



PLANETARY HEALTH WEEKLY

BRINGING YOU CURRENT NEWS ON ECOLOGICAL WELLNESS & GLOBAL HEALTH

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ARCTIC TEMPERATURES ARE RISING SO FAST COMPUTERS DON'T BELIEVE THEY'RE REAL

Three hundred and twenty miles north of the Arctic Circle, a weather station in America's northernmost city of Utqiagvik (formerly Barrow), Alaska, has been quietly collecting temperature data since the 1920s. It turns out the temperatures recorded at Utqiagvik over that time were warmer than had ever been seen before. So much so, in fact, that an automated computer system set up to police data and remove irregularities had flagged it as unreal and excluded it from the report. Those warmer temperatures mean the amount of Arctic sea ice in the area has drastically decreased, leading to yet more warming. And as that vicious cycle of warmer temperatures to less ice, to even *warmer* temperatures and even *less* ice, has repeated, the Utqiagvik weather station did what it was supposed to do: It sent up a huge red flag that something must be broken. It turns out it wasn't the station that was broken. It was the climate. What happened in Utqiagvik is a frightening peek at the future of the rest of the world in a 2010 profile of the remote village and its rapidly shifting landscape. The Smithsonian concluded it was "ground zero for climate change."

[Read More on Mother Jones](#)



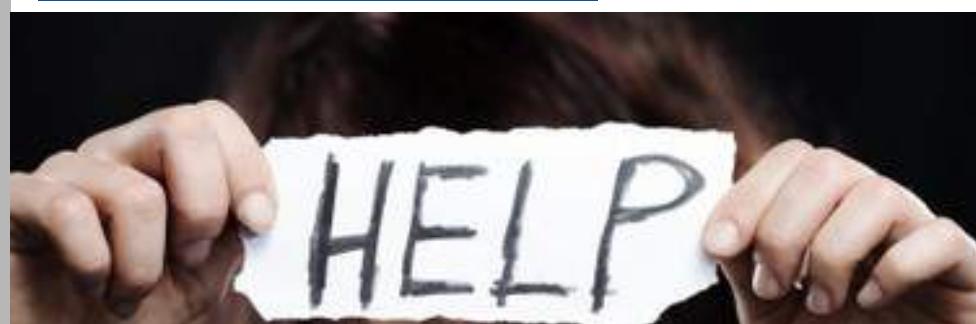
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THE SEXUAL ASSAULT EPIDEMIC NO ONE TALKS ABOUT

US National Public Radio obtained unpublished US Justice Department data on sex crimes. The results show that people with intellectual disabilities, women and men, are the victims of sexual assaults at rates more than seven times those for people without disabilities. It's one of the highest rates of sexual assault of any group in America, and it's hardly talked about at all. They found that there is an epidemic of sexual abuse against people with intellectual disabilities. These crimes go mostly unrecognized, unprosecuted and unpunished. A frequent result was that the abuser was free to abuse again. The survivor is often re-victimized multiple times. Most rape victims, in general, are assaulted by someone they know, not by a stranger. But NPR's numbers from the Justice Department found that people with intellectual disabilities are even more likely to be raped by someone they know. For women without disabilities, the rapist is a stranger 24% of the time, but for a woman with an intellectual disability it is less than 14% of the time.

[Read More on National Public Radio](#)





Central America Weakens Forest Shield Against Future Droughts

According to the State of the Region Programme, the 2017 environmental statistics published, since 2000 Central America has lost forest cover and wetlands, vital to the preservation of aquifers, which coincided with a widespread regional increase in greenhouse gas emissions that contribute to global warming. It is not good news, said Alberto Mora, the State of the Region research coordinator, who noted that the region could have 68 departments or provinces suffering severe aridity towards the end of the century, compared to fewer than 20 today. To the west of Honduras, in neighboring Guatemala, losses are also reported in forest cover. In 2000, 39 percent of the territory was covered by trees; that proportion had fallen to 33 percent by 2015. Although fewer and fewer hectares of forest are cut down in that country, the problem persists and continues to generate serious food security challenges.

