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# AJ

CANADA'S ENVIRONMENTAL VOICE

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# Daring & Dedicated

Meet the scientists and organizers who are rewriting the rules.



## The Fire Fighter

**JESSICA ERNST** spent a quarter-century as an environmental consultant to Canada's oil and gas industry before she became its sworn enemy. What literally sparked her outrage was the flammable tap water from the aquifer below her property in Rosebud, Alberta, which Ernst blames on methane contamination from Encana's "risky and experimental drilling program," aka hydraulic fracturing.

In 2007, Ernst filed a \$33-million lawsuit against the Alberta government and energy giant Encana, alleging that regulators "failed to follow the investigation and enforcement processes they had established and publicized," thereby threatening the health of people, property, livestock and their shared water supplies. In October 2013, Alberta's chief justice finally green-lit the case for trial, but absolved the Energy Resources Conservation Board (ERCB) because the province had previously granted its regulator statutory immunity.

Ernst told *The Tyee* why she has no choice but to appeal: "Chief Justice Wittmann ruled that the ERCB has a duty to protect the public, but not me. I am the public; we all are. Without water to bathe in, the public's well-being declines – as mine has for years. Without water to drink, the public dies, so do all individuals – including Justice Wittmann and his loved ones. There is no frack worth that."

To back up her claims, Ernst also released a report in June 2013 that compiles 10 years' worth of scientific facts and findings about the dire impacts of fracking on groundwater.

[ernstversusencana.ca](http://ernstversusencana.ca)



DANIEL ABRIEL

### The Activator

**A WANNABE ASTRONOMER** turned intrepid anthropologist turned proactive suburban theorist, Jill Grant wasn't sure of the mark she wanted to make on the planet until she got all the way to Papua New Guinea. There she saw people who "needed clean water, access to health care, control over their resources" and strategies to tackle a host of development issues. "I thought it was better to have the skills to help people cope with the challenges they were facing, rather than just study their cultural practices."

So Grant returned to Canada, completed a second masters' degree and spent the next two decades teaching environmental planning at the Nova Scotia College of Art and Design (NSCAD). In 2001, she helped launch Dalhousie's Community Design program – the first of its kind in Canada – when NSCAD joined with Dal's Urban and Rural Planning department. She continues to interpret suburbia and the complexities that bind public and private spaces via the university's Planning Theory and Practice website, and in 2008 she was recognized by the Canadian Institute of Planning for her work to bridge the discrepancies between theory and practice.

Most importantly, Grant still teaches students the opposite of passive observation.

[theoryandpractice.planning.dal.ca](http://theoryandpractice.planning.dal.ca)

### The City Streamliner



**WHEN SADHU JOHNSTON** was hired as Vancouver's Deputy City Manager in 2009, he praised the city's livability and sustainability credentials and said he felt "like the city is poised

to really push this agenda. I want to be part of that." It was quite a compliment from a man wrapping up six years as Chicago's first-ever Chief Environmental Officer, during which he'd deployed a world-class municipal climate change plan.

As a Vancouverite, the 39-year-old dual citizen has become a next-level champion of practical strategic adaptation. He's guided impressive puzzle pieces into place, including a successful organic waste diversion program, one of the continent's most ambitious building codes and the 2020 Greenest City Action Plan – Vancouver's blueprint for becoming the planet's urban sustainability benchmark.

Yet Johnston's deepest influence comes through his efforts to share the expertise of leading urban planners with those playing catch-up. He founded and co-chairs the Urban Sustainability Directors Network (representing 50 million North Americans), and helps direct and develop the Sustainability Tools for Assessing and Rating (STAR) Communities framework. *The Guide to Greening Cities*, an urban resilience how-to book he co-authored, was published this fall.

[usdn.org](http://usdn.org) | [starcommunities.org](http://starcommunities.org) | [guidetogreeningcities.org](http://guidetogreeningcities.org)

### The Capacity Builder

**POLICY MAKERS** are hardly a scarce resource in 2013, but few can balance the art and science of workable solutions like Ann Dale. The Royal Roads University prof's extracurricular activities are impressive – she chairs the Canadian Consortium for Sustainable Development Research, founded the \$30-million National Environmental Treasure, and leads a BC-focused research group called MC3 (Meeting the Climate Change Challenge), which develops best practices in community adaptation. In her pre-academia career as a federal government executive, Dale played a pivotal role in launching the now-defunct National Round Table on the Environment and the Economy in 1988. The acclaimed author has also embraced visual and virtual media as a way of harnessing social capital, and she enthusiastically uses the web to discuss community vitality and how to reconcile our relationships with both space and place.

"I have tried very hard to integrate the arts into my research," said Dale when she accepted the prestigious Canada Council of the Arts Molson Prize for Social Sciences in May 2013. "Using visuals can be a powerful motivator for action in climate studies as people can't see the impact until it is too late." Through Dale's eyes, it's easier to find the way forward.

