

7TH ANNUAL
Knight Schools
SURVEY



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Getting Schooled

Seven years later, Canadian
universities still have a lot to learn

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Aside from degree programs designed around social or environmental issues, sustainability is often a secondary subject in academia. While a few distinct universities are beacons of promise, working social and environmental issues into their degrees, the majority typically fall short.

For seven years, Corporate Knights has been tracking Canadian universities in an attempt to measure how well they integrate sustainability. We have looked at undergraduate business and Masters of Business Administration (MBA) programs, law schools, teacher's colleges, industrial design programs, public policy schools, and engineering degrees. Trends in our analysis point to things slowly improving, but there is still an overwhelming need for better integration of social and environmental values into our academic programs.

This year, in addition to re-visiting undergraduate business, MBA, and engineering programs,

we expanded our horizons into the mathematical realm of insurance and risk analysis with an evaluation of Canadian actuarial science programs. The results were disappointing, and emphasized a disconnect between the financial sector and a world facing many environmental and social risks as a result of a growing population and a changing climate.

The results are not all bad. Certain university programs emerge as clear leaders; others are making notable progress towards more sustainable curricula, moving significantly up in the ranks from previous years.

Still, these select few are outliers in a mob that otherwise maintains the status quo. If our societies are going to achieve sustainability, then Corporate Knights believes the education paradigm needs to shift. There are barriers to the implementation of a more sustainable curriculum—shrinking funding and resources at the post-secondary level are clear



examples—but there is also great opportunity in the integration of sustainability into the mainstream.

Asaf Zohar, Associate Professor and Chair of the Business Administration Program at Trent University, puts it simply, “If we recognize the magnitude of the opportunity that exists, we will reframe the nature of the barriers.”

We couldn’t agree more.

Too often, businesses operate with short term vision. Value is measured in quarterly reports, driven by the mandate of increased profits, and appeasing the boardrooms and investors who only seek a healthy bottom line.

Purely short term and profit-based thinking not only leads to widespread environmental degradation and social injustice but also to economic disaster, as we have witnessed during the sub-prime mortgage fuelled recession. The current model is problematic, and if we continue to use it, hope for a sustainable society will almost certainly be lost.

But what if business leaders moved beyond the myopia of their individual company or industry and expanded their vision to the well-being of broader society?

Corporate Knights believes that Canada’s academic institutions should be shaping students into both experts and stewards who understand their responsibility to respect and maintain environments, cultures, and economic prosperity.

Undoubtedly, this is easier said than done, but there are feasible ways to move forward.

PERMEATE DON’T ISOLATE

In order for sustainability to move from the periphery to the mainstream, it needs to be woven into the core of all academic programs. Moving beyond an isolated course on ethics or corporate social responsibility,

sustainability needs to permeate the teachings of the majority of courses in the university calendar.

TOPPLE THE SILOS

A common criticism of academia is its tendency to be inward thinking, self-referential, and more or less unable to effectively communicate its rich and diverse knowledge with society at large. As information becomes more and more specialized within a discipline, columns or “silos” of communication are created. These silos do little to further the kinds of dialogues that need to take place between disciplines, institutions, and society to bring about a more sustainable future.

Many schools have worked diligently to promote breadth-based education that requires students to take myriad courses from different faculties. This allows students to gain a more holistic understanding of the role of their respective disciplines in society, by allowing them to engage with different perspectives and ideologies that will later inform the way they interact and perform in the real world.

RESEARCHING FOR THE COMMON GOOD

In order to mainstream sustainability in academia, environmentally and socially-focused research and innovation is crucial. Interdisciplinary research groups, centres, and institutes are incubators of some of the most talented minds in the country, and their work is essential to progressing beyond current social, economic, and environmental policies. The more environmental and social research being carried out by faculty members, the greater the chance that this

expertise will trickle down to core courses, enriching the student experience with practical and up-to-date case studies in the classroom.

Our surveys do show an adequate level of sustainability-based research through faculty publications, institutes and centres, and research chairs; 66 per cent of business schools, 78 per cent of engineering schools, and 64 per cent of actuarial science programs had sustainability-themed research institutes or centres, for example. These statistics are encouraging, and we are hopeful this capacity will continue to expand.

ARE YOU EXPERIENCED?

A sure-fire remedy to the insular nature of academia is engaging the inspired student body with the surrounding community. Corporate Knights has been impressed every year by the number of environmental and social student initiatives we see in our surveys across the board. The kind of experience-based learning that is achieved through student organizations like Net Impact or Engineers Without Borders is arguably more pivotal than any textbook or lecture could hope to be.

