

World water shortage predicted as pollution problem worsens

Paris Future water resources could be limited by pollution, says the team behind the most comprehensive review of the topic so far.

If pollution keeps pace with population growth, 18,000 cubic kilometres of fresh water — almost nine times the total amount used worldwide for irrigation — will be polluted by 2050. The report, which was due to be released on this week by the United Nations, says that the pollution is partly due to the 2 million tonnes of waste dumped into rivers and lakes each day.

But the review played down the likelihood that such shortages could spark conflict. The authors surveyed water-related interactions between countries over the past 50 years, and found that most resulted in water-sharing treaties or the building of dams. “Some of the most vociferous enemies around the world have negotiated water agreements,” says the report. The authors point to the example of agreements over the use of water from the Indus: tributaries of the river flow across the partly disputed India–Pakistan border, but the group that oversees control of the river has survived two wars between the countries.

♦ www.unesco.org/water

NASA decides that three's a crowd on space station

Washington Life on the International Space Station is set to become lonelier. NASA and its international partners decided last week to reduce the crew from three to two people in order to conserve food, water and other supplies while the space shuttle is grounded.

How much research a crew of two can do is unclear. In 2001, NASA was forced to reduce intended numbers on the station from six or seven to three in response to budget cuts. The agency's advisers said this would allow little significant science to be done (see *Nature* 418, 263; 2002). But NASA administrator Sean O'Keefe insists that the two astronauts will have time for research.

The next inhabitants, who will join the station in April or May aboard a Russian Soyuz capsule, are likely to continue some of the current crew's studies of physiological responses to weightlessness. Russian Progress spacecraft will be used to ferry supplies to the station while the shuttle is out of action.

Study breeds cautious optimism over vCJD

London Cases of variant Creutzfeldt–Jakob disease (vCJD) in Britain are on the wane, according to an epidemiological study.

Azra Ghani and colleagues at Imperial College, London, modelled the course of the

Islands in the pink

London Cool waters from the Atlantic Ocean swirl around the Balearic Islands of Mallorca and Menorca (far right) in this image snapped by Envisat, an Earth-observation satellite developed by the European Space Agency.

Envisat was launched on 1 March 2002 (see *Nature* 415, 825; 2002), and this picture is part of an exhibition of images from the satellite to celebrate its first year in orbit, currently on show at the British National Space Centre in Leicester. The thermal picture shows cooler waters in white and pink and the warmer waters of the Mediterranean Sea in blue. Understanding the mixing of such currents is an important part of ocean-circulation and climate research.



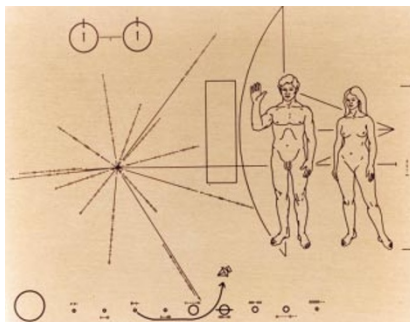
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neurological condition, thought to result from eating beef tainted with the protein that causes mad cow disease. They predict that the number of British people who may yet succumb is between 10 and 7,000 (A. C. Ghani *et al. Proc. R. Soc. Lond. B* doi:10.1098/rspb.2002.2313) — far fewer than the maximum number of fatalities predicted in 1998. The disease has killed fewer people each year for the past two years: 17 died in 2002, compared with 20 in 2001 and 28 in 2000.

But this is not necessarily a permanent decline. Another epidemiological study of vCJD, published last week in *The Lancet*, points out that all known victims have carried a particular version of the gene for the prion protein that goes awry in sufferers (N. J. Andrews *et al. Lancet* 361, 751–752; 2003). People with other genotypes may also be susceptible, but with longer incubation times.

Solar-System researchers in the dark as probe signs off

Washington In the end its plutonium batteries gave out, too feeble to send a radio signal to Earth. The Pioneer 10 spacecraft's final transmission, on 22 January, prompted nostalgic media coverage. But researchers studying the Solar System's outer reaches have lost what could have been a valuable data



Pioneer 10 won't be talking to us anymore, but the plaque it carries could be of interest to aliens.

source as the craft journeyed deeper into space.

Space scientists had hoped that Pioneer 10 would detect the termination shock — the region where charged particles from the Sun collide with magnetic fields and particles in interstellar space. The shock is thought to lie 80–90 astronomical units (AU) from the Sun (1 AU is the Earth's distance from the Sun). The spacecraft's twin, Pioneer 11, stopped transmitting in 1995. Just two spacecraft — Voyagers 1 and 2 — are now probing the region. Voyager 1 is now 87.5 AU from the Sun, slightly farther than Pioneer 10, whereas Voyager 2 is 69.5 AU away. None appears to have hit the boundary, although some data from Pioneer 10 are yet to be analysed.

The latest genomics, straight to your phone

Stockholm Biologists can now act on inspiration whenever it strikes, thanks to a new database that sends information about genome sequences to mobile phones.

“I was sitting on the bus reading a paper and I wanted to know what DNA sequences were available for the species I was looking at,” says the service's creator, genomics researcher Björn Ursing of the Karolinska Institute in Stockholm, Sweden. “Then I looked at my mobile phone.” Ursing went on to develop WiGID — the Wireless Genome Information Database. WiGID contains information on genome size, publications and scientific descriptions of the 117 organisms that have had their genomes sequenced.

Some researchers have questioned whether biologists need such information on their phones, but Ursing says he has already heard of scientists using the database during seminars. WiGID will complement BioWAP, a service developed at the universities of Turku and Tampere in Finland, which allows researchers to retrieve information from web-based genome and protein databases.

♦ wigid.cgb.ki.se

♦ www.uta.fi/imt/bioinfo/BioWAP