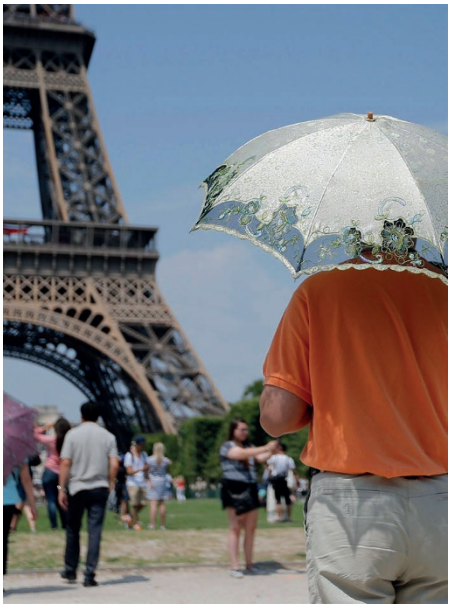
ATTRIBUTION

Heatwave mortality

Environ. Res. Lett. **11,** 074006 (2016)



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The robust attribution of specific climatic impacts — such as crop losses or flood damage — to anthropogenic drivers of increased extreme weather might help inform societal responses to, and assignment of responsibility for, climate change and resultant loss and damages. However, such end to end attribution is challenging.

Daniel Mitchell from the University of Oxford, UK, and co-authors explicitly quantify the role of human activity in heat-related mortality during the 2003 European heatwave, analysing both the Europe-wide temperature response and localized responses over London and Paris.

They find that anthropogenic climate change increased the risk of heat-related mortality in central Paris and London by ~70% and ~20% respectively. Out of the additional summer deaths attributed to the heatwave event in Greater London and central Paris 64 (±3) deaths were attributable to anthropogenic climate change in London, and 506 (±51) in Paris. Such attribution procedures may one day become commonplace following climate related events such as floods and heatwaves. *AB*

CLIMATE COMMUNICATION

Uncertain reporting

Public Underst. Sci. **25,** 656–673 (2016)

Conveying uncertainty remains a major challenge for scientists. In an attempt to aid lay readers in interpreting its latest report, the IPCC used a 'calibrated language' to communicate the likelihood of key findings. The effectiveness of that strategy largely depends on it being understood and reported to a wide audience.

Luke Collins and Brigitte Nerlich from the University of Nottingham, UK, conducted a text analysis of how this language was used by the English-speaking media when reporting the IPCC's Working Group I Summary for Policymakers.

They found that 141 of 1,906 articles in the dataset implicitly referred to the IPCC's calibrated language, with only 30 making explicit reference to the likelihood scales. Reporters often chose to use analogies rather than the calibrated language, comparing the science of climate change to knowledge that smoking causes cancer, for example. The concepts of 'certainty' and 'consensus' were also often conflated.

This suggests that the IPCC's efforts to clarify uncertainty through a calibrated language only had a small impact on wider communication of key climate science findings. *MH*

BIODIVERSITY

Double whammy

Ecol. Lett. http://doi.org/bnrc (2016)

Biodiversity is threatened by many global change drivers, with land conversion and climate change among the most important. Assessments that link species' responses to multiple global change drivers remain rare, however, despite having great potential value for conservation planning.

In an effort to address this knowledge gap, Luke Frishkoff from Stanford University, USA, and co-authors assess the linkages between climate and land-use change impacts for more than 300 species of birds in Costa Rica.

They find that the species that thrive in drier conditions also tend to be able to utilize agricultural areas. Furthermore, species that prefer forest habitats in drier regions were found to use agricultural areas more in wetter regions. Under projected drying conditions, forest-dependent species that avoid agricultural areas were the most likely to experience decreases in habitable range size. The synergy between these drivers of biodiversity loss is likely to reduce biodiversity more severely than would be expected if climate and land conversion effects were acting either antagonistically or independently. *AB*

CRYOSPHERIC SCIENCE

Glaciers status

Clim. Dynam. http://doi.org/bnrf (2016)

DANIEL A. LEIFHEIT / MOMENT / GETTY

Around the world, glaciers are being affected by climate change. Glacier mass balance — the difference between accumulation and loss of mass — allows us to track changes, but it is difficult to draw global conclusions as individual glaciers show significant variability related to the local climate.

To address this, William Medwedeff and Gerard Roe from the University of Washington, USA, statistically evaluated datasets of glacier mass balance from around the world. Data of sufficient time periods was available for 158 glaciers, which have a Northern Hemisphere bias, with most coverage in Europe and North America. The authors investigated the trend in individual datasets and associated variability.

Comparison of seasonal variability revealed that around 70% of the datasets had greater variance in the summer than winter, although this was not true for maritime climates. Negative mass balance trends were typically seen in the summer, with 25% of the individual annual records having statistically significant negative trends. Considering all data available, the trend is negative and significant. These results highlight the overall decline in glaciers globally, and suggest caution at considering individual records as being representative of broader regions. *BW*

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