

Saving the Last Ocean

How seafood markets can help save Antarctica's Ross Sea

Summary

Antarctica and the Southern Ocean that bathes its icy shores are often described as distant, barren, and inhospitable. However, the waters and coastline of the Southern Ocean support as many as 75 million different marine species, many of which are found nowhere else on Earth.

The Antarctic's diverse and unique ecosystem is dependent on a healthy environment. Due to its remoteness and harsh climate, it has been spared from many of the impacts of human development that have degraded most other regions of the Earth. It has been further protected by the Antarctic Treaty and its later additions, which together protect the Antarctic as a natural reserve devoted to peace and science.

Despite this protection, the Antarctic still faces numerous threats: climate change, ocean acidification, increasing numbers of human visitors, the Japanese whaling programme, and - most recently - fishing. Having taken so many fish from the seas closer to home, fishermen are now venturing to the ends of the Earth, down to the dangerous and inhospitable waters of the Southern Ocean, in order to maintain our insatiable appetite for seafood.

Fisheries first appeared in the Southern Ocean in the early 1960s, where they repeated the patterns of exploitation seen around the world – new populations of fish and krill were discovered, exploited and depleted, stock after stock. Fisheries in the Southern Ocean are now under the control of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Although CCAMLR is considered an international leader in its approach to fisheries management, it struggles to protect the sensitive Antarctic ecosystems from the impacts of fisheries. One particular problem is the fishing vessels that take advantage of the vast size and isolation of the Southern Ocean to fish illegally, ignoring all the of CCAMLR's rules that aim at minimising the impacts of fisheries on the ecosystem.

The problem of fisheries in the Antarctic has recently come to a head in one of the most unique and unspoilt regions of the Antarctic – the Ross Sea, the one remaining ocean region in the world that has been little affected by human activities.

The Ross Sea is home to an amazing array of creatures that form one of the Antarctic's most unique and complex marine ecosystems. Some of its special features include the richest diversity of fish in the Southern Ocean, including seven species found nowhere else, and disproportionately large populations of particular species of seals, whales and penguins. The Ross Sea's value, in evolutionary terms, has been compared to that of the Galapagos Islands and other places designated as World Heritage Sites for their exemplary fauna.

Unlike other marine ecosystems, there are large and healthy populations of top predators – larger fish, birds and mammals – in the Ross Sea, and the relationships between all levels of life have remained relatively intact. Therefore, the Ross Sea is of extraordinary value to scientists as a 'living laboratory', to learn more about marine ecosystems and where climate change and its impacts can be investigated without interference from other, more direct human impacts.

Until recently, the Ross Sea was one of the last areas in the world not targeted by commercial fishing. In 1998, vessels from New Zealand led the charge into the Ross Sea, and it has become a longline fishing ground for Antarctic toothfish. Up to 12 countries have legally sent vessels to this fishery since 2000.

Antarctic scientists now believe that this fishery is a threat to the Ross Sea ecosystem. Antarctic toothfish are the largest fish in the Antarctic and take a long time to reach maturity – two key indicators that a fish species is highly vulnerable to fishing with a high risk of being

fished to extinction. The rest of its life cycle remains a mystery, as scientists have never found eggs, larvae or young toothfish.

Without this vital information, monitoring of toothfish populations is very difficult, and an accurate evaluation of the impact of fisheries is not possible. This situation highlights the need for extreme care in allowing any fishery to target such a species, especially with the additional threat of IUU fishing in the region. And, regrettably, there is evidence that the fishery is already having a negative impact.

Adult toothfish have disappeared from the area of McMurdo Sound, the southern edge of the species' range. As an important predator and prey species within the Ross Sea, any declines in Antarctic toothfish populations are likely to have detrimental impacts on the whole ecosystem. In fact, disappearance of Antarctic toothfish from this area has already been linked to a decline in the numbers of fish-eating ecotype-C killer whales in the area, and a change in the diet of Adélie penguins.

In recognition of its ecological value, the Ross Sea has been named by CCAMLR as one of 11 priority areas for the development of a representative network of marine protected areas spread across the Southern Ocean.

The key opposition to the protection of the Ross Sea is likely to come from those countries that fish for and trade in Antarctic toothfish. Data shows that fleets from about 20 nations have been fishing for both toothfish species in recent years. The five fleets taking the largest catches in 2007 were from France, Chile, Uruguay, Australia and the UK. In 2008, the top five exporters of toothfish were Uruguay, France, Chile, New Zealand and Mauritius, while the top five importers were the USA, Japan, China, Korea and Singapore. From 2004 to 2008, over 40% of toothfish were imported by the USA, and the Asian markets imported an almost equal proportion.

Consumption figures for toothfish are not readily available but it is clear that the five main importing countries mentioned above also represent the top consuming nations. Unfortunately, many consumers are probably unaware that they are eating Antarctic or Patagonian toothfish. Retailers and restaurants have given toothfish more marketable names, such as Chilean sea bass or Antarctic cod, and rarely provide information on where their fish was caught.

Toothfish is expensive and unusual, and therefore tends to be sold in the more high-end, exclusive seafood restaurants, as well as speciality seafood shops and seafood markets. It is uncommon in most European supermarkets, except in France where it is sold by some supermarket chains. In the USA it is found in many supermarket chains, but with recent changes to seafood sourcing policies, the only major Canadian supermarket chain still selling toothfish after September 2010 will be Sobeys.

With the increasing development of sustainable seafood sourcing policies by retailers globally, toothfish is disappearing from supermarket shelves. In the UK, retailers have not sold any toothfish for many years, and Canadian retail chains that sold toothfish (as Chilean sea bass) until recently have now removed it from their shelves or have set a date to do so. The movement is also growing in the USA. Ahold-USA has publicly stated that it will not sell toothfish products, and Wegmans will not sell any seafood products sourced directly from the Ross Sea.

Famous US chefs Kin Lui and Hosea Rosenberg refuse to serve Ross Sea toothfish and are publicly supporting the campaign to protect the Ross Sea as a marine reserve. Finally, the major global shipping company, Maersk, is also now refusing to offer transportation for a variety of unsustainable fish species including toothfish any fish that might be from illegal operations.

Closing the Ross Sea to fishing and making it into a Marine Reserve will give the ecosystem a chance to recover from any impacts the fishery has already had. It will also provide the ecosystem with better chance of adapting to the changing environment caused by climate change and ocean acidification. While any fishery remains in the Ross Sea, it can undermine the political processes that put marine reserves in place as countries try to protect the interests of their fisheries in the region.

Greenpeace is asking consumers, chefs and retailers to make a public commitment not to buy, sell or serve any toothfish, certified or otherwise, and to support the call to turn the Ross Sea into a fully protected Marine Reserve to preserve this unique and threatened ecosystem for the future.

For more information, read the full report available at:

<http://www.greenpeace.org/international/en/publications/reports/Defending-the-last-ocean/>