



# IV ROSS SEA CONFERENCE 2023

*Università degli Studi di Napoli "Parthenope"*

*Via Amm. F. Acton, 38 - 80133 Napoli, ITALY*

*3-7 July 2023, Via Acton 38, Naples-Italy*

**Topic:** Marine biology and ecology

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**ABSTRACT Subject :**

Antarctic toothfish: Science, fishing, climate change and politics in the Ross Sea region

**Abstract** 01/03/2023 15:36:24

When the Ross Sea region Marine Protected Area (MPA) came into effect in 2017 it was the worlds largest marine reserve. It was also time-limited, in that it was established for a period of 35 years, after which, unanimous approval from CCAMLR members is needed to continue. The MPA provides an unprecedented opportunity to study the extent to which high seas MPAs (1) conserve representative ecological structure and function; (2) mitigate threats to ecosystems from fishing; and (3) provide a reference area to better gauge the effects of fishing and climate change. However, at over 1.55 million km<sup>2</sup> in size, tracking change and evaluating the conservation value of the Ross Sea region MPA is a highly complex, technical and unprecedented scientific challenge. The region is enormous, remote, inhospitable, complex (both physically and biologically), spatially heterogeneous, and varies on time-scales of days to decades. This presentation will discuss New Zealand research associated with the Ross Sea region MPA during its first 5 years in the context of CCAMLR international management plan. We summarise our baseline understanding of the ecosystems of the marine Ross Sea region and highlight key knowledge gaps. This taking stock is used to suggest future directions for ongoing monitoring of the region to understand the role of spatial protection: how can we ascertain the conservation value of a large, high-seas MPA in the Southern Ocean given oceanographic variability, complex food-webs, global change and mobile species?

