. She thinks it’s good for ecosystems but even better for people.*

Nature snobs: Is the West Coast the Best Coast?

ALEXANDRA DENIS

As I sit on a piece of driftwood overlooking Victoria’s Inner Harbour, I think to myself, “Wow, I’ve never seen anything quite as beautiful as this.” But on second thought, I have. I’ve seen many oh-my-god-like-totally-gorgeous landscapes across this sprawling country. It’s easy to forget all that Canada has to offer when immersed in a place as remarkable as Vancouver Island, and many people do, offering their preference without hesitation. Recent conversations with what I like to call “nature snobs,” reveal echoed sentiments: *I just wouldn’t feel like myself if I lived off the island! Why would I ever move somewhere else when this city offers everything I need and love? I could never live away from the ocean because I just love it too much.* Well you know what? They probably could.

West Coast nature snobs have location fixation, holding one type of environment above all others. Forget about the plains of Saskatchewan, the Arctic basin, the Boreal plains, or the Alberta Badlands—these nature snobs have got it bad for the vast woodlands, long rugged coastlines and temperate rainforests of the coast. Canadians live in the second largest country in the world; we’re blessed with an abundance of biomes, so why restrict our worship to the wonders of the West?

Geography snobbery reigns over Vancouver Island. This past summer I lived in Alberta, and since returning to Victoria I’ve received nothing but horrified exclamations: “But what did you *do for*

fun? There’s no water in Alberta, no forests, no nothing!”

What did I do there you ask? There’s more to travel, recreation, and life, even, than ocean walks and old growth forests, people. While living and working in Alberta, I roamed the expansive flat plains of rural hamlets, dug my hands into some of the richest fossil heritage in the world, explored the awe-inspiring mountaintops in Banff, and wandered the remarkable Dinosaur Provincial Park—none of which can be experienced in BC.

West Coast nature snobs come in all sizes: maybe it’s the girl with the Cowichan sweater freshly plucked off the racks at Aritzia. Or perhaps it’s the guy with the deluxe MEC backpack, who’s headed to the library, not the Haida Gwaii. Well, maybe he is going camping, though likely a deluxe version: glamping. Glamorous campers are out amongst the wild—in a ten-man tent equipped with a full kitchenette, hammocks and a flush toilet nearby. Let’s tuck our socks into our knee high Hunter boots on our way to our SUVs, because there’s a four per cent chance of rain today, right?

Nature snobbery does have, however, one redeeming quality: pride. Everyone has something they’re especially proud of or pleased with, and nature snobs are no different. People peddle the praises of the West Coast because we’re *proud* to live here, and want *everyone* to know. Snobbery’s justified, therefore, if the snob in question has roamed all of Canada, before deciding to champion the West Coast. But snobbery without travel, curiosity and exploration? I’m unconvinced.



A SPECTACULAR ALBERTAN LANDSCAPE.

PHOTO BY JULIA BENNETT

So, is the West coast the best coast? Who am I to judge really? I’m definitely not writing from a frigid fall day in Winterpeg, Manitoba. I too live, breathe and thoroughly enjoy the West Coast. Vancouver Island is home to me, and I’m more likely to protect my home than I am to protect some far distant landscape.

Sense of place can hold a certain power; it can make us do crazy things, like berate those who move elsewhere, who abandon the shiny Sitka spruce that sprawl the Island. I understand where this surrounding hounding comes from, and why one feels a special connection to the West Coast, whether they were born here or moved at age 55. There’s no place like it.

So why do I care to write about nature

snobs? Because they’ve overlooked two fundamental principles: 1) our planet is interconnected, and 2) natural objects that *aren’t* visually stimulating need equal care and attention.

Each ecosystem offers something vitally important to the whole planet, and therefore each ecosystem must be individually regarded and respected to promote biological diversity. The Canadian prairie ecosystem in Alberta, Manitoba and Saskatchewan contain a lopsided amount of endangered and threatened species. Changes to natural habitats result in shrinking populations of many animals and organisms.

“Why should we protect boring, useless grassland in Saskatchewan when we can

stroll into a space like Cathedral Grove and marvel at 800-year-old trees?” asks the nature snob.

Because if we don’t disperse our activism, we will further the damage to our country’s biodiversity. While the West Coast of Canada *does* experience problems in forestry and strained ecosystems in areas near major urban centres, we don’t deserve all the press. We can’t ignore what’s happening to larger parts of Canada’s ecosystem.

While it’s fine to feel the need to gloat about your beautiful landscape, perhaps as you sit back in your self-satisfied driftwood seat, remember: there are plenty of spaces worth bragging about, and you haven’t even seen them yet.

Keeping British Columbia clean

BRIANNA MEYER

My drug of choice is not heroin, meth, or cocaine. How could I even afford those on a student budget? I get my fix elsewhere. There is always an outlet for my cravings. I use at school, at home, and on the bus. My friends do too. My parents are a little skeptical of the new stuff on the market, but are solid users nonetheless. We owe our constant satisfaction to a single dealer who is no stranger to our homes or our province.

BC Hydro has been feeding British Columbia's addiction to energy for years. For most BC residents, BC Hydro exists as a tiny green and blue logo appearing on energy bills each month. Clean, reliable electricity pumps through our homes, schools and offices from deep inside the heart of BC. Electricity is at our fingertips. From iPhones to laptops, electricity charges our lives.

Residents of British Columbia take pride in the clean energy and sustainable hydroelectric operations that provide for our province. As energy addicts, however, it is easy to become so infatuated that we only see what we want to see. BC Hydro may keep the lights on, but more often than not, BC residents are living in the dark.

With an estimated 40 per cent energy supply gap projected by 2020, BC Hydro has proposed a third hydroelectric generating facility to be constructed on the Peace River. Also known as "Site C" this station would feed BC's demand for electricity for the next 100 years.

Advertised as a "clean energy project", the scope of Site C stretches far past the consumption of any individual user. Yes, spending 7.9 million dollars on clean energy is an investment in BC's collective future, but what is the true cost of "clean"?



DON'T FORGET ABOUT THESE GUYS

PHOTO BY ELIZABETH CRONIN

BC Hydro compares the greenhouse gas (GHG) emissions associated with the Site C project to be in equal range with geothermal, wind and solar energy sources. However, with construction requiring the deforestation and flooding of over 5,340 hectares of fertile land, the carbon footprint of this operation is not as negligible as BC Hydro makes it out to be. The Peace Valley Environmental Association estimates the Site C project will be responsible for the release of over 150,000 tonnes of GHG into the atmosphere.

Despite this crushing reality, hydroelectricity is a massive resource for the province of British Columbia. Exports provide the opportunity to share this resource with our southern neighbours and decrease their reliance on fossil fuel powered energy generation. However, BC exports energy to the US primarily during peak loads. This means the base fuel source, coal for instance, is maxed out and still there are unmet energy needs. BC is not replacing fossil fuel power sources, but instead is feeding the States' unhealthy energy appetite.

The steadily expanding mining and oil fracking industries in Northern British Columbia are salivating at the prospect of receiving cheap energy directly from Site C. In the eyes of many, the potential of Site C to feed the expansion of these

projects overshadows the simultaneous environmental effects.