While student-led initiatives are indeed promising, experiential learning could be better encouraged. Partnerships between research centres, faculty, students, and the broader community are needed, and would offer a rich educational experience to both students and society. Out-of-the-classroom learning bridges the gap between the ivory tower and the local community, and forges links between organizations and the inspired minds that can set them on a path to sustainability.

Knight Schools Ranking continues on p.40



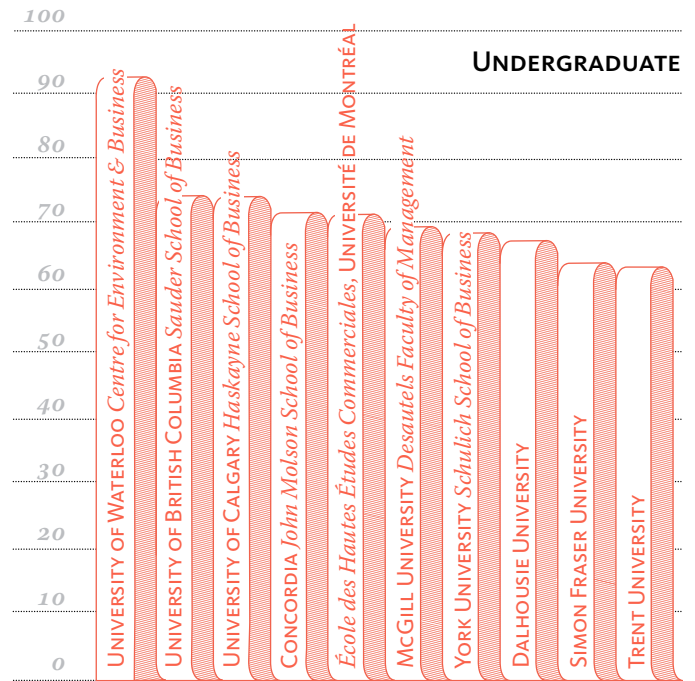
“Any thinking person today has to weigh the consequences of human activity on the natural environment. This is an area where ethical judgments must be made.”

Richard F. Haskayne, OC, FCA
Business leader, philanthropist and author of
Northern Tigers: Building Ethical Canadian Corporate Champions: A Memoir and a Manifesto.

At the Haskayne School of Business, we teach our students the principles of ethics and corporate social responsibility through the curriculum, speakers and seminars and by supporting their initiatives to give back to the community. Our goal is to shape future business leaders who will be guided by ethical and socially responsible business practices.

Business Schools

Trends of corporate social responsibility and awareness of sustainability are growing in the mainstream economy. However, the bulk of both undergraduate business and MBA programs show a reluctance to respond in kind, with their scores only marginally improving. There are clear leaders, however, who remain ahead of the curve.



2006 NASA REPORTS THE OZONE LAYER IS RECOVERING.

This is due in part to reduced concentrations of CFCs, phased out under the Montreal Protocol.

