

## Managing human impacts across diverse marine environments

### Abstract

As an island nation, the UK is surrounded by water, spanning from the coast and intertidal, to the circalittoral and deep-sea. Understanding the changing condition and resilience of marine biodiversity within these vastly different water masses is of key importance to understanding both the impacts of, and how to best manage, human activities whilst enabling continued sustainable development.

One of the biggest challenges to understanding biodiversity state is the lack of time-series data, particularly in areas where long-term monitoring has not yet been implemented around our offshore (>12nm) and deep-sea waters. To manage this, the UK's Joint Nature Conservation Committee are further developing spatial mapping proxy methods, gathering data on human activity presence, pressures caused by these activities, and the associated sensitivity of biodiversity to these pressures, to understand key areas of risk. Whilst evidence for these assessments is becoming more widely available for offshore waters, there is a large evidence gap on deep-sea biodiversity sensitivity, and understanding how to manage this little-studied environment. With ongoing pressures from fishing and oil and gas activity, and future threats from deep-sea mining, this is a key area of research which is urgently needed to help develop effective and sustainable management measures.

### Key words

Biodiversity; Impacts; Deep-sea; Anthropogenic activity

### Short description

Developing impact assessment proxies to protect and manage offshore marine areas with limited time-series data.

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