57th European Marine Biology Symposium

16-20 September 2024, Naples

Title: Monitoring Change in Highly Protected Marine Ecosystems

Category: Oral Presentation

Authors: Fionnuala McBreen, Kayleigh Thomas, Anamika Poyil, Rosie Clewett, Rob P. Harbour, Eilidh Boa & Karen Webb

Affiliations: Joint Nature Conservation Committee (JNCC)

Presenting author: Fionnuala McBreen

Presenting author email: Fionnuala.McBreen@jncc.gov.uk

Consider for Marine Ecology special issue: Yes

Session: Pattern of changes in marine ecosystems

Abstract

Highly Protected Marine Areas (HPMAs) are areas of the sea that allow the protection and full recovery of marine ecosystems. In July 2023, the UK designated the first three Highly Protected Marine Areas (HPMAs), two in offshore waters and one in inshore waters. These HPMAs are designed to protect all species and habitats and associated ecosystem processes, including the seabed and the water column, by prohibiting extractive, destructive and depositional activities.

As part of the Joint Nature Conservation Committee's (JNCC) responsibility for nature conservation in the UK offshore marine environment it is leading work to design and deliver the first marine ecosystem baseline monitoring surveys for the two offshore HPMAs: Dolphin Head and North East of Farnes Deep. Part of this two year programme includes surveys to collect baseline data using benthic grab samplers, underwater cameras, Baited Remote Underwater Video systems (BRUVs) and CTDs.

Projects within this programme will investigate our ability to detect changes in HPMA ecosystems and the impacts of climate change through research on food webs and their biodiversity components. This includes investigating long-term trends in plankton taxonomic and functional groups from 30 years of Continuous Plankton Recorder data and exploring changes in fish species composition and feeding guilds using modelling approaches. The programme will consider the challenges of monitoring and assessing the condition of marine ecosystem components at a site scale. These efforts aim to enhance our understanding and conservation of marine biodiversity in HPMAs.