2007 MORE SIGNS OF ECOSYSTEM STRESS EMERGE.

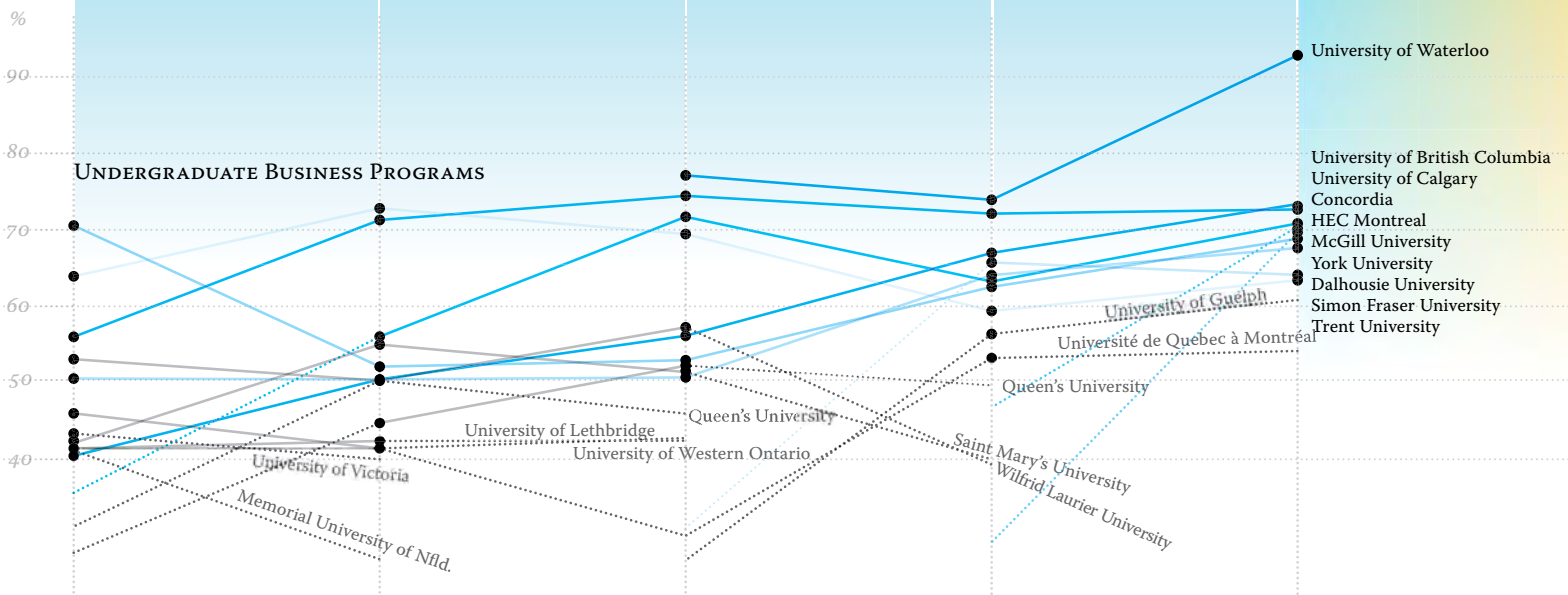
In addition to an earlier prediction that fish stocks could disappear in 50 years, scientists say sharks and bee colonies are also at risk.

