



# PLANETARY HEALTH WEEKLY

BRINGING YOU CURRENT NEWS ON GLOBAL HEALTH & ECOLOGICAL WELLNESS

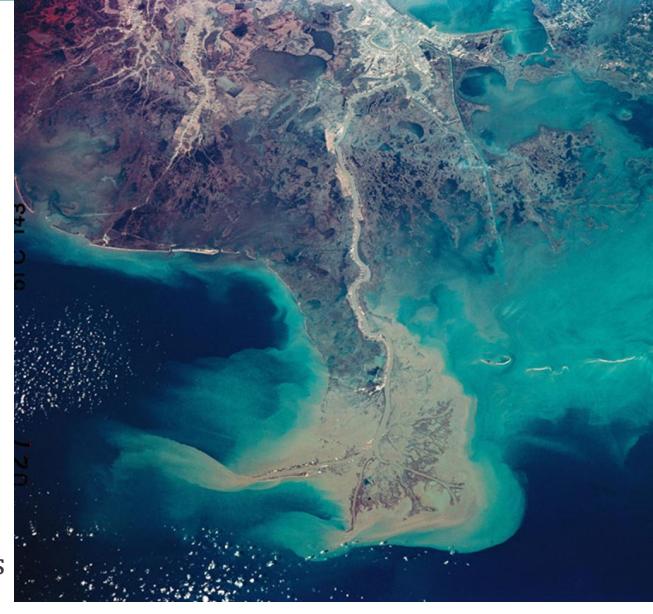
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## SCIENTISTS DISCOVERED A DEAD ZONE THE SIZE OF FLORIDA IN THE GULF OF OMAN

Scientists recently identified a dead zone as large as Florida in the Gulf of Oman. The 65,755 square mile area is now devoid of marine life due, in large part, to climate change and human pollution. The increasing size of dead zones in the ocean is threatening animal populations and leading to the destruction of underwater life. But scientists say the damage doesn't have to be permanent. One study has called for further investigation of the Gulf of Oman to understand how to manage the fisheries and ecosystems of the Western Indian Ocean to prevent dead zones from widening. Dead zones are created when warm water washes over colder, deeper water, producing the perfect conditions for algae to bloom and soak up the sunshine on the water's surface. When these organic masses sink to the bottom and begin to decompose, the bacteria that feed on them steal oxygen from other marine life. As water temperatures rise and algae grow more rapidly, the number and size of dead zones in the oceans are increasing rapidly. [Read more on Global Citizen.](#)



Credit: EarthSky

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## ENDOCRINE DISRUPTING CHEMICALS AND OBESITY, DIABETES AND RELATED METABOLIC DISORDERS

Obesity and associated metabolic disorders represent a major societal challenge in health and quality of life with large psychological consequences in addition to physical disabilities. They are also one of the leading causes of morbidity and mortality. Although, different etiologic factors including excessive food intake and reduced physical activity have been well identified, they cannot explain the kinetics of epidemic evolution of obesity and diabetes with prevalence rates reaching pandemic proportions. Interestingly, convincing data have shown that environmental pollutants, specifically those endowed with endocrine disrupting activities, could contribute to the etiology of these multifactorial metabolic disorders. Within this review we will demonstrate that metabolic disorders could originate from endocrine disruption with a particular focus on convincing data from the literature. [Read more on NCIB.](#)

Credit: BreastCancerUK

## RESEARCH SUGGESTS THAT

## ENDOCRINE DISRUPTING CHEMICALS

COULD BE MAKING US MORE  
VULNERABLE TO BREAST CANCER RISK



Endocrine disrupting chemicals (EDCs) are man-made chemicals that interfere with natural hormone functions within the body.

EDCs are present in a number of everyday items, such as plastics, packaging, cosmetics and food.



