# PLANETARY HEALTH WEEKLY

BRINGING YOU CURRENT NEWS ON GLOBAL HEALTH & ECOLOGICAL WELLNESS

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## 1.7 MILLION CHILDREN DIE EVERY YEAR DUE TO POLLUTED ENVIRONMENT

More than one in four deaths of children under five years age can be attributed to unhealthy environments and every year environmental risks like indoor and outdoor air pollution, second-hand smoke, unsafe water, lack of sanitation and inadequate hygiene result in the deaths of 1.7 million children under five years, said two new reports released by the World Health Organization (WHO).

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## ALSO IN THIS ISSUE:



## RECORD BREAKING CLIMATE CHANGE PUSHES WORLD INTO UNCHARTED TERRITORY

The record-breaking heat that made 2016 the hottest year ever recorded has continued into 2017, pushing the world into "truly uncharted territory", according to the World Meteorological Organisation. The WMO's assessment of the climate in 2016, published on Tuesday, reports unprecedented heat across the globe, exceptionally low ice at both poles and surging sea-level rise. Global warming is largely being driven by emissions from human activities, but a strong El Niño – a natural climate cycle – added to the heat in 2016. The El Niño is now waning, but the extremes continue to be seen, with temperature records tumbling in the US in February and polar heatwaves pushing ice cover to new lows.

Read More on The Guardian


Ryerson University Faculty of Community Services

## Zika Virus In Canadian Travelers More Severe Than Expected

A new study sheds light on the acquisition and features of Zika virus in Canadian travellers, indicating it was commonly confirmed as dengue in people returning from the Americas and the Caribbean but more severe than expected, according to a new study published in CMAJ (Canadian Medical Association Journal). Researchers looked at data over one year from the Canadian Travel Medicine Network (CanTravNet), a network of infectious disease specialists across the country focused on detecting travel-related illness in returned Canadians and visitors to Canada. Except for one case of infection through sexual intercourse, all cases were most likely transmitted by mosquitoes. Read More on Science Daily

## Disease That Has Killed Millions of Bats Found in Nebraska

A highly contagious fungal disease that has killed millions of bats in North America has been confirmed in Nebraska, making it the 30th state to be affected by the bat malady. Nebraska wildlife officials announced that following the recent discovery of several dozen dead bats at a mine in Cass County, the U.S. Geological Survey's National Wildlife Health Center in Madison, Wisconsin confirmed white-nose syndrome in three bats from the mine. The bat disease has afflicted seven bat species so far. Last year it was discovered in the West for the first time, when a little brown bat killed by white-nose syndrome was found near Seattle, Wash. Read More on Biological Diversity

## Antibiotic Resistance: A Burgeoning Problem For Kids Too

The adage that kids are growing up too fast these days has yet another locus of applicability. In a new, first-of-its-kind study, researchers from Case Western Reserve University School of Medicine have found a 700-percent surge in infections caused by bacteria from the Enterobacteriaceae family resistant to multiple kinds of antibiotics among children in the US. These antibiotic resistant infections are in turn linked to longer hospital stays and potentially greater risk of death. The research, published in the March issue of the *Journal of the Pediatric Infectious Diseases Society*, is the first known effort to comprehensively examine the problem of multi-drug resistant infections among patients under 18 admitted to US children's hospitals with Enterobacteriaceae infections. Read More on Science Daily

## Melting Sea Ice May Be Speeding Nature's Clock in Arctic

Spring is coming sooner to some plant species in the low Arctic of Greenland, while other species are delaying their emergence amid warming winters. The changes are associated with diminishing sea ice cover, according to a study published in the journal Biology Letters and led by the University of California, Davis. The study covers 12 years of observations at a West Greenland field site, about 150 miles inland from the Davis Strait. The site is near Russell Glacier, a dynamic front protruding from the massive inland ice sheet that covers most of the Island. Each year from early May to late June, researchers looked daily for the first signs of growth in plots enclosing individual plant species.

