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Climate & Health News

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



NOVEMBER 2019

A news and science roundup organized by the five themes of *The Lancet Countdown on Health and Climate:* health impacts; adaptation; mitigation; economics and finance; and communication and politics.

Health Impacts

News

New report says higher temperatures driving 'alarming' levels of hunger

This year's <u>global hunger index report</u>, ranking 117 countries measuring hunger rates and trends, shows progress since 2000; however the report indicates that hunger rates are 'serious' or 'alarming' in 47 countries, and that the number of undernourished people across the globe is increasing. -- *The Guardian*



Food production is likely to fall due to the climate crisis. Maize is one of the crops already declining. Photo: Jekesai Njikizana/AFP/Getty Images

Five billion people likely face shortages of food and water by 2050 according to new study

Particularly in Africa and South Asia, billions are likely to face shortages of food and clean water in the coming decades as nature changes and in some cases fails. Hundreds of millions more could be vulnerable to increased risks of severe coastal storms, according to a <u>new report on biodiversity and ecosystems services</u>, the first to model how nature and humans can survive together. – *National Geographic*



climate change have brought.

Photo: Jason Larkin, Panos Pictures/Redux

Read also:

- Malaria rates surge in deforested parts of the Amazon -- Mongabay
- <u>Cascading effects of extreme weather: Typhoon Hagibis followed by flooding in Japan</u> AP
- California's power black-outs: a glimpse of future adaptation? CityLab
- West Nile, Eastern equine encephalitis, flesh-eating bacteria flourish in US due to warmer weather – USA Today
- Water inequality is now a global problem Circle of Blue

Science

<u>Systematic review of global cardiorespiratory effects of heatwaves</u>

Researchers identified 54 studies in 20 countries, and found significant association between heatwaves and both cardiovascular and respiratory mortality; most significant associations were observed for the elderly, and those with ischemic heart disease, stroke, heart failure, and chronic obstructive pulmonary disease. Heatwaves were not clearly associated with cardiovascular and respiratory morbidities. – Cheng et al., *Environ Res*



various kinds of cardiovascular and respiratory illnesses. Photo: REUTERS/Mike Segar

<u>Predicted temperature increase and heat-related health burden globally</u>

Authors projected temperatures to 2099 for 28 countries and estimated excess mortality. The average temperature increase is largest in Canada and Finland and smallest in Ireland and Argentina. Excess mortality is increased in tropical countries such as Vietnam and the Philippines, and decreased in Ireland and Australia. Temperature increase is correlated with daily temperature range, while vulnerability to temperature increase is affected by health expenditure and proportion of obese and elderly. – Lee et al., *Environ Int*



Construction worker Dineose Vargas wipes his face at a construction site on the Duncan Canal in Kenner, La., where diseases are flourishing due to climate change. Tuesday, Aug. 13, 2019. Photo: Gerald Herbert, AP

Read also:

- <u>Higher temperatures increase emergency department visits for mental illness</u> Mullins & White, *J Health Econ*
- Review: Climate change and brain diseases Ruszkiewicz et alm Environ Res
- Association of antimicrobial resistance and warmer climate in Europe –
 Kaba et al., Int J Hyg Environ Health
- Association of suicide and dust storms in Korea Lee et al., Environ Int

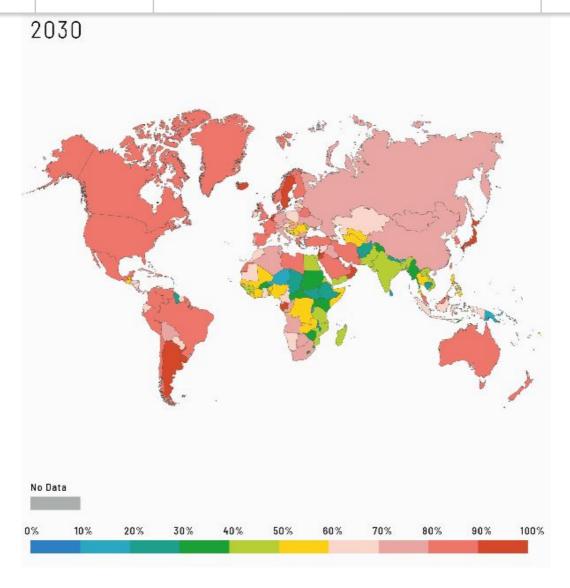
• <u>Sea level rise impact on groundwater salinization in Asian deltas</u> – Islam et al., *Environ Manage*

