



PLANETARY HEALTH WEEKLY

BRINGING YOU CURRENT NEWS ON GLOBAL HEALTH & ECOLOGICAL WELLNESS

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THREATS, BULLYING, LAWSUITS: TOBACCO INDUSTRY'S DIRTY WAR FOR THE AFRICAN MARKET

British American Tobacco (BAT) and other multinational tobacco firms have threatened governments in at least eight countries in Africa demanding they axe or dilute the kind of protections that have saved millions of lives in the west, a Guardian investigation has found. BAT, one of the world's leading cigarette manufacturers, is fighting through the courts to try to block the Kenyan and Ugandan governments' attempts to bring in regulations to limit the harm caused by smoking. [Read More on The Guardian](#)



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EARTH IS ON ITS WAY TO THE BIGGEST MASS EXTINCTION SINCE THE DINOSAURS

A new study paints a grim picture: The populations of nearly 9,000 vertebrate species, including mammals such as cheetahs, lions and giraffes, have significantly declined between 1900 and 2015. Almost 200 species have gone extinct in the past 100 years alone — a rate of two per year. The study says the losses are indicative of the planet's "ongoing six major extinction events" and has cascading consequences for human life on Earth. The sixth mass extinction is already here and the window for effective action is very short, probably two or three decades at most. All signs point to ever more powerful assaults on biodiversity in the next two decades, painting a dismal picture of the future of life, including human life. [Read More on Washington Post](#)





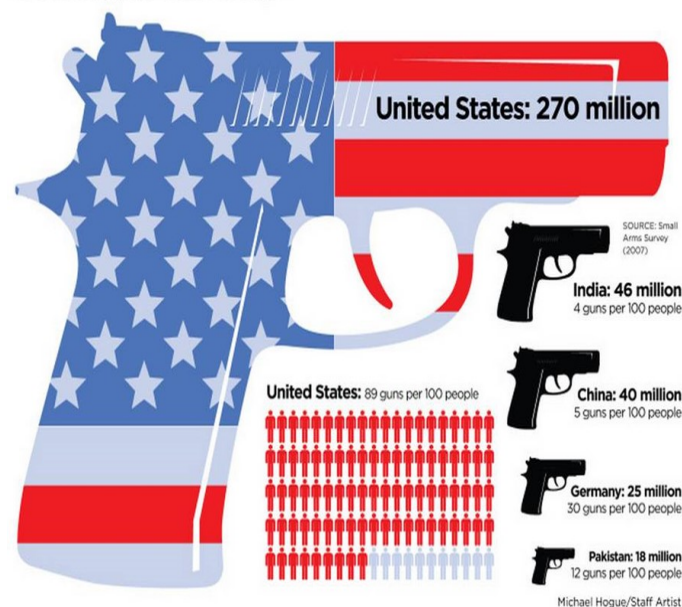
MOST FEMALE HOMICIDE VICTIMS ARE KILLED BY HUSBANDS OR OTHER INTIMATE PARTNERS

A new report by the Centers for Disease Control and Prevention about homicides and women provides some disturbing numbers about just how common this is in the US. Homicide is the fifth leading cause of death for women ages 18 to 44. In 2015 alone, 3,519 women and girls were killed. More than half of these killings were perpetrated by current or former boyfriends, husbands or other intimate partners. Women who are racial and ethnic minorities were disproportionately affected. According to the study, black women had the highest rate of dying by homicide, 4.4 per 100,000, followed by American Indian women at 4.3 per 100,000, Hispanic women at 1.8 per 100,000, white women at 1.5 per 100,000 and Asian women at 1.2 per 100,000. [Read More on Washington Post](#)

COMPARE THESE GUN DEATH RATES: THE U.S. IS IN A DIFFERENT WORLD

Gun homicides are a common cause of death in the United States, killing about as many people as car crashes (not counting van, truck, motorcycle or bus accidents). Some cases command our attention more than others, of course. Counting mass shootings that make headlines and the thousands of Americans murdered one or a few at a time, gunshot homicides totaled 8,124 in 2014, according to the F.B.I. This level of violence makes the United States an extreme outlier when measured against the experience of other advanced countries. Around the world, those countries have substantially lower rates of deaths from gun homicide. In Germany, being murdered with a gun is as uncommon as being killed by a falling object in the United States; about two people out of every million are killed in a gun homicide. Gun homicides are just as rare in several other European countries, including the Netherlands and Austria. In the United States, two per million is roughly the death rate for hypothermia or plane crashes. [Read More on NY Times](#)

