

## Arctic clean-up project aims to confront Soviet pollution legacy

**London** The environmental legacies of the cold-war era in the Arctic are set to be tackled, thanks to a multimillion-dollar fund devoted to the cause.

The four-year plan, which has a fund of more than US\$30 million, will assess ten hotspots of environmental problems in the Russian Arctic. These include some of Russia's most polluted cities, which have been affected by industries established under the former Soviet Union, such as oil and mineral mining. The project will also target old military marine sites where submarines have been abandoned and left to rust away.

Two bodies — the United Nations Environment Programme and the Advisory Committee on Protection of the Sea, a London-based environmental group — will determine the cost of cleaning up the sites, and will test technologies such as the use of marine algae that absorb oil.

The project's backers, including several Arctic nations and the Global Environment Facility, an international environment fund based in Washington DC, hope the studies will lead to a full-scale environmental restoration programme.



Out in the cold: Russian submarines left to rot.

## Foreign students to foot the bill for US security scheme

**Washington** The US government is setting up a system to keep tabs on foreigners studying in the country — and it expects the students themselves to foot the bill.

The Department of Homeland Security, which oversees immigration, proposed last week that students seeking US visas be charged a \$100 fee. Homeland Security undersecretary Asa Hutchinson says that he expects the scheme to raise more than \$30 million a year, which will go towards a computerized tracking system designed to seek out terrorists posing as students.

Since the attacks of 11 September 2001, immigration rules have hampered students hoping to study in the United States, and academic bodies are fearful that the fee will

## Wolves under threat as rabies outbreak bites

**London** An outbreak of rabies has hit one of the world's rarest dogs, the Ethiopian wolf (*Canis simensis*, pictured). Twenty of the animals have died in the Bale Mountains, in the southeast of the country, over the past few weeks — a severe blow for a species that numbers only 500 wolves overall. Three-quarters of the wolf population died during a similar outbreak in 1991. Conservation biologist Claudio Sillero of the University of Oxford, UK, says that a similar proportion could die this time around. Conservationists think that the wolves caught the disease from domestic dogs — although dogs in the region have been vaccinated. Wildlife managers have long wanted to vaccinate the wolves themselves, but Ethiopian authorities have so far refused, citing concerns over the potential side-effects of such a move. "We could arguably have prevented the current outbreak," says Sillero.



be yet another impediment. Students will probably have to pay in US currency or by cheque or credit card — but such means are not always available to students in developing countries.

## US beefs up policing of transgenic crop trials

**San Francisco** The US Department of Agriculture (USDA) is establishing a unit to monitor field trials of genetically modified crops.

Transgenic crops have been field-tested, grown and eaten in the United States for years. But crops that are genetically tweaked to make drugs or industrial compounds have faced more opposition. In 2002, ProdiGene of College Station, Texas, was fined \$250,000 for mismanaging a trial of maize engineered to produce a pig vaccine. Large quantities of maize and soy beans in Iowa and Nebraska had to be destroyed after possible contamination by the transgenic maize.

This summer, the USDA began requiring specific permits for the testing of non-food biotech crops; before this, companies merely had to notify the agency that tests were taking place. To enforce the rule, the USDA announced on 17 October that it is to form a compliance unit within its Biotechnology Regulatory Services programme dedicated to inspections, raising the number of services staff from 33 to 50.

## Tropical climate study gives view of global heatwave

**Munich** A study of the tropical Pacific Ocean has given climate researchers a global picture of how temperatures changed during an exceptionally rapid period of warming 55 million years ago.

Researchers think that this spike of warming, called the Palaeocene/Eocene

Thermal Maximum, was caused by a belch of methane from reservoirs in the sea floor (see *Nature* 423, 681–682; 2003). Researchers knew that at high latitudes, sea surface temperatures rose by some 10 °C over a period of 10,000 years — they deduced this from the ratios of different isotopes in the preserved shells of marine organisms. But no one had been able to find suitable samples of such shells for this brief time period in the tropics.

Now James Zachos of the University of California, Santa Cruz, and his colleagues have managed to analyse organisms in a tropical seafloor sample, and found that these waters warmed by about 5 °C (J. C. Zachos *et al.* *Science* doi:10.1126/science.1090110; 2003). Their findings are consistent with climate models used to describe such periods of rapid temperature change.

## NASA turns to sub firm in nuclear power play

**Washington** A naval office that is more at home designing nuclear reactors for submarines may soon adopt its technologies for outer space.

NASA is negotiating with the Department of Energy to hire Naval Reactors, based in Arlington, Virginia, to design the power source for its ambitious nuclear-powered Jupiter Icy Moons Orbiter (JIMO), planned for launch after 2011.

Naval Reactors has a reputation for quality and safety, says Alan Newhouse, manager of NASA's nuclear programme, called Project Prometheus. But it will probably need outside advice in adapting its nuclear technology for space. The deal has not yet been signed, but Admiral Frank Bowman, head of the Naval Nuclear Propulsion Programme, said last week that he supports the project.