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Climate & Health News

Newsletter of the JHU-UPF Public Policy Center Climate Change Working Group



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JULY 2017
2nd Edition

Welcome to this second edition of *Climate and Health News* for July. With the increasing number of health-related climate news stories and science articles and our growing readership, we have decided to issue a shorter twice-monthly newsletter to ensure the information we are sharing is as timely as possible.

In this edition, see maps that show [how heat will affect world cities](#) and how [flooding will affect US communities](#). A new [review of the urban heat island](#) was published this month, along with a [review of nature-based solutions](#) focused on health. Finally, see how lessons from heat early warning in Ahmedabad, the first city in India to employ them, are being transferred to [air pollution early warning alerts](#).

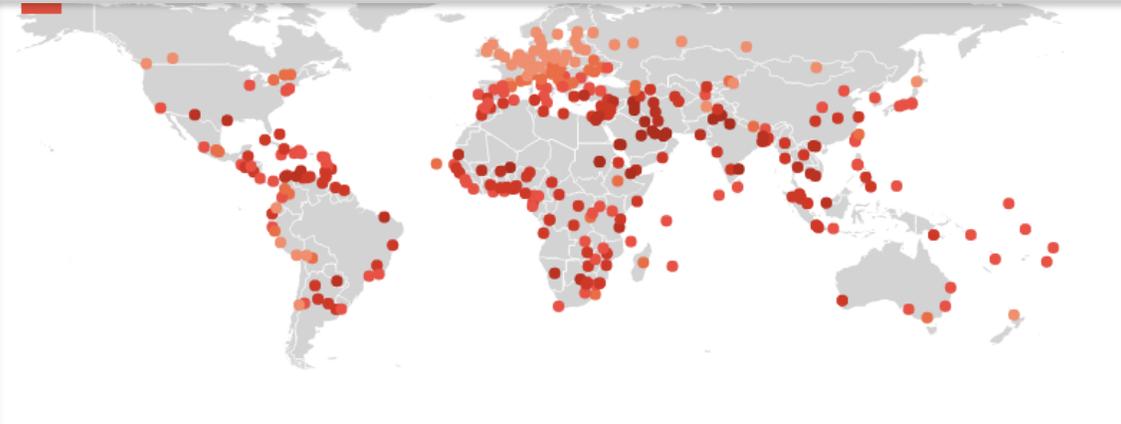
We'll be back in early August with our next edition.

NEWS

EXTREME HEAT & DROUGHT

Interactive map: [This is how climate change will affect world cities](#)

To illustrate how hot cities could be in the future and what choices they face, Climate Central created an interactive map in partnerships with the World Meteorological Organization. – *Climate Central*



To illustrate just how hot cities' future could be and the choices they face, Climate Central created the interactive above in partnership with the World Meteorological Organization. It shows how the average summer high in the future in each of these cities compares to other cities of today. In some cases, the shift puts them in a completely new temperature zone.

[Rising temperatures could bump you from your flight](#)

American Airlines canceled 57 regional flights out of Phoenix in June due to extreme heat of 120 degrees F. More heat waves could mean flights get canceled, delayed or have to lose some weight. These very hot days are called "weight restriction days," because fully loaded planes can't get off the ground, and have to lose fuel, cargo, or passengers. – *Washington Post*

[Increased tropical zone will lead to more droughts and heatwaves](#)

The Earth's waistline is bulging. The tropical zone between the Tropic of Cancer and Tropic of Capricorn has been expanding about 85km per decade. Currently the tropical zone extends from the Andes in South America to northern parts of Argentina and Chile to the Sahara Desert. With expansion in Australia, by 2100 the new dry subtropical zone would extend from Sydney to Perth. – *news.com.au*

[Raging wildfires across California force nearly 8,000 to evacuate](#)

Four different wildfires were blazing in early July. – *LA Times*



A car and house near Oroville, Calif., are engulfed in flames by the Wall fire on Saturday. (Josh Edelson / AFP/Getty Images)

[Solutions: Amid LA heat wave, residents say 'cool pavement' is working](#)
During one of the worst heat waves ever to hit Southern California this week, the first “cool pavement” street, made of grey reflective surface, seems to be working to reduce the road and surrounding building temperature. — LA Daily News

[Solutions: Hot, Dry Madrid Aims For A Cooler, Greener Future](#)

The city has come up with a simple, low-tech solution: plants. Madrid aims to cover as much of its surface as possible with greenery — roof gardens, walls and empty lots. — [npr.org](#)



Madrid's Caixa Forum has a wall covered with plants, part of Madrid's plan to combat global warming. [Wojtek Gurak/Flickr](#)

EXTREME PRECIPITATION

[New data set explores 90 years of natural disasters in the US](#)

The findings suggest that the rich leave areas hit by disaster while the poor stay and suffer. — [The Conversation](#)