[Read More on IPS News](#)

New York Can Expect Bigger Floods, Much More Often

In the 1970s, experts estimated that New York City could expect a massive flood about every 500 years, “a 500-year flood.” But new research suggests such mega floods, something exceeding the surge caused by Hurricane Sandy in 2012, which caused over \$50 billion in damage, may start happening much more often. By the 2030s, mega floods may hit the Big Apple every five years, according to a new study in the *Proceedings of the National Academy of Sciences*. Combining climate projections, expected sea-level rise and simulations of thousands of hurricanes, the authors model flooding at Battery Park on New York harbor between now and the year 2300. Rising seas are already expected to inundate large parts of the city this century. To that, the authors add the storm surges expected from the violent weather associated with climate change.

[Read More on Journalist's Resource](#)



Huge Snowfall Increases Over Antarctica Could Counter Sea Level Rise

Scientists have found large increases in snow accumulation in a vast region of eastern Antarctica, a trend that, if it continues or becomes more widespread, could lessen the ice sheet's contribution to sea level rise and mitigate one of the most feared consequences of climate change. Based on a more than 500-foot-long ice core extracted from the thick sheet and containing a snowfall record dating back 2,000 years, the researchers found snow accumulation levels had been rising since around 1900. And the increase is most marked in recent decades, up through the year 2010. It's a finding that aligns with the notion that climate change, by increasing the atmosphere's retention of water vapor, is increasing precipitation. A huge amount of snow falls in Antarctica every year, the equivalent of 5 to 7 millimeters of sea level rise annually. But at the same time, that snowfall is usually balanced by the loss of ice around the periphery of the ice sheet, where it melts in contact with ocean waters or slides out into sea and eventually floats away in large chunks. Any tweak to either side of this equation, more snowfall, or more ice loss, would change Antarctica's contribution to sea level rise. We already know Antarctic ice loss has been increasing, particularly in the vulnerable West Antarctic region, which has drawn massive media attention as several large glaciers have markedly retreated. [Read More on the Washington Post](#)





Are GMOs the Key to Global Food Security

Agricultural and food security experts are investigating a range of ways to address these challenges. Solutions range from everything from new breeding programs, to better monitoring and evaluation, to farming strategies that reduce waste and increase yield. But in discussing a food-secure future, the role of genetically modified organisms remains a raging debate. Opponents raise concern over the environmental impacts of such crops and the patent stipulations for small farmers, and they challenge the science and information coming from organizations such as Monsanto. This concern has led to the cultivation of GMOs being banned or prohibited in more than 30 regions, not including bans that have occurred at sub-regional levels, as well as food labelling standards identifying products as GMO free. Today, as technology is becoming more accessible and less expensive, smaller labs and researchers are able to produce GMOs at a reduced costs, with the seed produced available for public good, not profit. And this allows them to respond to small, localized food production issues such as bananas in Uganda and papaya in Hawaii.

[Read More on Devex](#)

Uganda's RHU Warns of Impact of Global Gag Rule on its Programs

Reproductive Health Uganda is one of Uganda's leading NGOs providing services related to sexual health and reproductive rights, but it now faces a number of challenges to its work, including a recent move by the United States to bring back the Mexico City policy, also known as the "global gag rule." In 2016, RHU reached over 6.8 million people in the east African nation, with 3.3 million services offered to youth. They accessed nearly 1 million people across the country with family planning services. RHU offer services around safe motherhood, family planning, HIV/AIDS, adolescent interventions and more, targeting mainly youth and other vulnerable groups, with a particular focus on people in remote areas. They also carry out advocacy around abortion. RHU's "rights-based family planning services" include a "Sayana Press learning project," which was being supported with funding from the U.S. Agency for International Development to increase learning for the provision of the injectable contraceptive by village health teams and facility-based providers. Devex spoke to RHU Executive Director Jackson Chekweko about the issues the group faces, and the impact of the "global gag rule" on its programs and Uganda as a whole.

[Read the Interview on Devex](#)



The Classic Explanation for the Black Death Plague is Wrong

Plague came to Europe in the 14th century and rapidly conquered the continent. The pandemic, one of the worst in human history, killed tens of millions. Up to 60 percent of the population succumbed to the bacteria called *Yersinia pestis* during outbreaks that recurred for 500 years. The most famous outbreak, the Black Death, earned its name from a symptom: lymph nodes that became blackened and swollen after bacteria entered through the skin. Yet even now, the "biggest conundrum in the field" is the physical mechanism that hastened plague's swift spread, said Monica Green, a historian at Arizona State University and an expert in medieval European health. A study published recently in the *Proceedings of the National Academy of Sciences* suggests an answer, and it points primarily to lice and fleas, not rodent culprits. In the long-popular theory of bubonic plague, rats, gerbils or other rodents acted as bacteria banks. The fleas that bit infected rats then jumped to humans and started feasting. Rodents have been unfairly maligned for their role in the pandemic, per a new mathematical model.