Adaptation

News

Urban humans: Adapting to climate change in cities

As people are drawn to cities and the global urbanization rate nears 70% by 2050 -- and with climate resilience an overwhelming priority -- city planners will need to go underground, become smarter, go slower, build havens, focus on safety. A primer on these city strategies. – *Place*



Share of the population living in urban areas (2030). Photo: OWID based on UN World Urbanized Projects, 2018.

Read also:

- Can mayors save the world from climate change? NY Times
- A new 'smart city index' ranking 100 cities puts Singapore at the top –
 FastCompany
- <u>Big cities go green to fight against climate change: New York City</u> Futurity
- California power blackouts hit cellphone towers, fraying a communication lifeline – NY Times

<u>rradeoπs in adaptation and mitigation land use policies in urban</u> <u>coastal China</u>

Using as a case study Xiamen City, a large rapidly-industrializating coastal city in China, researchers found land use strategies for climate mitigation and adaptation may work at cross-purposes. However, properly integrated mitigation and adaptation strategies (i.e., climate-sensitive land use planning) can lead to win-win outcomes. – Xu et al. *Environ Int*



View of the Twin Towers of Xiamen City. Photo: Conrad Hotels & Resorts.

Read also:

- <u>Mapping 160 million at risk in China's low-elevation coastal zones</u> Yang et al., Int J Environ Res Public Health
- <u>Space-time dynamics of a triple epidemic: zika, dengue and chikungunya in Rio de Janeiro</u> Freitas et al., *Proc Biol Sci*
- <u>Mapping increased minimum mortality temperatures globally</u> Yin et al., *Nat Commun*
- Adapting health care services for flood risk in the UK Landeg et al., J Health Serv Res Policy
- <u>Green infrastructure in urban planning at the Mexico-US border</u> Giner et al., *J Environ Manage*

News

<u>Stopping global warming will cost \$50 trillion according to Morgan Stanley</u>

To halt greenhouse gas emissions by 2050 in line with the 2015 Paris Agreement, the bank estimates \$50 trillion in investment will be needed in 5 areas: renewable energy; electric vehicles, carbon capture and storage, hydrogen power for industry, and biofuels for aviation and other global transport. — *Forbes*



An aerial view of large icebergs floating as the sun rises near Kulusuk, Greenland, on Aug. 16. A new report estimates that \$50 trillion of investment is needed in the next three decades to reach the 2015 Paris Agreement on emissions. Photo: Felipe Dana/AP

Read also:

IMF suggests carbon tax of \$75 per ton by 2030 to limit global warming –
 Washington Post

Science

Authors suggests there is a clear need for transformative change in land management and food production to address the global land challenges of climate change mitigation, climate change adaptation, combatting land-degradation and desertification, and delivering food security. They assess 40 common practices and find several enhance food productivity. – Smith et al., *Glob Change Biol*



Community workers in China have fixed a one square metre straw checkerboard on the desert sand to curb desertification. Photo: Alok Gupta

Read also:

Income per capita and urbanization are key drivers of meat consumption
 Milford et al., Appetite

Economics & Finance

News

<u>Firms ignoring climate crisis will go bankrupt says Bank of England Governor</u>

Companies and industries that are not moving towards zero-carbon emissions will be punished by investors, the governor of the Bank of England has warned; he also said it was possible that the global transition needed to tackle the climate crisis could result in an