Read More on Science Daily

## Amazon Deforestation, Once Tamed, Comes Roaring Back

A few months ago, a representative from Cargill traveled to this remote colony in Bolivia's eastern lowlands in the southernmost reaches of the vast Amazon River basin with an enticing offer. The American agricultural giant wanted to buy soybeans from the Mennonite residents, descendants of European peasants who had been carving settlements out of the thick forest for more than 40 years. The company would finance a local warehouse and weighing station so farmers could sell their produce directly to Cargill on-site, the man said, according to local residents. Cargill confirmed the accounts of colony residents, and said the company was still assessing whether it would source from the community.

Read More on NY Times

## Our Oceans Are Garbage

Last September, more than 40 tons of garbage was pulled from the beaches of Vancouver Island alone. A good portion of the garbage is alleged to have come from the Japanese tsunami of 2011. However, the problem is not limited to just Vancouver Island; in 2015, a study estimated that the ocean contained 5.25 trillion pieces of garbage and counting. Some even estimate there will be more plastic than fish in the ocean by 2050. There have been reports from around the globe about the impact plastic pollution is having on both coastal marine environments and the wildlife that inhabits these regions. In Canada, researchers have warned that plastic is affecting birds and smaller marine life. For a country with the largest coastline, it's a problem that's not getting better. Read More on Vice


## Extraordinary Levels of Pollutants Found in 10 km Deep Mariana Trench

Scientists have discovered "extraordinary" levels of toxic pollution in the most remote and inaccessible place on the planet – the 10km deep Mariana trench in the Pacific Ocean. Small crustaceans that live in the pitch-black waters of the trench, captured by a robotic submarine, were contaminated with 50 times more toxic chemicals than crabs that survive in heavily polluted rivers in China. "We still think of the deep ocean as being this remote and pristine realm, safe from human impact, but our research shows that, sadly, this could not be further from the truth," said Alan Jamieson of Newcastle University in the UK, who led the research.

Read More on The Guardian

# SPOTLIGHT ON POLICY:

## Global Injury Vaccine Injury System Needed To Improve Public Health

A vital race is on in laboratories across the globe to develop a vaccine for the Zika virus. However, even if a vaccine were available today, many of the world's poorest people would not be able to receive it due to political and economic concerns surrounding vaccine injuries. Vaccine injuries are very rare and can range from minor immune responses such as hives to death. It is estimated that every second, more than 30,000 vaccine doses are delivered through routine immunization programs throughout the world.

