

NEWS BRIEFING

● POLICY

Curbing ship pollution:

Some of North America's coastal waters were last week designated 'emission control areas'. This means that from August 2012, ships entering those waters will have to cap their emissions of particulate matter and of nitrogen and sulphur oxides — for example, by switching to cleaner diesel fuels. The International Maritime Organization announced the move on 26 March, following a proposal from the United States and Canada to improve coastal and inland air quality.

Climate transparency: Climate scientists should make available all the data and methodologies — including raw data and computer codes — that support their work, a UK government committee has recommended. The House of Commons science and technology committee report, published on 31 March, looked into the disclosure of climate data revealed by e-mails leaked from the Climatic Research Unit (CRU) at the University of East Anglia in Norwich. It criticized the university for supporting "the culture at CRU of resisting disclosure of information", but found there was no attempt to subvert the peer-review process.

UK science advice: Science advisers to the British government "should not act to undermine mutual trust", according to a set of principles for independent science advice released last week. Formal terms of engagement were called for after the sacking of drugs adviser David Nutt. An early draft had suggested that politicians and science advisers should "reach a shared position" — but that controversial clause was removed after consultation with researchers.

Carbon tax dropped: The French government has indefinitely postponed a tax on carbon dioxide emissions after a massive defeat in regional



E. MARTINO/PANOS

FOREST LOSS SLOWING

The pace of deforestation around the world has slowed in the last decade, but it is still alarmingly high, according to a report released on 23 March by the Food and Agriculture Organization of the United Nations. On average, around 13 million hectares of forests were converted to agricultural land or lost through natural causes every year between 2000 and 2010. That compares with 16 million hectares annually in the 1990s. The net annual reduction in forest area over 2000–2010 was 5.2 million hectares (an area about the size of Costa Rica), down from 8.3 million hectares per year in 1990–2000. South America and Africa faced the biggest net losses, but Asia registered a net annual gain, mainly because of large-scale afforestation programmes. The figures come from the 'Global Forest Resources Assessment', a study released every 5 years that now covers 233 countries and territories.

elections. The proposed €17 (US\$23) per tonne tax had been due to enter into force on 1 July. France would have been the largest economy to have adopted such a measure, and it was a key part of President Nicolas Sarkozy's environmental plans. Conservative parliamentarians and industrialists feared that the tax would harm the competitiveness of French firms if implemented only in France, and argue that it should be imposed at European Union level.

Nanotech race: The United States' leading position in nanotechnology is "threatened by several aggressively investing competitors" such as China, South Korea and the European Union. The verdict came from the President's Council of Advisors on Science and Technology (PCAST) in its 25 March review of the US

National Nanotechnology Initiative. Although US public and private nanotech investment grew by 18% a year between 2003 and 2008 to reach US\$5.7 billion, the rest of the world's investment grew at 27% annually. And China now applies for more nanotech patents than the United States, although it holds fewer overall.

UK budget: Ahead of national elections expected in May, the UK government's annual budget, announced on 24 March, revealed nothing of spending plans for science after 2011 — when researchers fear cuts. Chancellor Alistair Darling announced a one-off sum of £270 million (US\$407 million) to create 20,000 new university places, a £2-billion public-private green investment fund and support through 'technology and innovation centres' for commercializing research. Prime Minister

NUMBER CRUNCH

12.3%

Growth in prescription drug sales for Teva Pharmaceuticals during the 12 months to September 2009. The generics firm, based in Israel, was the fastest-growing drugs company in that period.

Source: Reuters, IMS Health

Gordon Brown later confirmed an expected £250 million for a biomedical research centre in London, and pledged to appoint a minister for life sciences if he is re-elected.

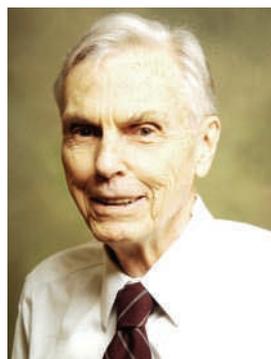
Knowledge highway: India's government has approved a 60-billion-rupee (US\$1.3-billion), 10-year project to establish a nationwide high-speed data communication network. The National Knowledge Network, cleared on 25 March, would link together about 1,500 scientific and educational institutions, allowing scientists and students to share computing facilities, set up virtual classrooms and collaborate on research. Its core physical infrastructure should be completed in two years.

Regulatory shortfall: The US Food and Drug Administration, which has had chronic staff recruitment and retention problems, needs to develop a strategic human capital plan, according to a government report issued on 23 March. The Government Accountability Office, the investigative arm of the US Congress, considered a 2009 survey of more than 300 agency managers, of whom 80% said they would welcome extra staff, and just 36% saw the agency keeping pace with the scientific advances necessary to regulate products.

