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Joint Nature Conservation Committee

NATURAL ENGLAND

Marine Conservation Zone Project -Features catalogue

Irish Sea Conservation Zones

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Map shows sea areas covered by the four regional MCZ projects.

The Marine Conservation Zone Project – Features Catalogue

Healthy seas, rich in marine wildlife, are not only important in their own right but contribute to our quality of life.

As well as providing food, energy, industry and leisure our seas absorb and retain more carbon dioxide than the land and habitats such as seagrass beds and kelp forests play an important role in combating climate change. With some of the most diverse waters in Europe our seas are home to a fantastic range of wildlife including dolphins, corals and seahorses. Every species and habitat has a role to play in the health and resilience of our environment and contributes to our future wellbeing so it is vital that we protect them.

A network of Marine Protected Areas (MPAs) will play an important role in conserving our marine life. Within this network our European marine sites conserve species and habitats , including birds, of European importance. Marine Conservation Zones (MCZs) are a new type of MPA and will conserve representative habitats, as well as species and habitats of conservation importance in the UK.

On the following pages are marine features that MCZs will be designed to protect.

Click here to go to Features catalogue web page

Species

Common name

Ocean quahog

Scientific name

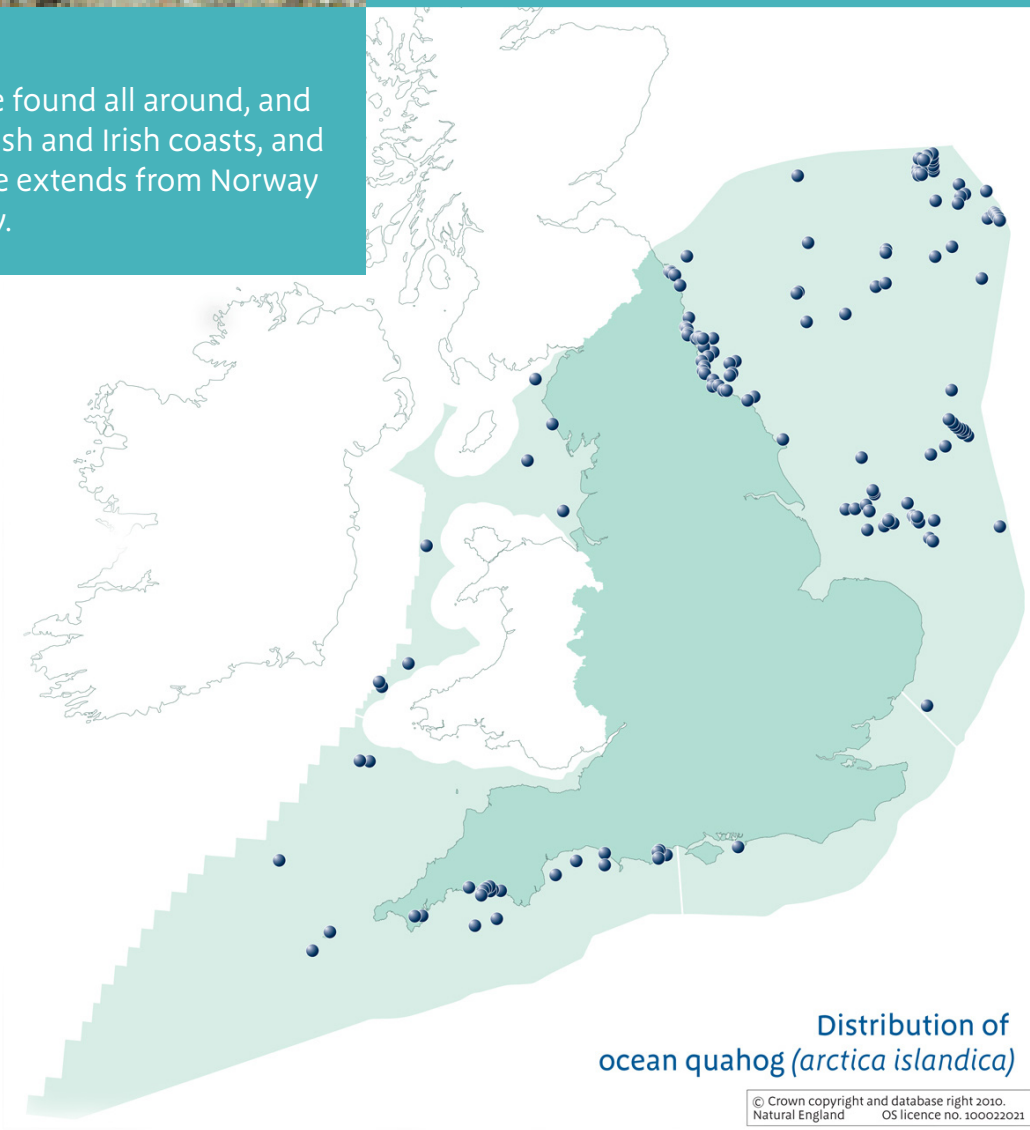
arctica islandica

Other common names

Icelandic cyprine
Iceland cyprina

Distribution

Ocean quahogs are found all around, and offshore from, British and Irish coasts, and the European range extends from Norway to the Bay of Biscay.



