

# SEVEN DAYS

The news in brief

## RESEARCH

### Antarctic blast

An explosion at Argentina's Esperanza station in Antarctica killed one person on 14 January, according to news reports. The blast occurred during the handling of flammable materials. Esperanza, on the northern tip of the Antarctic Peninsula, is used for biology, geology and seismology research.

## POLICY

### US budget bill

On 17 January, US President Barack Obama signed a US\$1.1-trillion spending bill that will fund the government until 30 September. The budget restores most science agencies to roughly 2012 funding levels — as they stood before last year's across-the-board government spending cuts, known as sequestration. But funding for the National Institutes of Health still fell \$1.25 billion short of what Obama had requested for the 2014 fiscal year. See page 461 for more.

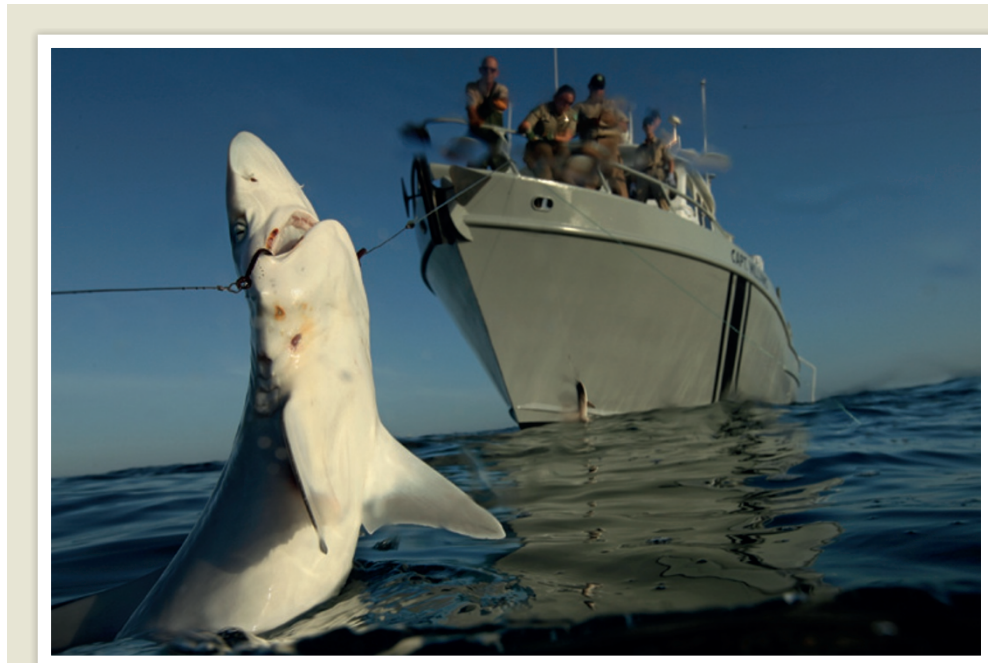
### Energy trends

Global investments in renewable energy dropped for the second consecutive year last year, with a 12% dip from 2012, according to figures released on 15 January

## NUMBER CRUNCH

# 1,004

The number of rhinoceroses illegally killed in 2013 in South Africa, according to government figures. It marks the nation's worst year on record for rhino poaching. Source: Dept Environmental Affairs



ERIC SCHLEGEL/CORBIS

## Extinction risk for sharks and rays

One-quarter of all species of shark and ray are threatened by overfishing, according to the first global analysis of the animals' conservation status. The figures come from the Shark Specialist Group at the International Union for Conservation of Nature (IUCN), which analysed 1,041 species of the chondrichthyan class (sharks, rays and 'ghost sharks' called

chimaeras). Of these, 25 are critically endangered, 43 endangered, 113 vulnerable and 132 'near threatened', according to IUCN criteria. Extinction risk among these animals is "substantially higher than for most other vertebrates", the group reports (N. K. Dulvy *et al.* *eLife* 3, e00590; 2014). See [go.nature.com/qi2tvi](http://go.nature.com/qi2tvi) for more.

by international research company Bloomberg New Energy Finance. The falling costs of solar installations helped to drive the downturn, as did uncertain government support for renewable power in Europe and the United States. Europe's investments plummeted by US\$40 billion, or 41%, from 2012. By contrast, Japan saw a 55% surge, as closures of nuclear power plants made room for the solar industry.

### Bisphenol A limits

The European Food Safety Authority (EFSA) has recommended slashing daily intake limits for the

chemical bisphenol A (BPA), used to manufacture plastics such as food containers. In a draft assessment released on 17 January, the agency said that BPA poses a low public-health risk because typical exposure levels are low. But uncertainty about the chemical's potential toxicity, including effects on the reproductive and nervous systems, warrants temporarily cutting daily limits from 50 to 5 micrograms per kilogram of body weight, the EFSA said.

