

## POLITICS

### Gender bias

The UK Parliament's influential House of Commons science and technology select committee came under fire after announcing eight members on 12 September, all of whom are men. Norman Lamb, the new head of the cross-party body (which does not select its membership), added his voice to complaints about the lack of women. The Conservatives have since put forward two further members, one of whom, Vicky Ford, is a woman. That leaves one unfilled Labour Party position on the committee, which is tasked with holding the government to account on scientific topics.

### India–Japan talks

Japan and India have agreed to cooperate on a range of science and technology activities, including an exchange programme between the mathematical and life sciences to foster talented theoretical biologists. The agreements were part of the 12th India–Japan Annual Summit, held on 13–14 September in Ahmedabad and Gandhinagar, India, which included discussions about disaster risk management, infrastructure and development. India's Department of Biotechnology and Japan's National Institute of Advanced Industrial Science and Technology also re-signed a five-year memorandum of understanding to promote research collaborations in the life sciences and biotechnology.

### Dual-use research

Experiments involving dangerous biological agents that could be misused to cause harm, such as some

viruses and bacteria, are poorly regulated in the United States, according to a 14 September report by the US National Academies of Sciences, Engineering, and Medicine. The US government requires special oversight of experiments on only 15 biological agents and toxins, and does not sufficiently address potential threats posed by synthetic-biology experiments, the report concludes. The analysis also finds that most researchers do not know how to identify and mitigate biosecurity risks associated with such experiments, and that there is no established procedure for seeking advice

from federal agencies. The report calls for international engagement on the topic, and for better training to help scientists recognize and address any biosecurity risks that their research presents.

## EVENTS

### Nuclear letter

Eighty-five nonproliferation experts signed a letter on 13 September urging US President Donald Trump to reaffirm support for an international deal, signed in July 2015, that limits Iran's nuclear programme. The International Atomic Energy Agency has verified Iran's compliance with the deal,

which called for the country to limit uranium enrichment and stop producing plutonium in exchange for a partial lift of international sanctions. But observers have become alarmed by statements in which Trump suggested that he might not recertify Iran's compliance to the US Congress in mid-October — something that he needs to do every 90 days to prevent US sanctions from snapping back into place.

### Media policy

A document leaked anonymously from the US Centers for Disease Control and Prevention (CDC) suggests that the agency is becoming more tight-lipped than in the



VINCENT J. MUSI/NGC

## Snow leopard moves off endangered list

Snow leopards are no longer officially endangered, according to the latest International Union for Conservation of Nature (IUCN) Red List, which now puts them in the less-threatened 'vulnerable' category. But populations of the leopard (*Panthera uncia*) are still declining, the IUCN warns, and the risk of extinction is still high. The list, updated on

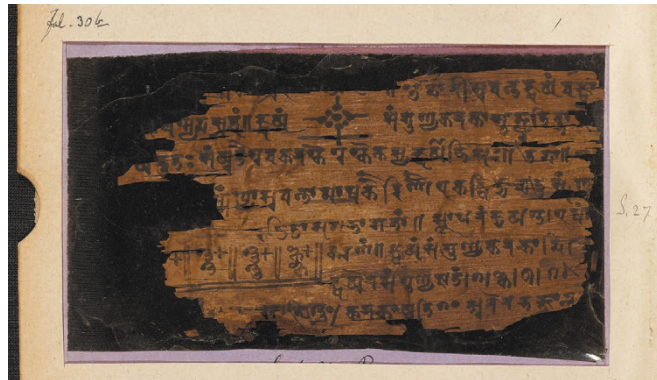
14 September, outlines the risks to 87,967 species. In other changes, five of the six most prominent species of ash tree in North America have been classified as critically endangered because of the threat posed by an invasive beetle, and the Christmas Island pipistrelle bat (*Pipistrellus murrayi*) is officially extinct.

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 past. On 12 September, the news website Axios reported that the e-mail notice, dated 31 August, instructs all CDC employees not to speak to reporters “even for a simple data-related question”. Several health journalists pushed back, calling the move a “gag order”. According to an updated CDC media-policy document sent to *Nature* by Shelly Diaz, senior press officer at the agency, employees must coordinate with the public-affairs office when they are approached by reporters.

