

POLITICS

Team Trump

Many of US President Donald Trump's nominees to lead key science agencies had their Senate confirmation hearings last week. Scott Pruitt, Trump's choice to direct the US Environmental Protection Agency, acknowledged that humans are contributing to global warming "in some manner". Representative Tom Price (Republican, Georgia), nominated to lead the Department of Health and Human Services, said he would support funding increases for the National Institutes of Health (NIH), which is in the department's purview. And former Texas governor Rick Perry, nominated to head the Department of Energy, assured a Senate committee that he would protect "all of the science" at the department. Trump has decided to retain Francis Collins as director of the NIH, at least temporarily.

EVENTS

'Three-parent' baby

A girl has been born in Ukraine to an infertile couple, using a fertilization technique that mixes DNA from three people, it emerged on 18 January. The technique — part of a group of therapies known as mitochondrial replacement — was originally designed to prevent mutated mitochondria from being passed from mother to baby. Last September, it was revealed that a boy conceived using a similar technique had been born in Mexico. His mother carried a rare disease, and his parents used the innovative therapy to prevent him from inheriting it. But in the Ukrainian case, the parents used the treatment as a fertility therapy. The baby was created through 'pronuclear transfer',

in what is thought to be the first use of this particular technique to treat infertility.

Data-fraud case

A former researcher at the Lawrence Livermore National Laboratory in California begins a prison sentence on 26 January for a conviction relating to data fraud. Between 2008 and 2012, Darin Kinion received millions of dollars in funding from a US government agency to design and build experimental quantum-computing components. However, he did not set up the relevant equipment, and he submitted false data to the agency to justify further funds. In December 2016, Kinion was sentenced to 18 months in prison — rare

for a scientific misconduct case — and ordered to pay back US\$3.3 million.

DIVERSITY

UK diversity failure

UK universities might not have employed any black academics in senior roles for the past three years, figures released on 19 January by the Higher Education Statistics Agency show. Since 2013–14, records have listed no black employees in the top academic staff categories of managers, directors and senior officials. In 2015–16, the categories covered 565 jobs: 510 employees reported their ethnicity as white, 15 as Asian, 10 as 'other including mixed', and 30 had no ethnicity

recorded. But the agency rounds numbers in such data to the closest multiple of 5, which means a figure of zero could represent up to two members of staff.

FUNDING

US climate grant

The US state department announced on 17 January that it had transferred US\$500 million to the United Nations' Green Climate Fund. The money is part of \$3 billion that the administration of former president Barack Obama pledged to the fund; the United States has now donated a total of \$1 billion. The transfer came days before the inauguration of Donald Trump, who during campaigning



CASSI ALEXANDRA FOR NATURE

Scientists join march against Trump

Scientists were among the hundreds of thousands of people who marched on Washington DC on 21 January, the day after Republican Donald Trump was inaugurated as US president. The march was organized to protest against Trump's comments about women, but many researchers took the opportunity to oppose his positions on scientific issues, which are widely seen as worrisome by the research community. Trump's early actions as president included publishing an energy plan that renews focus on fossil fuels and reiterates his campaign promise to repeal federal climate-change regulations. See pages 435 and 443 for more.

NASA/NOAA had promised to stop all US payments to UN climate-change funds. The Green Climate Fund is intended to help developing nations to cope with climate change.

