

SEVEN DAYS

The news in brief

POLICY

Swedish stimulus

The Swedish government unveiled plans on 2 February to make the country carbon neutral in less than two decades. A law expected to pass through parliament in March would set a binding target of reducing domestic greenhouse-gas emissions from industry and transport by 85% by 2045, relative to 1990 levels. Remaining emissions would be offset by natural carbon capture through forestation and by investment abroad. On announcing the move, Sweden's environment minister, Isabella Lövin, said that her country wants to set an example at a time when climate action in the United States is threatening to lose momentum.

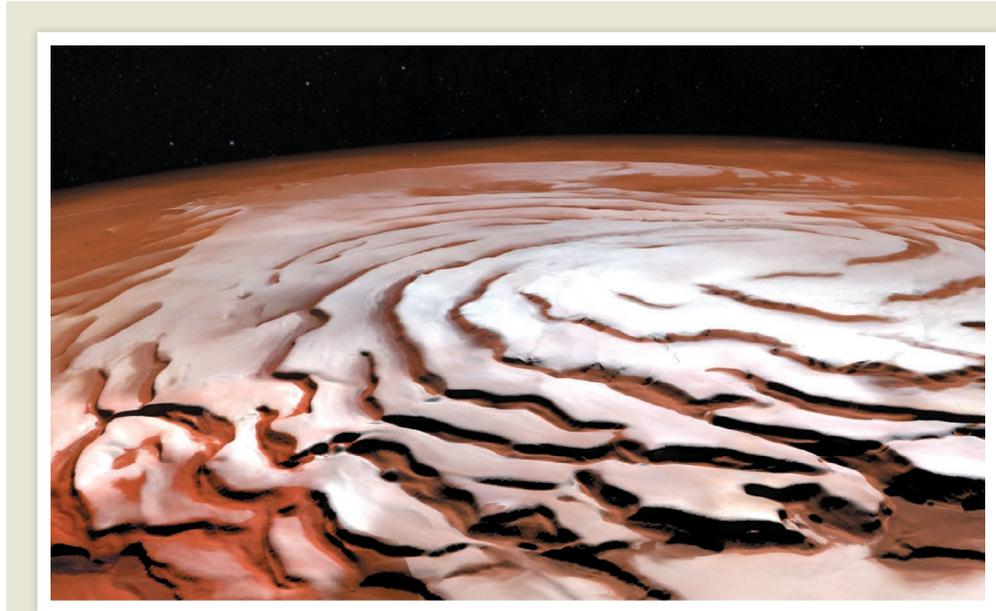
PEOPLE

UK science czar

The UK government's chief scientific adviser has been appointed to possibly the biggest science job in the country. The government announced on 2 February that Mark Walport will take the helm of a new body called UK Research and Innovation (UKRI), which is expected to oversee a pot of more than £6 billion (US\$7.5 billion) in government science spending when it comes into being in 2018. Walport's appointment is significant because there are fears that UKRI could reduce the freedom of the nine individual bodies that currently allocate much government science funding.

Researcher on trial

An Iranian researcher in disaster medicine, who is accused of collaboration with a "hostile government", has been threatened with the death sentence by a judge on Iran's revolutionary court, according



ESA/DLR/FU BERLIN; NASA MGS MOLA SCIENCE TEAM

Martian polar ice cap sculpted by wind

A seasonal layer of carbon dioxide frost coats Mars's northern polar ice cap in this image, which was released on 2 February by the European Space Agency (ESA). Each winter, carbon dioxide precipitates out of the cold atmosphere and onto the ice cap. The image is a composite of pictures taken between

2004 and 2010 by ESA's Mars Express spacecraft. The distinctive spiral troughs were probably carved by wind. Radar investigation by Mars Express and NASA's Mars Reconnaissance Orbiter revealed that the ice cap consists of many layers of ice and dust extending to a depth of about 2 kilometres.

to close contacts of the scientist. Ahmadreza Djalali, who had been affiliated with research institutes in Italy, Sweden and Belgium, was arrested in April 2016 during an academic visit to Iran. According to sources close to Djalali, he has been kept in solitary confinement for three months in a Tehran prison and was forced to sign a confession. Djalali's trial is scheduled to start later this month.

POLITICS

Romanian protests

Angry Romanian scientists have called on their new government to reverse its order for national science-advisory bodies to immediately stop their work,

pending reorganization. The government made the order on 31 January, when it also issued a decree giving amnesty to some officials accused of corruption; this was later withdrawn after mass protests. An open letter signed by nearly 600 academics and their supporters says that the councils, which are non-political, should be immune to government change. Signatories fear that the proposed reorganization may allow amnesty for politicians who have committed scientific misconduct.