Credit: Medium

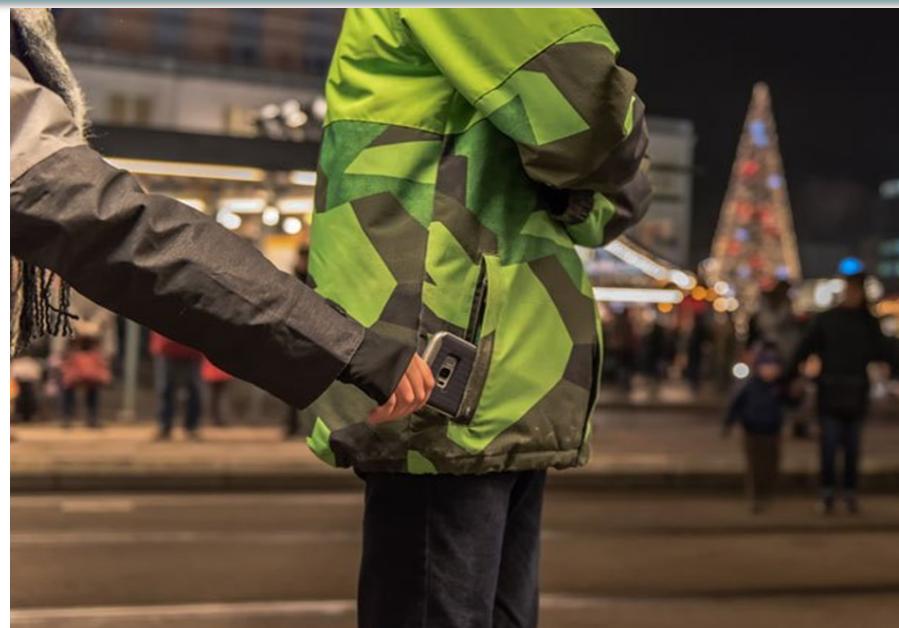
## AIR POLLUTION INCREASES CRIME IN CITIES – HERE'S HOW

The impact of air pollution on human health is well-documented. We know that exposure to high levels of air pollutants raises the risk of respiratory infections, heart disease, stroke, lung cancer as well as dementia and Alzheimer's disease. But there is growing evidence to suggest that air pollution does not just affect our health – it affects our behaviour too. Lead was removed from petrol in the USA in the 1970s in response to concerns that vehicle emissions could be contributing to behavioural problems, learning difficulties and lowered IQ among children – which can influence criminal behaviour. Taking lead out of petrol has since been linked with a 56% drop in violent crime in the 1990s. [Read more on The Fifth Estate.](#)

## CANCER IS AN ENVIRONMENTAL DISEASE

The prevailing theory of cancer, accepted by practically all oncologists and researchers in over the last 5 decades, is that cancer is a genetic disease. This is termed the somatic mutation theory (SMT), which theorizes that a cell develops mutations that allow it to become cancerous. This requires multiple 'hits'. That is, a single mutation is rarely sufficient to provide a normal cell everything it needs to become cancerous. But now the focus is on the environment.

[Read more on Medium.](#)



Credit: Gary Haq

## BUGGED OUT BY CLIMATE CHANGE

Warmer summer and fall seasons and fewer winter freeze-thaw events have led to changes in the relative numbers of different types of bugs in the Arctic. This study relies on the longest-standing, most comprehensive data set on arctic arthropods in the world today: a catalogue of almost 600,000 flies, wasps, spiders and other creepy-crawlies collected at the Zackenberg field station on the northeast coast of Greenland from 1996-2014. New research from Washington University in St. Louis is tracking how the tiniest Arctic ambassadors are responding to the rapid warming occurring in this region. Compared with colder years in the past, there are now more plant-eating and parasitic arthropods, and fewer detritivores (the insects that literally consume the living world's garbage). [Read more on Science Daily.](#)