[Read More on the Washington Post](#)



The Only Force That Can Beat Climate Change is the U.S. Army

The precise extent of human-induced climate change is unclear, but the basic science is unequivocal, as is the danger it poses to the United States. This threat comes from the direct impact of climate change on agricultural production and sea levels but equally importantly from the huge waves of migration that climate change is likely to cause, on a scale that even the world's richest states and societies will be unable either to prevent or accommodate. The most urgent and important task facing climate change activists in the United States is to persuade the U.S. national security establishment of the mistakenness of this decision. If no serious progress can be made under this administration, then concentrated thought must be dedicated to placing climate change at the heart of the next administration's NSS and of U.S. security thinking in general. This is because the most promising avenue to convince conservative American voters and to generate genuinely serious action in the United States against climate change would be to firmly establish the link between global warming and critical issues of national security. [Read More on Foreign Policy](#)

SPOTLIGHT ON POLICY: China Finally Shuts Down its Government-Sanctioned Ivory Trade

China has finally taken the important step to shut down its legal and government-sanctioned ivory trade. Demand for ivory in China has fallen since early 2014 because of a crackdown on corruption and slower economic growth. Public awareness campaigns featuring celebrities have helped boost awareness of the bloody cost of ivory. Wildlife groups estimate 30,000 elephants are killed by poachers in Africa every year. 'It is the greatest single step toward reducing elephant poaching,' said Peter Knights, chief executive of the group WildAid. The trade in ivory has been legally thriving in China and Hong Kong since 1975. The ban on all ivory sales has already led to an 80 percent decline in seizures of illegal ivory entering China as well as a 65 percent decline in raw ivory prices, WildAid claimed. Under the ban, China's 172 ivory-carving factories and retail outlets will also close. Some factories and shops started closing in March. Illegal ivory supplies have also been rife in unlicensed shops and online across China. Conservationist Zhou Fei said the Chinese ban could be a catalyst for the closure of ivory markets across Asia. However, Kenya-based conservation group Save the Elephants said this year that neighbouring Laos has expanded its retail market more rapidly than any other country. [Read More on Metro](#)



SPOTLIGHT ON INDIGENOUS HEALTH: U.N. Lambasts Latin America for Abusing Indigenous Rights

Latin America is trampling on indigenous rights and jailing ever more campaigners to stifle opposition to big business taking over ancestral lands. Victoria Tauli-Corpuz, the U.N. Special Rapporteur on the Rights of Indigenous Peoples, said activists campaigning to protect their land from mining, logging, dams and other development projects were increasingly being criminalised. "Criminalisation is really about using the justice system to stop indigenous peoples from pursuing their own activities and their own actions against projects that are destructive to them," Tauli-Corpuz told the Thomson Reuters Foundation. She said the problem was "very prevalent" in Latin America and one that for her would be a priority this year, including an official visit to Guatemala in coming months. Criminal charges against activists include trespassing, economic sabotage and terrorism, Tauli-Corpuz said. "Increasing numbers of indigenous people are put in jail on the basis of those charges, so it's really a serious concern," she said. "It's discrimination. It's total injustice."

[Read More on Reuters](#)



QUOTE OF THE WEEK

"The comment I dislike the most is when people talk about cold weather and people type 'So much for global warming...' Not really a joke to me. Also, it proves someone doesn't have the understanding of the definition of weather vs. climate. You'll see people type that a lot in the next week or two on professional meteorologists' social media pages."