PEOPLE

Science and religion: Evolutionary geneticist Francisco Ayala has won this year's £1-million (US\$1.5-million)

NEWS MAKER



John Tate
The US mathematician has won this year's US\$1 million Abel Prize for his work on algebraic number theory. See go.nature.com/JNBbhf for more.

Templeton Prize, an award for those "affirming life's spiritual dimension" that has recently focused on the overlap between science and religion. Ayala, a former president of the American Association for the Advancement of Science, was also ordained as a Dominican priest and is currently professor of biology and philosophy at the University of California, Irvine. Some researchers condemned

the US National Academy of Sciences for hosting the award announcement.

BUSINESS

Gene patents overturned: In a ruling that has far-reaching implications for gene patenting, a federal judge in New York on 29 March struck down seven patents on genes associated with breast and ovarian cancer. The patents, on the *BRCA1* and *BRCA2* genes, are held by Myriad Genetics and the University of Utah Research Foundation, both based in Salt Lake City. The judge ruled that the patents were "improperly granted" because they were related to isolated DNA that is a product of nature, and therefore not patentable. The lawsuit was filed in May 2009 by the Public Patent Foundation and the American Civil Liberties Union, both in New York. Myriad says it will appeal the ruling. See go.nature.com/uoSndN for more.

Pfizer fine: Pharmaceutical giant Pfizer fraudulently marketed an anti-seizure drug, a US federal jury ruled last week. The firm, based in New York, has been ordered to pay US\$142 million in damages to the Kaiser Foundation Health Plan and Kaiser Foundation Hospitals, based in Oakland, California. The jury determined that Pfizer had illegally marketed the drug gabapentin (Neurontin) for unapproved indications, including migraines, neuropathic pain and bipolar disorder. An analysis late last year suggested that the company published only those trials of off-label uses

THE WEEK AHEAD

- 1 APRIL**
NASA looks back half a century to 1 April 1960, when the first successful weather satellite, TIROS-1, was launched from Cape Canaveral, Florida.
go.nature.com/ZhrtTo
- 8 APRIL**
The European Space Agency is set to launch CryoSat-2, which will monitor variations in the extent and thickness of polar ice. See page 658 for more.
go.nature.com/M5nOT8
- 8 APRIL**
In Prague, the United States and Russia will sign a treaty (agreed last week) to cut their stores of long-range nuclear warheads by around 30%.

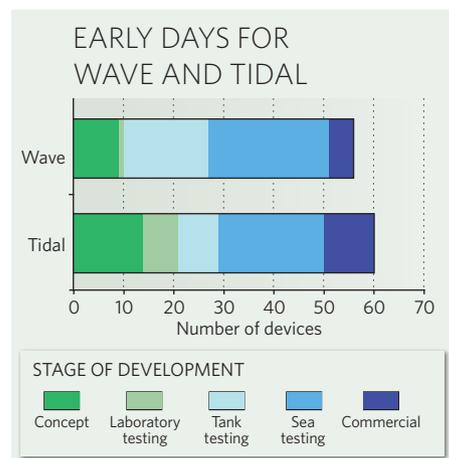
that had positive outcomes (S. S. Vedula *et al.* *N. Engl. J. Med.* **361**, 1963–1971; 2009).

Clean-energy investment: China has become the world's leading clean-energy investor, putting US\$34.6 billion into the sector in 2009 — almost double the \$18.6 billion invested by the United States, according to a report from the Pew Charitable Trusts in Washington DC. Using data collated by Bloomberg New Energy Finance, the study also shows that Spain invested the highest percentage (0.74%) of its gross domestic product in clean energy, topping the table of investment intensity in the sector.

BUSINESS WATCH

Scotland's bid to become the 'Saudi Arabia of marine energy' was boosted on 16 March, when ten off-shore sites were leased to firms hoping to build up to 1.2 gigawatts of wave and tidal power by 2020. That doesn't include tidal barrages, which trap huge volumes of water in the manner of hydroelectric dams, and would be a massive amount of capacity for the sector, which has a long way to go before it makes a dent in renewable-energy generation. Wave-bobbing machines and underwater turbines together contribute fewer than 10 megawatts of capacity worldwide. By March this year, only 15 of 116 tidal and wave companies tracked by Redfield Consulting — a renewable-energy consultancy

in Monymusk, UK — had designs suitable for commercial application (see chart). Britain, Australia, Canada, Norway and South Korea lead interest and investment in the sector, and their coastlines have potential. Theoretically, the Pentland Firth — a strait between the Orkney Islands and northeast Scotland — could generate an average of 4 gigawatts, estimates Ian Bryden, a marine-energy expert at the University of Edinburgh, UK. That's roughly equivalent to four coal-fired power stations. But, Bryden adds, the industry talks of having 2 gigawatts of combined wave and tidal capacity worldwide by 2020 — a target he calls "ambitious".



SOURCE: REDFIELD CONSULTING