Civilian gun ownership



HOSPITAL MANAGEMENT PRACTICES IN THE US MAY PUT WOMEN AT RISK FOR C-SECTIONS DURING CHILDBIRTH

The study published recently in *Obstetrics & Gynecology*, is the first to link management of unit culture, nursing, and patient flow to maternal health outcomes. "It is hard to predict when women will go into labor, how long labor will take, and which women may require critical resources like the operating room or blood bank. The way managers address this uncertainty appears to be an independent risk factor for a woman getting a C-section," said senior author Neel Shah, an obstetrician and Harvard Chan School researcher who leads the Delivery Decisions Initiative at Ariadne Labs, a joint center of Harvard Chan School and Brigham and Women's Hospital. The study looked at how those management practices affected the health of low-risk women having their first child. [Read More on Science Daily](#)



AIR POLLUTION CASTS SHADOW OVER SOLAR ENERGY PRODUCTION

Global solar energy production is taking a major hit due to air pollution and dust. According to a new study, airborne particles and their accumulation on solar cells are cutting energy output by more than 25 percent in certain parts of the world. The regions hardest hit are also those investing the most in solar energy installations: China, India and the Arabian Peninsula. The study appears online June 23 in *Environmental Science and Technology Letters*. With colleagues at the Indian Institute of Technology-Gandhinagar and the University of Wisconsin at Madison, Bergin measured the decrease in solar energy gathered by the IITGN's solar panels as they became dirtier over time. The data showed a 50-percent jump in efficiency each time the panels were cleaned after being left alone for several weeks.

[Read More on Solar Daily](#)

PROJECTION OF AMERICAN DUSTINESS IN THE LATE 21ST CENTURY DUE TO CLIMATE CHANGE

Climate models project rising drought risks over the southwestern and central U.S. in the twenty-first century due to increasing greenhouse gases. The projected drier regions largely overlay the major dust sources in the United States. However, whether dust activity in U.S. will increase in the future is not clear, due to the large uncertainty in dust modeling. This study found that changes of dust activity in the U.S. in the recent decade are largely associated with the variations of precipitation, soil bareness, and surface winds speed. Using multi-model output under the Representative Concentration Pathways 8.5 scenario, we project that climate change will increase dust activity in the southern Great Plains from spring to fall in the late half of the twenty-first century – largely due to reduced precipitation, enhanced land surface bareness, and increased surface wind speed.

[Read More on Nature](#)



MISSOURI JOINS ARKANSAS IN EMERGENCY BAN OF MONSANTO'S DRIFT-PRONE PESTICIDE

In response to more than 130 complaints of crop damage from the highly toxic and drift-prone pesticide dicamba, Missouri officials announced an immediate ban on the sale and use of the controversial pesticide that has damaged thousands of acres of crops across the Midwest and South. The dicamba ban, which Missouri officials said was temporary pending the determination of a more permanent solution, was announced on the same day Arkansas approved an emergency ban on the pesticide, effective July 11. The Missouri soybean association has estimated that around 200,000 acres of soybean are suspected to have been damaged by dicamba in 2017. Complaints about the pesticide in Missouri have already exceeded the 120 received by the state last year, when Missouri led the nation in dicamba-related complaints. [Read More on Biological Diversity](#)



THIS SHIPPING-CONTAINER FARM COULD SOMEDAY SOLVE THE FOOD DESERT PROBLEM

There's a farm opening soon in Laurel, Md., that can grow strawberries in January. It could grow rare tropical fruits from Asia and Central America on our native soil. It could produce custom-designed lettuce, more peppery or sweet. It's a hydroponic farm in a shipping container, and its owners hope it could eventually put an end to food deserts, including our biggest one: outer space. Local Roots, a California company, has created an indoor farm that can turn any produce into local produce, anywhere. They grow fruits and vegetables in shipping containers that are stacked in old warehouses or parking lots, which can either be connected to the grid or, eventually, powered by solar energy. Local Roots has designed the custom growing technology and hardware, and it owns and operates the farms, selling its produce to restaurants and food distributors under its own brand.

[Read More on Washington Post](#)

SPOTLIGHT ON POLICY: TRUMP ADMINISTRATION PULLS PLUG ON TEEN PREGNANCY PROGRAMS

The Trump administration has quietly axed \$213.6 million in teen pregnancy prevention programs and research at more than 80 institutions around the country, including Children's Hospital of Los Angeles and Johns Hopkins University. The decision by the U.S. Department of Health and Human Services will end five-year grants awarded by the Obama administration that were designed to find scientifically valid ways to help teenagers make healthy decisions that avoid unwanted pregnancies.