AWARDS

Dual tribute

The CRISPR gene-editing system, which has transformed biological

research and biomedicine, drew yet more major prizes last week. On 31 January, the Madrid-based BBVA Foundation announced that its €400,000 (US\$427,000) Frontiers of Knowledge Award in Biomedicine would be shared by Francisco Mojica, Emmanuelle Charpentier and Jennifer Doudna. Mojica discovered the CRISPR repeating DNA sequences that some bacteria use to fight viral infections. Charpentier and Doudna developed the universal CRISPR editing tool — for which they have also won the ¥50-million (US\$445,000) Japan Prize, announced on 2 February. They share it with cryptographer Adi Shamir.

FUNDING

India's budget

Health research, biotechnology and space science are the main beneficiaries of robust budget increases announced by the Indian government on 1 February. Overall, science spending in 2017 by eight ministries (excluding nuclear and defence research) will increase by 11% — well above the projected 5% inflation rate — to 360 billion rupees (US\$5.3 billion). Health research, including the fight against diseases such as leprosy and measles, will get 31% more government funding. Biotechnology will get an extra 22%, and India's aspirations in space, including plans to land a rover on the Moon in 2018, will benefit from a 21% budget increase for space science.

EVENTS

Ice station

The British Antarctic Survey (BAS) announced on 2 February that it had completed moving its Halley VI research station 23 kilometres across the floating ice platform on which it rests. The 13-week operation, which used tractors to tow the station's 8 modules (pictured), was prompted by



fears about a growing crack in the Brunt ice shelf. Staff were evacuated last month for the coming Antarctic winter after another unpredictable crack in the ice was discovered. The base, which is designed to be relocated periodically, is ready for re-occupation in November, the BAS said.

Borehole record

The Iceland Deep Drilling Project completed the deepest-ever geothermal well on 25 January. After 168 days of drilling, the well bottomed out at 4,659 metres, just shy of its 5-kilometre goal. But temperatures and pressures were so high at the bottom of the well that fluids were observed behaving in a 'supercritical' fashion — as neither liquid nor gas — an observation that was one of the project's goals. The well, on Iceland's volcanic Reykjanes peninsula, is being used to explore the source of geothermal systems and to see

whether supercritical fluids can be tapped as an energy resource.

RESEARCH

Stem-cell trial

Japan is resuming pioneering clinical research using induced pluripotent stem (iPS) cells. A team led by Masayo Takahashi at the RIKEN Center for Developmental Biology in Kobe will make suspensions of iPS cells derived from retinal cells, and transplant them into people with age-related macular degeneration, an eye condition that can cause blindness. Takahashi started a similar study in 2014 — the first to use iPS cells in humans — but the cells prepared for the second patient were found to have genetic abnormalities and no other participants were recruited. On 1 February, Japan's health ministry approved a new five-patient study. This time the team will use banked iPS cells created

COMING UP

11–15 FEBRUARY

Biophysicists gather in New Orleans, Louisiana, for the Biophysical Society's 61st annual meeting.

go.nature.com/2jtfz17

12–16 FEBRUARY

At an international meeting in Queenstown, New Zealand, scientists discuss the latest research in advanced materials and nanotechnology.

confer.co.nz/amn8

15 FEBRUARY

India's Polar Satellite Launch Vehicle launches a high-resolution Earth-observation satellite from the Satish Dhawan Space Center in Sriharikota.

go.nature.com/2jteerk

from anonymous, healthy donor cells rather than from the participants themselves.

GM wheat trial

A UK research laboratory has been granted permission to begin field trials of a wheat plant that has been genetically modified (GM) to improve photosynthesis. Scientists at Rothamsted Research in Harpenden have already shown that wheat plants modified with a gene from stiff brome grass (*Brachypodium distachyon*) are more efficient at photosynthesis in greenhouses than conventional wheat, and they now hope to see improved yields from plants grown outside in more realistic conditions. In 2012, GM trials at Rothamsted attracted small but high-profile protests. The lab's researchers have been among the leading advocates of such trials in Europe.

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TREND WATCH

Women, non-Asian ethnic minorities and disabled people are under-represented in science and engineering in the United States, according to the National Center for Science and Engineering Statistics (NCSES). Women receive about half of all science and engineering degrees but hold less than 30% of jobs in these areas. White men, who in 2015 comprised only 31% of the US population, held nearly half of these jobs. Although female and minority representation has risen, disparities remain.

IDENTITY GAP

Women and ethnic minorities are under-represented in white-male-dominated US science and engineering (S&E) occupations.

