

**TUESDAY 13 DECEMBER 2016**

**ZSL SCIENCE AND CONSERVATION EVENT**

The Meeting Rooms, Zoological Society of London,  
Regent's Park, London NW1 4RY

**AGENDA**

**Fishing in the Arctic – is there a sustainable approach?**

**Chair: Kirsty Kemp, Institute of Zoology, ZSL**

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**Receive the following communications:**

**Daniela Montalto, Campaigner, Greenpeace UK**  
*Drawing the line: fishing boundaries & Arctic Protection*

**Rohan Currey, Fisheries Standard Director, Marine Stewardship Council**  
*Sustainable fishing, marine protection and MSC certification at the poles*

**Rod Cappell, Director, Poseidon**  
*Fisheries in Greenland: their importance, responsible management and extension North*

**Chris Yesson, Institute of Zoology, ZSL**  
*A sustainable Arctic fishery? A case study from Greenland*

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## ABSTRACTS

### Fishing in the Arctic – is there a sustainable approach?

**Tuesday 13 December 2016**

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#### **Drawing the line: fishing boundaries & Arctic Protection**

*Daniela Montalto, Campaigner, Greenpeace UK*

Investigations by Greenpeace released in March 2016 have shown industrial fishing fleets using destructive bottom trawling were increasingly invading previously pristine areas of the Barents Sea in the Norwegian Arctic.

The icy waters of the northern Barents Sea are home to a huge diversity of marine life, including bowhead whales, walrus and polar bears, along with rare fish and invertebrates. Many more species doubtless remain to be discovered in this remote area. As climate change steadily diminishes the extent and annual duration of the sea ice, this and other areas of the Arctic Ocean that were previously ice-covered for all or much of the year are becoming accessible to commercial exploitation. Sea ice loss in the northern Barents Sea is turning it into a new hunting ground for industrial fishing. Fishing brings with it the threats of habitat degradation and bycatch, potentially wiping out marine life and putting this whole fragile ecosystem at risk. Currently, there is no law in place to protect these Arctic areas previously covered by sea ice.

In May 2016, following Greenpeace's campaign, seafood brands, major UK's supermarkets and some of the world's largest fishing companies, struck a ground-breaking deal to not expand their cod fishing activities with trawl gear into areas where regular fishing had not taken place before.

This is the first time the seafood sector has voluntarily imposed limitations to industrial fishing in the Arctic. The challenge for these companies is now to deliver on their commitment to Arctic protection and show real results out on the water.

**Daniela Montalto** has been campaigning at Greenpeace for the last 15 years, having first joined the organisation in her native Argentina. Moving to Greenpeace International, Daniela helped to develop and coordinate successful campaigns against deforestation and biodiversity loss around the world, including winning a soya moratorium in the Brazilian Amazon and commitments against deforestation

from producers and retailers of palm oil and paper products. Most recently, Daniela joined Greenpeace UK where she has led a successful campaign calling for some of the world's largest seafood and fishing companies in the Norwegian Arctic to pledge not to expand their bottom trawling activities in areas which have become newly accessible due to retreating Arctic sea ice.

### **Sustainable fishing, marine protection and MSC certification at the poles**

*Rohan Currey, Fisheries Standard Director, Marine Stewardship Council*

There are striking parallels in the development of sustainable fishing and marine protection in both Arctic and Antarctic waters. Both regions have sustainable, well-managed Marine Stewardship Council (MSC) certified fisheries operating at high latitudes within complex biophysical and geopolitical environments. With increasing awareness of the potential ecosystem effects of fishing and climate change, there has been growing public demand to establish broad-scale marine protection for important habitats in both regions. This demand culminated in the recent adoption of the world's largest Marine Protected Area (MPA) - the Ross Sea Region MPA - by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). A key feature of the Ross Sea Region MPA is that it was designed via systematic conservation planning to achieve multiple objectives. This means that the MPA will protect key ecosystem components but also permit a sustainable, well-managed MSC certified fishery for Antarctic toothfish to continue to operate in other parts of the Ross Sea. In this presentation, Rohan will provide a case study of the development and MSC certification of the Ross Sea toothfish fishery, and the parallel development and adoption of the Ross Sea Region MPA by CCAMLR. He will highlight the key factors that lead to the successful culmination of both processes in the hope of drawing lessons for other polar fisheries in the years to come.

**Dr Rohan Currey** is Fisheries Standard Director at the Marine Stewardship Council (MSC). He holds a PhD in marine mammal science with a research background in marine mammal science and Antarctic fisheries science. Previously, he represented the New Zealand Government in the Scientific Committees of the International Whaling Commission and the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). In CCAMLR, he was the New Zealand Government's principal science advisor for the recently established Ross Sea region Marine Protected Area and the MSC certification of the Ross Sea toothfish fishery.