The sun rises behind the remains of a New Jersey roller coaster destroyed by Hurricane Sandy. [AP Photo/Mel Evans](#)

[Swathes of south China under water](#)

Torrential rain lashed parts of central and south China on Monday, with floods damaging crops, forcing hundreds of thousands from their homes and killing at least 33. Water levels in more than 60 rivers in southern China have risen above warning levels. – *Reuters*

[Climate change could see Africa's Sahel turn lush and green in our lifetimes](#)

The Sahel, the transition region between the Sahara desert and savannah spanning Mauritania, Niger, Chad, Sudan and Eritrea, has been struck by periods of [severe drought](#). This could abruptly shift to a much wetter regime in decades once Earth reaches 1.5 to 2 degrees C above pre-industrial levels, by bringing a [tropical monsoon season](#). – *International Business Times*

SEA LEVEL AND RELOCATION

[The drowning villages of Indonesia](#)

Rising sea levels have forced people to leave their homes in four villages located in Bekasi, on the Indonesian island of West Java. Those who have remained face difficult living conditions. Just a few decades ago, thousands of families inhabited these fishing villages. Now, only a few hundred remain. –*Aljazeera*



Wawan has raised the floor of his house several times to keep water from getting in. It is now 1.5m higher than the original level, yet last year, sea water again entered the house. [Syarina Hasibuan/Al Jazeera]

[Climate Change Dilemma: How Much Flooding Is Too Much?](#)

Union of Concerned Scientists used federal data to project the year communities will become “chronically inundated,” defined as any community facing flooding an average of every two weeks across at least 10 percent of its area. – *Bloomberg*

[Fight, flee, or wait and see? Locals face hard choices as Louisiana coast recedes](#)

Some 120,000 people live on the most vulnerable shrinking lowlands south of New Orleans, fishing or working in the oil refineries and petrochemical plants. Warnings that Louisiana is losing more than 10,000 acres - equal to 10,000 American football fields - of wetlands each year are often met with skepticism, distrust and resignation. – Thomson Reuters

AIR POLLUTION

[Solutions: France to ban sales of petrol and diesel cars by 2040](#)

The decision of the Macron government was made as a matter of “public health policy.” – The Guardian

[Solutions: With color-coded warnings, Indian city gets serious about dirty air](#)

A plan to combat extreme heat in India's Ahmedabad city has been so effective in bringing down fatalities that the city is rolling out a similar program to fight air pollution. Ahmedabad is the first Indian city to install an air monitoring and warning system, the Air Information and Response (AIR) plan that involves an air quality index and giant LED screens displaying five color-coded alerts of the levels and their related effects. – Reuters

INFECTIOUS DISEASE

[With a Tick Boom, It's Not Just Lyme Disease You Have to Fear](#)

Experts say the Northern United States may be in for bad tick season this summer, raising concerns about Lyme

FOOD AND AGRICULTURE

[Vulnerable 'chokepoints' threaten global food supply](#)

A new report identifies 14 bottlenecks, from roads to ports to shipping lanes through which large amounts of food trade pass, which are at risk from climate change. The chokepoints already suffer repeated disruptions. For example, US inland waterways and railways, which carry 30% of the world's maize and soy, were hit by flooding that halted traffic in 2016 and a 2012 heatwave that kinked rail lines and caused derailments. – The Guardian

SCIENCE

EXTREME HEAT

[REVIEW: The Urban Heat Island: Implications for Health in a Changing Environment](#)

This review highlights recent attempts to quantitatively estimate the health impacts of the urban heat island (UHI) effect and health benefits of policy measures. Climate change, increasing urbanization and an ageing population are likely to increase the risks to health from UHI. A range of measures could reduce health impacts from heat and bring other benefits to health and wellbeing.



Patrick Carrigan, engineering assistant for Los Angeles City General Services, checks the surface temperature of a special reflective surface being tested on Jordan Avenue in Canoga Park. DAVID CRANE — STAFF PHOTOGRAPHER

In this study, we estimate the magnitude of adaptation needed to lower vulnerability to heat in order to prevent an increase in heat-related deaths in the 2050s; this is the Adaptive Risk Reduction (ARR) needed. In the 2050s, the ARR for the general population in Southern Europe is 53%; for the population above 65 years the ARR is 75% with climate change under a medium scenario, and higher under the highest warming scenario.

[Quantifying Projected Heat Mortality Impacts under 21st-Century Warming Conditions for Selected European Countries](#)

The aim of this paper is to quantify the possible future impact of heat on population mortality in European countries, under different climate change scenarios. We estimate excess death rates due to heat-related causes. Mediterranean and Eastern European countries will be the most affected by heat, but a non-negligible impact will be still registered in North-continental countries.

[Evaluation of individual and area-level factors as modifiers of the association between warm-season temperature and pediatric asthma morbidity in Atlanta, GA](#)

Results of this analysis suggest socio-demographic factors (race/ethnicity, insurance status, and area-level SES) may confer vulnerability to temperature-related pediatric asthma morbidity.

