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# Climate & Health News

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



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**NOVEMBER 2018**

Dear Climate & Health News readers,

A major special report of the IPCC called ["Global Warming of 1.5 degrees Celsius"](#) was issued in early October and is essential reading for all those interested in responding to climate change (see first news article below).

This month we say farewell, with a multitude of thanks, to our talented star Managing Editor, Eileen McRae, and wish her all success and happiness in her new endeavors.

Best regards,  
Mary

Dear Climate & Health News readers,

I would like to thank Mary Sheehan and all of the readers for two wonderful years as the Managing Editor of this Climate and Health Newsletter. I wish this project all the continued success in the future.

All the best,  
Eileen

## [The IPCC's new 1.5 degrees C global warming report](#)

The Intergovernmental Panel on Climate Change has published a special new report titled "Global Warming of 1.5°C." The good news is that the carbon budget for staying under 1.5°C of warming is larger than previously thought, so there may be slightly more time to act. The bad news is that the consequences of overshooting that threshold are likely to be catastrophic. – Foreign Policy



Cracked mud is pictured at sunrise on the dried shores of Lake Gruyère, affected by continuous drought, near the western Swiss village of Avry-devant-Pont. (Fabrice Cofrin/AFP/Getty Images)

## [\*\*Solutions: A new climate adaptation commission\*\*](#)

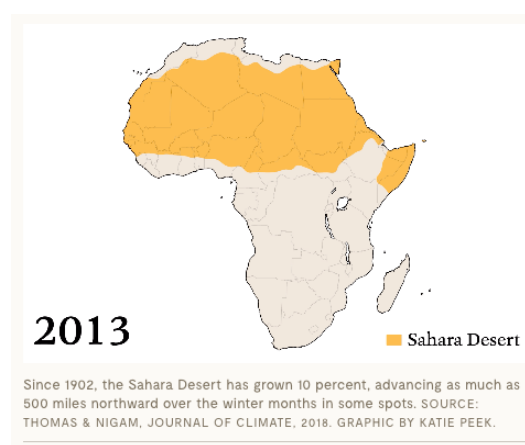
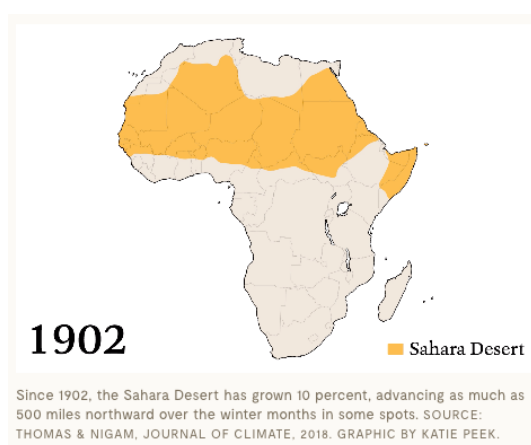
To spur action on climate change adaptation, a coalition led by billionaire Bill Gates, former United Nations Secretary General Ban Ki-Moon, World Bank CEO Kristalina Georgieva have launched a Global Commission on Adaptation. The new group, on a two-year mission, intends to bolster funding and search for sensible solutions. – *National Geographic*

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A new international effort hopes to help farmers—and everyone else—adapt to climate change. Switching from raising chickens to ducks is one solution in a growing toolbox. PHOTOGRAPH BY G.M.B. AKASH, PANOS, REDUX

### [How the world's climate zones are shifting](#)

A look via several eye-opening maps at how rising global temperatures are altering climatic zones around the planet, with consequences for food and water security, local economies, and public health. —*Yale 360*



### [The climate change local data gap](#)

It's easy to talk about how climate change will alter Earth's surface in the century to come; it's far harder to talk about how these changes will play out locally. Across huge swaths of the world, scientists don't have the data they need—especially the kind of in-depth, long-term observations that can place current weather in context—to understand that past. — *The Atlantic*