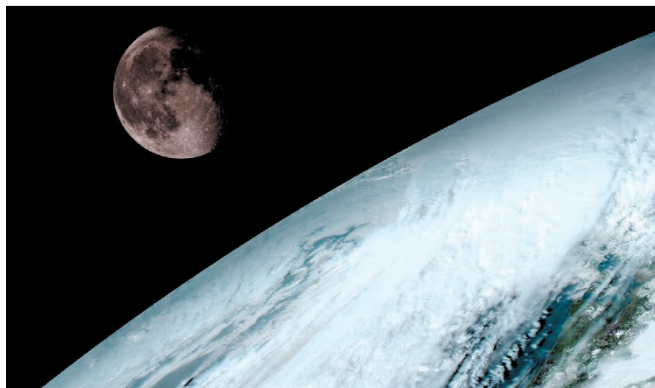
TECHNOLOGY

Atomic clocks fail

Scientists working on Europe's Galileo global navigation system are scrambling to work out what has caused the failure of 9 atomic clocks on 5 of the network's 18 satellites. The clocks are crucial components, but the constellation has so far been unaffected by the failures because each satellite carries four clocks — two of one type and two of another. Galileo began offering initial navigation services last month, and aims to be fully operational in 2020, with 30 satellites in orbit. Officials expect to need fixes for clocks on satellites that have not yet been launched.

Improved imagery

The first images from the United States' latest Geostationary Operational Environmental Satellite (GOES) were released on 23 January (pictured, a view of Earth and the Moon). GOES-16 (formerly known as GOES-R) was launched last November and is the most scientifically capable US weather satellite ever. From its



orbit 35,900 kilometres above Earth, it can take pictures every 30 seconds, much faster than previous GOES satellites. It is expected to be fully operational by November, and will provide improved meteorological, solar and space-weather forecasts.

POLICY

GM proposals

The US Food and Drug Administration released draft rules on 18 January describing how the agency might regulate animals modified using gene-editing tools such as CRISPR. The most controversial of three proposed regulations declares that all animals whose genomes have been intentionally altered will be examined to ensure they are safe and effective for their intended use, in a process similar to that used to approve new animal drugs. And on 19 January, the US Department of Agriculture proposed

changes to regulations governing genetically engineered plants. The revised framework would exclude some engineered crops, for example those in which DNA has been deleted rather than inserted, or that recapitulate a natural DNA sequence found in close relatives of the crop. It is not clear how the new US president will carry the proposals forward.

Carbon capture

The UK government spent £100 million (US\$125 million) on a carbon capture and storage (CCS) funding scheme that has now been cancelled, says an auditor's report. The report concluded that the design of the scheme contributed to its failures. Two projects to reduce greenhouse-gas emissions by capturing carbon dioxide and storing it underground were shortlisted in a government competition,

COMING UP

31 JANUARY –
1 FEBRUARY

The Festival of Genomics is held in London, bringing together people from academia, industry and health care.

go.nature.com/2knrtmo

30 JANUARY –
10 FEBRUARY

The scientific subcommittee of the United Nations' Committee on the Peaceful Uses of Outer Space meets in Vienna.

go.nature.com/2jnaf0v

before cost concerns led to the competition's cancellation in 2015. A previous scheme was cancelled in 2011, at a cost of £68 million. The United Kingdom still does not have a large-scale CCS plant; there are 15 worldwide.

UK industry plan

The UK government unveiled a post-Brexit industrial strategy on 23 January. Part of the plan focuses on research and innovation, and raises the possibility of making specific deals with businesses to boost sectors including the life sciences, nuclear power and low-emissions vehicles. A preliminary policy document includes "investing in science, research and innovation" as one of the strategy's ten key pillars, but does not make any specific new funding commitments. The plan, which was welcomed by several academic groups, also suggests increasing the number of science PhD students; establishing a programme to recruit top-rank academics from abroad; and launching a dedicated research institution for battery technology.

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TREND WATCH

The average global surface temperature hit a record high for a third year running, according to separate analyses released by NASA and the US National Oceanic and Atmospheric Administration (NOAA) on 18 January. NASA found that global temperatures were 0.99°C above the long-term average (see chart). NOAA calculated a rise of 0.94°C. Both reported that the lingering El Niño event had a big impact early in the year. Of the 17 warmest years on record, 16 have occurred since 2001.

2016 WAS THE HOTTEST YEAR ON RECORD

The global average temperature in 2016 was almost a full degree warmer than the mid-twentieth-century mean, continuing a long-term warming trend, according to NASA's analysis.