[crcresearch.org/crc-blog](http://crcresearch.org/crc-blog) | [mc-3.ca](http://mc-3.ca) | [anndale.me](http://anndale.me)



COUVRETTE OTTAWA

### The Budding Reclaimer

**AT 15** years old, Kelcie Miller-Anderson set up a science lab in her basement to investigate the fungi in dandelion roots that allows them to sprout anywhere, even in her back alley. Three years on, the second-year University of Alberta student and land remediation prodigy already has a research coup under her belt.

Miller-Anderson's interest in dandelion hardiness led her to try growing fungus from the plant – first with soy beans, then oyster mushrooms – to decontaminate materials from Syncrude tailings ponds, which she acquired by partnering with the oil company. Her all-natural (albeit stinky) home experiments with mycoremediation have had intriguing results, supporting the now-18-year-old's theory that the enzymes released by the oyster mushrooms' mycelium can use decomposed hydrocarbons from the tailings as sugars to grow.

Because her priority is now university, Miller-Anderson plans to conduct field trials during her next summer break. "I want to solidify my findings and get the method perfected, and see it being used in the future," she told the *Edmonton Journal*. Clearly she's determined, and she has a good handle on pragmatism too: "It's important that people realize, yes, there are environmental impacts, but the oilsands are very important to the Alberta and Canadian economies."



LEAH HENNEL, CALGARY HERALD



FORESTETHICS.ORG

## The Negotiator

**WITH THE MARCH 2014 DEADLINE** closing in to ratify safeguards outlined by the 2006 Great Bear Rainforest Agreements, Valerie Langer brought the signatures of 10,000 British Columbians to the provincial legislature in early October and asked the government to do exactly that. The ForestEthics campaign director and long-time guardian of Canadian coastal ecosystems is an excellent messenger for this spectacular region's spirit bears, salmon and Western red cedars – and the citizens who love them. “Now, it's up to the decision makers to be on the right side of history,” she wrote at the time.

As an activist with Friends of Clayoquot Sound in the late 1980s and early 90s, Langer chained herself to trees and logging equipment and was arrested four times. She shifted her target to buyers of BC wood by helping create the Clayoquot Rainforest Coalition in 1994 (which became ForestEthics in 2000) with members of Greenpeace, Natural Resources Defence Club and other environmental groups. ForestEthics has exposed poor logging practices and saved rare trees and habitats by brokering market solutions with Fortune 500 companies such as Dell, Staples and Victoria's Secret. The organization has protected more than 26 million hectares of endangered forest – a surface area slightly larger than all five Great Lakes. [forestethics.org](http://forestethics.org)

## The Natural Capitalist



ADRIAN MILANKOV

**THERE'S A SUBTLE** difference in Geoff Cape's approach to retuning our relationships with nature. Instead of asking people to save remote landscapes, he wants them to infuse their lives with plants, which in most cases means greening their sprawling built environments.

Inspired by New York's Central Park and bent on “the requirement for cities to incorporate nature to make those cities liveable,” Cape began seeding cracks in the concrete two decades ago. He started a not-for-profit called Evergreen in 1991 and has invited a stunning deluge of greenery into Canada's largest metropolis and beyond, partnering with more than 3,000 schools and enabling thousands of projects across Canada, including 25 community gardens in the Greater Toronto Area.

Cape's green thumb matches beautifully with his business acumen. In 2010 he unveiled Evergreen Brick Works (EBW), a \$55-million reimagining of a 17.4-ha industrial site as a massive environmental community centre spread among converted factories in Toronto's forested ravine. Cape sees EBW as a chance to “explore the past, present and future of city-building all in one place,” but also as a living testament to self-sufficiency and an influencer of corporate sustainability strategy. The space hosts events, fills 4,460 m<sup>2</sup> of offices with “mission-supporting tenants” and runs a garden centre.

In other words, Cape quite literally sells his dream of a verdant, flourishing city.

[evergreen.ca](http://evergreen.ca) | [ebw.evergreen.ca](http://ebw.evergreen.ca)



SHAUGHN BUTTS, EDMONTON JOURNAL

## The Harsh Realist

**GEORGE POITRAS** spent early October telling European policy makers the same thing he's been saying for years: tar sands mining has a devastating, deplorable impact on the vitality and traditions of First Nations communities in Northern Alberta. He made the journey overseas to counter the federal and provincial government lobby and convince EU member states to qualify tar sands exports as dirty in their looming decisions on a Fuel Quality Directive, expected in mid-December.

“Our people can't wait for further deliberations,” he explained to a London crowd. “We're at a crossroads in our history as to whether we survive.”

Poitras is no stranger to such high stakes. In 2002, he gave up his position as Chief of the Mikisew Cree First Nation in Fort Chipewyan to speak freely about the spiking cancer rates and other harsh realities taking shape in his community, some 200 kilometres downstream from bitumen extraction operations. He's remained a vocal front-line defender of the Mikisew Cree ever since. In a 2011 open letter to Barack Obama about the gravity of the Keystone XL pipeline decision, Poitras drew this line in the tar sands: “Your approval will mean with certainty that we will continue to see our waters poisoned, our lands contaminated, our skies polluted, our fish deformed, and our people die unnecessarily.”