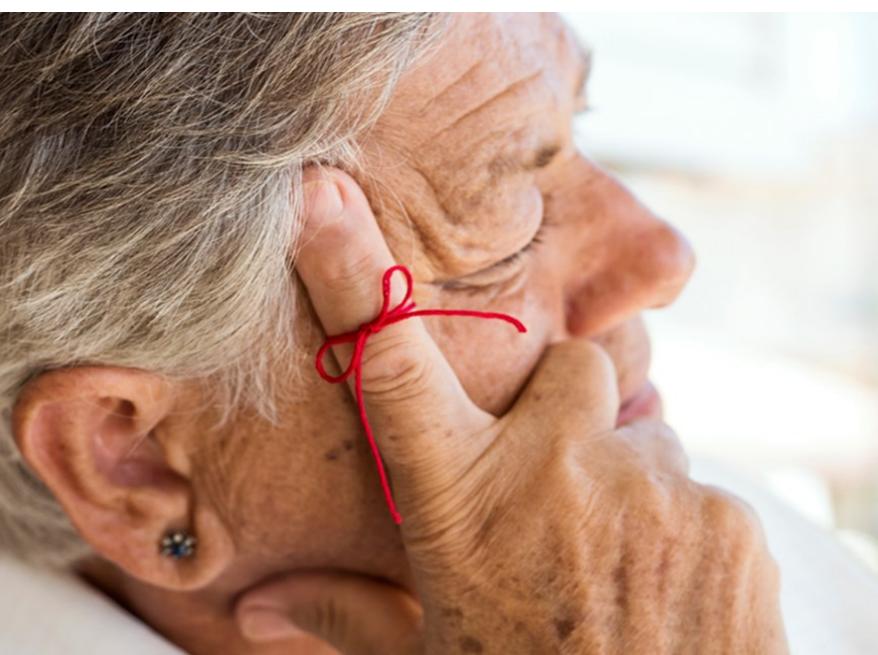
Credit: Environmental News Network



Credit: Undark

## DECLINES IN BIRTHS TO FEMALES AGED 10–14 IN THE UNITED STATES, 2000–2016

The birth rate for females aged 10–14 reached a record low for the United States in 2015 and 2016, 0.2 births per 1,000 females, down from 0.9 in 2000. The number of births to females aged 10–14 was a record low in 2016, dropping to 2,253 from 8,519 in 2000. During 2000–2016, birth rates declined for females aged 10–12, 13, and 14. During 2000–2016, birth rates for females aged 10–14 declined for all race and Hispanic-origin groups, with the largest decline occurring among non-Hispanic black females. The birth rate for teen mothers aged 15–19 declined 57% from 2000 through 2016. During this time, the rate for young adolescent mothers aged 10–14 also declined. [Read more on CDC.](#)



Credit: Healthline

## HOW NUCLEAR WAR WOULD AFFECT THE WORLD CLIMATE AND HUMAN HEALTH

There is no denying that nuclear war would have a huge impact on the environment. Though daily headlines worry about the safety of nations and citizens, little has been said about the impact on climate change. In Part Two of our series on the consequences of nuclear war, science and technology historian Paul N. Edwards tells us about the effects of nuclear war on Earth itself. The “nuclear winter” theory of the mid-1980s played a significant role in the arms reductions of that period. But we are not talking enough about the climatic effects of nuclear war. [Read more on Medium.](#)



Credit: Askideas

## EVERYDAY DRUGS RAISE THE RISK OF DEMENTIA

Long-term use of some antidepressants, bladder drugs and anti-Parkinson's medication has been linked with tens of thousands of dementia cases. Hundreds of thousands of people are taking routine medicines that increase their risk of dementia by up to a third, researchers have warned. Doctors need to use these drugs more sparingly, the most comprehensive study of its kind has found. Millions of older people are on cocktails of pills and GPs must take more seriously attempts to get them off these medications, the authors said. [Read more on The Times.](#)



Credit: The Truth About Cancer

## CALL FOR PUBLIC COMMENTS ON THE DRAFT WHO GUIDELINES: SATURATED FATTY ACID AND TRANS-FATTY INTAKE FOR ADULTS AND CHILDREN

Non-communicable diseases (NCDs) are the leading causes of death and were responsible for an estimated 39.5 million (72%) of the world's 54.7 million deaths in 2016. Of the major NCDs, cardiovascular diseases (CVD) were the leading cause of NCD mortality in 2016 and was responsible for nearly half of all NCD deaths. Modifiable risk factors such as unhealthy diet, physical inactivity, tobacco use and harmful use of alcohol are major causes of CVDs. Dietary saturated fatty acids and trans-fatty acids are of particular concern as high levels of intake are correlated with increased risk of CVDs. The WHO Department of Nutrition for Health and Development (NHD), through the work of the Nutrition Guidance Expert Advisory Group (NUGAG) Subgroup on Diet and Health, is updating the population nutrient intake goals for the prevention of non-communicable diseases. [Read more on the WHO.](#)



