

POLICY

Climate report

In its latest assessment, released on 27 September, the Intergovernmental Panel on Climate Change gave its first formal estimates of the total carbon dioxide emissions that can be released while limiting CO₂-induced global warming. Total emissions must be kept below 1,800 gigatonnes for a 66% chance of keeping average global warming to 2°C above pre-industrial levels, the report says. At current CO₂ emissions rates, about 37 gigatonnes per year globally, that limit will be exceeded in less than 50 years. See go.nature.com/yqx3lm for more.

Spanish recovery

Spain's government has proposed its first increase in science funding since 2009, as part of a 2014 budget presented on 27 September. Total spending on research and development (R&D) would go up by 1% to €6.1 billion (US\$8.3 billion), with non-defence research up by 6%. But there is a catch: more than half the budget would be awarded in loans, which in past years have been promised to companies and not used. And funding remains depressed after a 39% cut to R&D over the past five years (not counting inflation). See go.nature.com/7x694q for more.

JOURNALISM AWARD

Science writer Jennifer Frazer last week won the American Meteorological Society's Award for Distinguished Science Journalism in the Atmospheric and Related Sciences for her News Feature in *Nature* 'Blowing in the wind' (*Nature* **484**, 21–23; 2012).



NATL INST. OCEANOGRAPHY

Pakistan quake throws up island

An island appeared in the Arabian Sea on 24 September, the apparent result of a magnitude-7.7 earthquake that shook south-central Pakistan (see go.nature.com/kmcchc). The low island (pictured) arose about 1 kilometre off the country's Gwadar coast, an area known for mud volcanoes that appear in coastal waters and are usually washed away within months.

The new island measures about 50 metres long by 20 metres wide and 10 metres high, says Asif Inam, a marine geologist at the National Institute of Oceanography (NIO) in Karachi. Seismic shaking probably caused mud, mixed with methane gas, to extrude from the sea floor and form the island, he says. The NIO plans to survey the area to search for similar features.

French budget

Research and higher-education funding remained largely unchanged in France's draft 2014 budget, released on 25 September. The proposal fulfils pledges made by French President François Hollande and Prime Minister Jean-Marc Ayrault to introduce a long-awaited carbon tax, which is set to begin next year. The tax is expected to bring in €340 million (US\$460 million) in 2014, and about €4 billion by 2016. See go.nature.com/wepepo for more.

E-cigarette control

Pressure intensified last week for the US Food and Drug Administration (FDA) to take tough action on electronic

cigarettes, when 40 state attorneys general called for "immediate regulatory oversight" of the products. 'E-cigarettes' have proved controversial among tobacco-control advocates (see *Nature* **501**, 473; 2013), and the FDA is expected to issue proposed regulations next month. In a letter dated 24 September, the attorneys general warned that the "increasingly widespread, addictive product" is being marketed to young people.

Helium reserve

The US Congress finalized on 26 September a bill to avert an imminent shutdown of the federal helium reserve, which provides more than one-third of the world's supply.

President Barack Obama is expected to sign the bill, which will ramp down the reserve over several years instead of closing it abruptly in October. Experts had predicted that the sudden shutdown would cause a spike in helium prices. Liquid helium is commonly used as a coolant for ultra-low-temperature physics experiments and magnetic resonance imaging machines. See go.nature.com/vlmgbt for more.

EVENTS

US shutdown

Numerous research agencies have been affected by the US government's shutdown on 1 October, as lawmakers failed

JOHN D. & CATHERINE T. MACARTHUR FOUNDATION
to agree a 2014 spending plan. Government scientists stayed at home, grant-making ceased at the National Institutes of Health and the National Science Foundation, and government research ships were called back to port. See page 13 for more.

Space delivery

The second commercial cargo vehicle ever to fly to the International Space Station has arrived. On 29 September, astronauts aboard the space station used a robotic arm to dock the crewless Cygnus craft, made by Orbital Sciences of Dulles, Virginia. The company is competing with SpaceX of Hawthorne, California, to provide NASA with for-profit space-transportation services. Cygnus, which launched on 18 September, carried about 700 kilograms of supplies for the astronauts. It is meant to stay at the space station for a month, being loaded with cargo for disposal, before returning to Earth, where it will burn up on re-entry.

PEOPLE

Genius grants

The MacArthur Foundation, based in Chicago, Illinois, announced the 2013 recipients of its 'genius' grants on 25 September. Thirteen scientists were among



the 24 winners, including experimental physicist Carl Haber at the Lawrence Berkeley National Laboratory in California and statistician Susan Murphy (pictured) at the University of Michigan in Ann Arbor. Winners receive 'no-strings-attached' awards of US\$625,000 paid over five years. See go.nature.com/4mr7qo for more.

FUNDING

Poaching pushback

The Clinton Global Initiative in New York launched on 26 September a US\$80-million effort to clamp down on elephant poaching in Africa. The programme brings together several conservation groups and African nations to increase law enforcement at 50 sites across Africa, and to detect and prosecute smugglers. Elephant poaching has surged in recent years,

driven particularly by ivory demand in Asia. Officials in Zimbabwe reported last week that more than 80 elephants had been killed with cyanide in a national park.

RESEARCH

Protein project out

The Protein Structure Initiative, a high-throughput US pipeline to solve thousands of protein structures, will end after 2015 (see *Nature* **466**, 544; 2010). Jon Lorsch, director of the US National Institute of General Medical Sciences in Bethesda, Maryland, announced the institute's plan for the 13-year-old programme in a blog post on 24 September. An independent review recently concluded that the project was not making its work relevant enough to biology, and Lorsch cited the need to free up more funds for investigator-initiated work in tight fiscal times.

Fouchier flu fight

Influenza expert Ron Fouchier protested on 26 September against a Dutch court's decision to uphold government oversight of his research, calling the court's arguments "weak". Fouchier, of the Erasmus Medical Center in Rotterdam, the Netherlands, has sparked controversy by creating mammalian-transmissible strains of the

COMING UP

6–11 OCTOBER

The latest findings from space missions such as MESSENGER, Cassini, Curiosity and Kepler are discussed at the American Astronomical Society's 45th annual meeting of the Division for Planetary Sciences, in Denver, Colorado. go.nature.com/epvznl

7–9 OCTOBER

The winners of the 2013 Nobel prizes for physiology or medicine, physics and chemistry are announced in Stockholm. www.nobelprize.org

H5N1 avian flu virus. On 20 September, he lost his case to exempt such research from export control laws, which are aimed at restricting biological weapons. The regulations require researchers to obtain export permits before disseminating 'dual-use' materials and information that could have both legitimate and malicious uses. See go.nature.com/x1p9ea for more.

Defence contest

The US Department of Defense is taking heat from genome scientists after announcing last week the winners of a US\$1-million software competition. Participants submitted algorithms designed to quickly identify pathogens from DNA sequencing data. Several researchers have criticized the contest as being poorly run, citing changes made to the scoring system during the competition. The solution by the winning team, from Germany and Singapore, will be used to address biological threats to the US military, the agency says.

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TREND WATCH

Owing to uncertainty over wind-energy policies in the United States and China, the number of new wind-power installations will drop by 25% worldwide this year. For the first time, solar energy will overtake wind energy in new installations (see chart). The forecast comes from analysts at Bloomberg New Energy Finance, who add that the number of solar installations is increasing in Japan and China because of financial incentives, but dwindling in western Europe, where subsidies are being cut.

MORE SOLAR THAN WIND

The number of new photovoltaic panels will overtake the number of new wind-power installations this year, say analysts.