Crashing through BC's backcountry with blinders on, BC Hydro erodes my confidence in its claims to become a "clean energy powerhouse". What is the definition of clean energy? Energy that supplements, as opposed to replaces, fossil fuel demand, powers environmentally destructive practices (mining and fracking) and destroys thousands of hectares of carbon sinks in construction and infrastructure? This does not sound clean to me.

I find the clean energy aftertaste unsavoury on the tongue. My conscience is stuck between riding BC's false pride in clean energy and confronting the consequences of my addiction. Snapping out of denial and into reality is not easy. The truth is shameful. I know that getting my BC Hydro bill this month will ruin my high. BC Hydro, I recall all the times you kept me warm, brought light into my life and played music in my ears. I could never turn you off. I now see the truth behind your kindness all these years. You gave me what I wanted, cheap and convenient electricity, and in return, I was your faithful customer. But it is time to stop playing dirty.

I am pulling the plug. It is about time for both of us to start cleaning up our acts.

Foraging for fun!

KIMBERLEY VENESS

Medicines, herbs, and berries ... oh my! These are just a few of the goodies you could find if you visited the Spring Ridge Commons, a permaculture garden growing on the corner of Chambers and Gladstone. Started in 1999 by local gardener Geoff Johnson and a crew of like-minded green thumbs, Fernwood's first edible park has become the city's largest and oldest permaculture garden.

So what is permaculture? It's a method of landscaping that works with nature to create a self-sustaining ecosystem rich in a diverse selection of species. This style of gardening differs from modern agriculture because it avoids planting monocultures that require constant attention and inputs of chemical fertilizers. Instead, permaculture spaces harbour a variety of species that coexist and mutually benefit each other. The Spring Ridge Commons is multi-layered, and often referred to as a "forest garden" because of its unstructured layout and natural look. Over a decade of care, much of it from local volunteers in Victoria, has spurred the plants to thrive. Mature trees and sprawling shrubs cluster in the garden, footnoted by smaller vegetation.

In the centre of the Commons a large sign can help you find your way around. It explains the art of permaculture and displays each plant location on a colourful sign. The sign also boasts a long list of trees, shrubs, and harvestable plants within the garden. In September I took a short-cut through the garden while walking to the Cornerstone Café in Fernwood for a cup of tea. I plucked a handful of figs from one of the trees, and they served as a delightful side snack with my earl grey. What a treat!

The garden hosts other treats as well, though not all of them compliment earl grey tea. Witch hazel is a medicinal plant, and though its time of harvest just passed, it is a great plant that can treat bruises, insect bites, and even acne. Keep your eye out for it in the commons next year, as it is a fantastic organic way of treating common bothers like mosquito bites or unwelcome blemishes.

The winter months are upon us, so get out before—or after!—the frost. Becoming more connected to your food by harvesting it from the ground instead of a shelf is extremely rewarding and exceptionally healthy. Tell a friend about your eco-escapades into the Spring Ridge Commons, and many of the other untapped local gardens in the city. Create fresh and original meals using your finds, and treat ailments with the pluck of a leaf. Be local, be sustainable, and have fun foraging.



Conservation contradiction: Dam under troubled water

JAMILA DOUHAIBI

In mid-June the temperature around Fort St. John can get up to nearly 20 degrees. But in the Watson Slough we had to wear rubber boots despite the heat if we wanted to avoid getting stuck in the mud. The wetland was forgiving enough that it didn't swallow any of the elementary school kids from CM Finch or Bert Bowes or Duncan Cran into the pond or the small stream where the kids were catching caddis fly larvae and other insects to identify in the entomology station we had set up in the more stable riparian area.

Some, who had forgotten rubber boots, chased their friends in runners or flip flops, their feet coated in mud. One boy, with chin length hair and overzealous energy, veered off the dock too soon and sunk to his knee in mud.

Watson Slough sits just off the highway, 15 kilometres west of Fort St. John, near the Peace River. Truck drivers entering and leaving the city barrel past, hardly noticing the sign for the slough, chucking beer cans and pop bottles into the ditch alongside the road, the slough just another blur of green along their endless route.

Only a fraction of the wetland's 50 acres was harassed by the children's screams and laughter over the two weeks of half-day camps. The rest of the wetland disappears behind white spruce and trembling aspen; a movie-worthy backdrop.

The most exciting event may have been when a ruddy duckling got lost and ended up along one of the well-worn paths the kids were taking. We managed to usher it back towards the water where

it safely reunited with its mother, and the kids could continue catching water boatmen and backswimmers, bringing them back to the buckets we had set up with pictures so they could identify their bugs. Hard to distinguish from the similar-looking backswimmers, the water boatmen look like oval canoes, oars jutting out in front of their bodies to whisk them around.

Water striders: just one of the interesting insects that can be found in a wetland. As their name suggests, they stride along the top of the water like figure skaters, never sinking because of hair on the underside of their body that repels water. These insects sense the subtle movements on the surface of the water, catching their prey with crab-like pincers.

Wetlands are the crucial in-between space between purely aquatic and terrestrial areas. These water-purifiers—nature-made Britta filters—are expanded aquifers the world has been given for free. For now. Before we bulldoze over them and build parking lots so people can see the view. They not only act like massive sieves, taking in the pollution from around them and filtering it, they also provide essential habitat for wildlife—most animals inhabit wetlands for part of their lives.

BC contains over eight million hectares of wetland; only 5.6 per cent of the province. Watson Slough, despite its invaluable functions and unique flora and fauna, could be flooded under 6 metres of water with the proposed Site C Dam targeting the area. If this happened, moose and other mammals couldn't visit the area as

a pit stop along their northern, migratory trek. The ruddy ducks and other birds couldn't stop at the bird houses set up in the aquatic area. The students couldn't escape from a day at school to learn about how important wetlands are to biodiversity.

It seems like a contradiction that the place these kids come to learn about saving is a place that may be destroyed for our province's growing energy needs.

I can't tell you the amount of power our province swallows each year, or tell you how many animals depend on the area for habitat, how many people live on it, have history and livelihoods and homes in the potential flooding zone, but I do know that BC Hydro says Site C "would be a source of clean, reliable and cost-effective electricity for more than 100 years, providing enough energy to power more than 450,000 homes per year in BC." Is it really clean? Is it worth keeping all the lights on in our three-story consumerist houses? Maybe clean air, and protecting endangered species, and letting our kids know we care about the places their kids will grow up, learn and play in, is also important.

Future grade threes and fours from Alwin Holland and Robert Ogilvie will drive up in their bright, yellow bus, and be taken to see massive walls of cement that separate the river from a newly formed lake. And somewhere, more than 6 feet under that lake, will be the slough. The peaceful calm of its existence, the necessity of its presence, suffocated and forever silenced by the constant drone of turbines.

