

POLICY

Palm-oil ban

On 13 June, Norway became the first country to ban government use of biofuels made from palm oil. Global demand for the oil is a major driver of deforestation in Indonesia and Malaysia; studies suggest that palm oil-based biodiesel produces up to three times more carbon emissions than conventional diesel. The Norwegian parliament resolution follows a European Parliament vote to urge the European Commission to end the use of palm-oil-based biodiesel by 2020.

Texas stem cells

Texas governor Greg Abbott signed a bill on 12 June that will grant seriously ill people the right to try unapproved stem-cell therapies. The law will apply to stem cells harvested from adult tissues. To be eligible, patients must have a severe chronic disease or terminal illness, and their physician must have deemed all applicable approved treatments either unavailable or unlikely to work. The stem-cell therapy must be undergoing clinical trials, and its use must be overseen by an ethics committee. Even so, the bill has stoked concerns among some researchers that it will boost the growing use of unapproved stem-cell therapies in the United States. The law will go into effect on 1 September.

ARPA-E check-up

The US Department of Energy's Advanced Research Projects Agency — Energy (ARPA-E) is on track in its mission to fund and develop high-risk energy research that could result in technological breakthroughs, the US National Academies of Sciences, Engineering, and Medicine announced



STR/AFP/GETTY

Lift-off for China's first X-ray telescope

China launched its first astronomy satellite on 15 June, an X-ray telescope that will look for black holes, pulsars, neutron stars, γ -ray bursts and other high-energy phenomena. The 2.5-tonne Hard X-ray Modulation Telescope (HXMT), known as Insight, lifted off on a Chinese Long March-4B rocket from a site in the Gobi Desert. Chinese scientists want to use

the satellite to learn how to incorporate pulsar observations in spacecraft navigation systems. Insight will also scrutinize γ -ray bursts for hints about gravitational waves. It will orbit 550 kilometres above Earth, so its three telescopes will pick up X-rays that terrestrial telescopes would be unable to detect because of atmospheric absorption.

on 13 June. The progress report found that one-quarter of ARPA-E's projects have garnered follow-on investment from private industry or public agencies, half have produced peer-reviewed publications and 13% have received patents. President Donald Trump has proposed eliminating up to 93% of the agency's US\$291-million budget, but the report suggests that funding should be increased.

PUBLISHING

Journal blacklist

On 15 June, scholarly services firm Cabell's International in Beaumont, Texas, launched

a blacklist of 'predatory' academic journals: those that deceive their authors or readers by, for example, charging fees to publish papers without conducting peer review. The initiative comes five months after a widely read blog listing suspected predatory journals and publishers, run by academic librarian Jeffrey Beall at the University of Colorado Denver, was taken offline. Cabell's index — which lists about 4,000 journals — differs from Beall's in that it is available only to paying subscribers. The company uses a set of 65 criteria to judge whether journals are predatory. It also publishes a 'whitelist'

of trustworthy journals, to which about 800 institutions subscribe. See go.nature.com/2tici9n for more.

RESEARCH

Kepler's tally

Astronomers have spotted 10 more Earth-sized extrasolar planets orbiting in the habitable zones of their stars. The discovery is part of the last planetary catalogue compiled during the primary mission of NASA's Kepler spacecraft. The 4-year hunt brings Kepler's total count of planet candidates to 4,034, of which more than half have been confirmed. The mission has since turned

its gaze from a point in the Cygnus constellation to elsewhere in the Milky Way galaxy. The final catalogue also revealed that small exoplanets tend to come in two categories: rocky ones a little bigger than Earth, and worlds enveloped in gas that are slightly smaller than Neptune.

Exascale computing

The US Department of Energy has awarded US\$258 million to six companies pushing towards the next generation of supercomputers. Currently, the two most powerful supercomputers are in China; a US machine ranks fourth. Both countries are working towards exascale computing, in which systems will be able to carry out a billion billion calculations a second — making them 1,000 times more powerful than today's most dominant machines. The awardees will receive funding over three years and include longtime builders of supercomputers, including Cray and IBM.

FACILITIES

Seed-vault cash

The Norwegian government has committed 37 million kroner (US\$4.4 million) to upgrade the Svalbard Global Seed Vault (pictured), a repository in the Norwegian Arctic intended to provide



a long-term backup for the world's seeds. The investment comes after rain and meltwater from permafrost thawed by unusually warm temperatures flooded the vault's entrance tunnel last October; no seeds were damaged, but the government agency responsible for the vault said that it would seek to secure the facility. Improvements will include waterproofing the tunnel's inside wall, constructing drainage ditches and removing heat sources. An initial 14 million kroner will be used for design work on the upgrades.

EVENTS

Package bomb

A professor of mechanical engineering at Yonsei University in Seoul was injured by a package bomb that had been planted at his office by one of his graduate students on 13 June, according to South Korean

media reports. The professor, identified by police only as having the surname Kim, suffered second-degree burns and was treated at a hospital on campus. The device was built from a coffee cup packed with screws, batteries and gunpowder. Policed arrested and charged the suspect, whose surname is also Kim. He told the authorities that he had intended to injure rather than kill, and that he constructed the bomb after being reprimanded over his research and thesis work. The professor said that he'd had a disagreement with his student over the thesis-writing process.

Cyberattack

University College London (UCL) was hit by a 'ransomware' attack on 14 June. In such events, hackers encrypt data on a computer system and demand money for the digital key to unlock them. UCL said that infection probably

came from users accessing a compromised site and may have involved a new type of virus, because it had not been picked up by antivirus software. The university said it had restored full access to affected computer drives on 19 June.

PEOPLE

Harvard head

Drew Gilpin Faust, the first female president of Harvard University in Cambridge, Massachusetts, will step down in June 2018 after 11 years in the post, the institution said on 14 June. During Faust's tenure, Harvard raised US\$2.9 billion for its science faculties, and created the School of Engineering and Applied Sciences. She oversaw the launch of a number of initiatives at the university, including the One Harvard project to foster cross-disciplinary collaborations, an innovation programme called i-lab, and the Science and Engineering Complex, which is scheduled to open in 2020 and will expand the university's engineering facilities. Harvard's trustees are expected to form a committee to search for the university's next president.

POLITICS

French election

The nascent party of French President Emmanuel Macron — La République en Marche! — swept to victory in the country's parliamentary elections on 18 June, winning a comfortable majority in the National Assembly, the lower house of parliament. Among the party's members of parliament, many of whom are political newcomers, is the mathematician and Fields Medal winner Cédric Villani. The outcome gives Macron a mandate to push his pro-business, pro-innovation and pro-European Union agenda. See page 459 for more.

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TREND WATCH

The United States has the world's highest number of supercomputers — but for the first time none of its systems is among the three most powerful, according to the biannual TOP500 ranking. The United States has 169 supercomputers, followed by China with 160. The planet's most powerful computer is still China's Sunway TaihuLight, which can perform 93 quadrillion calculations per second. A Chinese computer also takes second position, and in third place is the Swiss Piz Daint system.

SUPERCOMPUTING POWERS

The United States has the most supercomputers in the world, but China's Sunway TaihuLight is the most powerful system.