### [\*\*Solutions: Reduction in meat consumption needed\*\*](#)

Huge reductions in meat-eating are essential to avoid dangerous climate change, according to the most comprehensive analysis yet of the food system's impact on the environment. In western countries, beef consumption needs to fall by 90% and be replaced by five times more beans and legumes. — *The Guardian*



Steak and a healthy vegetarian meal with pulses. Composite: Getty Images

### [\*\*Extreme storms are damaging America's democracy\*\*](#)

Major disasters and challenging long-term weather conditions may be weakening local governments, increasing racial and class inequality, and reducing trust in government. — *The Atlantic*



### [Mold is a rapidly growing urban health problem](#)

After a hurricane or tropical storm, mold – which is a common result of flooding – can spread easily within 48 hours in damp homes, can cause major health problems, and is difficult or expensive to remove. – CityLab

### [Solutions: Capturing and reusing storm water may be promising strategy for cities](#)

Three promising new technologies could help send storm water to taps in thirsty cities. Scientists are making headway on solutions to scrub pollutants from urban storm water before putting it into underground reservoirs for city use. – *The Daily Climate*



Residents fill up during the Cape Town water crisis in May. (Credit: Widad Sirkhotte/flickr)

### [Solutions: Paris may be a climate adaptation and mitigation model, and Paris will ban cars along a portion of the Seine](#)

In a way that few other cities have so far, Paris is actively seeking ways to manage the environmental, political, and economic storms to come. Among innovative steps, Paris is converting three kilometers of streets along the Seine river for the exclusive use of pedestrians and cyclists. – CityLab





People sitting on the pedestrianized Seine quayside earlier this year, on the site of what was recently a major road. ([Gonzalo Fuentes/Reuters](#))

### **Solutions:** [City of London calls for car ban on half its streets](#)

The City of London has introduced a plan to dramatically reduce car traffic and speeds in the financial district. Cars would be banned from half of all roads in the city center, and vehicles passing through on access roads would be limited to 15 mph. The move is intended both to improve cyclist and pedestrian safety, and reduce emissions. – Fast Company

### **Solutions:** [What city action could have the biggest climate impact?](#)

From focusing on improved urban transit to requiring zero carbon buildings, here are a few ideas from influential thinkers on local action and the environment regarding the one thing a city or state could do to cut emissions significantly and fast. – CityLab



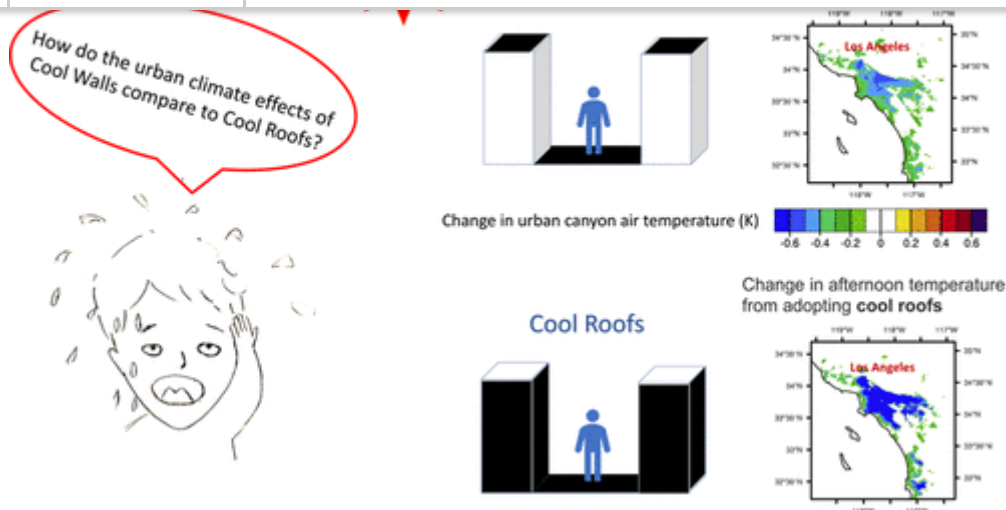
The slogan "No Plan B" is projected on the Eiffel Tower as part of the World Climate Change Conference in 2015 in Paris. Charles Platiau/Reuters