[Read More on Reveal News](#)



SPOTLIGHT ON INDIGENOUS HEALTH: SUPPORTING THE NEXT GENERATION OF INDIGENOUS HEALTH RESEARCHERS

When the Truth and Reconciliation Commission of Canada (TRC) issued its 94 calls to action in the pursuit of reconciliation, health was an important theme. In particular, the TRC called on all levels of government to increase the number of Indigenous peoples working in the health care field. The Indigenous Mentorship Network Program aims to support the next generation of Indigenous health researchers by providing distinctive learning opportunities and specially tailored mentoring activities to Indigenous students at the undergraduate, master's, doctoral and post-doctoral levels, as well as Indigenous researchers in the beginning phase of their careers.

[Read More on Government of Canada](#)



QUOTE OF THE WEEK

"Climate change will be a defining driver of the global economy, society and financial markets over coming years, decades and beyond. Whether the global economy is rebuilt on less carbon intensive foundations or the temperature continues to escalate, investors will be unable to avoid its impacts."

Andrew Howard of the giant UK asset management firm Schroders

[Read More on BusinessGreen](#)

EVENTSTABLE

DATE	CONFERENCE	LOCATION	REGISTER
June- Sept	Aboriginal Conferences	Canada	http://aboriginalconferences.ca/
July 25-27	Pedagogy For The Anthropocene: Re-rooting Academic Knowledge in Nature	Toronto Canada	https://docs.google.com/forms/d/e/1FAIpQLSfofqDbn3qR-F5XpUO9k_mhfkPp6SOj3w4-vQsouYH1oVuYnQ/viewform?c=0&w=1
Sept 25-27	Canadian Association of Community Health Centres 2017 Conference	Calgary Canada	https://www.cachc.ca/2017conference/
Sept 29	Governance of Pharmaceuticals Policy Workshop	Toronto Canada	http://www.sussex.ac.uk/globalhealthpolicy/events/workshops/pharmaceuticalsandglobalhealth/workshopformat
Oct 29-31	Canadian Conference for Global Health	Montreal Canada	https://www.ccgh-csih.ca/ccgh2015/index



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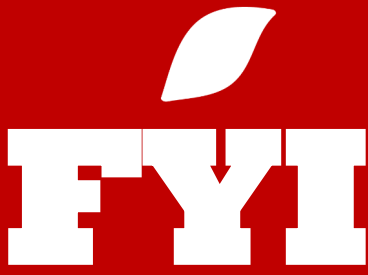


TOBACCO: A DEADLY BUSINESS



This Guardian series of resources is focused on the huge damage of the tobacco epidemic, which continues to cost millions of people's lives around the world per year, and the industry behind it.

[Read More on The Guardian](#)



A TREATY IS REACHED TO BAN NUCLEAR ARMS. NOW COMES THE HARD PART



For the first time in the seven-decade effort to avert a nuclear war, a global treaty has been negotiated that proponents say would, if successful, lead to the destruction of all nuclear weapons and forever prohibit their use. Negotiators representing two-thirds of the 192-member United Nations recently finalized the 10-page treaty after months of talks.

The document, called the Treaty on the Prohibition of Nuclear Weapons, was formally adopted at United Nations headquarters in New York during the final session of the negotiation conference. It will be open for signature by any member state starting on Sept. 20 during the annual General Assembly and would enter into legal force 90 days after being ratified by 50 countries. The participants did not include any of the world's nine nuclear-armed countries, which conspicuously boycotted the negotiations.

Some critics of the treaty, including the United States and its close Western allies, publicly rejected the entire effort, calling it misguided and reckless, particularly when North Korea is threatening a nuclear-tipped missile strike on American soil. In a joint statement released after the treaty was adopted, the United States, Britain and France said, "We do not intend to sign, ratify or ever become party to it."

The statement said that "a purported ban on nuclear weapons that does not address the security concerns that continue to make nuclear deterrence necessary cannot result in the elimination of a single nuclear weapon and will not enhance any country's security, nor international peace and security." Disarmament groups and other proponents of the treaty said they had never expected that any nuclear-armed country would sign it — at least not at first. Rather, supporters hope, the treaty's widespread acceptance elsewhere will eventually increase the public pressure and stigma of harboring and threatening to use such weapons of unspeakable destruction, and make holdouts reconsider their positions.

[Read More on NY Times](#)



TDR PARTNERSHIPS TO ADDRESS CRITICAL HEALTH ISSUES



Partnership is key to TDR's success. TDR being a special funding program for research and training based at the World Health Organization. We could only accomplish what has been done by working with others. This has been a main tenet throughout our history, and the 17 Sustainable Development Goals agreed by United Nations members even have a goal focused on this: Goal 17: Revitalize the global partnership for sustainable development.