### **Fisheries in Greenland: their importance, responsible management and extension North**

*Rod Cappell, Director, Poseidon*

At over 2 million km<sup>2</sup> with a coastline of 44,000km, Greenland is the largest island in the world. The Greenland ice sheet covers 81% of the landmass, while the coastal fringes are home to just 56,000 people. At just 1 person for every 7 square kilometres (London has over 4,500 people per km<sup>2</sup>), strict resource management might seem unnecessary. But the population's great dependence on natural resources and their close cultural connection with the natural world make responsible resource management a high priority in Greenland.

Fishing is vital to the people and the economy: it employs 15% of the working population and seafood accounts for over 90% of exports and 25% of Greenland's GDP. Fisheries vary in scale: offshore fisheries for shrimp and Greenland halibut involve a few large, modern vessels operated by state-owned companies. By contrast, inshore fisheries for halibut, cod and lumpfish are essential to hunter-fishers operating at a subsistence-level.

Management plans (and international co-operative agreements where required) are in place for these key fisheries. Recently this has been recognised and further developed under the Marine Stewardship Council. As a result of MSC certification, research commissioned by Sustainable Fisheries Greenland (a partnership between industry and government) has provided new knowledge of Greenland's marine habitats and fishing's impact on those habitats.

The impact of climate change is already evident in Greenland's fisheries; changing seasonal fishing patterns and the distribution of stocks. As sea ice retreats, vessels can fish further north and for longer. The need for effective, responsible management and the scientific knowledge to inform that management is greater than ever.

**Rod Cappell** is a director of Poseidon, a fisheries consultancy working with a range of government and seafood industry clients. He trained as a marine biologist before focusing on resource management and economics. Rod has been involved with Greenlandic fisheries for the last 5 years, including Marine Stewardship Council fishery assessments and an evaluation of the EC's Sustainable Fisheries Partnership Agreement with Greenland.

### **A sustainable Arctic fishery? A case study from Greenland**

*Chris Yesson, Institute of Zoology, ZSL*

The West Greenland Coldwater Prawn fishery is under assessment by the Marine Stewardship Council to gain a certificate of sustainability. Initially the assessors identified a lack of primary information on seabed (benthic) habitats in the region, as well as a lack of understanding of impacts on these habitats.

Institute of Zoology (IoZ) researchers have provided an independent assessment of the benthic habitats of the West Greenland continental shelf. We'll present results from six years of research cruises, analysing the impact of trawling in West Greenland at depths of 100-700m. There are a great variety of benthic habitats spanning 2000km of shelf, from warmer, rockier southern regions with a high diversity of attached, erect, vulnerable fauna; up to colder, muddy northern areas with more mobile, resilient fauna.

Benthic diversity and abundance are lower in heavily trawled regions, but impacts are greater and longer-lasting in rockier areas. However, the shrimp are mainly found on more resilient muddy seabed. These areas have been fished for more than 50 years, and we find no significant change in these areas over the past 4 decades.

The fishery is exploring northward expansion, as shrimp track their optimal temperatures in warming waters. At present the fishery operates below 72°N, but has been conducting trial fishing further north in Melville Bay. The seabed is more abundant and diverse in these northern areas, which has implications for further expansion.

It can be difficult to balance the competing interests of conservation and industry. The economic importance of this fishery to Greenland means it will continue for many years. The fishery has shown commitment and enthusiasm in embracing the need for long term sustainability, generating hope that science can and will influence fishing practice going forward, and underpin a mutual aim of minimising environmental impact.

**Dr Chris Yesson** is a research fellow at Institute of Zoology. He arrived at a marine research career via the circuitous route of a Pure Maths degree then 5 years as a management consultant before retraining as a biologist. His PhD at the University of Reading examined evolutionary responses to climate change in terrestrial plants. He has worked at IoZ since 2009, where he has focused on marine research, examining distributions and genetics of cold water corals. For the past 5 years he has studied the seabed of West Greenland and assessed the impact of trawling on the benthic fauna of the region.

**Chair: Kirsty Kemp, Institute of Zoology, ZSL**

Dr Kirsty Kemp is a benthic ecologist with a primary interest in sustainable management practices in the marine environment. She is currently an independent research fellow at the Institute of Zoology, ZSL, and has 14 years of experience conducting ship-based field research using benthic cameras, ROVs and submersibles in all oceans of the world. She has been actively studying the benthos of Greenland since 2011 and her current work focuses on the disturbance impacts of trawl fishing on the Arctic seafloor, using benthic photography and bycatch specimens to map and describe seafloor communities, and to understand the stresses they are subjected to now, historically, and into the future.