[mikisewcree.ca](http://mikisewcree.ca)



## The Smart Mouth

**AMONG RACHEL PARENT'S MANY** public statements since she began speaking out about the dangers of genetically modified organisms (GMOs), her televised jab in July 2013 at condescension-prone CBC pundit Kevin O'Leary revealed a hint of the teenage activist's gutsiness: “If you promise not to use the word stupid, I won't use the word fascist.”

The 14-year-old started making speeches to her schoolmates about how the health and ecosystems of their generation were being compromised two years ago. Parent had travelled to the Amazon and other northern parts of South America, places she describes as “being devastated by the planting of GM soy.” In 2012 she founded Kid's Right to Know Club, which uses social media, crowd funding and an obviously well-supported ambition to get other youth involved in calling for GMO labelling and joining campaigns against GM alfalfa, Halloween candy and cafeteria mystery meat.

Emboldened by the O'Leary confrontation and millions of YouTube views, Parent recently demanded a meeting with federal Health Minister Rona Ambrose about the need for mandatory independent studies into GMO impacts, framing the issue bluntly. “Genetically engineered crops have led to a massive increase of pesticide use which is destroying our soil, corrupting our water, killing off our bees and butterflies,” she said at Toronto's March Against Monsanto in October. “Yes, we are being bullied.”

[kidsrighttoknow.com](http://kidsrighttoknow.com)

## The Preservationists

**BEFORE ERIC PETERSON AND CHRISTINA MUNCK** bought 87 ha on Calvert Island in 2002, their remote inlet on BC's Central Coast had been a luxury retreat and fishing lodge that alienated its Indigenous neighbours and the BC Parks employees who run the 1,230-square-kilometre marine conservation area around it. It's tough to imagine a more fruitful resolution than the Hakai Beach Institute.

Launched in 2010, Hakai aims to treat this rich, vital stretch of coastline with maximum respect – and as an incredible opportunity. It prioritizes multidisciplinary environmental science on a long-term timescale and includes local First Nations in studying the archeological record at ancient village sites. Between March and November, the self-sustaining facility hosts up to 100 staff, guests and visiting scientists, and functions as an independent natural laboratory with access to diverse, overlapping marine and terrestrial ecology. It is also a focal point for post-graduate instruction, community initiatives, stewardship training and conferences.

The tens of millions that Peterson and Munck have sunk into Hakai represent only one cause they support through the Tula Foundation, which they founded in 2001. Tula also spends \$2-million annually on improving health care in rural and Indigenous communities in Guatemala and is a strong supporter of both the Centre for Microbial Diversity at the University of BC and the University of Victoria's Environmental Law Centre.

[hakai.org](http://hakai.org) | [tula.org](http://tula.org)

Profiles produced by Julie Bélanger, Semini Pathberiya & Eric Rumble.

We can only fit a fraction of the Great Canadian Game Changers among us on the pages of one magazine. We'd love to hear about the scientists, organizers, communities, activist front-liners and quiet revolutionaries that are doing amazing work for the sake of environmental preservation and awareness — and our capacity to live lighter and more thoughtfully. Please take a few minutes to tell us about the Great Canadian Game Changers we missed at [alternativesjournal.ca/GCGC](http://alternativesjournal.ca/GCGC).

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# Old Ways, New Path

How the T'Sou-ke Nation is powering its cultural revitalization.

BY HANS TAMMEMAGI

**CHIEF GORDON PLANES** of the T'Sou-ke First Nation in Sooke, BC, motivated his community to become one of the greenest in Canada with a simple idea: "We used to live sustainably, and only took what we needed from the land. We need to get back to that."

Five years ago, guided by the ancestral custom of looking ahead seven generations, the community prepared a vision with four goals: self-sufficiency in energy and food, economic independence – or as Chief Planes has said, "No more living off the dole" – and a return to traditional ways and values.

But the T'Sou-ke cultural renaissance looks more like the future than the past. In 2009, the community collaborated with contractors to build a 400-panel solar photovoltaic system that generates 50 per cent more electricity than the next largest in the province. Power bills at the three administrative offices where the panels are located have since been reduced by 100 per cent; the other 25 homes the system powers have cut costs by up to half.

In 2009 and 2010, hot-water solar panels were installed on the roofs of 42 of the 86 buildings on the reserve. The remaining houses will be upgraded with heat-pump water heaters by the end of 2014.

Some homes have received extra roof

insulation and new appliances to replace obsolete ones, and all buildings are pursuing a comprehensive conservation program using energy-saving light bulbs, low-flow shower heads, weather stripping and hot-water-pipe insulation. Supported by organizations like the youth-driven T'Sou-ke Smart Energy Group, conservation kits and behavioural training are encouraging residents to turn down thermostats and mind light usage. The ongoing goal is to get all buildings to net-zero energy usage.

"Conservation is crucial, since it is 10 times more expensive to generate electricity than to save it," says special projects manager Andrew Moore, who is responsible for transforming the community's vision into reality. Another crucial part of the equation is economic self-sufficiency, which the T'Sou-ke community is working toward by requiring band members to receive mentoring, training and to work on all construction contracts.