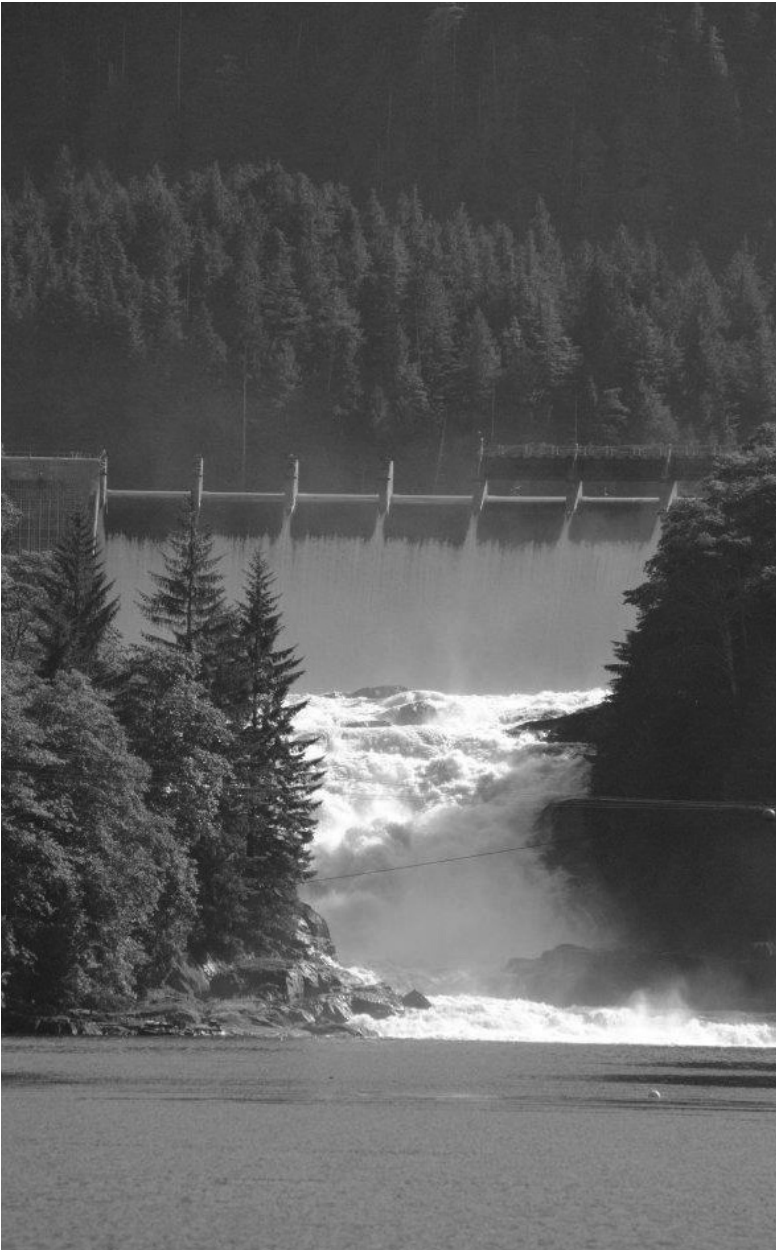


PHOTO BY GEORGIA BRANDER



COASTS IN JEOPARDY

PHOTO BY GEORGIA BRANDER

Hearing my voice

HILARY DECKER

We marched along Government Street until pouring through the pillars at Centennial Square; our voices echoing in the lofty ceiling. The podium stood facing us underneath the “Climate Action Now!” banner and the event’s speakers in a line to the right of it. None had yet spoken, but I already respected them for having the courage to speak in front of all 400 of us. My heart reached out to them.

One woman, Caitlyn Vernon, a Campaigner for the Sierra Club of BC, spoke of the infamous Enbridge pipeline proposals. Her voice was soft and dependent on the microphone yet strong with conviction. She detailed the potential horrors such a pipeline would bring to coastal BC, particularly if an oil tanker were ever to nick the edge of one of the many islands in its barely navigable route from Kitimat. I admired Caitlyn’s eloquence despite facing such a sizable crowd.

The focus of her message shifted to questioning the legitimacy of a government willing to risk the province’s natural beauty, health, livelihoods, culture, biodiversity, and happiness in exchange for billions of dollars. Even though I had heard this message many times, I could feel a new passion boiling inside, fed by the fire of this woman’s speech.

Indeed the government’s incentives for welcoming the pipeline are great, terrifyingly tempting to some, and admittedly, hard to refuse. Of course this pipeline would present economic benefits for BC and Canada, creating new jobs, opening new markets and avenues of exchange with Asia. Yet everything we know BC to be could change forever in the event of an oil spill: the interweaving landscapes and communities of species and people interacting to sustain health, integrity, and life. From the puzzles of islands, to the lush rainforest, to the networks of streams to the salmon, spirit bear, and Douglas fir: surely some things are priceless.

The focus shifted again, this time to us as Caitlyn told the crowd how we could prevent this. There would be a public hearing in the area if enough people committed to participating in it. I was thrilled; there was, it seemed, a way to stop this proposal from going through.

I had been approached by several different groups requesting my commitment to the hearing, first by the Dogwood Initiative and then the Sierra Club. Every encounter ended with my asking of the same question: is there a way to participate without actually speaking? But what I never considered was that it was called a hearing for a reason; we were to be heard, and you can’t be heard if you don’t speak. It’s not a “seeing,” I couldn’t just show up, hide

in a corner and expect someone to assume my position on the issue.

The hearing was an opportunity to participate in policy-making, something millions of people around the world cannot do. It was an opportunity to exercise our democratic right to dissent and discuss. The panellists would be there specifically to hear what we, the people of the area, have to say about this. I, in fact, had a lot to say about a potential pipeline on the coast of BC.

Without the participation of those with an opinion on the matter the panel could fairly assume it was not an issue of importance and carry on. Strictly in accordance with the most basic purpose of a hearing, I then seemed to have a duty to be there.

I had an opinion, yes, but what of a voice? Was I truly expected to stand before thousands, wheeze into a microphone, and attempt to persuade one of the largest energy corporations in Canada, through chattering teeth, why they should listen to me? I could already hear in my mind the verbal anarchy that becomes me when I am forced to articulate something in front of many others; this would surely overcome me in that moment.

It was my plan then, to inform as many people as I could and hope they would sign up to speak; the more people the better, I thought. Then my absence would be irrelevant.

In between sending these notifying emails to friends however, flashes of my terrified, eight-year-old self being teased by neighbourhood bullies interrupted me. In the memory, Joel Burns and Michael Peterson pace the end of my driveway sing-songing insults my way. Tiring of this tactic, Joel turns to my dog and spits on his head, Michael follows suit, and fury boils somewhere behind my Spice Girls tank top. At the time, this was the greatest injustice I had ever witnessed. Passion collided with my fear, gripped my vocal cords, and drove me forward to my one and only face-off with Joel Burns.

I am now 22 years old and the injustices I face have grown. When I think about what is to be lost and what is to be gained by an oil pipeline on the BC coast it is clear to me that the costs outweigh the benefits. Likewise, my fearful absence from the hearing would be a loss for democracy; an unaffordable loss in a time of need for our fragile coast. Through these careful calculations, I have discovered a voice of mine seldom heard, tailored for the Joel Burnses of the world; reserved for battle.

For this reason, and for the sake of something more important than money in all our pockets, I will join the other 4,000 concerned citizens who have signed up to attend the hearing, and wait in line for the podium, for my turn to speak and be heard.