## SCIENCE

### **Solutions: Evaluation of cool walls and roofs in Los Angeles**

This study assesses the influence of employing solar reflective cool walls on the urban energy budget and summertime climate of the Los Angeles basin. Cool walls lead to increases in urban grid cell albedo that peak in the early morning and late afternoon and reduce "canyon" air temperatures.

Zhang et al. 2018. *Systematic Comparison of the Influence of Cool Wall versus Cool Roof Adoption on Urban Climate in the Los Angeles Basin*. Environ Sci Technol. 52(19):11188-11197.

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Zhang et al. 2018. *Systematic Comparison of the Influence of Cool Wall versus Cool Roof Adoption on Urban Climate in the Los Angeles Basin*. Environ Sci Technol. 52(19):11188-11197.

### **Solutions: Using Google searches to monitor heat health impacts**

Authors examined daily trends in validated syndromic surveillance heat-related morbidity indicators against symptom-based heatwave related Google search terms. Daily increases in frequency in Google search terms during heatwave events correlated well with validated syndromic indicators. This work highlights the potential benefits for countries which lack established public health surveillance systems to monitor heat-related morbidity and the use of internet search data to assess the wider population health impact of exposure to heat.

Green et al. 2018. *Google Search Patterns Monitoring the Daily Health Impact of Heatwaves in England: How Do the Findings Compare to Established Syndromic Surveillance Systems from 2013 to 2017?* Environ Res. 166:707-712.

### **Solutions: Evaluation of a sub-national adaptive capacity index in Italy**

We describe a climate change adaptive capacity index developed for Italy's regional and sub-regional administrative levels, as a part of the National Climate Change Adaptation Plan. The index is built around four dimensions and ten indicators. Results show that higher-level composite indices neglect the inherent variability of performance at lower levels and suggest bottom-up aggregation methods may be promising.

Marzi et al. 2018. *Comparing Adaptive Capacity Index Across Scales: The case of Italy*. J Environ Manage. 223:1023-1036.



Authors quantified the co-benefits of climate change mitigation on ambient air quality and human health. Air pollution reduction through climate change mitigation under the 2 °C goal could reduce premature deaths in Asia by nearly 800,000 by 2050, equivalent to a life value savings of US\$2.8 trillion (6% of GDP), over three times more than the climate mitigation cost (US\$840 billion). At the national level, India has the highest potential net benefit, followed by China and Japan.

Xie et al. 2018. *Co-benefits of Climate Mitigation on Air Quality and Human Health in Asian Countries*. Environ Int. 119:309-318.

## **[Mental health and climate change: new empirical evidence \(USA\)](#)**

This study coupled meteorological and climate data with reported mental health difficulties from nearly 2 million Americans to show empirically that short-term exposure to more extreme weather, multiyear warming, and tropical cyclone exposure are each associated with worsened mental health.

Obradovich et al. 2018. *Empirical evidence of mental health risk posed by climate change*. Proc Natl Acad Sci USA. 115(43):10953-10958.

## **[A sub-national climate health vulnerability assessment in Ontario, Canada](#)**

Public health agency practitioners used an applied research approach to expand local knowledge of health vulnerabilities through a climate change action plan and vulnerability assessment. Challenges included framing and scoping of health impacts, and access to data analysis expertise; opportunities included development of key partnerships within the community. This approach may be valuable for other public health organizations.

Levison et al. 2018. *Development of a Climate Change Vulnerability Assessment Using a Public Health Lens to Determine Local Health Vulnerabilities: An Ontario Health Unit Experience*. Int J Environ Public Health. 15(10): pii. E2266.