2008 GREEN ECONOMIC IDEAS ENTER THE MAINSTREAM.

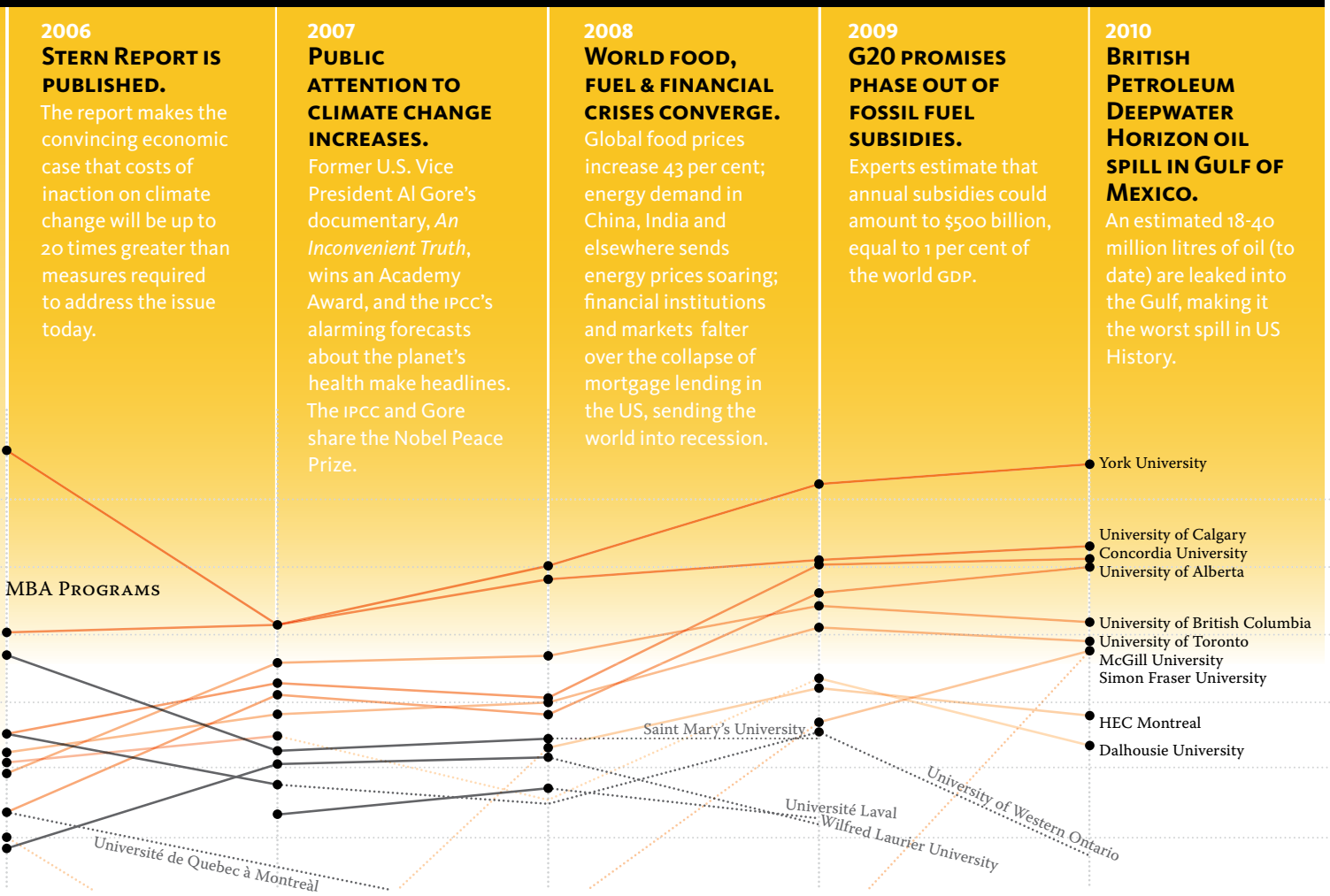
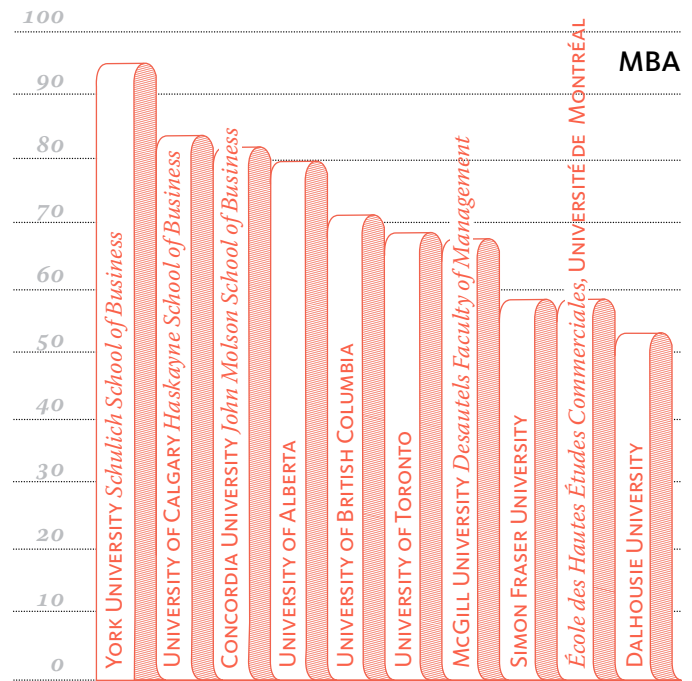
National governments invest a portion of their economic stimulus in environmental actions, and a low-carbon economy and green growth become new objectives for the future economy.

2009 FIRE & ICE HEADLINES.

Multi-year sea ice all but disappears from the Arctic Ocean, and the Australian drought that commenced in 2003 leads to the worst wildfires in Australia's history.



Despite the bulk of business programs performing below the bar (89 per cent of undergraduate business and 86 per cent of MBA programs scored below 70 per cent), there are clear and notable leaders among the laggards. In both MBA and undergraduate business programs, the top five schools scored above the 70 per cent range.

