

# SEVEN DAYS

The news in brief

## PUBLISHING

### Preprint push

A preprint server for the Earth and planetary sciences called the Earth and Space Science Open Archive (ESSOAr) should launch early next year, the American Geophysical Union in Washington DC announced on 21 September. The site, to which geoscientists can post findings before peer review, faces competition. Researchers are planning to launch another service, EarthArXiv, soon on a platform hosted by the Center for Open Science in Charlottesville, Virginia; the centre already supports preprint sites for engineering, sociology and psychology, among other fields.

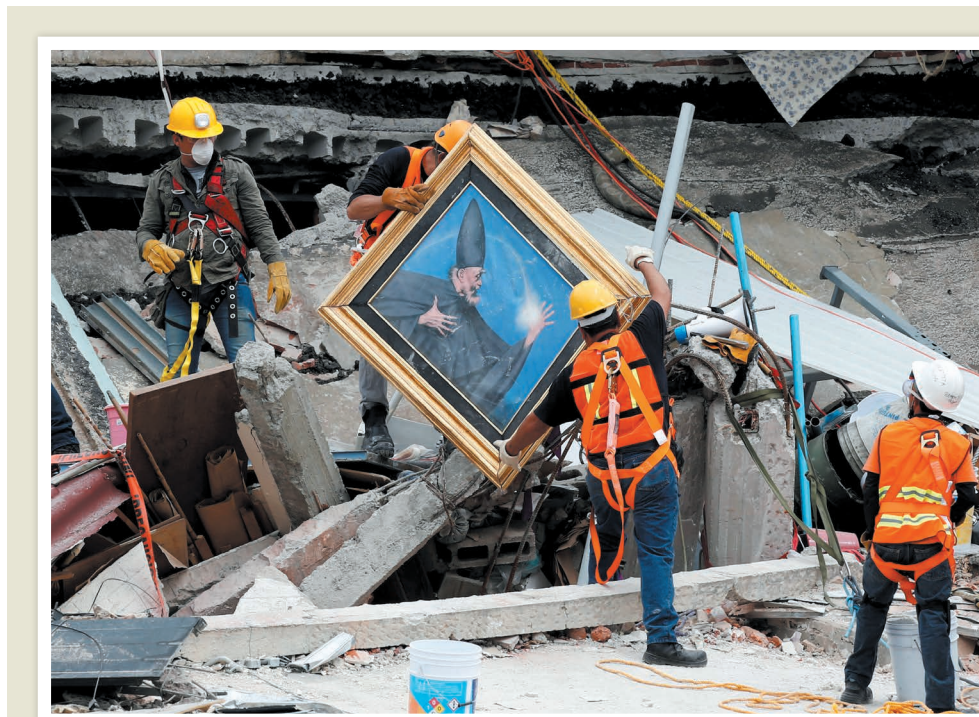
## POLITICS

### US-UK deal

The United States and the United Kingdom have signed their first umbrella agreement to collaborate on science. The 20 September deal commits the countries to improving scientific cooperation, for example by enabling easy travel of people and equipment between the two nations. At the same time, the United Kingdom announced £65 million (US\$88 million) in funding from existing science spending for the Deep Underground Neutrino Experiment, which will construct neutrino detectors in Batavia, Illinois, and Lead, South Dakota, to study these subatomic particles.

### German election

Angela Merkel is set for a fourth term as German chancellor after her Christian Democrat Union party won the largest share of seats in the nation's 24 September election. But she will have to negotiate with new allies to form a leadership coalition,



CARLOS JASSO/REUTERS

## Mexico hit by two earthquakes in 12 days

A magnitude-7.1 earthquake struck central Mexico on 19 September, killing more than 320 people and reducing buildings to rubble in the states of Puebla, Morelos and Guerrero, as well as in Mexico City. The event came 12 days after a magnitude-8.1 tremor hit off the state of Chiapas — Mexico's largest quake in more than

a century — and 32 years to the day after the country's most damaging tremor, an 8.0, killed thousands. Like the recent Chiapas quake, the 19 September tremor struck in the middle of the Cocos geological plate. Seismologists say that the 7 September and 19 September quakes are unlikely to be linked. See page 442 for more.

after her political partners in the previous government, the Social Democrats, lost support and declared they would enter opposition. That could open up policy rifts on issues such as gene editing and climate regulations. The far-right group Alternative for Germany (AfD) saw its support surge, and it is now the third-largest in parliament, but Merkel ruled out including it in a coalition. See page 441 for more.

### Space agency

Australia will establish a national space agency. Michaelia Cash, the country's acting minister for industry,

innovation and science, made the announcement on 25 September, coinciding with a meeting of the 2017 International Astronautical Congress in Adelaide. Australian scientists welcomed the news, saying that it will make international space collaborations easier and help to foster jobs in space industries. The announcement comes ahead of the release of a government-commissioned expert review into Australia's space-industry capabilities, due for completion by March 2018. The review will now also develop a charter for the space agency, Cash says.