Credit: Andrew Sullivan



Credit: Wacici

## SPOTLIGHT ON INDIGENOUS HEALTH:

### NORTHERN ONTARIO SCHOOL OF MEDICINE ESTABLISHES CROSS-BORDER PROJECT TO IMPROVE OPPORTUNITIES FOR FIRST NATION, METIS AND NATIVE AMERICAN POPULATIONS

The Northern Ontario School of Medicine (NOSM, in Thunder Bay and Sudbury) and University of Minnesota Medical School Duluth (UMMSD) have established a cross-border program to improve the health and educational opportunities of First Nations, Métis and Native Americans in Northern Ontario and Northern Minnesota. "Indigenous peoples in Canada and the U.S. have a lower health status, disproportionately higher disease burden and lower life expectancy than non-Indigenous populations, and these inequities exist in large part because of a lack of access to adequate, culturally aware health care," said Dr. Darrel Manitowabi, Interim Director of Indigenous Affairs at NOSM. "This project addresses this problem by developing and improving existing Indigenous health profession programs, sharing knowledge and experience on providing culturally sensitive care and mentorship, as well as curriculum and programming to improve health status." [Read more on The Northern Ontario School of Medicine.](#)



**"We now look beyond civic governance to urban governance. We aspire to cooperate with cities around the world for a sustainably prosperous future. Small actions lead to small changes, which lead to bigger changes. Our actions will form the Earth's future. A dream we dream together will come true. I hope that the climate action story of the citizens of Seoul (South Korea) will become an important chapter in the history of the earth."**

***Park Won-soon, Mayor of Seoul, Republic of Korea***

<http://www.ipsnews.net/2018/04/citizen-power-ignited-seouls-energy-innovations/>