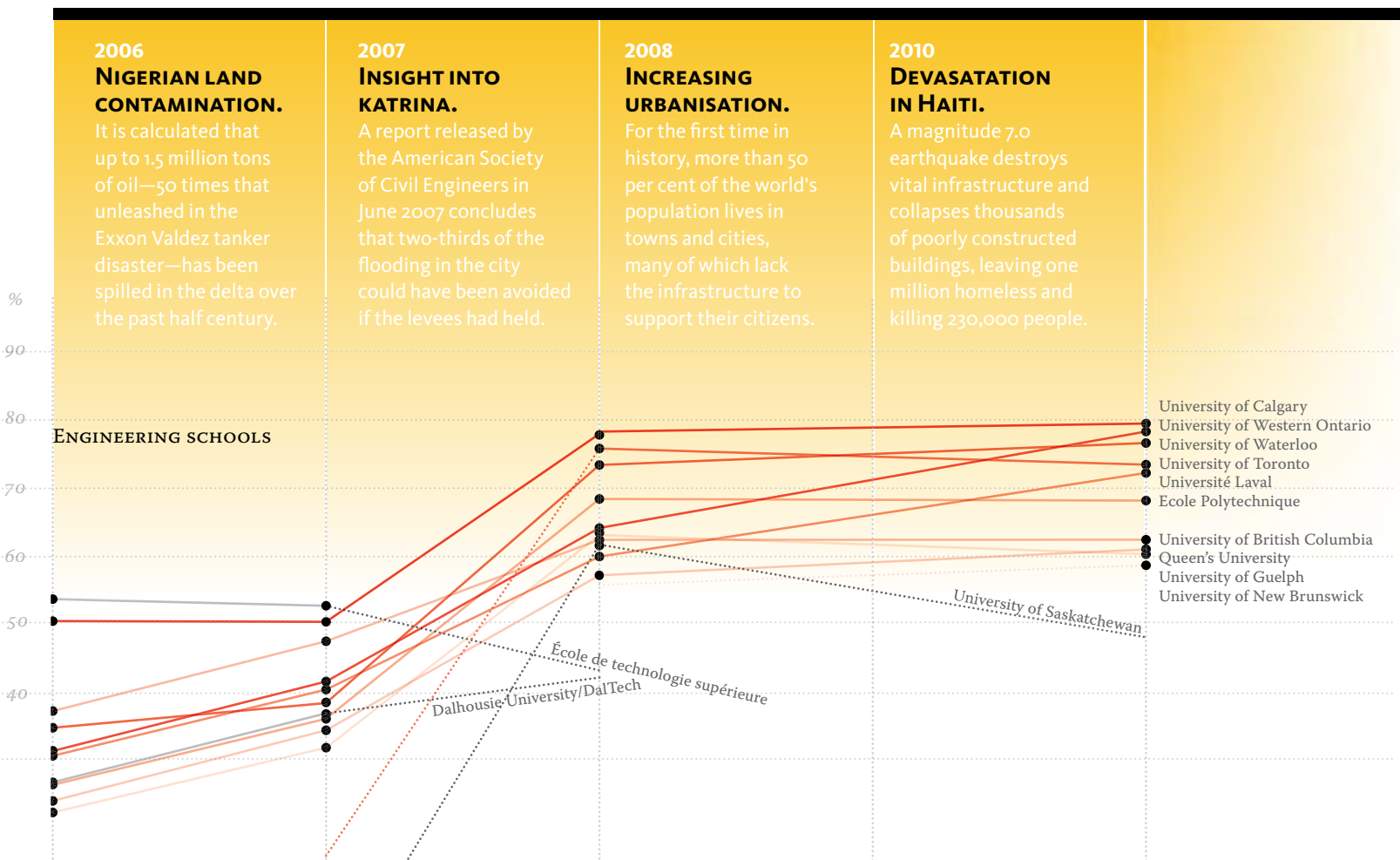
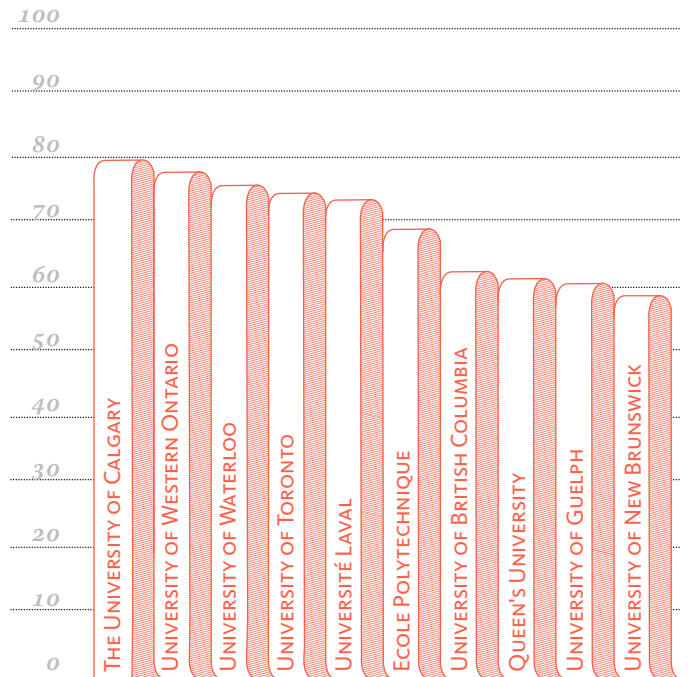


Engineering

While the average score is 45.9 per cent, it still represents a 4.2 per cent increase from 2008, the last time we evaluated Canadian engineering programs. The top five schools scored above 70 per cent.