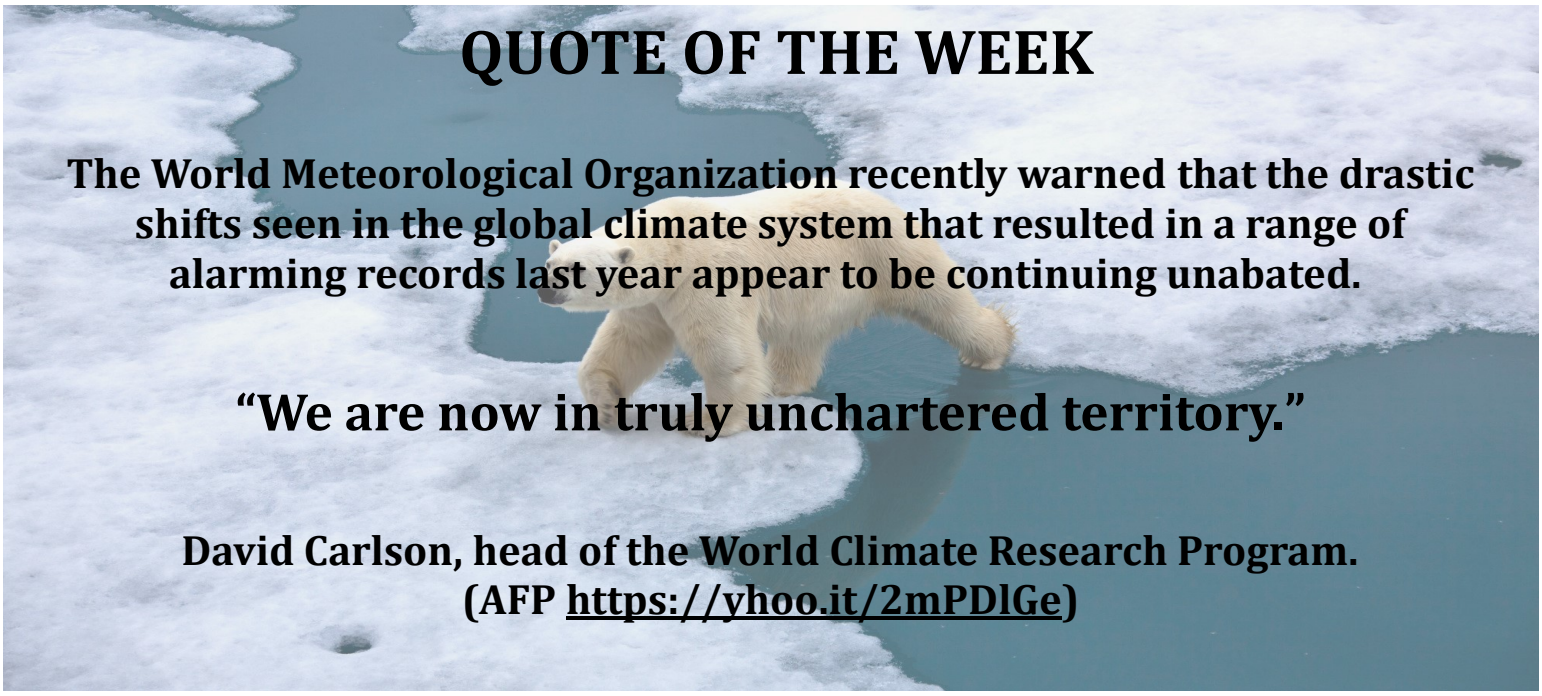
Read More on Science Daily


# SPOTLIGHT ON INDIGENOUS HEALTH:

## Food Insecurity Among Inuit Living in Inuit Nunangat

Using data from the 2012 Aboriginal Peoples Survey (APS), this study examines the prevalence of food insecurity among Inuit aged 25 and over living in Inuit Nunangat, and the factors associated with food insecurity among Inuit adults. Food insecurity can refer to situations when the amount of food purchased does not last and there is not enough money to buy more food, balanced meals are unaffordable, or household members cut the size of their meals or skip meals because there is not enough money for sufficient food. This study also discusses some of the health outcomes of Inuit adults who live in a food insecure household.

Read More on Statistics Canada



# QUOTE OF THE WEEK

**The World Meteorological Organization recently warned that the drastic shifts seen in the global climate system that resulted in a range of alarming records last year appear to be continuing unabated.**

**"We are now in truly unchartered territory."**

**David Carlson, head of the World Climate Research Program.**
**(AFP https://yhoo.it/2mPDlGe)**

# EVENTS TABLE

| DATE | CONFERENCE | LOCATION | REGISTER |
|---|---|---|---|
| April 6-9 | 2017 Annual CUGH Global Health Conference | Washington USA | http://www.cugh.org/events/2017-annual-cugh-global-health-conference |
| April 22-23 | Global Health & Innovation Conference | Connecticut USA | http://www.uniteforsight.org/conference/ |
| June 12-23 | McGill Summer Institute in Infectious Disease and Global Health | Montreal Canada | http://mcgill-idgh.ca/ |
| June 12-16 | Global Health Diagnostics | Montreal Canada | http://mcgill-idgh.ca/courses/global-health-diagnostics/ |