Members of T'Sou-ke Nation are also mentoring others. This year alone, they hosted 32 schools, 54 municipalities and scores of international tourists for workshops and tours. Since 2012, the community has been working with the nearby city of Colwood and its partners on a \$12-million project to upgrade 1000 homes before March 2014 ([solarcolwood.ca](http://solarcolwood.ca)).

The next phase of T'Sou-ke's revitalization is achieving food security. An extensive community greenhouse is being developed to provide foods such as peppers and tomatoes, and an additional eight greenhouses will grow a cash crop of wasabi (Japanese horseradish) for export. "When all is complete we will have a zero-mile diet," explains Christine George, a local who champions traditional foods and foraging on the beach and in the forest.

Other traditional T'Sou-ke customs are quietly re-emerging too. When tourist busloads arrive, visitors are served a salmon barbeque and offered carvings, paintings, masks, plants and other goods for sale. In 2014, a closed church will be converted into an arts centre.

The vision articulated by Chief Planes is coming to fruition. Energy usage and costs are tumbling, unemployment is decreasing and an accessible, more nourishing food system is being created. Most significantly, however, the community's pride and confidence are growing. **AV**

**Hans Tammemagi is a writer and photographer who focuses on environment, travel and native culture.**

Follow more T'Sou-ke Nation achievements and initiatives at [tsoukenation.com](http://tsoukenation.com).

# First Places

A baker's dozen of trailblazing sustainable communities.

BY EMILY SLOFSTRA

## 1<sup>st</sup> Community Greenhouse Above the Arctic Circle

The Inuvik Community Greenhouse opened in 2000 after local volunteers and Aurora College students spent two years converting a decommissioned arena to accommodate 74 full-size garden plots (3 by 1.2 metres each). The gardening season runs from May to September, and the greenhouse is heated by the 24-hour sunlight throughout the summer. [inuvikgreenhouse.com](http://inuvikgreenhouse.com)

## 1<sup>st</sup> Municipality to Ban Plastic Bags

The Northern Manitoba town of Leaf Rapids banned plastic bags in 2007. While there are only two major retailers in the town of about 500 citizens, it's still an impressive feat. [townofleafrapids.ca](http://townofleafrapids.ca)

## 1<sup>st</sup> Plastic Water Bottle Ban

In March 2009, University of Winnipeg students voted by a three-to-one margin to eliminate more than 38,000 bottles sold on campus every year. The measure adds to an already strong sustainability agenda that has implemented a composting program and an improved recycling system that includes batteries, e-waste, cartridges and light bulbs. [bit.ly/BottleBan](http://bit.ly/BottleBan)

## 1<sup>st</sup> Windpower Test Site

The Wind Energy Institute of Canada has been testing and improving wind turbines at North Cape, PEI, since 1981. The peninsula's harsh marine environment and highly variable weather conditions between summer and winter have made the facility vital to considering turbine applicability across Canada. [weican.ca](http://weican.ca)

## 1<sup>st</sup> to Mobilize Against the Perils of Bitumen

The Keepers of the Athabasca have organized the Tar Sands Healing Walk annually since 2009 to acknowledge the mining operations' destructive impact on the climate and to the livelihoods and landscapes of those who live downstream. In 2013, hundreds of people joined First Nations and Métis locals in a 14-km walk alongside tailings ponds north of Fort McMurray. [healingwalk.org](http://healingwalk.org)

## 1<sup>st</sup> Community to Ban Cosmetic Pesticides

Responding to citizens' health and environmental concerns, Hudson, Québec, became the first town in North America to create a bylaw to control the use of cosmetic pesticides in 1991. Two companies, Chemlawn and Spraytech, were charged in 1992 and took the municipality to court to have the bylaw declared invalid. Nine years later, the Supreme Court ruled in favour of the municipality, setting a Canada-wide precedent for local environmental protection. [bit.ly/PestBan](http://bit.ly/PestBan)

## 1<sup>st</sup> County to Ban Fracking

In October 2012, Inverness County, Nova Scotia, passed a bylaw prohibiting exploration or extraction of oil or methane gas through hydraulic fracturing. Like the pesticide case in Hudson, QC, there is a concern that municipalities do not have jurisdiction over extractive operations, but the case is moot until Nova Scotia's independent review of fracking has been done. The review was originally set to be completed in 2014, but it has been extended until an unknown date to include public consultation and expert panels. [nofrac.wordpress.com](http://nofrac.wordpress.com)

## 1<sup>st</sup> Ecovillage Zoning

In 2006, the founders of Yarrow Ecovillage convinced the city council of Chilliwack, BC, to approve a unique zoning regulation that increased their land's maximum density from five to 40 residences. The exception allowed the community of 65 to build a multi-generation co-housing development, an education centre and commercial operations such as a café and deli. Similar legislation exists in other places under different names, such as the Comprehensive Development Zoning in Cowichan Valley, BC, passed in 2003. [yarrowecovillage.ca](http://yarrowecovillage.ca)