## RESEARCH

### RNAi victory

An RNA interference (RNAi) therapy has become the first to meet its goals in a phase III clinical trial. Companies have struggled for years to produce a successful RNAi therapy — which uses bits of RNA to interfere with the expression of target genes — prompting some experts and investors to question the feasibility of such treatments. But on 20 September, Alnylam Pharmaceuticals of Cambridge, Massachusetts, announced that its drug patisiran had significantly

FRED BAVENDAM/MINIDEN/INGC  
alleviated symptoms in a trial of 225 people with hereditary ATTR amyloidosis with polyneuropathy, a rare and potentially fatal disease caused by mutations in the *TTR* gene. Patisiran lowers levels of the TTR protein, making it easier for the body to clear clumps of mutant versions of the molecule that can lead to nerve and organ damage.

## ENVIRONMENT

**Arctic ice**

Arctic sea-ice cover seems to have bottomed out for the year, at the eighth-lowest annual minimum in the 38-year satellite record, the US National Snow and Ice Data Center announced on 19 September. On 13 September, the ice cover was 4.64 million square kilometres, which is 1.25 million square kilometres more than the same date in 2012, the year of record-low ice extent. Low atmospheric pressure over much of the Arctic Ocean this summer helped to stem this year's ice

**Marine parks**

More than 1,200 scientists from 45 countries have signed an open letter urging Australia to reconsider plans to reduce protections in its marine parks (pictured, a pink anemonefish (*Amphiprion perideraion*) in the Great Barrier Reef Marine Park). The 21 September



letter states that, with its proposal to expand the size of fishing zones in marine reserves, released in July (see *Nature* <http://doi.org/cdd4>; 2017), the government is ignoring scientific evidence. The authors say substantial research has shown that strict protection from fishing conserves biodiversity, helps damaged ecosystems to recover and improves the health of fisheries. Public comments on the draft plans closed on 20 September.

**Korean air**

South Korea announced a set of measures to fight its worsening air pollution on 26 September. The government will shut down seven ageing coal plants, introduce monitoring and levies on industrial emitters of nitrogen oxide and offer incentives to switch from diesel to electric vehicles. Such actions are aimed at achieving a 30% reduction in domestic emissions of hazardous fine particulate matter less than

2.5 micrometres in diameter ( $PM_{2.5}$ ) by 2022. The nation's average exposure to  $PM_{2.5}$  is the highest of all member nations in the Organisation for Economic Co-operation and Development.

## EVENTS

**Discrimination suit**

A former vice-president of intellectual property at Synthetic Genomics, a biotechnology company co-founded by genomics entrepreneur Craig Venter, has filed a gender-discrimination lawsuit against the firm. The suit, reported by *The San Diego Union-Tribune* on 19 September, alleges that senior-level staff at the company, based in La Jolla, California, hired and promoted women less often than men, and that women were regularly denigrated and excluded from meetings. It also enumerates the under-representation of women in senior-level positions within the company.

Teresa Spehar, the plaintiff, had worked at the company for more than eight years before she was fired in June. Synthetic Genomics chief executive Oliver Fetzter stated that the company will defend itself against the allegations.

**Smoke control**

The global authority for the World Health Organization (WHO)'s tobacco-control convention has condemned the launch this month of the Foundation for a Smoke-Free World. The foundation, based in New York City, will receive US\$80 million a year in funding for 12 years from tobacco company Philip Morris International, and is led by a former WHO official. In a statement on 19 September, the WHO Framework Convention on Tobacco Control (FCTC) Secretariat called the move "a clear attempt to breach the WHO FCTC by interfering in public policy" and "a deeply alarming development aimed at damaging the treaty's implementation, particularly through the Foundation's contentious research programmes".

**Hurricane havoc**

Hurricane Maria intensified from a category 1 to a category 5 storm within 15 hours on 18 September before sweeping into Puerto Rico two days later. After making landfall as a category 4 hurricane, the storm's pounding winds and floodwaters devastated the island, wiping out its entire electricity grid. Debris punctured several areas on the 305-metre-wide dish at the Arecibo Observatory, a radio telescope nestled in the mountains in the western part of the country. Maria is the fourth major Atlantic hurricane this season — following Harvey, Irma and Jose — and is the strongest hurricane to hit Puerto Rico since 1932.

## TREND WATCH

Remote-sensing data show that there is less giant-panda habitat today than in 1976 (during China's first national panda survey) or than when the species was listed as endangered in 1988. Bamboo forests in which pandas live shrank by 4.9%, to about 55,500 square kilometres between 1976 and 2001. Habitat increased slightly, by 0.4%, from 2001 to 2013. But the remaining areas are more fragmented, with the number of habitat units isolated by roads and rivers tripling in the past four decades.

## BREAKING POINT

Remote-sensing studies show that the habitat of the giant panda is fragmenting fast.