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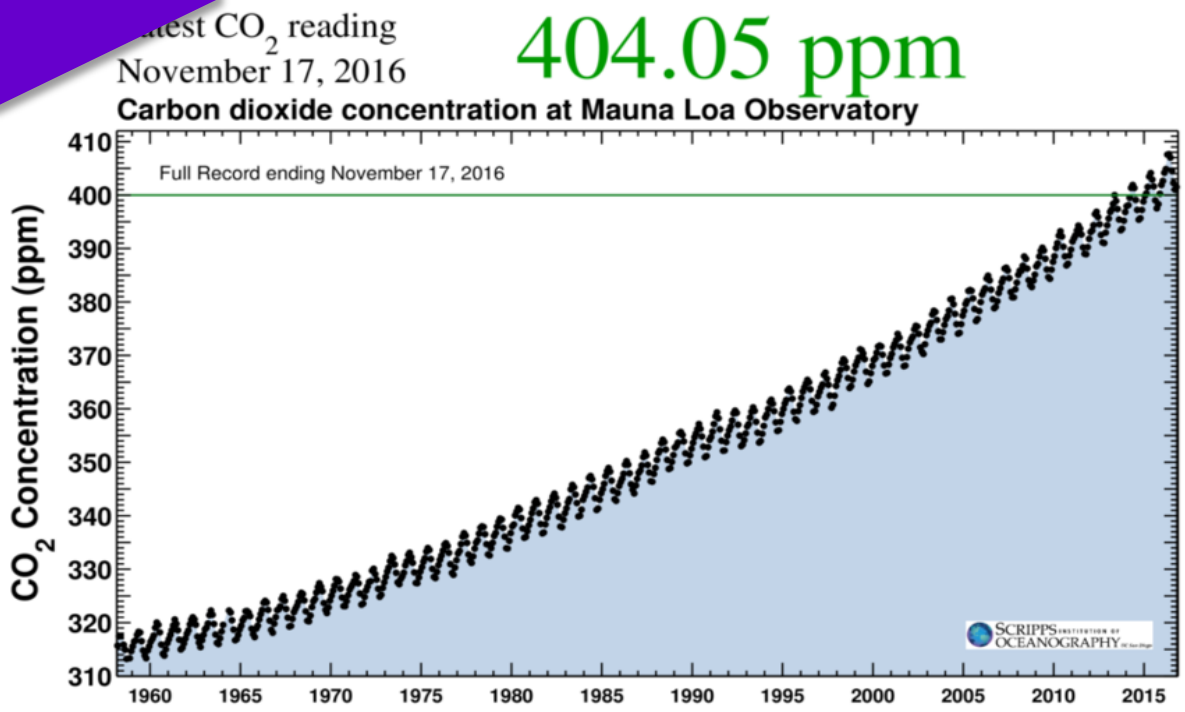
# CLIMATE VISUALS FOR THE CLIMATE CHANGE DENIER IN YOUR LIFE




## NEW EXON MOBIL CEO ECHOES REX TILLERSON'S SKEPTICISM ON CLIMATE SCIENCE

Darren Woods, the new chief executive of Exxon Mobil Corp., mirrored his predecessor's skeptical view on climate change in his first interview since taking over at the oil and gas giant.

Woods, who was promoted to CEO last month when Rex Tillerson stepped down to become secretary of state, acknowledged that unmitigated global warming poses risks that can't be ignored. But he stopped short of recognizing emissions from burning fossil fuels as the chief cause. Under Tillerson, Exxon Mobil reversed decades of company policy by recognizing that the climate is indeed changing. In 2009, the Texas-based firm publicly backed putting a tax on carbon, a move that some saw as a distraction from congressional debate over a cap-and-trade bill. In 2015, the company supported the Paris climate agreement, the first global deal to cut greenhouse gases that included the U.S. and China, the world's biggest polluters.

Yet as recently as 2016, Exxon Mobil was still paying millions to groups that either question fossil fuels' role in climate change or deny the science outright. During the last two election cycles, the firm donated heavily to Republicans, who remain one of the only major political parties in the world to question climate science. Anti-climate hawks Rep. Lamar Smith (R-Texas) and Sen. Jim Inhofe (R-Okla.) were among those who benefited from Exxon Mobil's largesse. Meanwhile, the company's investments in renewable energy trail far behind those of industry rivals like Statoil, a Norwegian oil company that has emerged as a top player in the offshore wind sector. That doesn't appear likely to change under Woods. The 51-year-old is steeped in the culture of a company he was groomed for the past year to lead. Like his predecessor, he insists that shifting focus to zero-emission energy sources would strain energy resources and leave "millions" of people in poverty without access to affordable electricity or transportation.