WMAZ Macon Meteorologist Matt Daniel

EVENTS TABLE

DATE	CONFERENCE	LOCATION	REGISTER
Jan 18	Cover Letters 101: What to (and not to) Include	Webinar	https://pages.devex.com/Cover-Letters-101-What-to-and-not-to-include.html?utm_source=marketo&utm_medium=email&utm_campaign=webinar_bootcamp_jan18&utm_term=button&utm_content=invite2&mkt_tok=eyJpIjoiTXpSbVpXUxhOVGN3Wm1ReSIsInQiOijHdk40RVhVchKzc2IwYnNKd2lic2pGc2ppSU5RYj4UTZ0VWhNNnA5dVhwbW9hU3I1UIRCVE1RM1pSR3A1eVNZVlJxeTlvRkxmZlwvazRoVHcl1Q4Sd3U1l2MkRaaUJlSHN5Y3hwbThsdlpvcVNGdVjOZUpnMEEzM CtqNHZDZE45In0%3D#CM
Feb 9-18	World Urban Forum 9	Kuala Lumpur Malaysia	http://wuf9.org/registration/?
March 16-18	2018 CUGH Conference	New York Canada	www.CUGH2018.org
April 20-22	BioVision Alexandria 2018	Alexandria Egypt	http://www.bibalex.org/bva2018/home/StaticPage.aspx?page=69
June	McGill University Summer Institutes in Infectious Diseases and Global Health	Montreal Canada	http://mcgill-idgh.ca/courses/tuberculosis-research-methods/
Oct 8-12	5th Global Symposium on Health Systems Research	Liverpool England	http://healthsystemsresearch.org/hsr2018/



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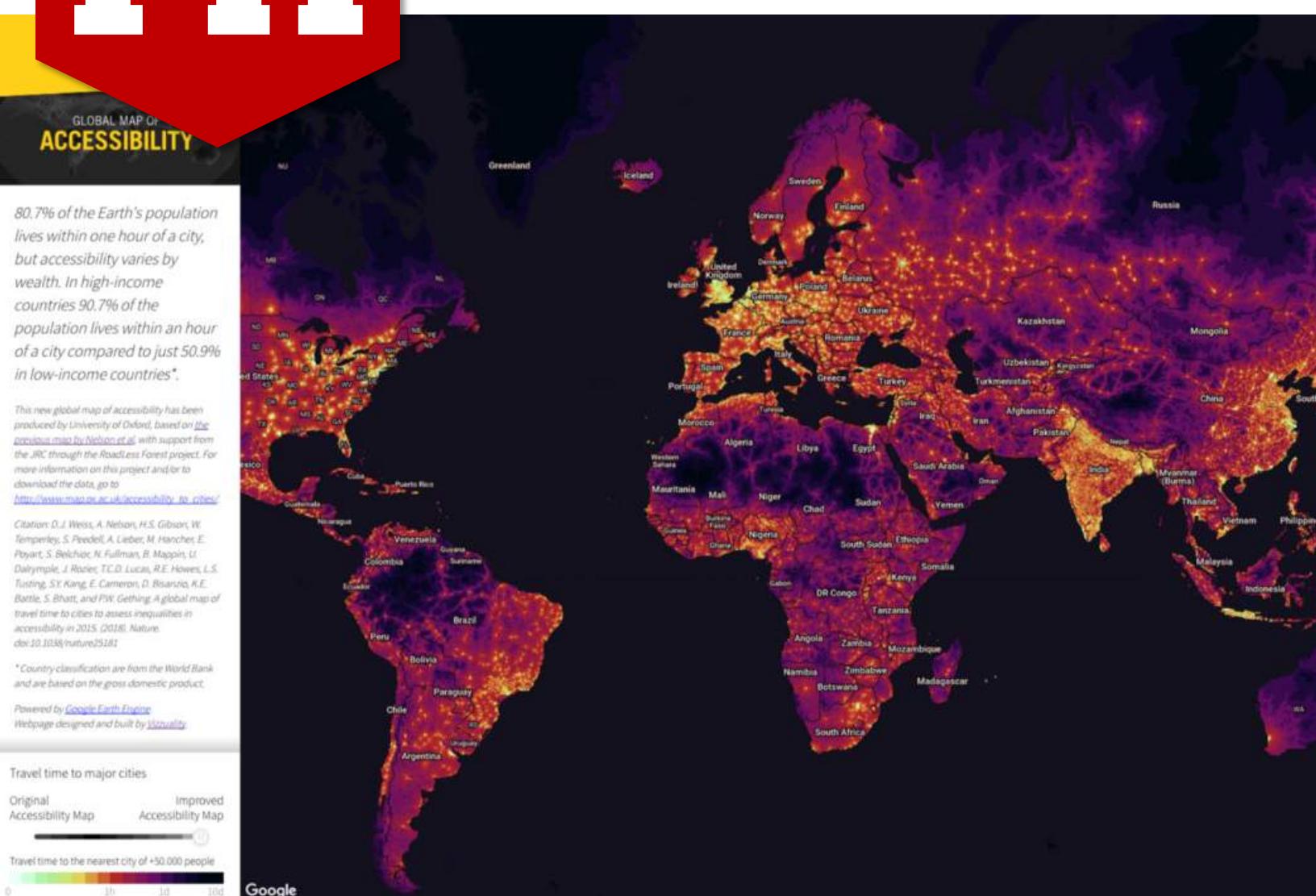