Distribution of ocean quahog *(arctica islandica)*

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Species

The Ocean quahog is a typical cockle-shaped bivalve, and the two halves of its hinged, rounded shell are thick, glossy and dark brown in colour. It is a long-lived animal and is quite large for its kind, growing up to 13cm across.

Ocean quahogs can be found from just below the low water level to depths of about 500m. They live buried in sand and muddy sand, often with their shells entirely hidden and just a small tube extending up to the surface of the seabed. The tube is a siphon that keeps water flowing across the animal, so that it can breathe, capture food, and expel waste.

People do eat quahogs, although this is more common in North America, Iceland and Norway than in the UK. Commercial fisheries for the bivalve suddenly increased enormously in the mid-1970s, and have remained at those levels ever since.

Ocean quahogs grow very slowly, and can take up to 50 years to reach market size. They are at particular risk from bottom fishing gear, and, like other slow-growing animals, once their numbers have been reduced the populations can take a long time to recover. Ocean quahogs are also an important food source for cod.

Conservation status / need

OSPAR List of Threatened and/or Declining Species and Habitats (Region II – Greater North Sea).

In Wales, ocean quahogs are a species of principal importance for the purpose of conservation biodiversity under the Natural Environment and Rural Communities Act 2006.

Ocean quahogs can live to more than 400 years old.

Further information

http://www.marlin.ac.uk/speciesinformation.php?speciesID=2588

http://www.conchsoc.org/encyclopedia/speciesInfo.php?taxon_version_key=NBNSYS0000173928&PHPSESSID=a0b28423415d546b9cefd946929b6fd1

