

SO-AntEco: Contributing information and scientific advice to the CCAMLR South Orkney Islands MPA review

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The South Orkney Islands are a small archipelago located in the Southern Ocean, 375 miles north-east of the tip of the Antarctic Peninsula. In 2009, the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) established the South Orkney Islands Southern Shelf Marine Protected Area (SOISS MPA), the first MPA located entirely within the High Seas anywhere on the planet. The MPA is designed to contribute towards the conservation of biodiversity in the Scotia Sea region, and to protect representative examples of benthic and pelagic habitats. A review of the MPA will be undertaken by CCAMLR in 2019, and work is ongoing to further develop a system of MPAs for the southern Scotia Sea/western Antarctic Peninsula region. Such work relies on the provision of policy-relevant scientific advice on patterns of biodiversity and understanding of benthic ecosystems.

SO-AntEco (South Orkneys - State of the Antarctic Ecosystem) was a British Antarctic Survey led expedition with an international team of scientists from the SCAR AntEco research programme. The team included 22 participants from 9 different countries and 16 institutes. The expedition took place on board the RRS James Clark Ross in February-March 2016. The expedition aimed to investigate species diversity, assemblage composition, abundance and habitat zonation along the shelf break of the South Orkney Islands, and to map the locations and distribution of all species found that were identified as VME (vulnerable marine ecosystem) taxa. A total of 124 trawled gear and 34 video/camera deployments were conducted during ~17 days of science. In total, over 700 seafloor habitat photographs and 3,900 live specimen photos were taken with over 38,000 individual animals collected and preserved for future analyses. Eighteen phyla were found from depths between ~500 m and ~2000 m.

We present the policy relevant findings of the expedition, and a summary of how these results will be used to contribute information and scientific advice for the SOISS MPA review and for the development of spatial management in this region more generally.