RESEARCH

**Ancient zero**

Indian mathematics was already using a symbol for zero in the third century AD, some 500 years earlier than previously thought, the Bodleian Libraries of the University of Oxford, UK, announced on 14 September. The claim follows new carbon dating of the birch-bark leaves of the Bodleian’s Bakhshali manuscript (pictured), discovered in 1881 in what is now Pakistan. The manuscript uses a dot, not yet as a number in its own right, but as a ‘placeholder’ to denote numbers such as 10 or 100. The Babylonians and Mayans had done this long before, but the Bakhshali symbol is the forerunner of the zero we recognize today:



the first recorded use of zero by itself is by an Indian mathematician in the seventh century. Part of the Bakhshali manuscript will be displayed in an exhibition on Indian science and innovation that opens on 4 October at the Science Museum in London.

**Cassini grand finale**

On 15 September, the Cassini spacecraft plunged into Saturn’s atmosphere in a planned move to end the probe’s 13-year study of the planet and its moons. Engineers steered the craft, which was low on fuel, towards its fiery death to keep Cassini from contaminating the gas giant’s moons, including Titan and Enceladus, which could harbour signs of life. The spacecraft hurtled towards its end at about 113,000 kilometres per hour, entering Saturn’s atmosphere roughly 10 degrees north of

the planet’s equator. Cassini’s final images, transmitted in the hours before its death, included shots of Enceladus setting behind Saturn, as well as a final close-up of some of the planet’s rings. See page 317 for more.

**Gravity satellites**

A battery failure caused one of the twin Gravity Recovery and Climate Experiment (GRACE) satellites to lose contact with Earth for four days starting on 4 September, NASA announced on 14 September. Operators recovered the link but are now planning for the mission to end no later than November, when the satellite will move out of full sunlight and lose all battery power. GRACE, a joint project between NASA and the German aerospace agency DLR, has been in orbit since 2002, and was meant

to last for only five years. It has made fundamental hydrological measurements, such as tracking the melting of Greenland’s ice sheet and the depletion of groundwater around the world. A follow-on mission is planned for launch in early 2018.

**Polar station**

The Canadian High Arctic Research Station in Cambridge Bay will officially open its doors in October. Planning and construction of the station, which is meant to fill a gap in the region’s research infrastructure, took ten years. The Can\$200-million (US\$164-million) facility will be the headquarters of the country’s major polar-science research agency, Polar Knowledge Canada. It will support Arctic-focused research endeavours related to renewable energy, environmental science, sea-ice changes and improving local infrastructure. The station includes necropsy and genomics labs, as well as teaching spaces and public spaces for community outreach.

FUNDING

**Job cuts**

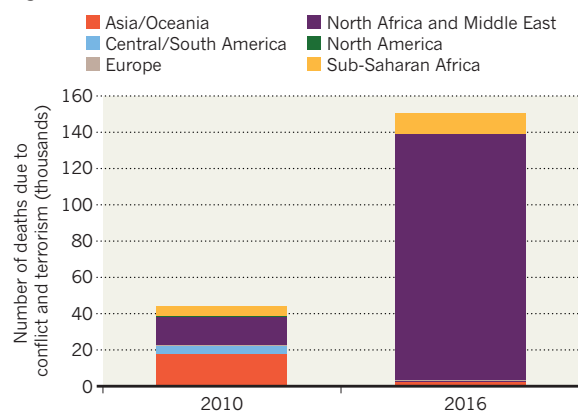
Australia’s national science agency plans to cut up to 57 research positions from its digital-innovation and minerals-research groups. On 13 September, an e-mail sent to staff at the Commonwealth Scientific and Industrial Research Organisation (CSIRO) said that the cuts were necessary to shift these groups’ “science capability in line with market demands”. The agency, which also plans to recruit up to 25 new staff members, aims to generate 45% of its revenue from non-government sources by 2019. The lay-offs follow substantial job cuts at the agency in the past 5 years, including about 275 staff positions axed in 2016.

TREND WATCH

Deaths from conflict and terrorism have jumped since 2010, says a 14 September report. The global total was around 150,000 in 2016, driven mainly by conflicts in North Africa and the Middle East. Overall, non-communicable diseases accounted for 72.3% of deaths in 2016, with ischaemic heart disease, diabetes and mental-health and substance-use disorders all rising worldwide. But deaths from infectious diseases have decreased, and deaths among children under 5 years old fell below 5 million for the first time.

COST OF WAR

Struggles in North Africa and the Middle East are driving a global rise in conflict deaths.



SOURCE: GBD 2016 CAUSES OF DEATH COLLABORATORS/LANCET 390, 1151–1210 (2017)

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