## 1<sup>st</sup> Stormwater Treatment Facility Park

Opened in 2010, Sherbourne Common integrates an ultraviolet stormwater treatment system into a 1.5-hectare park on the Toronto waterfront. The green space includes a skating rink, splash pad, pavilion and art structures that double as water channels that send disinfected stormwater into Lake Ontario. [waterfrontontario.ca/sherbourne\\_common](http://waterfrontontario.ca/sherbourne_common)

## 1<sup>st</sup> Sustainable Forestry Operation

The ancient Acadian forest on Windhorse Farm has been harvested for timber each year since Conrad Wentzell settled here in 1840. Today it remains a stunning example of land stewardship, and the Drescher family (who took ownership in 1990) is committed to maintaining the "functional integrity" of the forest alongside educational and work-study programs and a retreat centre for vacationing naturalists. [windhorsefarm.org](http://windhorsefarm.org)

## 1<sup>st</sup> Commercial Wind Farm

Commissioned in 1993 and built out in phases, the Cowley Ridge wind farm near Pincher Creek, Alberta, has 57 turbines mounted on bolted steel structures that look more like transmission towers than the sleek columns being installed today. Fourteen turbines are currently being refurbished, but the farm still feeds the grid with a capacity of 21 Megawatts, enough to power 7,665 homes for a year (based on the energy used by a Calgary household). [bit.ly/FirstWind](http://bit.ly/FirstWind)

## 1<sup>st</sup> Full-Scale Recycling Program

It began in 1981 with more than 1,000 homeowners in Kitchener, Ontario, separating used steel cans, glass and paper from other garbage. Today, 95 per cent of Canadians have access to recycling programs that can divert 25 per cent of their waste from landfills, and blue boxes are deployed all over the planet. [bit.ly/Recycle1st](http://bit.ly/Recycle1st)

## 1<sup>st</sup> LEED Certified Building

In 2005, Stratus Vineyards was granted the first Leadership in Energy and Environmental Design certification in Canada for its winery building in Niagara-on-the-Lake, Ontario. Most impressive is the geothermal technology used to heat and cool the building, but other important features for achieving certification included the recycled insulation and reclaimed wood and steel used in construction, the operation's composting of plant material waste, and the bike locks and showers for workers. [stratuswines.com](http://stratuswines.com)

Emily Slofstra is **AJ's** web editor. Learn more about First Nations communities and individuals that are walking for ecological justice at [alternativesjournal.ca/396](http://alternativesjournal.ca/396).

# Heroes of Heroes

## The people who inspire David Suzuki, Tzeporah Berman & Elizabeth May.

*A\J asked these three tireless boosters of sustainability a simple, but important question: Who is your environmental hero? Here are their answers.*

### DAVID SUZUKI

**M**Y FATHER. My earliest memory from childhood was when I was four, and he was taking me camping. It was my father's absolute love of the outdoors. He was an avid gardener. He would gather plants and small trees wherever he went and plant them in his garden. This was before World War Two, we lived in Vancouver, and we'd be going out fishing and camping on weekends. I don't think there is any greater way to teach you a love of the natural world, and so I am ever grateful to my father for that.

I went to college in the States. I fell in love with genetics, this really hot area of biology, and I was all set to become a hotshot geneticist. In 1962, I had my first job back in Canada at the University of Alberta, and a woman named Rachel Carson published a book called *Silent Spring*.

That was a really big shock for the world, because up until that point it was like, science and technology are wonderful and the economy is booming and everything is great. The guy who found that DDT killed insects, Paul Müller, won a Nobel Prize in 1948 for his discovery.

*Silent Spring* was all about the unexpected effects of pesticides. And as a geneticist, we focus on a chromosome or a gene and try to study one little part of nature. When I read her book, it was as if her message was written to me as a scientist. And that was: Yeah, you scientists are clever; you can invent things like DDT. But the lab is not the real world. You study the effect of DDT on an insect and a plant grown in a growth chamber or in the flask, but in the real world it's much more complicated. It rains! The wind blows, the sun shines – all kinds of things happen that you never see in the lab.

Out in the real world, everything is connected to everything else.

So you spray chemicals in a field to kill pests and you end up affecting fish and birds and human beings. I thought I was investigating the very essence of nature and what I would discover in the lab was so applicable to the bigger world. And I realized then that because of this idea that we're so powerful in genetics, we started applying ideas and ended up having all kinds of unexpected consequences. It was Rachel Carson that opened my eyes to a different way of looking at what I was doing.



Elizabeth May &amp; Mary Gorman

## ELIZABETH MAY

**M**ARY GORMAN works tirelessly against very large, vested interests in the fossil fuel industry, and against provincial governments that think they're going to get revenue out of oil and gas in the Gulf of St. Lawrence, which is essentially a quite enclosed marine ecosystem. The Gulf has very lucrative fisheries still, and Mary works as a volunteer on a shoestring with no substantial organization behind her, raising awareness and effectively fighting a lot of different proposals. The current one is called Old Harry, and they want to drill a deep-water oil well midway between the Magdeline Islands and the coastland of Newfoundland and Labrador.

Without an environmental review, the Harper administration has identified the Gulf of St. Lawrence as a place where they want to develop oil and gas. It's such a little-known issue, and there are lots of people who fight oil and gas there – the First Nations in the territory, many fishery unions, community organizations – and as is often the case in these kinds

of campaigns, there's one person who's a linchpin and never gives up.