Putting a price on carbon

CORAL CANDLISH-RUTHERFORD

The BC carbon tax—a levy put on greenhouse gas (GHG) emissions—was introduced in 2008 as part of a plan to mitigate global warming. BC emitted 68.7 million tonnes of carbon dioxide equivalent (a term used to measure the amount of CO₂) in 2008. In BC, the transportation sector accounts for 36 per cent of total emissions, and the residential sector is responsible for 45.3 per cent. Within the residential sector, emissions from space heating and cooling and water heating contribute 25.1 per cent. Estimates predict that the BC carbon tax will reduce CO₂ emissions by three million tonnes annually. On July 1, 2011, the tax rate increased from \$5 to \$25/tonne of CO₂, and in 2012 it will rise another \$5.

Putting a price on carbon emissions can be an effective mechanism for reducing GHG emissions because it discourages individuals and corporations from using fossil fuels, and encourages use of alternative technologies. The BC carbon tax is a positive step for environmental policy and a good example for all of Canada to follow. However, it is important to identify and address the shortcomings of its current structure.

The BC government’s promise of a revenue-neutral carbon tax means the government does not make or lose money from

the carbon tax. Rather, revenue is returned to citizens and corporations in an effort to make the tax more socially and politically palatable. However, this has increasingly negative impacts on low-income Canadians and is doing relatively little to reduce GHG emissions. In 2009/2010, revenues from the carbon tax were \$542 million. This is a substantial sum of money, which has a relatively low positive affect when dispersed among BC’s 4.5 million residents. The carbon tax should cease to be revenue neutral. Instead, revenue should be ring-fenced and divided between the following two areas: 1) Assistance for low-income BC residents, and 2) Funding for research and implementation of green technologies and initiatives.

The BC carbon tax has a disproportionately negative impact on low-income families, even though they are typically low emitters. This is because low-income earners often pay little or no income tax, so they do not benefit from income tax cuts. Also, corporate income tax cuts (which have been escalating) benefit high-income Canadians who own most of the shares in the companies. Last, although in 2010 the carbon tax increased by 50 per cent, the low-income credit only increased by 5 per cent, meaning low-income earners paid more tax but received less in credit. Among other benefits, the allocation of carbon tax

revenue to low-income residents would create more opportunity for them to make their lifestyles more carbon neutral.

It is difficult for people to reduce their carbon emissions if they do not have alternatives to current technology. Therefore, the other half of the carbon tax revenue should be used to fund research into sustainable technologies and renewable energy resources, green jobs, ecological conservation, public transit, retrofit programs, public environmental education, and tax cuts for industries and businesses using sustainable approaches. This is especially pertinent in Northern BC, where people living in remote communities rely heavily on fossil fuels for transportation and energy. Using carbon tax revenue to fund alternative, sustainable initiatives is very important because it can provide people with options to assist them in lowering their emissions. For example, in small towns in Northern BC, many residents’ only option is to drive to work. Building an efficient, low-emission mass transit system would provide residents with a more ecologically sustainable alternative.

Overall, using revenue from the carbon tax to assist low-income families and fund sustainable initiatives would make the tax more beneficial to BC residents, and more effective at reducing GHG emissions.

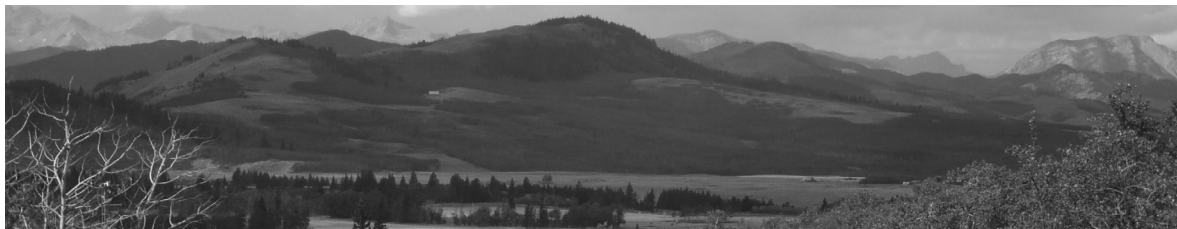


PHOTO BY JULIA BENNETT

Health and the environment

CRAIG AXFORD

Few still dispute the connection between health and the environment. We generally recognize the need for monitoring watersheds to guard against threats to our drinking water supply. Likewise, alarming increases in chronic diseases such as childhood asthma, particularly in areas with significant air pollution, serve as a tragic reminder of the vulnerability of the human body to pollution.

These days, resistance to environmental and public health policies usually comes packaged in persuasive arguments rather than straightforward denial of the connection between health and the environment. Risk and cost-benefit analyses presume to successfully measure the trade-offs, including threats to human health, associated with a given project or regulation. Where once anthropocentrism was its own justification, now detailed reports considering the utilitarian merits of a given action are required. However, health and the environment remain in separate silos, seen as linearly connected in a more or less direct cause and effect relationship.

Many do not associate the environmental movement with the myth perpetuated by industry and government that health and the environment are separate yet mutually dependent entities. Yet, its inaction to discount this myth has in fact made it a supportive partner. Large environmental groups haven’t offered any serious challenge to the human/nature dualism that first blossomed with philosophers like Descartes and Locke, or to the pro-growth economics of neo-liberalism so popular in the 20th century, only in recent years beginning to be questioned. Even now, as people take to the streets to express their dismay with the prevailing paradigms of our day, “mainstream” environmental

groups like the Sierra Club and Nature Conservancy remain largely silent.

There is a kind of insidious black and whiteness to placing environmental problems in one column and corresponding public health consequences in another. This approach covertly directs us toward the grand technocratic policy solutions that have come to define the current system’s response to virtually every social and environmental problem we face. In doing so, indigenous peoples, local communities, and individuals become further alienated and marginalized in favour of one-size-fits-all policies that emphasize technological solutions.

Arguments over fuel efficiency standards, the relative merits of carbon sequestration, or whether wind or solar will finally liberate us from our dependence on coal are essentially arguments over the cleanest way to maintain destructive levels of consumption. They are as oxymoronic as the phrase “clean coal”. Whether we get our electricity from windmills or coal-fired power plants matters far less to our wellbeing than how we define our place within the environment. With each new policy debate another opportunity to examine potentially deeper meanings behind the words “environment” and “health” is missed.

We ought to expand our definition of environment to include what anthropologist Wade Davis calls the “ethnosphere”. Davis describes the ethnosphere as “the sum total of all thoughts and intuition, myths and beliefs, ideas and inspirations brought into being by human imagination since the dawn of consciousness.” In reframing environment as both ecosystem and ethnosphere, protecting the environment transforms itself from an effort to save the ‘other’ into an effort to live sustainably as part of the whole. Such a paradigm shift necessarily has implications for

how we come to view health as well.

Placing environment and health in separate silos has caused us to see health as primarily a personal, individual concern. Health has increasingly been framed in the context of individual choices and therefore as a matter of personal responsibility. Those making “bad choices” can, in this context, be easily judged and dismissed.