[For Visuals See Huffington Post]
[Read More on Huffington Post]

# STUDY SHOWS ASIAN POLLUTION, HEAT WAVES WORSEN U.S. SMOG

An influx of pollution from Asia in the western United States and more frequent heat waves in the eastern U.S. are responsible for the persistence of smog in these regions over the past quarter century despite laws curtailing the emission of smog-forming chemicals from tailpipes and factories.

The study, led by researchers at Princeton University and the National Oceanic and Atmospheric Administration's Geophysical Fluid Dynamics Laboratory (GFDL), highlights the importance of maintaining domestic emission controls on motor vehicles, power plants and other industries at a time when pollution is increasingly global.

Published March 1 in the journal Atmospheric Chemistry and Physics, the study looked at the sources of smog, also known as ground-level ozone, across a period ranging from the 1980s to today. Ground-level ozone, which is distinct from the ozone in the upper atmosphere that protects the planet from ultraviolet radiation, is harmful to human health, exacerbating asthma attacks and causing difficulty breathing. It also harms sensitive trees and crops.

Despite a 50 percent cut in smog-forming chemicals such as nitrogen oxides, commonly known as "NOx," over the past 25 years, ozone levels measured in rural areas of the west have actually climbed. And while ozone in the eastern U.S. has decreased overall, the levels can spike during heat waves.

The study traced the increase of ozone in the west to the influx of pollution from Asian countries, including China, North and South Korea, Japan, India, and other South Asian countries. Collectively, the region has tripled its emissions of NOx since 1990. In the eastern U.S., meanwhile, heat waves -- which have become more frequent in the past few decades -- trap polluted air in place, leading to temporary escalations in locally produced ozone.

[Read More on Science Daily]

# DUBAI HARVESTS DESERT SUN AT VAST SOLAR PLANT

Dubai on Monday completed a solar plant big enough to power 50,000 homes as part of a plan to generate three-quarters of its energy from renewables by 2050. The 200 megawatt plant sprawls over 4.5 square kilometres (1.73 square miles) of desert and includes some 2.3 million photovoltaic panels. It is the second phase of the Mohammed bin Rashid Al-Maktoum Solar Park, which is set to pump out a total of 1,000 megawatts by 2020, the Dubai Electricity and Water Authority said.

The $326 million (300 million euro) second phase was built by a consortium including Saudi Arabia's ACWA Power and Spain's TSK. DEWA chief Saeed al-Tayer said the operators would sell power to the public utility company. The project is the "largest and first solar power project of its kind in the region", he said. "The state has begun early in preparing to say goodbye to the last drop of oil, through a clear strategy including investments in power generation plants that use various solar power technologies," Tayer said.

The solar park's first phase came online in 2013, with 152,000 panels producing 13 megawatts. DEWA said in December the second phase of the project had set a world record for cheap solar energy, at 5.6 US cents (5.2 euro cents) per kilowatt hour. Last year, DEWA awarded the third and final phase of the project, an 800 megawatt extension to the park, to a consortium led by Abu Dhabi's Masdar.

The Gulf emirate currently has a total generating capacity of 10,200 megawatts, Tayer said. Dubai is part of the oil-rich United Arab Emirates, but has few oil reserves itself. The bulk of crude production is concentrated in Abu Dhabi.

[Read More on Solar Daily]