The Dedicated Grant Mechanism for Indigenous Peoples and Local Communities is an innovative grant program for fighting forest loss. Several of its representatives travelled to Bonn to participate in the DGM's 2nd Global Exchange and the 23rd Conference of the Parties (COP 23) of the United Nations Framework Convention on Climate Change (UNFCCC). Now that COP 23 has ended, we are eager to share some updates and celebrate a major achievement for indigenous peoples and local communities (IPLCs) through this special edition of the DGM Digest. In this issue:

Learn more about the Local Communities and Indigenous Peoples Platform, which will help to facilitate the exchange of experiences, best practices and lessons learned on climate change mitigation and adaptation.

[**Read More on DGM Digest**](#)

GLOBAL MAP OF ACCESS TO CITIES



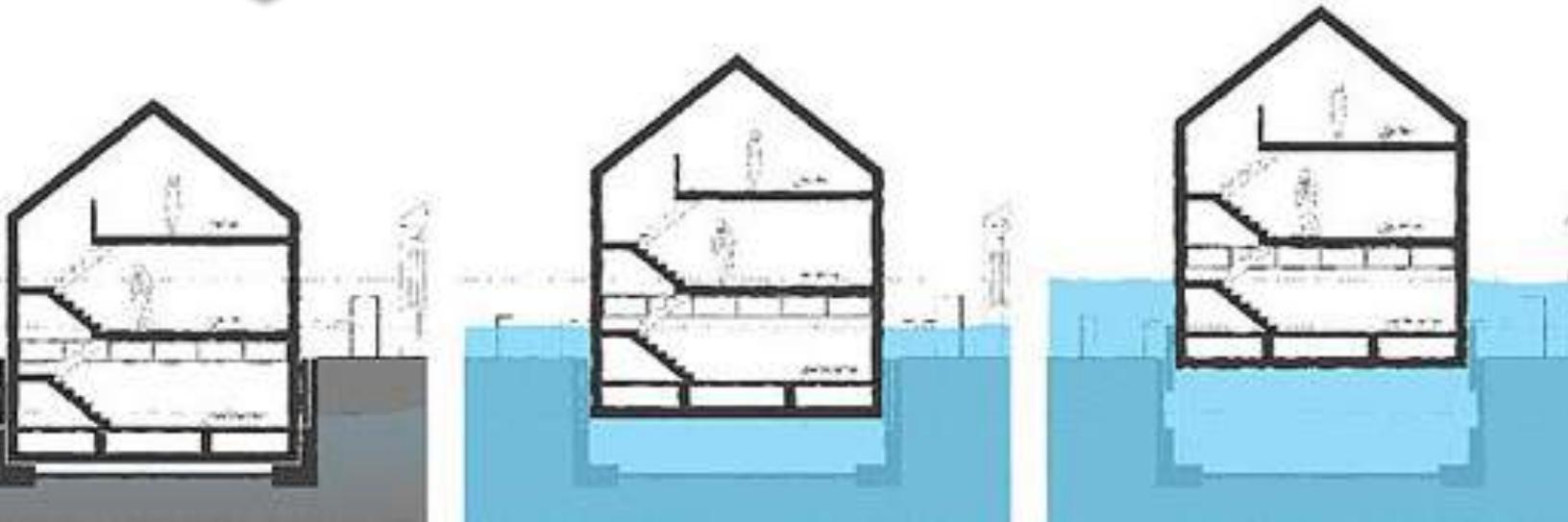
Education, healthcare and financial opportunities are just a few of the building blocks of a good life. Understanding how far people have to travel to access these services can help us prioritise which areas of the world need development assistance. Until now, this information could only be accessed using datasets or a static map image created in 2008. But now, with the launch of the new Global Map of Accessibility, you can view the travel time between almost any point on Earth and the nearest city in a matter of seconds.

The map draws on a study published recently in *Nature*. Simão Belchior is named as an author on the paper for his role in leading Vizzuality's contribution to the study. The study reports that 80% of the global population lives within one hour of a city. However, there's a disparity between high-income countries, where 90.7% of individuals live within an hour of a city, and low-income countries where that figure drops to 50.9%.