Certainly health is influenced by personal choices, but the choices available to the individual are largely determined by the culture they live in. By separating the biosphere from the ethnosphere we have let culture off the hook when it comes to making judgments about the relative value of the choices presented on the menu. The question of what constitutes a healthy environment is, under the current paradigm, best answered through research into the “natural world”. To the extent culture is evaluated, when at all, it is primarily within the social sciences, and these have largely been liberated of any responsibility to make value judgments, increasingly focusing instead on demographic trends and cold economic analyses. Provided we are collectively protected from unacceptable risks according to the cost/benefit calculations made, whether we choose to buy fast food or eat our vegetables is of no concern; that our society markets and consumes vast quantities of fast food is seen as just another interesting fact about our culture.

Using a holistic definition of environment that includes the ethnosphere, we cannot answer the question “what is a healthy environment?” without also answering the question “what is a healthy culture?” Embedded in these questions are answers to our own personal health concerns as well. By transforming our view of environment in this way, we both individually and collectively become empowered to move toward sustainability.

Morning coffee meltdown of the cursed-for-caring

ELIZABETH BAILEY

On a bright September morning, I groggily stepped out of bed, the chilly maple floorboards greeting my feet. Dragging a pair of well-loved sheepskin slippers, I walked into the kitchen and poured myself a steamy cup of dark roast. My boyfriend Josh sat reading in a chair overlooking the garden. With assignments due and readings looming, I did what every practical fourth year university student would do: I picked up the newspaper.

Still blurry with sleep, my eyes skipped across the headlines: Air Canada threatens to strike, the European debt crisis worsens, Hurricane Maria is downgraded to tropical storm. Trying, unsuccessfully, to conceal a yawn, my eyes scanned across the page, then stopped: “Scores of sea lions shot at fish farms”.

In the first three months of 2011, 141 California sea lions, 37 seals and two Steller sea lions (which are listed as a special concern under the Species at Risk Act) were legally killed at fish farms.

A bubbling sensation began in my chest, a mingling of sadness and anger and incredulousness.

“What the f*** is wrong with people?” shot out of me before I could stop it. “They are legally shooting hundreds of seals and sea lions, at fish farms! This is not right!!”

Josh looked up, eyebrow raised, half-frowning. “Good morning.”

“These are native marine mammals! People can’t just shoot them, because they interfere with their destructive, exotic-species-filled, disease ridden, fish-pellet-devouring, polluting, just-plain-disgusting, industrial fish farms. Don’t these people have a conscience?”

The paper slid to the floor as I swallowed a mouthful of bitter hot coffee.

“How can they justify these environmental atrocities? I mean, how do they sleep at night?”

“Do you really want me to answer that?”

Josh had every reason to be surprised at my reaction. After all, this type of thing happens all the time. Everywhere that some species, or natural system, unwittingly finds itself in the path of the steamroller of industrialization, the pavement prevails. Wolves and coyotes encroaching on farmland are culled in the name of cattle preservation. Rare and diverse ecosystems are plowed over. Still, something about this particular situation left me aggravated.

Maybe because there are already so many good reasons why fish farms shouldn’t be in the mouths of salmon spawning rivers exposing the wild native fish populations to the impacts of industrial farming. Maybe because I possess an innate affinity for the ocean and all of its raw power and diverse untamable beauty. Maybe because

the executive director of the BC Salmon Farmers Association vilifies the sea lions as large, extremely aggressive, net-destroying, pack hunters who need to be “dispatched” if they try to enter a farm pen, and in the next breath refers to them as “really intelligent animals”.

“It’s just so messed up!” I spat.

“You’re right.” Josh marked his page and closed his book. “So do something about it.”

“I know, but what?”

This conversation felt like a rerun. Me ranting, Josh listening, nothing changing. I get fired up; angry about some environmental, social or animal injustice. I rage, try to engage my loved ones in my mini-tirade. They abide, nodding until my steam runs out. I move on. Not peacefully, but pathetically; I sink into helplessness.

How did I end up like this? I can depress the atmosphere in a room, leave its occupants feeling that our society is the bane of Earth’s existence. I can cite statistics about what we’ve lost, list the dire problems facing life on earth, debate the virtues of the latest cause, but then what? As unproductive as it may be, it is the curse of the Environmental Studies student.

We are armed with knowledge, but our toolbox feels incomplete, lacking effective tools to chisel away at these inequalities. What tangible actions can we take to alleviate the suffering of the world?



BAD NEWS LEAVES A BITTER TASTE PHOTO BY JULIA BENNETT

We can restore ecosystems, and by doing so, our own mental health. We make peace with our destructive nature through the creative process of healing others. We can act out in protest, demonstrate our views and expose the injustices to the rest of the world. We can make personal change, live our lives in a manner that we feel okay about, knowing what we know. We can work to effect change by teaching, managing or making policy that will hopefully improve our situation. We can do all these things, but are they enough?

Social and environmental change move at such a slow pace, we feel impotent against the challenges. Even so, we must

continue to battle against them: to give something back for the damage we’ve done, to conserve the wild that exists still unimpaired by human development, to protect the ones who are defenseless against our weapons. If for nothing else, for our own mental and physical health. We will live longer and happier knowing we have done all we can. That will have to be enough.

So much for a simple coffee-and-the-paper morning with Josh. A single hot teardrop welled over my bottom lid and slid down my cheek. Josh stood up and wrapped me into warm, comforting arms.

“Well ...” he offered, “why don’t you write about it?”

Evaluating effectiveness in the context of alternatives

MIKE LENAGHAN

The 2008 BC Carbon Tax is designed to reduce carbon dioxide (CO₂) emissions within the province by placing a tax on the purchase of fossil fuels relative to their individual carbon emission outputs. It is intended to be ‘revenue neutral’, which means that 100 per cent of the taxes collected are redistributed to individuals and businesses through a combination of personal and corporate income tax reductions, and the distribution of low-income tax credits. By forcing people to pay for their emissions, the BC Carbon Tax is an effective way to reduce carbon emissions in the province; government modelling estimates that in its current form, it will reduce CO₂ emissions by 3 million tonnes by 2020 compared to business as usual.¹ In the context of climate change however, “effective policy” is a relative concept that must be carefully evaluated.

How does a carbon tax compare with other possible regulatory approaches?

Ambient Air Quality Standards (AAQSs)

AAQSs establish acceptable airborne particulate levels for individual pollutants based on their threat to human health. While in theory governments could develop AAQSs for individual greenhouse gases (GHGs), this would require enormous and continuous monitoring and evaluation efforts, as well as legislative changes since CO₂, the main GHG, is not directly harmful to human health.

Industry Specific Regulations (ISRs)

ISRs could be used by governments to impose emissions standards on individual industries. However, there are several problems with this approach. First, establishing ISRs can take years of negotiation between corporate interests and government, often resulting in a politically palatable but environmentally inadequate compromise. Conducted on a case-by-

case basis, the legislative process would take years, or even decades, and cost millions of dollars. Finally, this approach is time delayed; for example it would take decades before every car on the road was built under a new ISR regime.