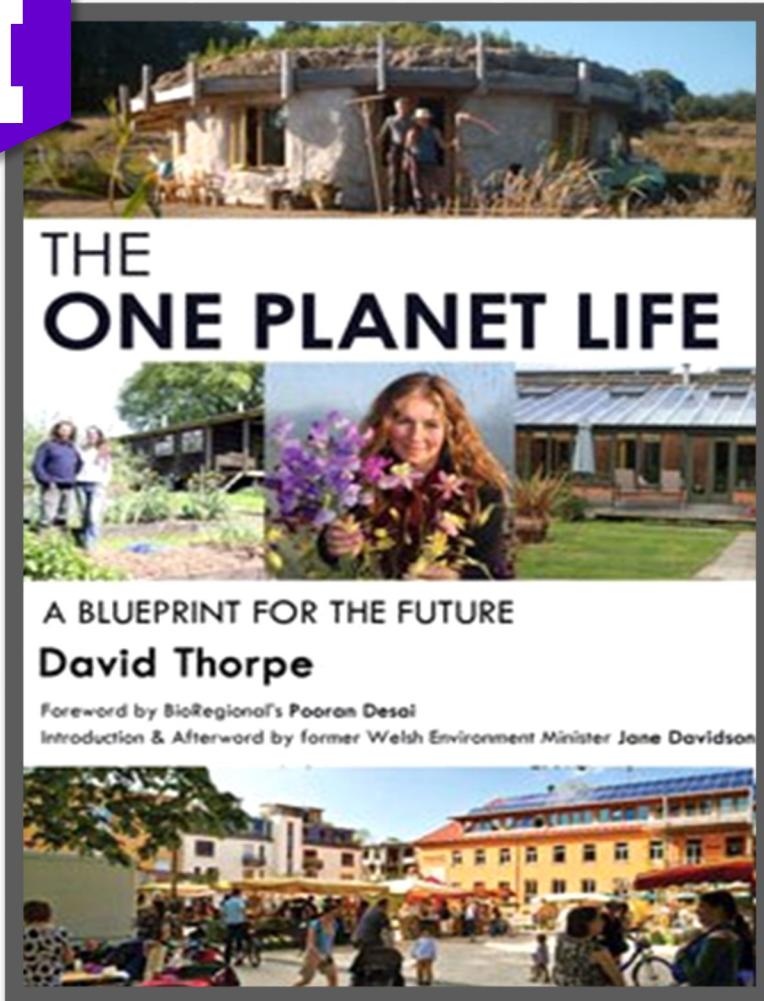
## EVENTSTABLE

Credit: Lonely Planet

DATE	CONFERENCE	LOCATION	REGISTER
May 24-26	Indigenous Health Conference	Toronto Canada	<a href="https://www.cpd.utoronto.ca/indigenoushealth">https://www.cpd.utoronto.ca/indigenoushealth</a>
May 25-27	Bethune Round Table: The Role of the Trainee in Global Surgery	Toronto Canada	<a href="https://bethuneroundtable.com/">https://bethuneroundtable.com/</a>
June	McGill University Summer Institutes in Infectious Diseases and Global Health	Montreal Canada	<a href="http://mcgill-idgh.ca/courses/tuberculosis-research-methods/">http://mcgill-idgh.ca/courses/tuberculosis-research-methods/</a>
June 22-24	Annual Conference, The Council of Canadians	Ottawa Canada	<a href="https://canadians.org/conference">https://canadians.org/conference</a>
Oct 8-12	5th Global Symposium on Health Systems Research	Liverpool England	<a href="http://healthsystemsresearch.org/hsr2018/">http://healthsystemsresearch.org/hsr2018/</a>
Nov 15-19	4th People's Health Assembly	Dhaka Bangladesh	<a href="http://www.phmovement.org/en/node/10805">http://www.phmovement.org/en/node/10805</a>
November 19- 21	Canadian Conference on Global Health	Toronto Canada	<a href="http://www.csih.org/en/events/canadian-conference-global-health">http://www.csih.org/en/events/canadian-conference-global-health</a>