Mary lives in Merigomish, Nova Scotia, and works out of her home with a loose coalition called Save Our Seas and Shores. By background she is also a journalist and sometimes a screenwriter, but all her own work goes by the sidelines because she's so dedicated to keeping the Gulf protected from oil and gas. If it wasn't for her dogged determination, I think they would've had oil wells by now.

Mary and I have the same approach, I think. I've always advocated that you never give up. And certainly Mary proves that. You don't turn your back on proponents of an industrial project; if you want to stay on top of it, you have to be vigilant. And Mary is very, very vigilant. She's ... indomitable.

She's always prepared with tremendously detailed documentation and she says what's happening, how the industry is abusing a process, how the regulators are so lax. She's also a very effective communicator. She's just an extraordinarily strong activist that most people wouldn't have heard of. Mary never fails to be where she needs to be when she needs to be there.

## TZEPORAH BERMAN



**ERIEL DERANGER** works with the Athabaskan Chipewyan First Nations. And it's one thing to work on an issue that

you know intellectually or even in your heart is important. It's another thing to work on an issue that directly impacts your community, to have the energy to get out there every day and talk about something that is incredibly controversial and also affects the lives of those you love.

Eriel is a very powerful spokesperson on both environmental issues and Indigenous rights, in her community and internationally. Over the last several years I have been so impressed by her capacity to weave together the financial implications of tar sands expansion with the local ecological impacts and global climate implications, and to tell that story in a way that is incredibly effective. She not only has one of the most sophisticated analysis and in-depth grasps of one of the most important issues that we face as Canadians, but she also has such a graceful and effective way of organizing that I think many people can learn from. She shows incredible leadership while at the same time teaching us all a deep respect for First Nations elders' voices and those who live in affected communities.


She is a big part of organizing the Tar Sands Healing Walk every year. It's a very interesting event because it's not a protest; it's a spiritual gathering. It's a healing for those communities. This year Eriel and other organizers brought together over 500 people from all walks of life to come and learn from First Nations leaders and elders in Fort McMurray. There were people there from all over the place that had been brought together and it was an incredibly moving experience for so many of us.



Eriel Deranger

When I first met Eriel, she was working for Rainforest Action Network and Sierra Club. She had designed a finance campaign that held banks accountable for the big statements they make around supporting Indigenous rights and responsible resource use. She had organized in-depth research on project financing at many of the largest banks and was really exposing the contradictions between their so-called principles and their commitment as companies and what they were actually financing. During that time she also organized protests from San Francisco to Toronto. And then a couple of years later our paths crossed again when she was delivering a report on the impacts of Shell's exploration – not only in the oil sands, but also in their exploration in the Niger Delta and Alaska – at the Shell AGM in the Netherlands. Our paths have crossed many times since then.

She does a lot of work in helping to train members of her own community to really find their voice, to speak to the media about their issues, about oil sands and the growing cancer rates in their communities. But then she also seems just as comfortable and effective working internationally.

I'm a mom, and I'm inspired by her ability to be a mom and to do this work and to balance the needs of her family and her community and her passion. I think she's a real role model for women everywhere. 

AJ web editor Emily Slofstra interviewed David Suzuki, Tzeporah Berman and Elizabeth May. Listen to AJ's podcast to hear Suzuki, Berman and May candidly share stories of inspiration about their environmental heroes. [alternativesjournal.ca/396](http://alternativesjournal.ca/396).



# Banking on Divestment

Canadian university students are demanding their schools stop supporting fossil fuels.

BY MARK BROOKS

**R**ICHELLE MARTIN isn't your typical activist. The third-year student in Philosophy and Interdisciplinary Leadership at the University of New Brunswick has always been interested in environmental issues but had no experience organizing or leading any kind of public campaign. This all changed a few months ago, rather unexpectedly.

When Martin and two other UNB classmates began researching ideas for an assignment in their leadership and community projects class, they learned about a burgeoning fossil fuel divestment campaign that was making headway south of the border and slowly gaining steam in Canada. For almost a year now, students on campuses across the US have been challenging their university and college administrators to take concrete action to confront the climate crisis by removing fossil fuel companies from their endowment portfolios.

For their assignment, Martin and fellow students Kayley Reed and Christina Wilson founded Fossil Free UNB. Although their class ended last spring, their campaign to persuade the university to divest from fossil fuels has only just begun.

Climate change campaigners around

the world have long struggled to find meaningful ways for individuals to contribute to solving what is a complex, seemingly intractable problem. One reason divestment is galvanizing students is that it provides a practical way to participate in collective action that could help reduce the political power of the wealthiest industry on the planet. "Climate change is going to affect young people more than anybody else," says Martin, "so we need to take responsibility for making changes. This campaign appealed to me because it targets students to take leading roles."

Over the past few months, Fossil Free UNB has collected hundreds of student signatures, seen a near-unanimous resolution in favour of divestment passed by the student union, and met with both the president of the university and the UNB Investments Committee. Although

the committee was not convinced of the merits of divestment, Martin and her friends remain undeterred. They are ramping up the pressure this fall by creating a formal organization on campus, enlisting more student support and tapping into the growing network of students across Canada who are engaged in similar efforts at their own schools.