Cap and Trade (C&T)

C&T is by far the most popular alternative to carbon taxation. It works by distributing carbon emission credits to businesses based on total allowable emissions for that year. Companies that emit more CO₂ than their credits allow are forced to buy additional ones, while businesses that emit less than their share can sell their credits for profit. While there are many nuances to C&T, it has two key advantages as a GHG reduction strategy. First, it provides ‘benefit certainty’ by setting a definitive ‘cap’ on emission levels. Second, by distributing emission credits to businesses, the cost of C&T is hidden from consumers, increasing its political appeal. Despite these benefits however, C&T suffers at least two important deficiencies. First, it is hard for individuals and businesses to predict its costs, making long-term investments in cleaner technologies less likely. Second, it requires an enormous administrative effort to set, adjust, and ensure compliance with the ‘cap’. As the EU’s experience with C&T makes clear, the process has yet to be perfected, and the resulting uncertainty may do more damage than good.

Having considered the leading policy alternatives, we can now assess the relative effectiveness of carbon taxation as a GHG reduction strategy.

Carbon Taxation

At its most basic level, carbon taxation works by placing a standard price on every tonne of CO₂ emissions. This system has several key advantages over the alternative policy approaches already discussed:

Simplicity: Compared to the alternatives, a carbon tax is a simple strategy requiring little administration to establish or monitor.

Rapid Implementation with Immediate Results: Whereas alternative approaches require years of negotiation and research prior to implementation, a carbon tax can be established very quickly using existing tax structures. Once in place, the impacts of the tax are immediate and system-wide, compared with alternative approaches which may develop piecemeal and take years to become fully effective.

Cost Certainty: By placing a fixed tax on carbon emissions subject to regular and predetermined increases, a carbon tax allows individuals and businesses to make behavioural changes and long-term investments in greener technologies based on assured cost-benefit analysis.

Revenue: Perhaps the most important advantage of a carbon tax is that it provides governments with a new source of revenue which can be used to address regressive aspects of the tax, and fund environmental initiatives.

Disadvantages of a carbon taxation

Benefit Uncertainty: While a carbon tax places clear costs on carbon emissions, it does not guarantee specific emission reductions as in the case of Cap and Trade. That said, so long as governments are willing to readjust the tax to an appropriate level, reduction trends can be assured.

Political Resistance: Labelling anything a ‘tax’ is bound to make it unpopular, particularly when it affects the average consumer. As a result, it can be politically difficult both to establish a carbon tax, and to raise the level of taxation later.

Despite its disadvantages however, a carbon tax, when compared with alternative policy approaches, offers the fastest, most cost-effective and dynamic means of reducing GHG emissions.

Three steps to improving the BC Carbon Tax

Eliminate Corporate Subsidies

The current BC Carbon Tax only applies to about 70 per cent of all GHG emissions in the province; the agricultural sec-

tor and emissions from landfill waste (14 per cent), as well as industrial processes which do not involve the burning of fossil fuels (16 per cent; e.g., cement making) are exempt.² This is problematic for two important reasons. First, these exemptions limit by nearly one third the ability of the Carbon Tax to reduce GHG emissions within the province. More importantly, because the Carbon Tax is coupled with individual and corporate income tax cuts, these exempt industries receive tax reductions without having to pay for the bulk of their GHG emissions. The result is that a considerable portion of Carbon Tax revenue is used to subsidize industries which have no incentive to reduce their emissions. The fact that this subsidy is paid for in part, through the taxation of individual citizens and public institutions, raises serious ethical concerns. To correct this issue, the Carbon Tax should be restructured to either incorporate the remaining 30 per cent of GHG emissions into the tax structure, or revoke the corporate income tax reduction these companies enjoy, freeing the revenue to fund environmentally sustainable public initiatives.

Improve the Social Equity of the Carbon Tax

The common problem with taxing public ‘bads’, such as CO₂ emissions, is that they disproportionately impact the poorest people in society. While the BC government has taken steps to address the regressive nature of the Carbon Tax, particularly through the low-income tax credits and public transit financing, its efforts have not gone far enough. Rather than reducing socioeconomic disparity, the BC Carbon Tax is increasing it. Fortunately, this issue can be easily addressed by ensuring low-income tax credits rise in proportion to the Carbon Tax. By eliminating the regressive impacts of the Carbon Tax on the poor, the BC government can provide low-income families with the economic means to be part of the climate solution.

End the Commitment to Revenue Neutrality

As already mentioned, the biggest advantage of a carbon tax is that it generates revenue that can fund environmental initiatives, providing a ‘double dividend’. Unfortunately, by making the Carbon Tax revenue neutral, the BC government has effectively eliminated this benefit. Of course, the promise of revenue neutrality was critical in making the Carbon Tax politically possible, however, this commitment should not, and arguably cannot, be maintained for two reasons. First, by eliminating the ‘double dividend’, it reduces the environmental impact of the tax by half. Second, by substituting a constant source of revenue (income tax) with a source expected to decline (a tax on CO₂ emissions), the government risks becoming a victim of its own success; if future Carbon Tax increases remain revenue neutral, the government could lose a growing portion of its revenue, resulting in cuts to public spending. It is therefore recommended that future Carbon Tax increases be freed from the revenue neutral commitment, to eliminate regressive impacts of the tax on low-income families and fund environmentally sustainable public initiatives.

Conclusion

Compared with the existing policy alternatives on the table, carbon taxation remains the most effective way to reduce GHG emissions on a large scale. That said, the BC Carbon Tax is not perfect. To ensure that the tax reaches its full potential as a strategy to reduce the province’s GHG emissions, the tax should be reformed to be more socially equitable and environmentally influential.

References:

¹ Lee, Mark and Toby Sanger. 2008. *Is BC’s Carbon Tax Fair? An Impact Analysis for Different Income Levels*, p. 26.

² David Suzuki Foundation. 2008. *The B.C. Carbon Tax: Myths and Realities*, p. 2.

Ultimate “Gingies”



PHOTO TAKEN BY EMMA COLDWELL

EMMA COLDWELL

- Ingredients:**
- ¾ cup packed brown sugar
 - ¼ cup brown rice syrup
 - 2 tbsp agave nectar
 - ¾ cup oil (I use olive oil)
 - ¼ cup molasses
 - ¼ cup unsweetened applesauce
 - 1 tsp vanilla
 - 2¼ cup whole wheat flour
 - 2 tsp baking soda
 - 1½ tsp cinnamon
 - 1 tsp ginger
 - 1½ tsp ground cloves
 - ¼ tsp salt

Directions:

Pre-heat the oven to 325°F. Mix the brown sugar, brown rice syrup, agave nectar, oil, molasses and apple sauce. Mix with an electric mixer or thoroughly by hand. Results are better when the batter is very whipped.

Stir in the rest of the ingredients, except the excess sugar. Make tablespoon-sized balls and roll the dough in the sugar.

Place cookies on a slightly greased baking sheet placed 1 cm away from each other on all sides.

Bake for 12–13 minutes. Let cool for 1–2 minutes and place on a drying rack.

*You will need extra brown sugar and/or cane sugar to roll the cookie dough in. (Note: If brown rice syrup and agave nectar are not regulars in your pantry, you can replace with any kind of sugar you have.)

No matter how much you resist or embrace the holiday season, there is always reason for “festive” baking! These are my holiday “gingies”—soft, chewy, and also vegan! They are fun to make and eat—even after Christmas has passed!