# NEW BOOK: THE ONE PLANET LIFE: THE ONLY LIFE TO LIVE



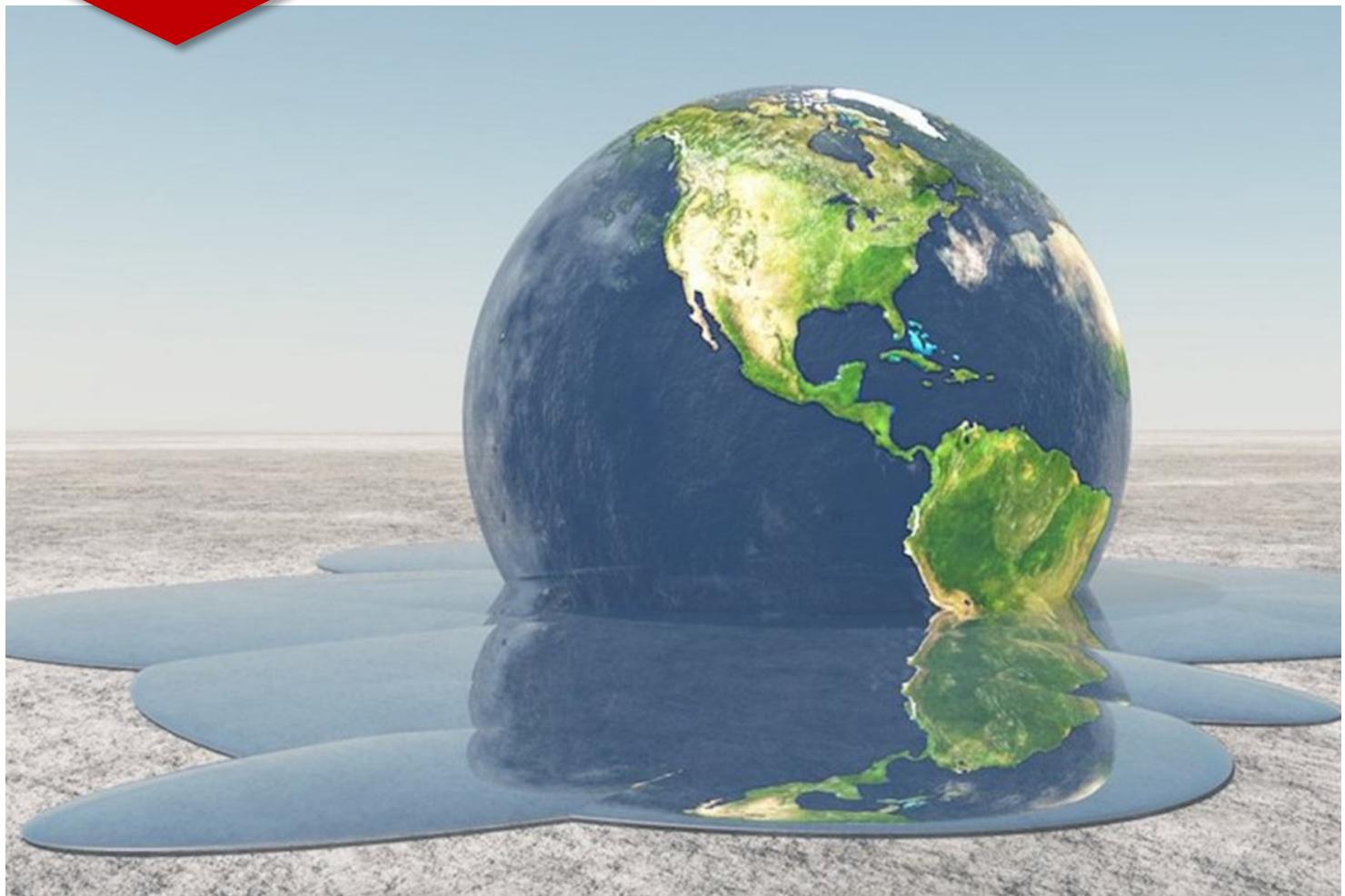
Credit: David Thorpe

**The One Planet Life** is a guidebook for everyone on the path towards a way of life in which we don't act as if we had more than one planet Earth. It also represents a manifesto for a change in attitude towards land use. The book uses the example of a pioneering Welsh policy, One Planet Development, but also that of BioRegional and other urban case studies. It includes: how to find land, finance, and construct a management plan; detailed information on: ecological land management, water supply and treatment, renewable energy, sustainable building, supplying your own food and reducing the carbon impact of travel - 20 exemplary examples at all scales – from micro-businesses to suburbs. The book will interest anyone seeking to find out how a sustainable lifestyle can be achieved. It will also be key reading for built environment practitioners and policy makers who are keen to support low impact initiatives, and for students studying aspects of planning, geography, governance, sustainability and renewable energy.

[\*\*Read more on The One Planet Life.\*\*](#)



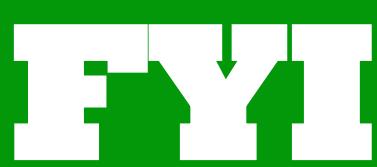
# HAS THE WORLD REACHED PEAK ECOLOGICAL FOOTPRINT?



Credit: The Fifth Estate

**Humanity's ecological footprint may have levelled off after decades of consistent increase, according to new data released last week by the Global Footprint Network.**

Ecological footprint is a shorthand way of understanding the relationship between our consumption of resources and the capacity of the planet to provide them and absorb the pollution we cause. Every individual, community or nation has their own ecological footprint. It is the biologically productive space needed to renew all that we demand from nature. For the world as a whole, it was in the early 1970s when humanity started consuming more than the planet could regenerate. From then on we have been in deficit, implying that we cannot carry on consuming at this level without ever-stronger risk of ecological crises. Global Footprint Network has been providing this country and planetary level data for many years but last week's launch also saw the launch of a new data platform and an open source system, meaning that anyone can now freely explore and interrogate the data on global or national bases. [Read more on the Fifth Estate.](#)

FYI

# LESS MEAT, MORE BUGS IN OUR DIETARY FUTURE



Credit: Medical News Today

Biologically speaking, humans are omnivores and we like to eat a variety of things. There is increasing interest in all sorts of alternative sources of protein as we diversify our diets. This trend is accelerating in 2018. According to Nielsen, the consumer analytics company, the proportion of Canadians identifying as vegetarian and vegan is still relatively small (6% and 2%, respectively), but 43 per cent of Canadians say they're planning to get more plant-based proteins into their diets. That's higher than both the United States and global average.

