Senator rebuffs academy over Arctic oil

Tony Reichhardt, Washington

Thirty-five years of oil exploration and drilling on Alaska's northern coast has harmed the environment but had some positive effects on the human population, says a US National Academy of Sciences study.

According to the report, opening up the Arctic National Wildlife Refuge (ANWR) to more drilling would inflict further damage on fragile ecosystems. The finding follows a two-year study by a panel chaired by Gordon Orians, emeritus professor of zoology at the University of Washington.

The report was praised by opponents and some supporters of drilling. But Senator Ted Stevens, the pro-drilling Alaska Republican and appropriations committee chairman who commissioned the study in 1999, dismissed it as "another tool to question development" in the refuge. He impugned the neutrality of the panel, which included oil-industry consultants as well as wildlife ecologists, economists and social scientists.

But Stanley Senner, director of the National Audubon Society's Alaska office, said that the report could influence "the hearts and minds of the people still in the middle" of the ANWR debate.

The argument about drilling in the refuge is America's highest-profile environmental debate. Current law prohibits drilling or prospecting, but President George W. Bush and key Republicans want to open up part of the refuge to oil production. The debate should climax later this year, when Bush tries to push his plan through Congress.

Outlook unsettled: a caribou enjoys summer grazing, but oil exploration could threaten its habitat.

"There is no way to engage in these activities and have zero effect on the environment", Orians told a press briefing on 4 March. The 450-page report shows that most oil spills in Alaska have done little harm, and that modern oil-extraction technology is less harmful to the landscape than past methods. But three-dimensional seismic surveys, which have replaced earlier two-dimensional techniques, require more use of off-road trails, threatening the tundra's ecosystem.

Effects on caribou herds are hard to assess because of lack of data, uncertainty about where future drilling would take place, and the natural factors, such as insect activity, that also influence herds' behaviour. There has

been no large decline in the Central Arctic caribou herd, says the report, but the spread of industrial activity is likely to change this.

Tribal people have benefited from better health care and other services, the report adds. But the destruction of traditions may have contributed to social problems such as alcoholism. In some cases, human and ecological effects are intertwined: seismic exploration has driven bowhead whales to change their migration routes, forcing native hunters to take longer and riskier trips to catch them.

The panel recommends more research in the region, perhaps in study areas modelled on the National Science Foundation's Long-Term Ecological Research stations. ■

Tougher rules aim to prevent gene flow into crops

Hannah Hoag, Washington

US biotechnology companies will be allowed to grow genetically modified corn to produce pharmaceuticals — provided that it is grown at least a mile away from food crops and

is carefully monitored by government inspectors.

Tighter regulations for trials of 'pharma crops' were announced on 6 March by the US Department of Agriculture's Animal and Plant Health Inspection Service (APHIS). Last year, food corn and soy beans in Iowa and Nebraska had to be destroyed after possible contamination by corn that was being grown by ProdiGene of College Station, Texas, to produce a pig vaccine.

As well as doubling the required safety distance from food crops, the rules require dedicated machinery, extra training for planters, and up to five annual visits to each site by inspectors.

Some biotech companies have advocated excluding pharma crops from the corn belt in the American Midwest to prevent any possible public backlash. There are no plans for this, but the new regulations could have a similar effect, says Rebecca Bech, director

for biotechnology and regulatory services at APHIS. The safety zones should keep most trials out of the corn belt, she notes.

Biotech companies hope the regulations will help to build public confidence. "They are based on science and we support them strongly," says Debra Robertson, director of intellectual property at Epicyte, a pharma company in San Diego, which is developing corn to counteract the herpesvirus.

"Strong confinement conditions are only half of the battle," counters Gregory Jaffe, director of the biotechnology project at the Center for Science in the Public Interest in Washington DC. "You need to increase oversight and make the companies comply."

Both allies and critics are concerned that many of APHIS's 2,600 inspectors have been moved to the new Department of Homeland Security. "We've been assured that when the time comes the inspectors will be made available," says Bech. ■