Divestment campaigns have been used with varying degrees of success by a number of social movements over the years. The idea is to convince individuals or an organization to sell shares in an unethical company or industry to raise public awareness about its transgressions while hitting the offenders where it hurts – their bottom line.

Whether public pressure to divest from companies doing business in South Africa had any significant role in ending the apartheid regime in the 1980s is a contentious matter. Yet it is almost certain that the campaign helped to reframe the ethical debate and greatly increase knowledge of the injustice of apartheid. The fossil fuel divestment movement believes that, in climate change, humanity is now facing another moral crisis that demands we take sides: if it's wrong to wreck the climate, it's wrong to profit from the wreckage.

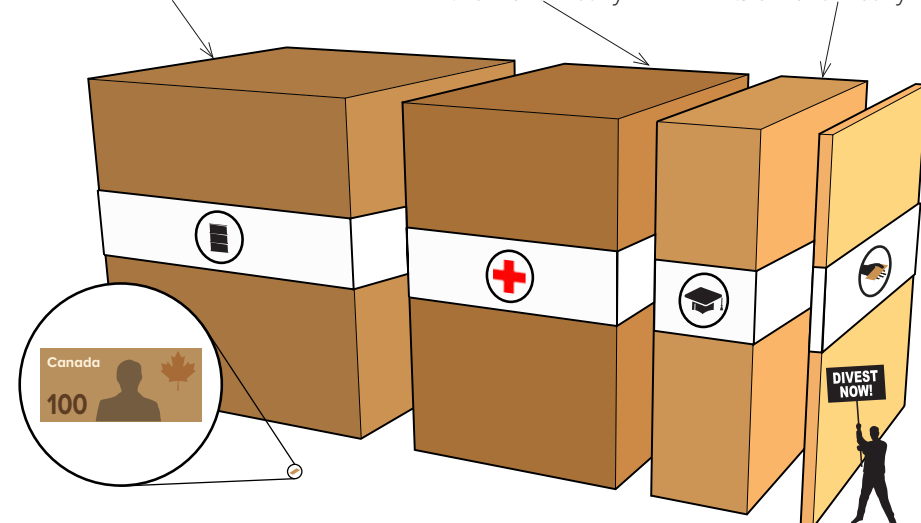
## \$40-Billion Equals Big Stacks of Cash

Estimated North American university endowment investments in fossil fuels: \$40-billion

Federal Canadian health care transfer payments: \$27.2-billion annually

Federal Canadian postsecondary education transfer payments: \$11.5-billion annually

Federal Canadian direct tax subsidies to oil industry: \$2.8-billion annually



Each block in this image represents massive, 7.5-metre-tall stacks of new Canadian \$100 polymer bills, which are slightly thinner than the old ones. The person pictured for scale is 1.8 metres tall (5'10"). For comparison, the estimated amount of money invested in fossil fuels by North American university endowments is roughly equal to the combined amount that Canada's federal government spends each year on postsecondary education, health care and oil industry subsidies.

DIAGRAM BY CONNOR LAI & NIK HARRON

Inspired by the struggles against apartheid and big tobacco, Bill McKibben's climate change organization 350.org decided to launch a widespread Fossil Free Divestment campaign following the re-election of Barack Obama in 2012. Aided by a handful of groups such as the Sierra Club and the Energy Action Coalition, the campaign built upon existing coal divestment efforts in the US, first targeting the endowments of postsecondary institutions and then broadening its scope to include municipalities, religious institutions and foundations. Their goal is simple: to "take on the industry," according to 350.org communications director Jamie Henn. "Students see divestment as a tangible way to make an impact [on climate change] at the local and national levels."

The campaign has since spread to more than 300 US colleges and universities, but so far only six have committed to pursue divestment – and not one of those has an endowment larger than US\$1-billion. (For context: Large research universities like Harvard and Yale have endowments of more than US\$30-billion and US\$19-billion, respectively – and in early October, Harvard's President stated it would not divest because its board members did not consider such a move to be "warranted or wise.") Eighteen cities and municipalities in the US have also signed on, including Seattle, San Francisco, Berkeley and Portland (Oregon), as well as a number of religious institutions. In July, the United Church of Christ became the first national faith communion to do so.

The Fossil Free Canada divestment campaign arrived a little later. The Canadian Youth Climate Coalition currently runs the project, although CYCC director Cameron Fenton says student organizers on campuses are driving it. Nineteen student-led campaigns were underway as of early October, and the CYCC is shooting for 30 by November. No Canadian schools have agreed to divest as of yet, but Fenton says it is still early and, in addition to UNB's progress, there have been other encouraging developments.

For example, the City of Vancouver announced plans in October to examine how its \$800-million in investments aligns with the mission, values and sustainable and ethical considerations outlined in its procurement policy. The pension plan of municipal employees in Vancouver includes investments in fossil fuels, mining and tobacco, and city council has decided to take a formal position on responsible investing. Fenton says this could lead to options for divestment, thereby setting a potentially groundbreaking

example for other Canadian cities.