Ninety-four percent of the programs offered elective courses that touched on environmental or social issues, demonstrating a significant level of interdisciplinary breadth.

Engineers play an important role in ensuring that communities and countries can adapt and cope with the environmental and social catastrophes that go hand in hand with a changing climate. Here are the engineering scores from the past five years measured against real-world environmental and social catastrophes.



2006 NIGERIAN LAND CONTAMINATION.

It is calculated that up to 1.5 million tons of oil—50 times that unleashed in the Exxon Valdez tanker disaster—has been spilled in the delta over the past half century.

2007 INSIGHT INTO KATRINA.

A report released by the American Society of Civil Engineers in June 2007 concludes that two-thirds of the flooding in the city could have been avoided if the levees had held.

2008 INCREASING URBANISATION.

For the first time in history, more than 50 per cent of the world's population lives in towns and cities, many of which lack the infrastructure to support their citizens.

2010 DEVASATATION IN HAITI.

A magnitude 7.0 earthquake destroys vital infrastructure and collapses thousands of poorly constructed buildings, leaving one million homeless and killing 230,000 people.

Spotlight on Colleges by CHARLOTTE YUN

ALGONQUIN COLLEGE: The future of the corporate job market is green, according to Claude Lloyd, professor and coordinator of the Green Business Management program at Algonquin College.

“Even now, the demand for graduates who have an understanding of business greening is out there and it’s growing.”

Algonquin is the first college in Canada to launch a Green Business Management graduate certificate, supplementing its core curriculum with applied interdisciplinary projects such as designing cradle-to-cradle supply chain models. Leading and innovative environmental topics like biomimicry are incorporated outside the classroom, where students learn to turn them into applicable business ideas for the local community.

“CSR and sustainability are becoming the norm in the corporate setting,” says Lloyd, “but there are still a lot of corporations who don’t have the in-house manpower to do it. That’s where the colleges are filling in.”

Lloyd notes the concepts are hardly new. “People who do see [sustainability] as new are becoming laggards.”

But he also stresses that colleges emphasize applied experience over research and theory, which could be beneficial in other corporate areas such as research and development.

“Hands-on experience can be put on résumés—it builds networks.”

SENECA COLLEGE: Chris Dudley, chair of the Green Business Management program at Seneca College, largely agrees with Lloyd. The future is green, he says, but Seneca is out to place “green pinstripes” on white-collar jobs, first.

“You’re not going to get the corner office from this certificate, but you will be getting that knowledge you can apply into companies and start working away towards that corner office. We’re taking a business approach [showing] how you can start moving a company towards sustainability.”

Seneca is looking to “thread the line of sustainability” into every aspect of their business programs, as well as into individual courses.

Regarding the lagging pace of universities, Dudley acknowledges their slow pace could have to do with their size and bureaucracies but notes that even a large college like Seneca—with more than 20,000 students—had enough time to deliver the right program. “We spend a lot of time on development,” he says.

“I have utmost respect for universities, but I think there’s a difference in how we move and how they move: they move slower. We will lead in this regard, but you will see down the road more and more post-secondary institutes moving this way, because it’s the right thing to do.”



Building A Sustainable Future

Waterloo’s School of Environment, Enterprise and Development (SEED) is the first fully integrated environment, business and development school in Canada and the most comprehensive in the world.

SEED will find a new home in a state-of-the-art LEED Platinum building in spring 2011.



Learn about SEED’s brand new Masters program in Environment and Business at seed.uwaterloo.ca

WATERLOO | ENVIRONMENT



Changing local and global communities

Every day, students, faculty and staff at the John Molson School of Business are making a difference.

MBA Community Service Initiative and International Outreach Community students share their business skills with local and international communities by providing not-for-profit organizations with the tools to develop strategies that meet the goals of society.

The David O'Brien Centre for Sustainable Enterprise helps corporations reconcile profitability with social and environmental performance.

Employees volunteer at fundraisers that support local hospitals, youth integration programs and victims of natural disasters around the world.

The John Molson School of Business is proud to get involved and bring about change.



Actuarial Science

In their Knight Schools debut, actuarial science programs fared poorly, with the highest score being 32.9 per cent, achieved by the University of Manitoba, followed by Université du Québec à Montréal and the University of Waterloo with 31.5 and 31.1 per cent respectively.