Since TDR's establishment in the 1970s, many global health initiatives have been created. This interest and support is greatly appreciated, but it brings new challenges of coherence and synergy. How do we make sure we aren't duplicating services? How do multiple agencies and institutions agree on global health priorities?

At TDR, we have discussed and analysed this a great deal, and have developed principles and a methodology to help guide us in the types of partnerships we seek and those we are offered. These can be partnerships of research, or funding, or a range of technical cooperation agreements. We use these principles and methodology to assess the coherence and alignment with what we are trying to do. The goal is to have a greater impact than what we could do alone.

The Ebola virus outbreak in West Africa raised issues of the ethics of conducting research in a complex environment, community engagement and local research capacity. The European and Developing Countries Clinical Trials Partnership (EDCTP) specializes in clinical trials in Africa, and TDR has experience in community-based projects and implementation research. Together, we agreed to address the questions raised in this outbreak through a joint grant programme.

We are funding research conducted by scientists living in 6 sub-Saharan countries to conduct high quality health research during health emergencies and/or epidemic outbreaks. So together, we are solving important research questions while strengthening the capacity of those countries to find and test local solutions – this is a key goal of TDR. [Read More on WHO](#)

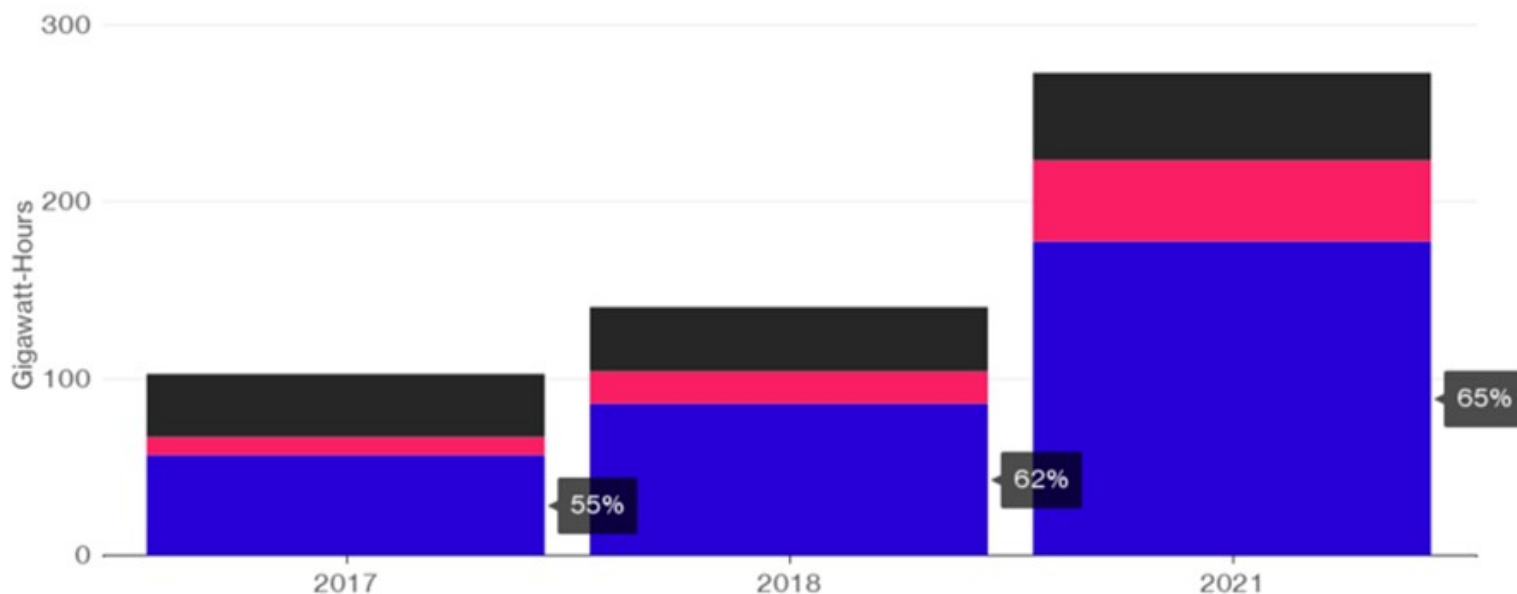


CHINA IS ABOUT TO BURY ELON MUSK IN BATTERIES

Power Surge

China's share of lithium-ion battery production is forecast to hit 65 percent by 2021

■ China ■ U.S. ■ Rest of the world



Source: Bloomberg New Energy Finance

Bloomberg

As Elon Musk races to finish building the world's biggest battery factory in the Nevada desert, China is poised to leave him in the dust. Chinese companies have plans for additional factories with the capacity to pump out more than 120 gigawatt-hours a year by 2021, according to a report published this week by Bloomberg Intelligence. That's enough to supply batteries for around 1.5 million Tesla Model S vehicles or 13.7 million Toyota Prius Plug-in Hybrids per year, according to Bloomberg New Energy Finance.