# DON'T IGNORE CARBON STORED IN SOIL IN CLIMATE CHANGE FIGHT: FIJI PRESIDENT

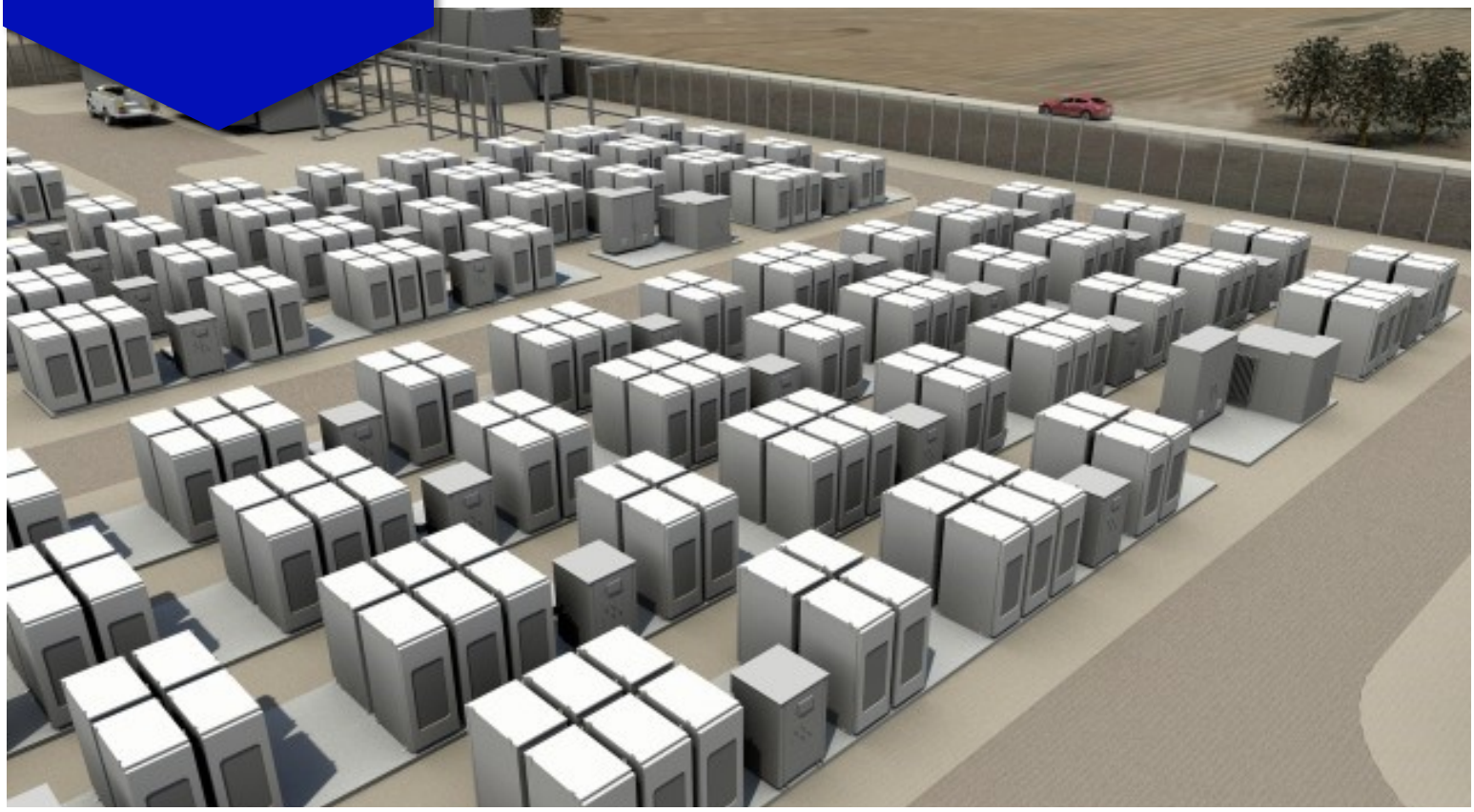
The Earth's soils contain more carbon than the planet's atmosphere and vegetation combined, but are dangerously neglected in the fight against climate change, Fiji's president told a U.N. conference on Tuesday. George Konrote, whose small Pacific nation is threatened by rising sea levels, warned commitments under the Paris climate change agreement to limit global temperature rises would be "in vain" if carbon trapped in the soil was to be released. "The negative impact on our environment and life as we know it could be colossal," Konrote told the meeting, held by the U.N. Food and Agriculture Organization (FAO) in Rome. "We cannot afford to neglect a resource that could be our serious and viable ally against climate change."