Identifying, forecasting, and managing risk are duties of the actuary. Through complex mathematical models and equations, they rein in the chaos of uncertainty and boil it down to a probability you can bank on.

Their training is rigorous—an academic calendar filled with equations to prepare them for the inevitable actuarial exams, their gateway into the profession.

But as it stands, the program leaves little room for breadth, never mind sustainability. Our recent survey reflects this void: sustainability is hardly on the radar of actuarial science programs.

Looking for sustainability in a math-centric program might seem counter-intuitive. Equations in and of themselves are morally neutral. There is no mathematical variable for “the greater good.” Or at least this was the explanation of many of the schools we contacted to fill out the survey.

“I guess I’m just confused, and perhaps you can enlighten me,” one professor remarked. “We teach mathematics. Sustainability doesn’t really enter into it. You wouldn’t expect an electrician to fix your plumbing, would you?”

Perhaps not, but we would expect an electrician to have a basic understanding of what the plumbing looks like and how the general internal structure of the house works. And actuaries-in-training should be exposed to social and environmental issues as part of their core curriculum, so they are conscious of the ethical dilemmas posed by models for financial profit.

The concept of sustainability is slowly gaining traction in the actuarial community. Susan Woerner, a member of the Society of

Actuaries in the United States, currently chairs a new Casualty Actuarial Society committee on climate change research and development, and she wants to see climate change included in actuarial study.

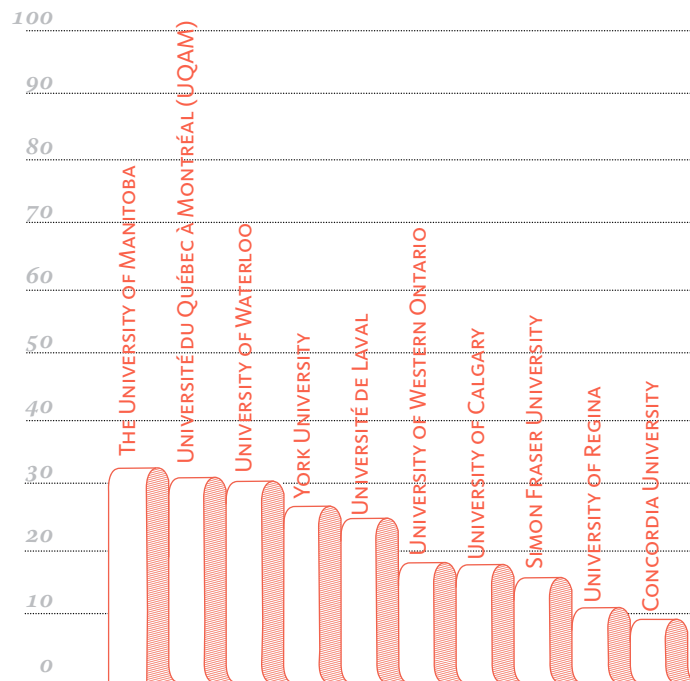
“In general, the current actuarial curriculum does not focus on sustainability per se,” she says. “The mathematical models we use tend to be quantitative and as such are not designed to accommodate qualitative variables. We need to consider broadening our perspective.”

Peter Eben, an Australian actuary working as convener of the Institute of Actuaries of Australia’s Climate Change Committee, says that widespread drought and bush fires in his country have put climate change on the actuarial radar.

To Eben, including sustainability into actuarial analysis is both necessary and valuable.

“Economic opportunities arise from applying a more holistic risk management approach, ensuring that all risk factors—including sustainability-related ones—are included,” he says. “The environmental and social governance framework for investing is well understood here and is practiced by many investors. Major shareholders are now asking businesses what their approach to sustainability is.”

In our surveys, the emergence of such issues in the Canadian actuarial education system are most evident in institutional research and outreach, through faculty publications, research centres, and symposiums and conferences that are available to the students and faculty.



Seven out of eleven schools had at least one research centre housed in the actuarial faculty that was conducting research rooted in social or environmental issues and faculty publications dealing with sustainability. Nine programs held at least one seminar or conference in the actuarial faculty that dealt with environmental or social sustainability.

Still, the strengths we see in faculty interests and research have not necessarily trickled down to the mainstream curriculae. But this is likely not a result of a disengaged faculty.

Many of the faculty headshots we browsed featured bespectacled professors atop a mountain, hiking in the forest, or standing beside a stream or a lake. Perhaps their affinity for mathematics and deep contemplation of randomness also makes them lovers of nature in all its chaotic glory.