This is coupled with an 18 per cent reduction in beef consumption and an 11 per cent decrease in pork consumption over the past decade, according to the Nielsen data. In the U.S., meantime, plant-based food sales grew by almost 15 per cent from July 2016 to June 2017.

We are being offered more variety in response to these trends. It's a phenomenon driven by a wide range of concerns over our health, the environment, animal welfare — and simply an increasing desire for variety. It's clear that consumers are reducing meat consumption (flexitarianism) or, to a smaller degree, not eating meat at all (vegetarianism, veganism, lacto-ovo vegetarianism and pescatarianism). The new, not-yet-finalized, Canada Food Guide recommends moving to a more plant-based diet. But if people reduce their intake of meat, they will need to find protein elsewhere. [Read more on The Conversation.](#)

# BALANCING NUCLEAR AND RENEWABLE ENERGY



Credit: Vaclav Volrab and Argonne National Laboratory

Nuclear power plants typically run either at full capacity or not at all. Yet the plants have the technical ability to adjust to the changing demand for power and thus better accommodate sources of renewable energy such as wind or solar power. Researchers from the U.S. Department of Energy's (DOE) Argonne National Laboratory and the Massachusetts Institute of Technology recently explored the benefits of doing just that. If nuclear plants generated power in a more flexible manner, the researchers say, the plants could lower electricity costs for consumers, enable the use of more renewable energy, improve the economics of nuclear energy and help reduce greenhouse gas emissions.

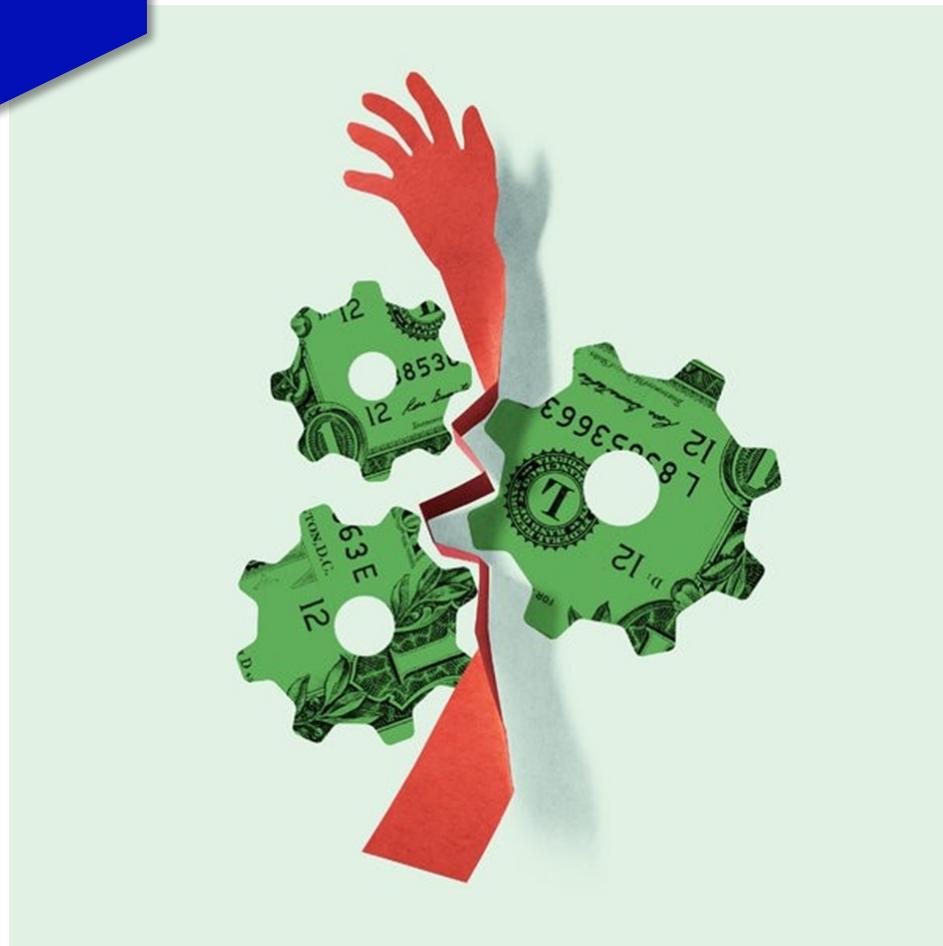
The new study provides tools to further explore potential benefits of flexible nuclear operations to work in tandem with greater shares of variable sources of renewable power generation.