Working with the University of Oxford's Malaria Atlas Project, the Joint Research Centre of the EU, Google, and the University of Twente, researchers have designed and developed an interactive global map of access to cities. Using this map, anyone can view the travel time between almost any point on Earth and the nearest population centre of 50,000 or more people. In addition to predicting access to services, the map and associated database can also be used to identify where the world's wild places remain untouched by humans. [Read More on The Medium](#)



A FLOATING HOUSE TO RESIST THE FLOODS OF CLIMATE CHANGE



After a catastrophic thunderstorm swept through southern Ontario, bringing a month's worth of rain in just a few hours, a group of seventy-five architects, engineers, and policymakers from sixteen countries gathered in the city of Waterloo to discuss how humanity will cope with its waterlogged future. The timing of the conference was a fitting meteorological coincidence; in a world increasingly transformed by climate change, heavy rains and major floods are becoming more common, at least in some areas. In the summer of 2017 alone, Hurricane Harvey dumped more than fifty inches of rain over Texas, a monster monsoon season damaged more than eight hundred thousand homes in India, and flash floods and mudslides claimed at least five hundred lives in Sierra Leone. In the past two decades, the world's ten worst floods have done more than a hundred and sixty-five billion dollars' worth of damage and driven more than a billion people from their homes.

It was statistics like these that animated the experts who had assembled in Ontario for the International Conference on Amphibious Architecture, Design and Engineering, a three-day event organized by Elizabeth English, an associate professor at the University of Waterloo. Unlike traditional buildings, amphibious structures are not static; they respond to floods like ships to a rising tide, floating on the water's surface. English began her career focussed on an altogether different force of nature: wind. After earning degrees in architecture and engineering, she eventually landed at Louisiana State University's Hurricane Center, where she studied the effects of wind loads on buildings and the aerodynamics of windborne debris.

In the aftermath of the storm, the federal government recommended that residents permanently elevate their houses, lifting them up onto raised foundations or stilts. But English worried that hoisting the city's low-slung, shotgun-style houses into the air would ruin its sense of community, making it more difficult for residents to chat with neighbors and passersby. "People didn't want to move up," English said. "And it visually thoroughly destroyed the neighborhoods. There had to be a better way."

In 2006, she founded a nonprofit called the Buoyant Foundation Project and began working with a group of architecture and engineering students to devise a method for retrofitting local homes with amphibious foundations. A typical New Orleans shotgun house sits slightly above the ground, resting atop short piers; the researchers could, they thought, fasten a steel frame to the underside of a house and affix a set of foam buoyancy blocks. Then they could sink posts into the ground and attach them to the corners of the frame, allowing the house to rise up off the piers without floating down the street. [Read More on The New Yorker](#)



OTTAWA CREATES OFFICE TO INVESTIGATE HUMAN RIGHTS ABUSES LINED TO CANADIAN COMPANIES ABROAD



More than a decade after the federal government created a “toothless” position to police Canada’s oil and mining companies operating overseas, Ottawa has announced there’s a new sheriff in town. The Canadian Ombudsperson for Responsible Enterprise (CORE) will be an independent officer who will investigate allegations of human rights abuses linked to Canadian corporations operating abroad. “To fly the Maple Leaf means something. It means being associated with a set of values,” said International Trade Minister François-Philippe Champagne in a news conference. “This is an extraordinary brand to have in the world today,” he added. “But it also comes with responsibilities.”

Unlike its predecessor, the Extractive Sector Corporate Social Responsibility Counsellor, the new position will not require the permission of a company to investigate. Nor will the ombudsman need a complaint, as they will have the power to launch their own investigations and publicly report their findings. “It really is momentous,” said Julia Sanchez, president of the Canadian Council for International Co-operation, an umbrella group of Canadian aid groups. “There’s no other such position in the world.”

About 60 per cent of the world’s mining companies are based in Canada, making this the ideal place to pioneer ways to ensure mines respect local people’s rights when operating abroad, Sanchez said. The ombudsman won’t deal with only mining companies, the government said in its announcement. The position’s scope will cover the mining, oil and gas, and garment sectors, but is expected to later expand to all other business sectors where Canadian companies operate internationally. While the ombudsman won’t have the power to impose sanctions or penalties, both their investigations and their recommendations will be made public. This creates the potential incentive for companies to avoid any reputational damage that could come from publicly ignoring recommendations.