## **[Extreme heat associated with fatal car crashes \(USA\)](#)**

This case-crossover study examined associations between heat waves and fatal traffic crashes during (2001-2011) in the continental USA. Results show a significant positive association, with a 3.4% (95% CI: 0.9, 5.9%) increase in fatal traffic crashes on heat wave days versus non-heat wave days.

Wu et al. 2018. *Heat Waves and Fatal Traffic Crashes in the Continental United States*. Accid Anal Prev. 119:195-201

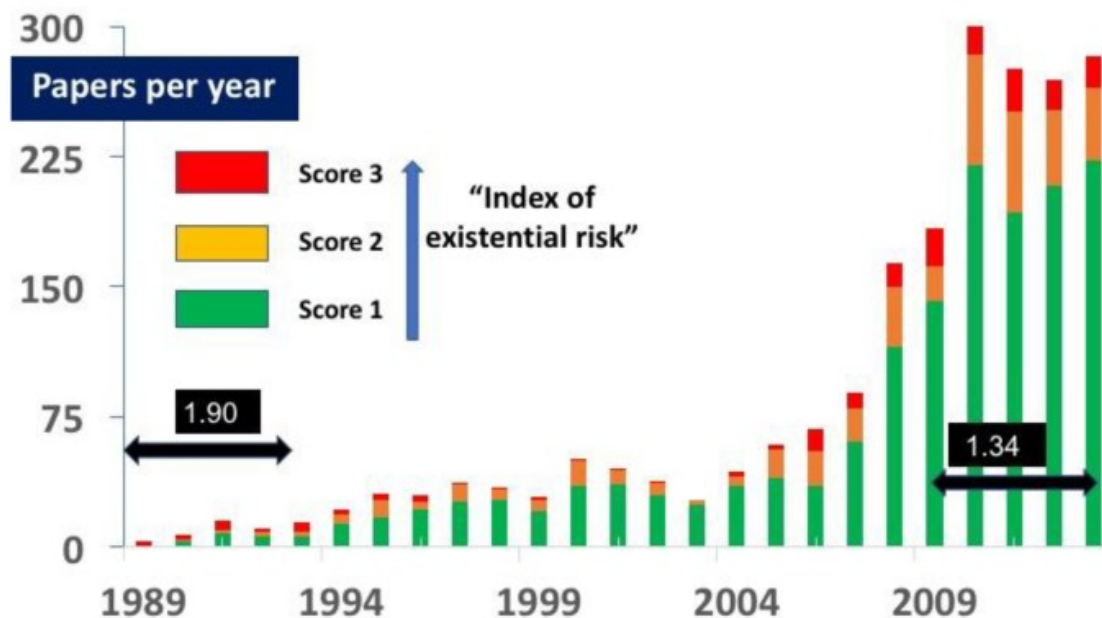


Unexpected effects of climate change: worse food safety, more car wrecks Image: Shutterstock

## **Review: Climate and health literature has grown but remains too narrowly focused**

This study reviews 25 years of climate change and health literature in published scientific journals, exploring the extent to which articles identified global systemic risk. There has been an enormous expansion of the literature over the period. However, recognition of the most severe and cross-disciplinary health risks from climate change was low; most papers instead focused on the narrow, discipline-bounded impacts of infectious disease and extreme heat.

Butler, 2018. *Climate Change, Health and Existential Risks to Civilization: A Comprehensive Review (1989-2013)*. Int J Environ Res Public Health. 15(10). pii: E2266.



Number of papers in each category. Since 1989 the number of papers concerning climate change and health has expanded considerably, particularly since 2008. As this article did not review the entire literature, the actual number of papers published, even in English, is more than shown. The average score of these papers declined from 1.9 in the first quintile to 1.34 in the final five years.

Butler, 2018. *Climate Change, Health and Existential Risks to Civilization: A Comprehensive Review (1989-2013)*. Int J Environ Res Public Health. 15(10). pii: E2266

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