How to cook perfect, restaurant-style tofu

MATTHEW PURDON

Ingredients:

- 1 block extra firm tofu,
- cornstarch
- salt and pepper
- red pepper flakes
- a few cloves of garlic, minced
- 1 tbsp grated ginger
- 2 tbsp chopped onion,
- sesame oil for cooking

Directions:

1. First step is to press the tofu. If you’re short on time you can skip this step, but it does make a difference. Tofu is stored in water so by getting that water out, your tofu will soak up whatever tasty flavors you cook with.
- To press the tofu: slice it in half (horizontally, like you would a hamburger bun). Lay the two pieces out on a pan or plate and put a tea towel or paper towel over top. Then, put something heavy—like a stack of textbooks—on it. Let it sit for a half-hour or so. Usually I do this before I start cooking and let it sit while I prepare the rest of the meal. When you’re done pressing the tofu cut it up into cubes, sized to suit your preferences.
2. Next, throw the cubes in a bowl and add a little bit of salt and pepper and some chili flakes if you like some heat. Add enough cornstarch to completely coat the tofu cubes.
- Heat some sesame oil (or whatever oil you have) in a big pan and throw the tofu in when it’s hot. Once the bottom sides are golden brown turn the cubes over, repeating until all sides are cooked evenly. When the tofu is about halfway cooked, toss a handful of ginger, garlic, and onion into the pan as well.
- The tofu should be nice and crispy and ready to be thrown into a stir-fry or any other tofu dish. I like it best served with some steamed broccoli and this easy spicy peanut sauce.

Spicy Peanut Sauce:

- 1 tbs olive oil
- 1 tbs sesame oil
- ⅓ cup chunky peanut butter
- ¼ cup honey
- 3 tbs soy sauce,
- 1½ tbs rice vinegar
- ½ tbs lime juice
- a bunch of minced garlic
- 1 tbs ginger
- 1 tsp red pepper flakes
- 1 tbs of coconut milk (optional)

Mix everything together and serve as dipping sauce.

“Bragg” Worthy Kale Salad

EMMA COLDWELL

This has become my infamous “go-to” salad whenever there are people gathering. My secret is Braggs Liquid Aminos- reminiscent of a soya sauce, without the extremely high sodium content. This healthy alternative is available at any health food store and some grocery stores.

Ingredients:

- 1 bundle of kale leaves, in bite-size pieces
- 6 leaves of green leaf lettuce
- ½ small red cabbage, diced
- ½ a cucumber
- ½ red onion sliced
- ¼ cup unsalted pumpkin seeds
- 2 tbsp olive oil
- 1 tbsp balsamic vinegar
- 2 tbsp Braggs liquid aminos
- Salt and pepper to taste

Directions:

Combine all vegetables in a large salad bowl. Drizzle the olive oil, balsamic vinegar and soy seasoning over the top. Add the salt and pepper. Toss so that each kale and lettuce leaf is coated. Sprinkle the pumpkin seeds on top. Eat, enjoy, and Bragg a little!

Butternut Squash Soup

EMMA COLDWELL

Up until a week ago I was very intimidated by the idea of making any kind of root-vegetable soup. However, the squash wasn’t going to cook itself! The soup was surprisingly easy to make and also allows for innovation and improvisation in the kitchen. You will need to roast the squash before adding it into the soup. Directions for both roasting and soup-making are included below.

Roasting the butternut squash:

Ingredients:

- 1 butternut squash
- 3 cloves garlic (peeled, not chopped)
- 2 tbsp olive oil
- salt (to sprinkle)
- pepper (to sprinkle)

Directions:

Pre-heat the oven to 435°F.

Dice the squash into slightly larger-than-bite-size pieces and toss onto a baking tray with the garlic (only need to peel the garlic).

Drizzle with olive oil, salt and pepper and toss with your hands.

Roast in the oven for about 20 minutes (until the squash is so soft that when you stab it with a knife it does not stick, or just slides right off).

This roasting step really doesn’t take too much extra time because, as it roasts, you will be busy chopping and sautéing vegetables!

Butternut Squash Soup

While the squash is roasting, you will need to gather:

Additional Ingredients:

- 1 leek (variation or addition: 1 white onion, 1-2 sticks of celery)
- 3 cloves garlic (now, I am a garlic nut, so if this is getting to seem too much, lay low on the garlic at this stage, but don’t scrimp on the roasted garlic!)
- vegetable stock, or water to cover the squash once it is in the pot
- ½ tsp cumin
- salt and pepper, heavy on the pepper.
- ¼ cup chopped fresh cilantro

Directions:

Heat a large pot up (enough for a hearty amount of soup) over medium

heat and add olive oil to thinly cover the bottom

Dice the leek finely (use the white part and the green, discard limp upper areas) and throw it into the pot to sauté for about 5 minutes (until it is soft).

Once the leek is cooked, add the garlic (chopped finely) and the ginger (chopped finely as well)

Let everything get to know each other in the pot. Add a bit of salt and a little bit of pepper, and add the roasted butternut squash. Fill the pot up with the veggie stock or water to just barely cover the squash. Continue letting everything get to know each other for another 5 minutes.

Now, most would say to wait for the soup to cool slightly before tossing into a blender, however I just threw it all in Hamilton (my blender) right away.

After it is blended, determine whether or not you like the consistency; if it’s too thick, add more liquid, if it’s too thin, I’m out of options!

Finally, add the chopped cilantro and enjoy.

Homemade Yogurt

MELIA PARKER

Cut down on plastic yogurt containers by making this dairy-delight from scratch and storing it in reusable glass jars!

Ingredients:

- 2 to 3 cups milk (any milk fat content except skim works, as does goat’s milk)
- at least 1 tablespoon plain yogurt with live cultures (*quantities of milk and yogurt can be multiplied successfully for larger batches)
- glass jar large enough to hold milk
- small tea towel
- pot (or double boiler) large enough to hold milk (be aware, the milk bubbles up when boiling)

*Try yogurt as a substitute for sour cream, or freeze to make frozen yogurt. Experiment by mixing in berries, vanilla

and other flavours, but remember, it’s best to make the yogurt from a plain-flavoured batch.

Directions:

1. Bring milk to a simmer in pot/double boiler over medium-low heat. If using just a pot, stir constantly to minimize burning the milk. Let milk simmer for about two minutes, stirring constantly to prevent frothing over.
2. Remove milk from heat and let stand until you can keep your finger in it without discomfort for about 10 seconds—I usually wait an hour or so. (If you’re scared about this part you can use a thermometer: the target temperature is 37°C–47°C.)
3. In a bowl, thoroughly whisk the tablespoon of yogurt with ½ cup of the warm milk, then incorporate into the rest of the milk. A good method is to

- put it all in the jar, fasten the lid tightly, and give it a good shake. Wrap the jar with the towel(s) to insulate (you can bundle it up in blankets, scarves, or sweaters too) and place it somewhere consistently warm (40°C–50°C)—near a heater or radiator is ideal. On top of the fridge works too.
4. Let mixture sit about 8 hours, or overnight. It will have a layer of liquid on top (the whey) which can be poured off or mixed in. Letting it sit for less time will result in a more liquid yogurt, and more time will result in a thicker, tangier yogurt. Letting the yogurt strain through a cheesecloth will result in a denser, greek-style yogurt, but will decrease quantity.
- Refrigerate, and remember to save the final tablespoon for your next batch.