### Extreme weather

The United States experienced warmer and wetter weather than average in 2013, the

National Oceanic and Atmospheric Administration reported in an annual summary on 15 January. Across the 48 contiguous states, temperatures averaged 11.3°C last year, 0.2°C above the twentieth-century average. Ten states reported one of their ten wettest years on record. By contrast, California recorded its driest year, with 27.6% of the state in severe drought by the end of 2013.

## BUSINESS

### Bargain genome

Biotechnology company Illumina, based in San Diego, California, says that it is set

JÜRGEN MAI/ESA to produce the first platform capable of sequencing an entire human genome for less than US\$1,000. Other companies have previously promised to hit that elusive price target, but Illumina's new HiSeq X Ten could come closest. Jay Flatley, the company's chief executive, announced on 14 January that the \$10-million sequencing system will be available to customers this year. See [go.nature.com/jhslf4](http://go.nature.com/jhslf4) for more.

## Cash for clean coal

The US Department of Energy on 15 January formally approved US\$1 billion in funding for FutureGen 2.0, a project to demonstrate carbon dioxide capture and sequestration technology in coal-fired electricity generation. Originally proposed in 2003, then cancelled five years later, the FutureGen programme was revived in 2009 by the administration of President Barack Obama. The current plan will retrofit part of a power plant in Meredosia, Illinois, to burn coal under high-oxygen conditions, producing a purified stream of CO<sub>2</sub> emissions that can be stored underground.

## Europe's new drugs

The European Medicines Agency (EMA) recommended that 38 drugs with a novel

active ingredient be authorized for use in Europe in 2013, compared with 35 in 2012, 25 in 2011 and 15 in 2010. In total, 81 medicines were recommended for human use last year, the London-based EMA said on 20 January. (The European Commission must approve agency recommendations before drugs can be marketed, but it rarely declines such requests).

### EVENTS

## Flu resurgence

The H7N9 avian influenza virus is making a comeback in China. In the first two weeks of January, 47 people fell ill, the World Health Organization has reported. That compares with more than 60 cases over a comparable period last April, the month that infections peaked. The virus had been relatively quiet since May, following the closure of live bird markets, until December, when a large uptick of 15 cases occurred. Bustling live markets gearing up for the Chinese New Year are thought to have contributed to the latest rise.

## Comet craft

The European Space Agency's Rosetta spacecraft has woken up after almost three years of hibernation in space. The craft, part of a €1-billion (US\$1.4-billion) mission to track down a comet, was



turned off in 2011 to save energy while travelling in deep space. Rosetta successfully re-established communications with Earth on 20 January, to much jubilation at the agency (pictured). The spacecraft will now journey to its target, the comet 67P/Churyumov-Gerasimenko, which it will approach in August and observe at close quarters before attempting to release and land a probe in November. See [go.nature.com/1ggyz](http://go.nature.com/1ggyz) for more.

## Journal shut down

The German academic publisher Copernicus Publications announced last week that it had shut down its journal *Pattern Recognition in*

*Physics*, citing what it called nepotistic reviewing that it regarded as malpractice. The company, based in Göttingen, was responding to a special issue on solar variability published late last year, in which the issue's editors doubted global warming. Copernicus will keep all controversial papers online, it said, but now wants to distance itself from "the apparent misuse of the originally agreed aims and scope of the journal". See [go.nature.com/peix6j](http://go.nature.com/peix6j) for more.

## Water worries

Residents of West Virginia slowly regained access to clean drinking water last week, following the discovery of a chemical spill on 9 January that contaminated the supply for hundreds of thousands of people. The Elk River became tainted when storage tanks at an industrial plant in Charleston, West Virginia, leaked 4-methylcyclohexane methanol, a chemical used to process coal. The spill has prompted the US Senate Environment and Public Works Committee to plan two hearings on chemical safety. The plant's owner, Charleston-based Freedom Industries, filed for bankruptcy on 17 January.

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## TREND WATCH

Only one in ten pathways for drug development ended in US regulatory approval between 2003 and 2011, according to a recent analysis (M. Hay *et al.* *Nature Biotechnol.* **32**, 40–51; 2014). By separately analysing each disease for which a single drug was tested (see chart), the authors found lower drug-success rates than estimated by many previous studies. Nearly 15% of vaccines entering phase I trials gained eventual approval, whereas small-molecule drugs succeeded at only half that rate.

## PHARMA PIPELINE

US approval rates for drugs may be lower than previously estimated, with oncology drugs faring worst.