The government will also consider cutting off a company from trade advocacy support and future funding received through Export and Development Canada if the ombudsman recommends it, Champagne said. Activists have applauded the announcement, especially those who have spent years working with the often isolated and impoverished communities affected by violence and environmental degradation around Canadian-operated mines.

While the roundtable called for an ombudsman to act as a point of contact for people directly affected by the operations of Canadian mining companies abroad, the then-Conservative government instead created a watered-down position, called the Corporate Social Responsibility (CSR) Councillor in 2009. That position will be dissolved at the end of its current mandate in May.

[Read More on The Star](#)



STATISTICAL TERMS USED IN RESEARCH STUDIES: A PRIMER FOR MEDIA



When assessing academic studies, media members are often confronted by pages not only full of numbers, but also loaded with concepts such as "selection bias," "p-value" and "statistical inference." Statistics courses are available at most universities, of course, but are often viewed as something to be taken, passed and quickly forgotten. However, for media members and public communicators of many kinds it is imperative to do more than just read study abstracts; understanding the methods and concepts that underpin academic studies is essential to being able to judge the merits of a particular piece of research. Even if one can't master statistics, knowing the basic language can help in formulating better, more critical questions for experts, and it can foster deeper thinking, and skepticism, about findings. Further, the emerging field of data journalism requires that reporters bring more analytical rigor to the increasingly large amounts of numbers, figures and data they use. Grasping some of the academic theory behind statistics can help ensure that rigor.

Most studies attempt to establish a **correlation** between two variables — for example, how having good teachers might be "associated with" (a phrase often used by academics) better outcomes later in life; or how the weight of a car is associated with fatal collisions. But detecting such a relationship is only a first step; the ultimate goal is to determine **causation**: that one of the two variables drives the other. There is a time-honored phrase to keep in mind: "Correlation is not causation." (This can be usefully amended to "correlation is not *necessarily* causation," as the nature of the relationship needs to be determined.

Another key distinction to keep in mind is that studies can either explore observed data (**descriptive statistics**) or use observed data to predict what is true of areas beyond the data (**inferential statistics**). The statement "From 2000 to 2005, 70% of the land cleared in the Amazon and recorded in Brazilian government data was transformed into pasture" is a descriptive statistic; "Receiving your college degree increases your lifetime earnings by 50%" is an inferential statistic. Here are some other basic statistical concepts with which journalism students and working journalists should be familiar:

- A **sample** is a portion of an entire **population**. Inferential statistics seek to make predictions about a population based on the results observed in a sample of that population.
- There are two primary types of population samples: **random** and **stratified**. For a random sample, study subjects are chosen completely by chance, while a stratified sample is constructed to reflect the characteristics of the population at large (gender, age or ethnicity, for example). There are a wide range of sampling methods, each with its advantages and disadvantages.



FYI

WHY ARE UNIVERSITIES FAILING HUMANITY?