A woman walks along a flooded street in Miami Beach, Florida. Miami-Dade County has been praised by analysts for its infrastructure investments focused on climate preparedness as credit ratings firms begin to focus on climate change. Photo: Lynne Sladky/Associated Press

Read also:

- What climate change could do to municipal bonds CityLab
- Major investors to ask companies to be carbon neutral by 2050 The Star

Science

Multinational corporations and global environmental stewardship

Authors show that a handful of transnational corporations have become a major force shaping the global intertwined system of people and planet. Transnational corporations in agriculture, forestry, seafood, cement, minerals and fossil energy cause environmental impacts and possess the ability to influence critical functions of the biosphere and could substantially accelerate sustainability efforts. – Folke et al., *Nat Ecol Evol*

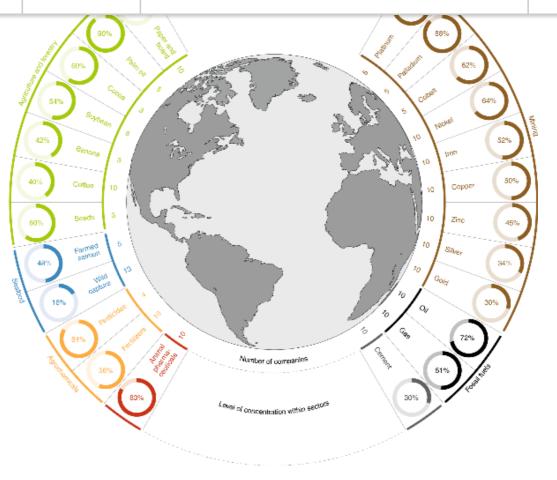


Figure 1. The biosphere in the hands of a few.

Read also:

• Rain intensity under warming climate threatening premium Italian wines – Di Carlo et al., *Sci Total Environ*

Communication

News

Researchers link extreme weather events to emissions from specific companies

Cities, states and ordinary citizens are about to test this new attribution science in the

internal estimate for the cost carbon-reduction policies would have on its business. – *Politico*



A gas flare from a petroleum refinery in Norco, Louisiana. Scientists have now analyzed all the carbon emissions from the Industrial Revolution until now and can calculate just how much can be attributed to individual fossil fuel companies. The breakthrough is being used by governments and other plaintiffs to sue oil and gas companies for the environmental damage caused by their products. Photo: Drew Angerer/Getty Images

Read also:

 Weather Channel hosting a debate on climate change for US 2020 election candidates – Washington Post

Science

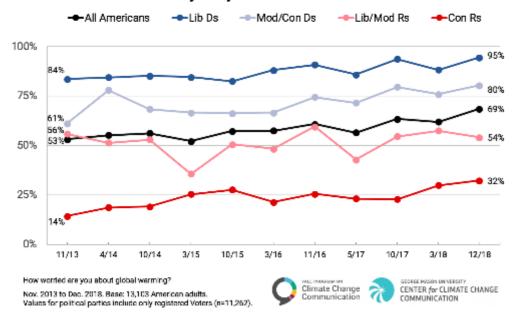
Americans do not distinguish between effective and ineffective climate strategies

This survey of climate-related beliefs in the US found respondents hold persistent misconceptions about climate change causes, and are uncertain about mitigation strategies. Authors recommend targeting risk communication to address gaps in

Crossman et al., Risk Anal

5yr Trend in Proportion of Americans That are Worried about Global Warming

- % who say "Very" or "Somewhat" worried -



Read more:

- Hope motivates climate action when odds low and success possible but not probable – Bury et al. Br J Soc Psychol
- Psychology and climate change Clayton, Curr Bio
- <u>Meta-analysis: Behavioral interventions promote household climate</u> <u>mitigation only to a small degree</u> – Nisa et al., *Nat Commun*



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