

HEALTH

Zika virus trial

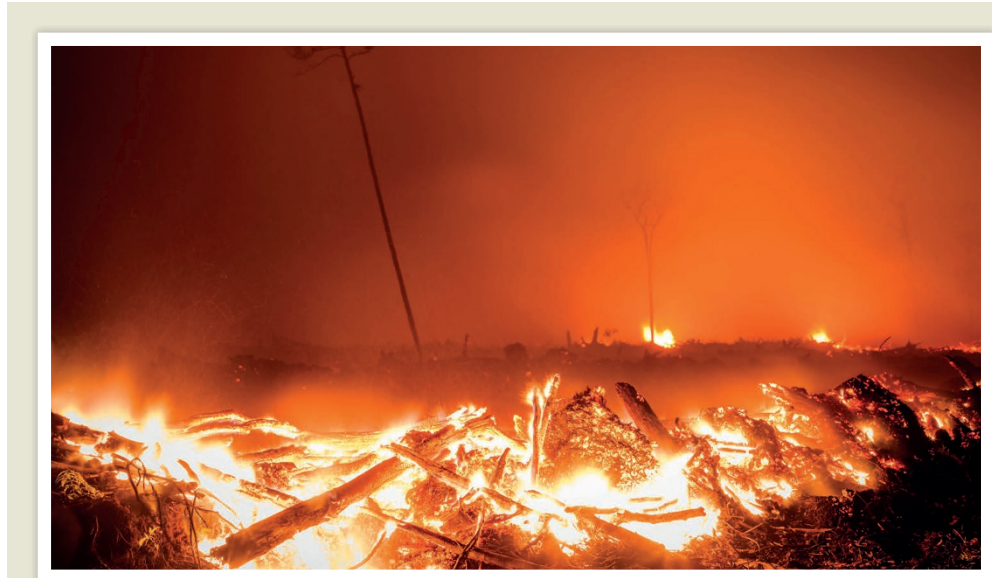
A trial that would release genetically modified mosquitoes in Florida to fight diseases such as the Zika virus can go ahead, the Florida Keys Mosquito Control District decided on 19 November. The initiative had been among those voted on by the state in non-binding referenda in the 8 November US election. The town of Key Haven, the proposed location of the trial, rejected the measure, but voters elsewhere in the broader area of Monroe County approved it. The mosquito board has the ultimate say. The experiment, which would be a US first, needs a new site and approval from the US Food and Drug Administration before it can begin. Separately, the World Health Organization announced on 18 November that the Zika virus no longer presents a health emergency of global concern.

Malaria vaccine

Vaccinations against malaria will begin in sub-Saharan Africa in 2018, the World Health Organization announced on 17 November. A handful of pilot projects will use the first ever malaria vaccine — called RTS,S — against the world's deadliest malaria parasite, *Plasmodium falciparum*. The projects will test the logistics of administering a vaccine that must be given to children 4 times over 18 months, and that yields only partial protection.

CRISPR in humans

A Chinese team of researchers has become the first to inject a person with cells modified using the CRISPR-Cas9 gene-editing technique, with the aim of treating aggressive lung



UILET/FANASTI/GETTY

Peat initiative targets climate and health

Peatlands cover only 3% of the global land surface, but contain about twice as much carbon as the entire biomass of the world's forests. A global initiative launched on 17 November at the United Nations climate meeting in Marrakesh, Morocco, seeks support from governments and international organizations to scale up protection

of the organic carbon stock and restoration of drained wetlands. Drained and burned peatlands are responsible for about 5% of carbon emissions from human activity. Peat forest fires last year in Indonesia (pictured), one of the founding members of the initiative, have been linked to 100,000 premature deaths in the region.

cancer. The participant is part of a clinical trial at the West China Hospital in Chengdu. See page 479 for more.

POLICY

Brexit and science

An influential group of politicians has urged the UK government to guarantee that all European Union researchers living in the country can stay after it leaves the union. In a report on the impacts of Brexit on science, released on 18 November, the House of Commons science and technology select committee advised the government to set out a broader vision for science — including committing to a hefty raise in the country's science spending. The committee also said that the

department in charge of Brexit should move swiftly to appoint a chief scientific adviser, a position currently unfilled and unadvertised. Separately, Prime Minister Theresa May announced on 21 November that her government would invest more in research and development — providing increases worth £2 billion (US\$2.5 billion) per year by 2020 — to keep Britain at the “cutting edge”.

Women only

In a bid to increase the proportion of women in high-ranking positions in academia, the Royal Netherlands Academy of Arts and Sciences will hold two special elections in 2017 to recruit 16 additional female scholars and scientists. Nominations for the first round

of women-only elections, the results of which are to be announced in May, are open until 8 December. Currently only 13% of the academy's 556 members are women. Normal annual elections for 16 new members, male or female, will continue in parallel with the two extra rounds, the academy says.

Climate concern

Australia, Canada and the United States all risk breaking the climate pledges that they made in Paris a year ago, according to an analysis of past and present action by the world's largest national economies. The study by the London School of Economics and Political Science, published on 17 November at the United Nations climate meeting in

Marrakesh, Morocco, finds that Argentina, Saudi Arabia and Turkey are likewise behind on meeting their climate goals. Only France, Germany and the United Kingdom are curbing their domestic greenhouse-gas emissions in line with their Paris targets; Brazil, China and Italy look set to almost keep their pledges, the authors say.