Chocolate Halvah

CORAL CANDLISH-RUTHERFORD

Ingredients:

- 6 tbsp sesame seeds (variation: 3 tbsp sesame seeds, 3 tbsp almonds)
- 1 tbsp cocoa powder
- 1 tbsp honey
- ¼ tsp vanilla
- ½ tsp cinnamon
- ¼ tsp salt

Directions:

Using a blender, coffee grinder, or food processor, finely grind sesame seeds/ almonds until almost paste-like. Transfer to a bowl and add all other ingredients. Mix well, then roll into small balls. You can eat them immediately or refrigerate them. Alternatively, you can omit the cocoa and cinnamon to make plain halvah, or add pistachios (add after mixing all other ingredients well) to either the chocolate or plain version. Can also be dipped in melted chocolate for chocolate-covered halvah.

Susan Griffin’s *Women and Nature: The Roaring Inside Her* How it changed my worldview and why you should let it change yours

ELIZABETH CRONIN

Eighteen years old, alone and enraptured, I stood looking up at what I was sure was the most beautiful thing I had ever seen. I was in the Louvre in Paris, staring at a large statue of a bare-breasted woman lifting a veil from her gently smiling face. A turquoise scarab beetle brooch held the rich fabric of her draping clothing, which flowed down to rest on her perfect naked toes.

I found the name of this fascinating stone woman, “Nature Revealing Herself to Science”, almost as enchanting as the creation herself. There was a trace of a thought somewhere in my mind that the representation of nature as a gorgeous exposed young woman might be problematic. It wasn’t until this year that a book—a work of art as accomplished as any I saw in the Louvre—led me to more fully understand the unhealthy relationship between women, nature and Western civilization that lay under the cold smooth surface of that statue.

Susan Griffin’s *Woman and Nature: The Roaring Inside Her* is a raw examination of the oppression and exploitation of women and nature throughout the history of Western civilization, and an attempt to show how this oppression and exploitation can end. Griffin’s skills as a poet combined with shocking facts and revelations, the products of diligent research, make *Woman and Nature* a book that changed my worldview and understanding of my own life more than any other.

Griffin’s material is powerful, but it is her style that takes *Woman and Nature* from captivating to deeply moving. She wrote the book as poetry, a decision that she says reflects a defiance of Western civilization’s rejection of emotion. Meticulously crafted sentences create feelings of control, oppression, fear, anger, wholeness and joy.

Two voices, representing the Patriarchy and women, dominate the book. The voice of the Patriarchy “almost always implies that it has found absolute truth”. Cold, short sentences with militaristic repetition give it clinical severity. In this

chillingly familiar voice, Griffin reaches through time to tell the often horrifying story of how Western culture, especially Western science and religion, have seen women and nature.

Griffin says the second voice represents her voice, the voices of other women and “voices from nature”. This voice often

“

The health of our society and our environment depends on healing the relationships between society, people of all genders, and nature.

”

uses “we”; Griffin italicizes it, and while reading it is easy to imagine a chorus of women speaking, and sometimes whispering, the words.

In the patriarchy-dominated beginning of the book this voice enters only occasionally, almost apologetically, bringing tragic shards of emotion into litanies of forceful patriarchal truths:

And it is written in the law that “Women should be subject to their men.”
And we learn
And it is advised that women not be allowed to teach nor should they baptize. That “even the Virgin Mary” was not allowed to baptize.
that our speech is unholy

The voices become more balanced as the voice of women asserts itself. Plaintive fragmented pleas become long flowing sentences interspersed with short descriptive ones as it grows. Finally it gains its full strength and re-

onciles with the voice of the patriarchy, which has become just the voice of a man—even a lover. The book ends with the male voice drawing us through his beautiful thoughts in a single long sentence, then being joined by the voice of women:

...I fly with her, enter her with my mind, leave myself,
die for an instant, live in the body of this bird whom I cannot live
without, as part of the body of the bird will enter my daughter’s body,
because I know I am made from this earth, as my mother’s hands were made from this earth, as her dreams came from this earth and this paper, these hands, this tongue speaking, all that I know speaks
to me through this earth and I long to tell you, you who are earth too, and listen *as we speak to each other of what we know: the light is in us.*

The world I knew as an eighteen year old had been kinder to me than the terrifying one in the beginning of *Woman and Nature*—a world where “witches” burned and surgeons attempted to “improve” the female reproductive system. Yet I see now that the echoes of these horrors have touched me, and many still play out in the lives of other women. Attempts to manipulate and control nature have scarcely changed since the publication of this book thirty-three years ago. The health of our society and our environment depends on healing the relationships between society, people of all genders, and nature. Griffin argues that when we accept that we are all “made of this earth”, we can begin to find the light of understanding in ourselves and live in peace with nature and each other.

The hidden history and dark present of oppression of women and nature can only be resolved if they continue to be brought to light, as they so beautifully are in *Woman and Nature: The Roaring Inside Her*.



NATURE REVEALING HERSELF TO SCIENCE. PHOTO BY ELIZABETH CRONIN

Environmental Studies Field Schools 2011

Environmental Studies students at the University of Victoria had the opportunity to participate in three environmental field Schools in the summer of 2011. During the Redfish School of Change students travelled from the Slocan Valley to the West Coast of British Columbia and participated in three Environmental Studies (ES) courses, which were ES 370: Leadership Skills for Community Action, ES 380: The Political Ecology of Food, and ES 382: Ecology of Sustenance. The other two field schools were held at the Hakai Beach Institute on Calvert Island. ES 470: Advanced Field Study in Biodiversity and Conservation of Coastal BC, took place in June. In August, ES Students had the opportunity to take Law 343: Environmental Law and Sustainability, which is now a cross-listed course with ES. These field schools provided students with valuable experiential learning opportunities. The images below highlight some of the experiences students had on these field schools.

Redfish School of Change



TEAM BUILDING ACTIVITIES ON GALIANO ISLAND. PHOTO BY CARLEY COCCOLA

PLANTING ONIONS AT AN ORGANIC FARM. PHOTO BY CARLEY COCCOLA

CANOEING INTO VANCOUVER. PHOTO BY JULIA BENNETT

OUTDOOR CLASSROOM. PHOTO BY CARLEY COCCOLA

ES 470: Biodiversity and Conservation of Coastal B.C.



ES 470 STUDENTS ON CALVERT ISLAND. PHOTO BY GEORGIA BRANDER

MESSAGES IN THE SAND. PHOTO BY GEORGIA BRANDER

EXPLORING THE COAST VIA WATER. PHOTO BY GEORGIA BRANDER

Law 343: Environmental Law and Sustainability



TRAVELLING TO CALVERT ISLAND. PHOTO BY GEORGIA BRANDER

LAW 343 STUDENTS TREK DOWN TO THE BEACH TO LEARN. PHOTO BY GEORGIA BRANDER



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SUNSET CAMPFIRE AFTER CLASS. PHOTO BY GEORGIA BRANDER





Step by Step
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www.stepbysteptherapy.ca

Danielle Rousseau. RCC
MA Counselling Psychology

Stepbystep1@me.com
Phone: 250.213.3909
#401, 1095 McKenzie Ave
Victoria BC