The team explored technical constraints on flexible operations at nuclear power plants and introduced a new way to model how those challenges affect how power systems operate. "Flexible nuclear power operations are a 'win-win-win,' lowering power system operating costs, increasing revenues for nuclear plant owners and significantly reducing curtailment of renewable energy," wrote the team in an *Applied Energy* article published online on April 24. The study helps to dispel long-held views that nuclear power plants must operate in "baseload" mode, producing power at maximum rated capacity whenever they are online.

[Read more on Science Daily.](#)



# HOW THE HUMAN RIGHTS MOVEMENT FAILED



Credit: Matt Chace

The human rights movement, like the world it monitors, is in crisis: After decades of gains, nearly every country seems to be backsliding. Viktor Orban in Hungary, Rodrigo Duterte in the Philippines and other populist leaders routinely express contempt for human rights and their defenders.

But from the biggest watchdogs to monitors at the United Nations, the human rights movement, like the rest of the global elite, seems to be drawing the wrong lessons from its difficulties. Advocates have doubled down on old strategies without reckoning that their attempts to name and shame can do more to stoke anger than to change behaviour. Above all, they have ignored how the grievances of newly mobilized majorities have to be addressed if there is to be an opening for better treatment of vulnerable minorities.

“The central lesson of the past year is that despite considerable headwinds, a vigorous defense of human rights can succeed,” Kenneth Roth, the longtime head of Human Rights Watch, contended recently, adding that many still “can be convinced to reject the scapegoating of unpopular minorities and leaders’ efforts to undermine basic democratic checks and balances.”

That seems unlikely. Of course, activism can awaken people to the problems with supporting abusive governments. But if lectures about moral obligations made an enormous difference, the world would already look much better. Instead, those who care about human rights need to take seriously the forces that lead so many people to vote in majoritarian strongmen in the first place.

[Read more on The New York Times.](#)

# WHITE HOUSE CONSIDERS RESTRICTING CHINESE RESEARCHERS OVER ESPIONAGE FEARS



Credit: Li Muzi

It sounds like something out of a science fiction movie: In April, China is said to have tested an invisibility cloak that would allow ordinary fighter jets to suddenly vanish from radar screens. This advancement, which could prove to be a critical intelligence breakthrough, is one that American officials fear China may have gained in part from a Chinese researcher who roused suspicions while working on a similar technology at a Duke University laboratory in 2008. The researcher, who was investigated by the F.B.I. but never charged with a crime, ultimately returned to China, became a billionaire and opened a thriving research institute that worked on some projects related to those he studied at Duke.

The Trump administration, concerned about China's growing technological prowess, is considering strict measures to block Chinese citizens from performing sensitive research at American universities and research institutes over fears they may be acquiring intellectual secrets, according to people familiar with the deliberations. The White House is discussing whether to limit the access of Chinese citizens to the United States, including restricting certain types of visas available to them and greatly expanding rules pertaining to Chinese researchers who work on projects with military or intelligence value at American companies and universities. The measures could clamp down on collaboration in advanced materials, software and other technologies at the heart of Beijing's plan to dominate cutting-edge technologies like advanced microchips, artificial intelligence and electric cars, known as Made in China 2025.

[Read more on The New York Times.](#)



**"Repairing the Earth"  
Road Maintenance  
Brooklyn, New York**

**May 15, 2018**

**Credit: David Zakus**

**This Newsletter is FREE.**

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