EVENTS

Super satellite

The Geostationary Operational Environmental Satellite-R Series (GOES-R), the United States' most scientifically capable weather satellite yet, successfully launched on 19 November. GOES-R can take pictures every 30 seconds, which is 5 times faster than current GOES satellites can, and in 4 times higher resolution. The rapid imaging will allow it to track severe storms, wildfire smoke and volcanic ash as they spread. GOES-R should be operational within a year.

Quadruple launch

A quartet of Galileo satellites successfully launched on an Ariane 5 rocket (pictured) from French Guiana on 17 November, bringing Europe's civil global positioning system close to completion. The 18 Galileo satellites now in orbit should allow the system to enter into preliminary



service by the end of the year. By 2020, a full constellation of 24 satellites along 3 orbital planes — plus 2 spares per plane — are to routinely transmit their position and the time, allowing users worldwide to locate objects on Earth with extreme precision.

Plant pathogen

The deadly *fastidiosa* subspecies of the plant pathogen *Xylella fastidiosa* has been identified on the island of Mallorca, Spain. It is the first appearance of this subspecies in outside environments in Europe; in April, it had been discovered in oleanders in a greenhouse in Germany. The subspecies is different from that responsible for the recent devastation of olive groves in Puglia, Italy — but the same as that which wreaked havoc last century in grapevines in California, where *X. fastidiosa*

is endemic. The bacterium was first identified in Europe in 2013.

FACILITIES

ITER creeps on

The council of the nuclear-fusion experiment ITER endorsed a radical change of plans on 17 November: the international project will now aim to store hydrogen plasma in its doughnut-shaped container by 2025, postponing full nuclear fusion until 2035. The plan was proposed in 2015 by director-general Bernard Bigot in an attempt to save the seriously late and over-budget project. In spring 2016, two external reviews expressed cautious optimism about Bigot's management changes and the pace of construction at the site in St-Paul-lez-Durance, France.

AWARDS

John Maddox prize

Human-memory researcher Elizabeth Loftus has been awarded the 2016 John Maddox Prize. Loftus, at the University of California, Irvine, has worked on the cognitive psychology of false memories and unreliable eye-witness testimony. She has influenced the US legal system, suffered severe harassment in reaction to her work and highlighted the vulnerability of academics

COMING UP

28 NOVEMBER–
2 DECEMBER

Dark matter and gravitational waves are top of the agenda at the 13th International Symposium on Cosmology and Particle Astrophysics in Sydney, Australia.

go.nature.com/2gc0luo

1–2 DECEMBER

Delegates from Canada and the 22 member states of the European Space Agency meet in Lucerne, Switzerland, to discuss the agency's focus for the coming years.

go.nature.com/2f7wmuk

in the face of legal threats. The John Maddox Prize is awarded annually for championing sound science and evidence in the face of hostility and repression. It is sponsored by *Nature* and the London-based charities the Kohn Foundation and Sense About Science. It is named after the late John Maddox, a former editor of *Nature*. See go.nature.com/2gdrxxo for more.

ENERGY

Texas tea

A massive deposit of untapped hydrocarbon deposits, thought to be the largest ever in the United States, has been discovered in western Texas. The Midland Basin of the Wolfcamp Shale area contains an estimated 20 billion barrels of oil and 1.6 billion barrels of natural gas, the US Geological Survey said on 15 November. The agency has not assessed whether it would be profitable to produce the 'unconventional' resources, which would have to be extracted using special methods.

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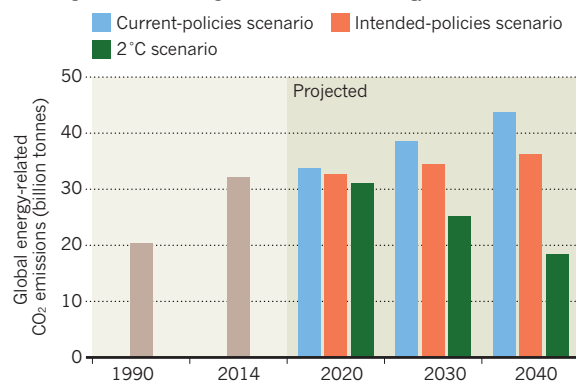
www.nature.com/news

TREND WATCH

The carbon budget to keep global warming below 2°C could be used up by 2040 under current climate policies, says the International Energy Agency in its latest *World Energy Outlook*. The report makes projections of global energy-related carbon dioxide emissions up to 2040 under three scenarios (see chart). Enforcing pledges in the 2015 Paris climate deal offers only a few years' respite. An early peak and subsequent decline in emissions in line with meeting the 2°C target would require extra efforts, the agency says.

CLIMATE PLEDGES FALL SHORT OF 2°C TARGET

Current and probable policies to curb carbon emissions will fail to limit warming to 2°C, according to the 2016 *World Energy Outlook*.



Current policies are those enacted as of mid-2016; intended scenario includes announced policies that will probably be enacted.