EXTREME PRECIPITATION, STORMS, & FLOODING

[Challenges and Opportunities for Mainstreaming Climate Change Adaptation into Water, Sanitation and Hygiene Development Planning in Ghana](#)

Climate change threatens water, sanitation and hygiene facilities and services; floods and droughts, which pollute and reduce water, have become a perennial issue in the northern regions of Ghana. This study assesses whether climate change adaptation measures are mainstreamed into the water, sanitation and hygiene planning process.



[Interannual cycles of Hantavirus outbreaks at the human-animal interface in Central China are controlled by temperature and rainfall](#)

Outbreaks of hantavirus, a rodent-borne zoonotic pathogen, have occurred recently in Eurasia and the Americas. This study examines a climate-animal-Hantavirus infection model based on a dataset from Central China. An 8-year cycle is revealed, with two climatic variables: temperature and rainfall.

MENTAL HEALTH

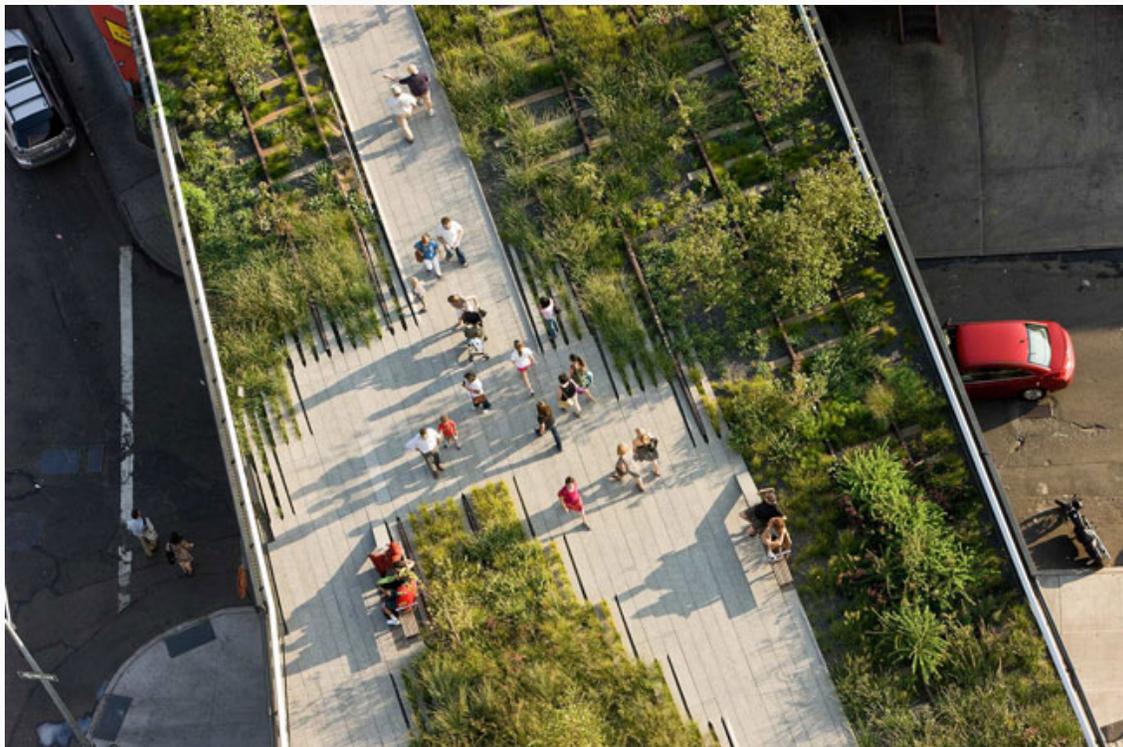
[The centrality of social ties to climate migration and mental health](#)

Climate change-related hazards and disasters, known to adversely impact physical and mental health outcomes, are also expected to result in human migration above current levels. We propose that the disruption of social ties is a key mechanism by which climate-related migration may negatively impact mental health. Policies and programs that aim to maintain ongoing social ties among migrants and their family and community members may be critically important in efforts to enhance population resilience and adaptation to climate change and to improve mental health outcomes.

SOLUTIONS

[REVIEW: Urban natural environments as nature-based solutions for improved public health - A systematic review of reviews](#)

Increasing urbanization, changing disease scenarios, and climate change impacts require innovative strategies for providing healthy and sustainable cities. Nature-based solutions (NBS), are those copied from or inspired or supported by nature. This review examined the evidence for public health benefits of exposure to natural environments.



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The High Line in New York City is a pioneering example of a green space in an urban environment. [Source: University Times](#)

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A woman digs for shellfish on the Pacific island of Kiribati, the country expected to be the most vulnerable to climate change's effects on fisheries Reuters