

# Europe dithers as Canada cuts cod fishing

Quirin Schiermeier, Munich

Cod on opposite sides of the Atlantic Ocean face contrasting prospects as authorities in North America and Europe try to conserve their once-plentiful stocks.

Late last month, the Canadian fisheries ministry ordered an end to all fishing of Atlantic cod (*Gadus morhua*) in three regions off the coast of Newfoundland and Labrador. It also set up a Can\$50-million (US\$36-million) action plan to assist fishermen and communities that will be affected.

But such closures are not yet envisaged in Europe — although fisheries experts are calling for a similar moratorium. Last week, the European Commission outlined a ten-year recovery plan for cod, which calls for lower catch quotas and a better monitoring system.

Although cod stocks in the North and Irish Seas have declined by 90% since the 1960s, some Canadian populations are down by more than 99%. Cod in warmer European waters reach maturity at an earlier age — an advantage in terms of reproductive ability.

On 2 May, the independent Committee on the Status of Endangered Wildlife in Canada (COSEWIC) recognized Atlantic cod as an endangered species after finding that some stocks face imminent extinction.

“If Canadian cod is threatened by extinction, this should ring alarm bells in Europe,” says Georgina Mace, scientific director of the Institute of Zoology in London, and a member of a committee that identifies endangered species at the World Conservation Union.



Cold comfort: fishing may be reduced in some areas, but Atlantic cod could still face extinction.

“Harvesting large long-lived species on a sustainable basis is much more difficult than we used to believe. Populations don’t seem to bounce back just because fishing effort is being reduced for a while,” Mace says.

COSEWIC member Jeff Hutchings, a marine biologist at Dalhousie University in Halifax, Nova Scotia, has shown that depleted fish populations do not recover easily when fishing pressure is reduced or stopped (see *Nature* 419, 662–665; 2002). “This is another reason not to let populations drop below a critical size,” he says. “Fisheries

managers in Europe should take note.”

But limiting fisheries without offering fishermen a viable alternative is unrealistic, argues Colin Bannister, of the UK government’s Centre for Environment, Fisheries and Aquaculture Science in Suffolk. “As much is being done as can be done, bearing in mind the socio-economic situation,” he says.

In Europe, some half-a-million people make a living from fisheries, including shipbuilding and repair. Attempts to reduce fleets or quotas have met fierce opposition.

Last December, thousands of British fishermen took to the streets in an unsuccessful protest against tighter European Union (EU) quotas on cod fishing. These were brought in on the basis of advice from the Copenhagen-based International Council for the Exploration of the Sea (see *Nature* 419, 866; 2002).

Scientists, however, hope that the long-planned fisheries reform will maintain its momentum, and that scientific advice will gain more influence on European policy.

“Europe has got to get out of the old system where lobbying of the fisheries industry and disagreement between EU member states have each year watered down the best available scientific advice,” says John Reynolds, a marine ecologist at the University of East Anglia in Norwich.

Bannister welcomes the European Commission’s plan to set up regional advisory bodies that will incorporate different interest groups, including fishermen and scientists.

In Canada such efforts are well under way already. Next month, scientists, fishermen and industry representatives at the third North Atlantic Responsible Fishing Conference in Yarmouth, Nova Scotia, will discuss the scientific, social and economic issues related to fishing.

## Asteroid probe to test technologies

David Cyranoski, Tokyo

A compact spacecraft mission headed off last week on an ambitious return trip to retrieve tiny rock samples from an asteroid 300 million kilometres away.

The Japanese Muses-C mission is the first in which rocks are to be brought directly back from an asteroid. The mission is intended as a demonstration project for several critical technologies, including a solar-powered ion motor that will provide its main means of propulsion, and up-to-date imaging techniques to control it remotely when it lands. The craft is designed to collect a gram of rock from asteroid 1998SF36 and bring it back to Earth in 2007.

Project leader Jun’ichiro Kawaguchi of the Institute of Space and Astronautical Science (ISAS) in Sagami-hara, near Tokyo, says the major goal of the mission is to convince researchers and government officials of the viability of a set of technologies for use in future

sample-return missions.

“There are a lot of bodies out there in space, and we want to show people that they can be studied like this,” says Kawaguchi.

Muses-C is designed to pelt the surface of asteroid 1998SF36 with steel projectiles travelling at 300 metres per second and then gather some of the dust that they kick up. Kawaguchi says one gram will be enough for studies into the substance of the asteroid. ISAS and NASA researchers plan to study the sample for a year and then make them available to other interested scientists.

The substance of the asteroids remains a mystery to scientists, who have had to depend on remote sensing imaging, such as that undertaken by NASA’s NEAR-Shoemaker mission (J. Veverka *et al.* *Nature* 413, 390–393; 2001), for clues about their composition. ISAS built the 530-kg craft itself after NASA dropped plans in 2000 to send a robot with it. The mission will cost at least ¥12.7 billion (US\$108 million). ■