The capability of mutually-beneficial partnerships also exists between climate research, environmental and biological statistics, and actuarial sciences. In many cases, these programs are in the same building.

The shift can be made towards a more sustainability-based actuarial curriculum. An increase in catastrophic environmental risks like hurricanes, drought, and flooding due to a changing climate, coupled with a growing awareness of the reputational risks that environmentally and socially negligent companies incur—as is happening with the BP oil spill—is some indication that such a shift will be both timely and crucial.



Faculty of Management

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Building with bricks

Co-operators Group CEO Kathy Bardswick explains why actuaries need to learn to read weather patterns.

One of the vision statements for The Co-operators Group Limited is for the company to be a catalyst for a sustainable society—atypical for an insurance company. But The Co-operators is an atypical insurance company. Founded in 1945 by Saskatchewan farmers, this fully Canadian-owned company has maintained principles for equity in insurance and in the community ever since.

After President and CEO Kathy Bardswick heard The Natural Step founder Dr. Karl-Henrik Robert speak at an international cooperative symposium in 2005 about his sustainability framework, she was inspired to “connect the dots” and create a holistic strategy for her company to incorporate the framework.

Bardswick’s first “real” job was shoveling copper underground for Inco in Thompson, Manitoba—one of the first women hired for such a position. Today, this mother of four is blazing a trail towards a more sustainable model for insurance.

Tell me about your approach to responsible business. I've always been passionately committed to the concept of cooperatives, but [there have been times where] I struggled with my organization not doing enough. Our world is getting scarier and riskier, whether it's inequality of wealth or climate change. If the world is increasingly unhealthy, insurance companies are going to have to pick up the pieces. Therefore we

focus on products and services that will change behaviours and that will influence, educate, and advocate for more responsible ways of living. For example, we encourage the use of hybrids by giving insurance discounts. There's also an emerging concept called “pay-as-you-drive,” where customers are charged different rates depending on how often and how far they drive. We'd love to be able to implement that.

We also focus on climate change adaptation. I chair the Institute for Catastrophic Loss Reduction and we do a lot of research associated with stronger, more resilient communities and how insurers need to respond to ensure that people are safer while the climate is changing. While you might have insurance [in cases of adverse weather], that's not going to fix the fact that you've lost your child's baby picture in the flood in your basement. Storms are becoming more frequent and severe. Property and lives are at risk.

How can an insurance company help with adaptation? At the Institute for Catastrophic Loss Reduction we're working on “design for safer living,” also known as the Three Little Pigs Project. We have this airplane hangar where we build homes and we blow them down, and we find ways to learn how to build them back in a stronger way. The Co-operators has committed to taking that research and when we have a total loss with a customer and we need to rebuild their home, we'll rebuild it

to a higher standard. One our of test homes in PEI was destroyed and we rebuilt it to a higher standard, and about a year and half later, a major wind and hail storm swept the community and our home was not damaged but the homes around it were.

Our goal with this initiative is to get this out to the community when they're retrofitting and to get builders to start incorporating higher standards when they're building. The insurance industry without question should be the leader when it comes to issues such as climate change and safety. These issues really speak to the core of what we do in our communities.

You have something you're cooking up called “wind-surance.”

Typically smaller wind companies struggle to get coverage, so we have a program in place to insure these enterprises.

How can the insurance industry be a systemic part of climate change solutions?

We [the insurance industry] understand what's going on. We can look at weather patterns worldwide and report on their implications on communities. We have the ability to provide a really good sense of where this is going and the damage it's doing and why.

The information base our industry has is phenomenal. We can advocate. We can influence behaviour. 🍪

For the full interview go to:
www.corporateknights.ca/podcast

METHODOLOGY:

Faculty members were given over a month to complete our Knight School surveys. In the event that a school did not return the survey, CK used public information gathered primarily from the websites of each school.

For a full list of percentages and scores please visit our full methodology online at: corporateknights.ca/knightschools.

The survey focused on three key areas:

1. Institutional Support considers how the faculties are doing their part to encourage sustainability through research, guest speakers/lecturers, awards and scholarships, faculty publications, and research institutions and centres.
2. Student-led Initiatives play the important role of measuring how sustainability

is fostered outside the classroom in clubs, groups, and initiatives.

3. Course Work gets to the core of how sustainability is integrated into the curriculum by looking at the content of available elective courses, joint degrees, specializations, and courses required for the completion of the degree.

This review pertains to the 2009-10 academic year.