Small island developing states are already suffering the impacts of climate change, including rising seas and more extreme weather, and have pushed hard for more ambitious international efforts to reduce planet-warming emissions. Fiji was the first country to ratify the Paris treaty last year and will preside over the next major U.N. climate change meeting, known as COP23, in Bonn , Germany in November. Soil naturally absorbs carbon from the atmosphere through a process known as sequestration. Besides helping reduce harmful greenhouse gases, carbon sequestration is a boon for farming. But when land is overexploited or degraded, trapped carbon is released back into the atmosphere, resulting in planet warming emissions.

About a third of the world's soils are degraded because of soil erosion - the loss of the topsoil by wind, rain or use of machinery - contamination and the sprawl of cities. Reverting the trend is key both to tackling global warming and to feeding the world's growing population, according to the FAO. Konrote called on global governments to support sustainable soil management practices through policy and investment.

**Read More on Reuters**

# TESLA'S BATTERY FARM ON KAUAI OPENS, LARGE-SCALE SOLAR ENERGY FOR HAWAII



Even before Elon Musk engineered Tesla's acquisition of SolarCity, the two companies were collaborating.

SolarCity was already controlled by Musk, who believes its solar-energy business can be reinforced and complemented by Tesla's energy-storage business. Last year, Tesla announced a joint project with SolarCity to install a large battery farm and solar array in Hawaii. That project is now complete, and ready to provide electricity to a Hawaiian utility.

Tesla, SolarCity, and partner Kauai Island Utility Cooperative unveiled the completed solar and energy-storage facility last week, reports the Silicon Valley Business Journal. The facility will be able to provide solar power to KIUC on demand, 24 hours a day, Tesla CTO JB Straubel said during the opening ceremony. The array of solar panels and energy-storage battery packs occupies 50 acres of land owned by Grove Farm Co., near KIUC's Kapaia power station.

It includes nearly 55,000 individual solar panels, and 272 Tesla Powerpack lithium-ion battery packs. Those packs have 52 megawatt-hours of storage capacity, and can discharge up to 13 megawatts of power to the grid. The Tesla and SolarCity-developed installation will bring KIUC up to 40 percent renewable-energy use.

KIUC has a 20-year agreement to purchase electricity from the project at 13.9 cents per kilowatt-hour. It also has a deal with infrastructure company AES for a similar solar-and-energy-storage project on Kauai's southern shore, including a 28-megawatt solar array.

**Read More on Green Car Reports**

# FOR AID WORKERS, IS BURNOUT PART OF THE JOB DESCRIPTION?

First of all, what is burnout? Let say what it is not: it's not about having the odd day when you feel tired and overworked. Burnout is much more serious: experts define it as a syndrome of physical, mental and emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity. In other words, burnout creeps up, leaving us physically, mentally and emotionally depleted, as well as frustrated, disillusioned, cynical, ineffective and emotionally distant from those around us, including the ones we are meant to serve.

Many aid professionals love a good challenge and are not up for a regular 9-5 job. Yet many complain that some humanitarian organizations are not very humane to their staff — citing problems of overwork, limited rewards, bullying and lack of civility. Burnout researchers indicate six main contributing factors to burnout: work overload; lack of control over the work; insufficient rewards; workplace community problems, such as incivility and a lack of support among coworkers; lack of fairness, such as inequality of pay, promotions or workload; and conflict between one's personal values and the requirements of a job.

The core of burnout prevention does not simply lie in self-care. Instead, it rests in addressing power issue at work and creating healthy organizations — and healthy doesn't mean perfect, so keeping our expectations in check is essential.

Rather than an army of stress counselors, here's what we need to prevent burnout: dignified work environments where people feel respected and their work is appreciated. Managers who are capable of addressing conflicts and not sweeping them under the carpet. Clear and realistic job descriptions (is it just me, or are most job descriptions in the sector meant for Superman or Wonder Woman?). Fair contracts, less bureaucracy, learning opportunities and a culture of accountability, responsibility and care.

**Read More on Devex**

# ITS TIME TO CHANGE THE CONVERSATION

## Learning Circle on Indigenous Public Health

## Ryerson University, Toronto

## March 29, 2017

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