By comparison, when completed in 2018, Tesla Inc.'s Gigafactory will crank out up to 35 gigawatt-hours of battery cells annually. Lithium-ion batteries have long been used in smartphones, laptops, and other personal electronics, but demand is forecast to explode in the next five years as electric vehicles proliferate and power companies install giant storage systems to smooth the ebb and flow of wind and solar.

Tesla produced nearly 84,000 vehicles in 2016 and has said it plans to make 500,000 in 2018. While Tesla may be building the biggest and splashiest factory, the Chinese government has launched a sweeping effort to increase the country's dominant market share.

Roughly 55 percent of global lithium-ion battery production is already based in China, compared with 10 percent in the U.S. By 2021, China's share is forecast to grow to 65 percent, according to Bloomberg New Energy Finance.

[Read More on Bloomberg](#)



FROM PTOLEMY TO GPS, THE BRIEF HISTORY OF MAPS



Is it possible that today's global positioning systems and smartphones are affecting our basic ability to navigate? Will technology alter forever how we get around?

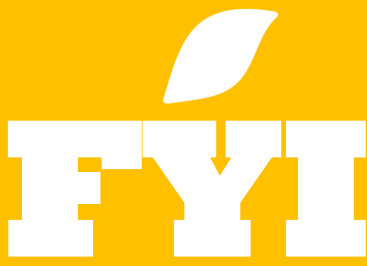
Most certainly—because it already has. Three thousand years ago, our ancestors began a long experiment in figuring out how they fit into the world, by inventing a bold new tool: the map.

One of the oldest surviving maps is, ironically, about the size and shape of an early iPhone: the Babylonian Map of the World. A clay tablet created around 700 to 500 B.C. in Mesopotamia, it depicts a circular Babylon at the center, bisected by the Euphrates River and surrounded by the ocean. It doesn't have much detail—a few regions are named, including Assyria—but it wasn't really for navigation. It was more primordial: to help the map-holder grasp the idea of the whole world, with himself at the center.

"There was something almost talismanic, I think, about having the world in your hand," says Jerry Brotton, a professor of Renaissance studies at Queen Mary University of London who specializes in cartography. Indeed, accuracy wasn't a great concern of early map-drawers. Maps were more a form of artistic expression, or a way of declaring one's fiefdom. Centuries later, the Romans drew an extensive map of their empire on a long scroll, but since the map was barely a foot high and dozens of feet wide, it couldn't be realistic. It was more of a statement, an attempt to make Rome's sprawl feel cohesive.

A 2008 study in Japan found that people who used a GPS to navigate a city developed a shakier grasp of the terrain than those who consulted a paper map or those who learned the route via direct experience. Similarly, a 2008 Cornell study found that "GPS eliminates much of the need to pay attention." Some map historians agree that a subtle change is at hand. Short tells me that he likes the convenience of GPS-brokered directions—"but what I do lose is the sense of how things hang together."

[Read More on Smithsonian](#)



GRAD SCHOOL IS HARD ON MENTAL HEALTH, HERE'S AN ANTIDOTE



Grad students take a psychological beating. In a 2014 study, the University of California at Berkeley found that 47 percent of its Ph.D. students showed signs of depression. One of the main reasons cited was academic disengagement. Humans can be resilient through a great deal of stress, but it's harder when working on abstract problems without clear indicators of progress — we lose perspective on why our work matters.

Science communication was my antidote because it reconnected me to motivation. The first thing we practiced was how to talk passionately about why we love research, what inspired us, what problem we're obsessed with. The practicalities of biology sometimes look like drudgery, moving around a thousand drops of clear liquid. Seeing the big picture infused my day with magic: I was working on unsolved problems!

We found external validation, too. Telling stories onstage let us hear gasps and applause from an audience. Writing a group blog let us celebrate when our articles were shared thousands of times. I saw my work through new eyes when it was illustrated by live music, improvised dance, chalk art, and poetry. When I shared what I work on, I felt part of something bigger because I saw my role in society as a creator of knowledge. I felt a new responsibility, too: The public funds our work; we owe people an explanation of what we've found.

[Read More on The Chronicle](#)

Great Blue Heron
Seguin Township, Ontario, Canada
(200 km north of Toronto)
July 21, 2017



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