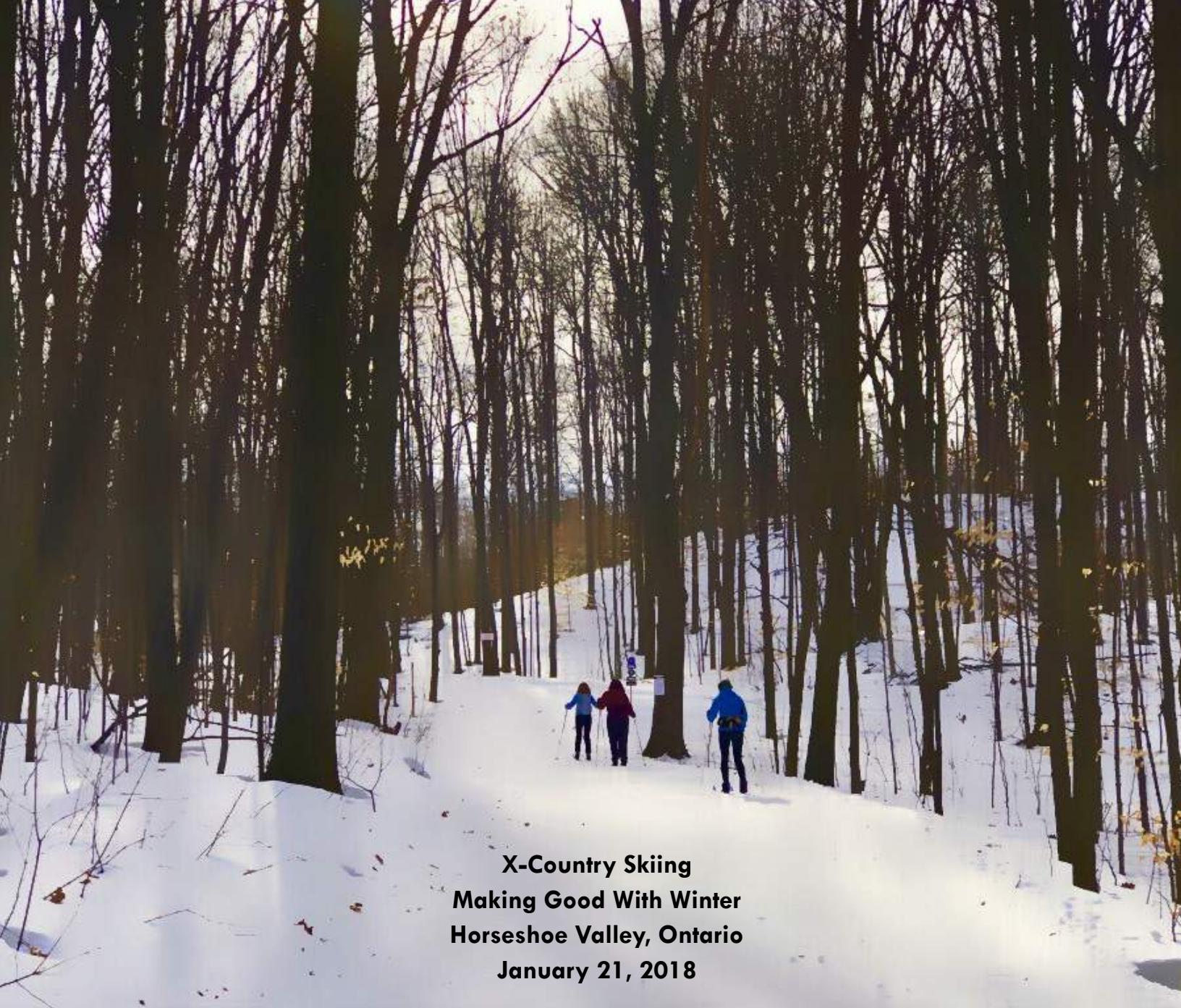
Among all the great universities on Earth, there is not a single graduate program that adequately addresses the global crisis.

Humanity is going through the most turbulent and complex change, at planetary scales, that it has ever gone through and there is *literally* no PhD program on Earth dedicated to preparing scholars to address this situation.

I will explain why this is the case by combining anecdotes from my own personal journey with commentaries on institutional history drawn from the work of others to (a) explain how things came to be this way; (b) express that it is unlikely things could have evolved any differently for important historical reasons; and (c) sketch an outline of what we might do now to remedy this unacceptable situation. Is it really the case that universities do not prepare graduates to manage the complexities of 21st Century global threats? There are centers for advanced research at places like the MIT Media Lab, Columbia University's Earth Institute, the Stockholm Resilience Center at Stockholm University, Future Earth with a network of regional hubs around the world, Harvard's Growth Lab, the Oxford Martin School, and the UK Met Office for integrative climate studies. Each in its own way brings advanced training to scholars and researchers working across disciplines on extremely complex challenges. And this is but a sampling of world-class infrastructure that exists in the world today.

But do any of these organizations *take a fully integrative approach to the coupling of human and ecological systems capable of designing and implementing policy solutions at the appropriate scale to avoid planetary-scale systemic collapse? Do they train people to intervene in ways that can save us from running ourselves off a civilizational cliff?* I ask this question because the current reality is very much one of humanity speeding toward this increasingly inevitable outcome. Whether you consider the Millennium Ecosystem Assessment of 2005, increasing alarm bells in every new report of the IPCC, or the crossing of planetary boundaries identified by the Stockholm Resilience Center, it is clear that humanity is either on the threshold of catastrophic collapse or it will soon cross a threshold that may not be seen until it is too late.

[**Read More on The Medium**](#)



**X-Country Skiing
Making Good With Winter
Horseshoe Valley, Ontario**

January 21, 2018

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