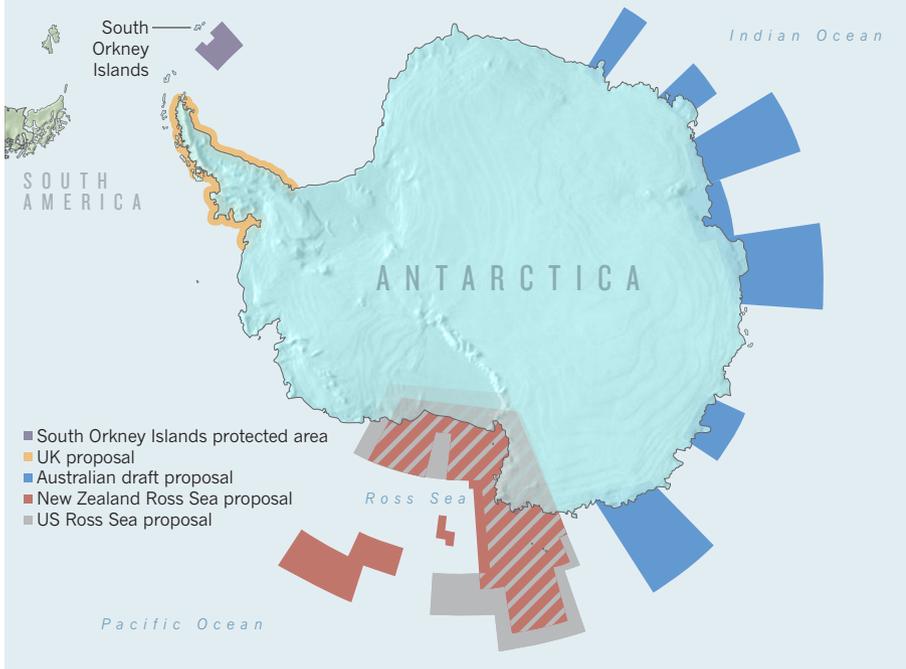


POLAR PROTECTION

A range of proposed marine protected areas could help to safeguard Antarctica's seas.



CONSERVATION

Antarctic seas in the balance

Plans to protect swathes of ocean face tough test.

BY DANIEL CRESSEY

Rich in fish, minerals and scientific potential, the seas around Antarctica are among the planet's most pristine waters — but fishing vessels are already moving in. Next week, negotiators at a meeting of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR, pronounced 'cam-lar') may try to contain the accelerating rush to access the region's natural resources. At stake is one of the planet's last great wildernesses — as well as the credibility of the international body set up to protect Antarctica's marine life.

CCAMLR will consider four proposals to create vast marine protected areas (MPAs) that would tightly restrict fishing activities in the region. But protection will require unanimous agreement by CCAMLR's members (24 countries and the European Union), and some, including Japan and China, have a record of scepticism about any kind of Antarctic MPA. "This is a particularly important meeting," says Alex Rogers, a conservation biologist at

the University of Oxford, UK. "If the proposals were blocked, it would be a very serious situation, and it would set back the whole process probably by a decade or more."

Only one large section of Antarctic waters is currently designated an MPA, a zone of about 94,000 square kilometres near the South Orkney Islands. The United States and New Zealand are now advancing two rival proposals to turn Antarctica's Ross Sea, which is home to seals, whales, fish, penguins and other birds, into one of the world's largest reserves (see 'Polar protection'). Commercial fishing in the Ross Sea, especially for the lucrative Antarctic toothfish (*Dissostichus mawsoni*), has been a sore point for environmentalists (see *Nature* 467, 15; 2010). The US proposal would protect 1.8 million square kilometres, with 800,000 square kilometres totally off-limits to fishing and set aside as a 'scientific reference area' for studying the effects of climate change. New Zealand's proposal would cover roughly 2.5 million square kilometres, with fishing allowed in some areas. The two countries had once hoped to bring a joint MPA proposal to

the table, but could not reach agreement. The Antarctic Ocean Alliance, a coalition of environmental groups, has criticized both plans: New Zealand's for compromising conservation in favour of allowing access for the country's fishing fleets, and the United States' for not covering enough ecologically valuable areas. Having two rival proposals for the same region could also stymie agreement and leave the Ross Sea without an MPA at all, the alliance warns.

Meanwhile, a UK-led effort is seeking protection for areas exposed by collapsing ice shelves around the Antarctic Peninsula. Newly exposed waters can quickly become populated with animals, making them highly attractive to fishing fleets, says Phil Trathan, head of conservation biology at the British Antarctic Survey in Cambridge, UK, who helped to develop the proposal. Protecting these areas would allow researchers to study how the marine ecosystem changes after the ice collapses — something that is expected to happen more frequently as the planet warms. "We understand a lot of the physical issues related to climate change," says Trathan. But "one of the really key issues is, what are the ecological consequences?"

Australia has submitted the fourth proposal, which would create a network of reserves around eastern Antarctica. "All four are very scientifically sound," says Andrew Wright, executive secretary of CCAMLR, based in North Hobart, Australia. But success is far from assured: "It has come down to a political decision now," says Susie Grant, a conservation scientist at the British Antarctic Survey.

If the proposals do not gain consensus by the end of the annual meeting on 1 November, they could in principle be considered at next year's meeting. But the need for all members to agree means that rejection would effectively kill these and any similar plans until there is a major shift in political ideology. Without an agreement this year, says Grant, "CCAMLR will have to consider very carefully what that means for the commitments it has made to conservation". ■

CORRECTIONS

In the Editorial 'Fighting chance' (*Nature* 490, 144; 2012), we implied that the link between a genetic variant and educational attainment was identified by the Social Science Genetics Association Consortium. In fact, it was identified, and refuted, in earlier work done by Daniel Benjamin.

In the News story 'Economics and genetics meet in uneasy union' (*Nature* 490, 154–155; 2012), we wrongly attributed to Enrico Spolaore the opinion that using genetic data in economics could help policy-makers to set immigration levels. He actually suggested that the work could reduce barriers to the flows of ideas and innovations across populations.