The big uptake has been on campuses. Since fall 2012 the Divest McGill group has succeeded in convincing the three major student unions to support their campaign, gathered more than 1,200 signatures from faculty, students, alumni and staff, and in May it formally presented the case for divestment to a Board of Governors Committee. According to Lily Schwarzbaum, an organizer with Divest McGill, the university has investments in 35 fossil fuel companies, which they estimate represents about five per cent of the total endowment. Ultimately McGill's Board did not consider the petition because they were unconvinced that the "social injury" of fossil fuel investments had been demonstrated, but Schwarzbaum insists the fight will go on. "The divestment movement is about creating new moral guidelines and empowering a generation of young people to take action to rethink the way we live in our society. Divestment is one piece in a larger goal of climate justice. All of these pieces must come together to change the way climate politics are enacted on our planet."

While the details of most university investment portfolios are not made public, 350.org's Jamie Henn says that total endowments in North America amount to approximately \$400-billion, of which roughly 10 per cent are in fossil fuel companies. Investment managers have anecdotally told Cameron Fenton that approximately 30 to 35 per cent of university endowments in Canada are in energy stocks, the majority in fossil fuel companies. As the total endowments of big schools such as McGill and the University of Toronto are more than \$1-billion each, we're talking about hundreds of millions of dollars at stake in Canada – and many billions of dollars in the US.

It is a lot of money, but only a drop in the bucket for companies such as Royal Dutch Shell, which grossed nearly half-a-trillion dollars in 2012 alone. "The dollars are important but the economic impacts extend far beyond this," says Fenton. "Divestment starts to create uncertainty in the future of fossil fuel stocks and, more importantly, it can take away their social license to operate so that fewer investors will want to pick up their stocks. The goal is to turn big oil into big tobacco – a pariah industry that politicians can't stand beside in good faith."

Divestment is not without its detractors. Some observers claim that because oil companies have huge market capitalizations, any divested shares will simply be repurchased by less scrupulous investors, making no real difference in the

## GREAT CANADIAN GAME CHANGERS

final analysis while hurting students who depend on the many scholarships and bursaries funded by fossil fuel companies. Some critics say oil companies are simply providing what people want and it would be more effective to focus on reducing consumer demand for oil and ending government subsidies to hugely profitable oil companies.

But campaigners feel that opposing subsidies and blocking pipelines are simply pieces of the climate change mitigation puzzle. "If fossil fuels companies were just providing oil they wouldn't be spending tens of millions of dollars lobbying to block all climate legislation and get climate deniers elected around the world," says Henn. "These companies aren't blameless. For decades they've been confusing the public about the science of climate change with well-documented misinformation campaigns and they continue to have a stranglehold on governments."

The success of fossil fuel divestment depends largely on how it is measured. "No one is thinking we're going to bankrupt fossil fuel companies," says Fenton, "but what we can do is bankrupt their reputations and take away their political power."

Fossil Free Canada is currently on a coast-to-coast Tar Sands Reality Check Tour to help promote divestment and push school boards to divest. "What success looks like to me is what we're already seeing," says Fenton. "Something that started with students on campuses has led to fossil fuel companies being genuinely afraid of this campaign. What makes me so confident is just working with these students to see how committed they are to making this happen." 

Mark Brooks is a freelance journalist and an instructor in the Environmental Studies program at Algonquin College in Ottawa. [earthgauge.ca](http://earthgauge.ca)

Find tools for organizing divestment campaigns and lobbying institutions, school boards and municipal governments at [gofossilfree.ca](http://gofossilfree.ca). Follow the youth climate movement at [energyactioncoalition.org](http://energyactioncoalition.org) and track the efforts of Bill McKibben and his allies at [350.org](http://350.org).

To launch a personal divestment campaign, [gofossilfree.org/mymoney](http://gofossilfree.org/mymoney) highlights Green Century Balanced Fund, Portfolio 21 and the Shelton Green Alpha Fund as the only broad-based, completely fossil-free mutual funds. Leading US-based environmental news website *Grist* also published a useful piece in early October, titled "How to divest from fossil fuels, no matter the size of your piggy bank."

# Watershed Moments

A timeline of Canada's environmental movement.

**THE FIRST HUMANS ARRIVED** in North America more than 12,000 years ago. Québec, the first permanent European settlement, was established in 1608. It's been more than 180 years since Shanawdithit, the last of the Beothuk peoples, died in St. John's. It's been 155 since Oil Springs, Ontario, became the site of Canada's first oil well. More than a century has passed since we built the Canadian Pacific Railway, created Banff National Park and saved the bison from the brink of extinction – and since New Brunswick poet Bliss Carman observed that “there is something in the Autumn that is native to my blood.”

Seeded by a rich, conflicted connection to our home and native land, the environmental movement is heavily rooted in Canadian soil. And while the bloom and decay of the last 45 years have created fertile ground, reaping more growth in the future depends on knowing what we've already sown.

Compiled by **AJ** associate editor, Janet Kimantas.