http://www.fao.org/fishery/species/3534/en

http://www.marinespecies.org/aphia.php?p=taxdetails&id=138802

http://www.habitas.org.uk/marinelife/species.asp?item=W21250

Habitat

Common name

Blue mussel beds

Scientific name

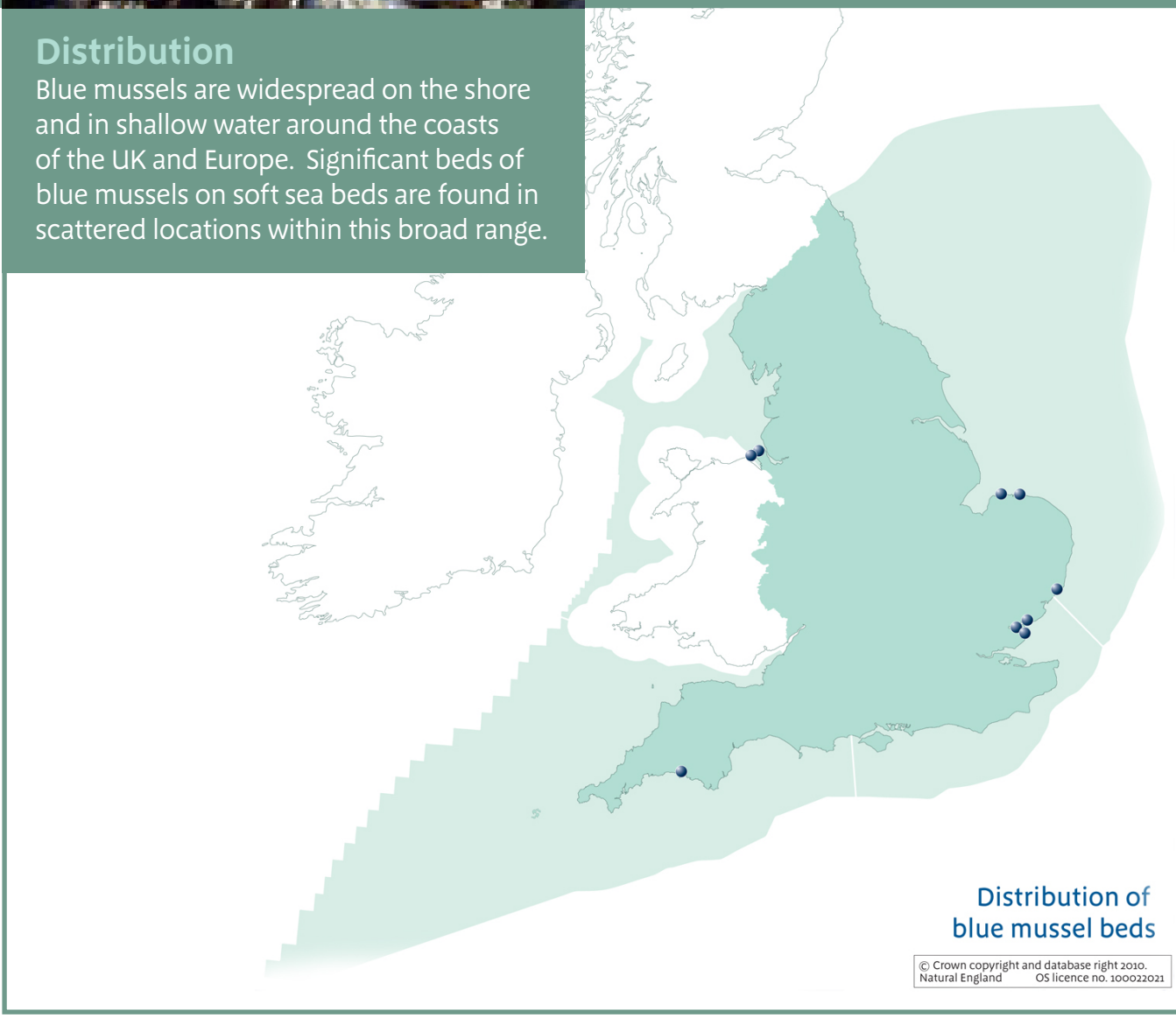
mytilus edulis

Other common names

N/A

Distribution

Blue mussels are widespread on the shore and in shallow water around the coasts of the UK and Europe. Significant beds of blue mussels on soft sea beds are found in scattered locations within this broad range.



Distribution of blue mussel beds

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Habitat

These small, blue mussels are a common sight on UK coasts. They can form extensive beds, with living and dead mussels, sand and mud all bound together by the mussels' sticky 'beards' of byssus threads. Blue mussel beds occur mostly on the lower shore between the tides or permanently submerged in shallow water.

Mussel beds provide an important food source for wintering waders. When beds were lost from parts of Holland in 1990, the eider duck numbers decline significantly. Otters may also get some of their food supply from blue mussel beds, and the 'mussel mud' formed by the blue mussels' waste is an important source of nutrients for animals living within the seabed.

Blue mussel beds have a particularly important role where they occur on soft seabeds, as they provide a hard surface in otherwise muddy or sandy areas. This attracts and supports a greater range of marine life than would otherwise be found there. 133 different animals and plants have been recorded in blue mussel beds, including seaweeds, anemones, barnacles, sea snails, crabs, starfish and worms.

The threats to blue mussel beds include their removal for food or bait, and the damage caused by mobile fishing gear, anchoring or mooring chains, or, for beds found between the tides, by trampling. They are also at risk from shoreline building developments, dredging, and pollution.

Blue mussel beds take at least five years to recover from damage, and those in southern England are some of the most threatened in Europe.

Conservation status / need

UKBAP Priority Habitat

OSPAR List of Threatened and/or Declining Species and Habitats (Region II – Greater North Sea, and Region III – Celtic Sea)

Blue mussel beds can also be key features of habitats listed in Annex I of the Habitats Directive.

The blue mussel can survive at temperatures as low as -10oC.

Further information

http://www.marlin.ac.uk/speciesfullreview.php?speciesID=3848

http://www.fao.org/fishery/culturedspecies/Mytilus_edulis/en

http://species-identification.org/species.php?species_group=mollusca&id=819

http://www.marinespecies.org/aphia.php?p=taxdetails&id=140480

http://www.marlin.ac.uk/habitatsbasicinfo.php?habitatid=36&code=1997

Broad habitats

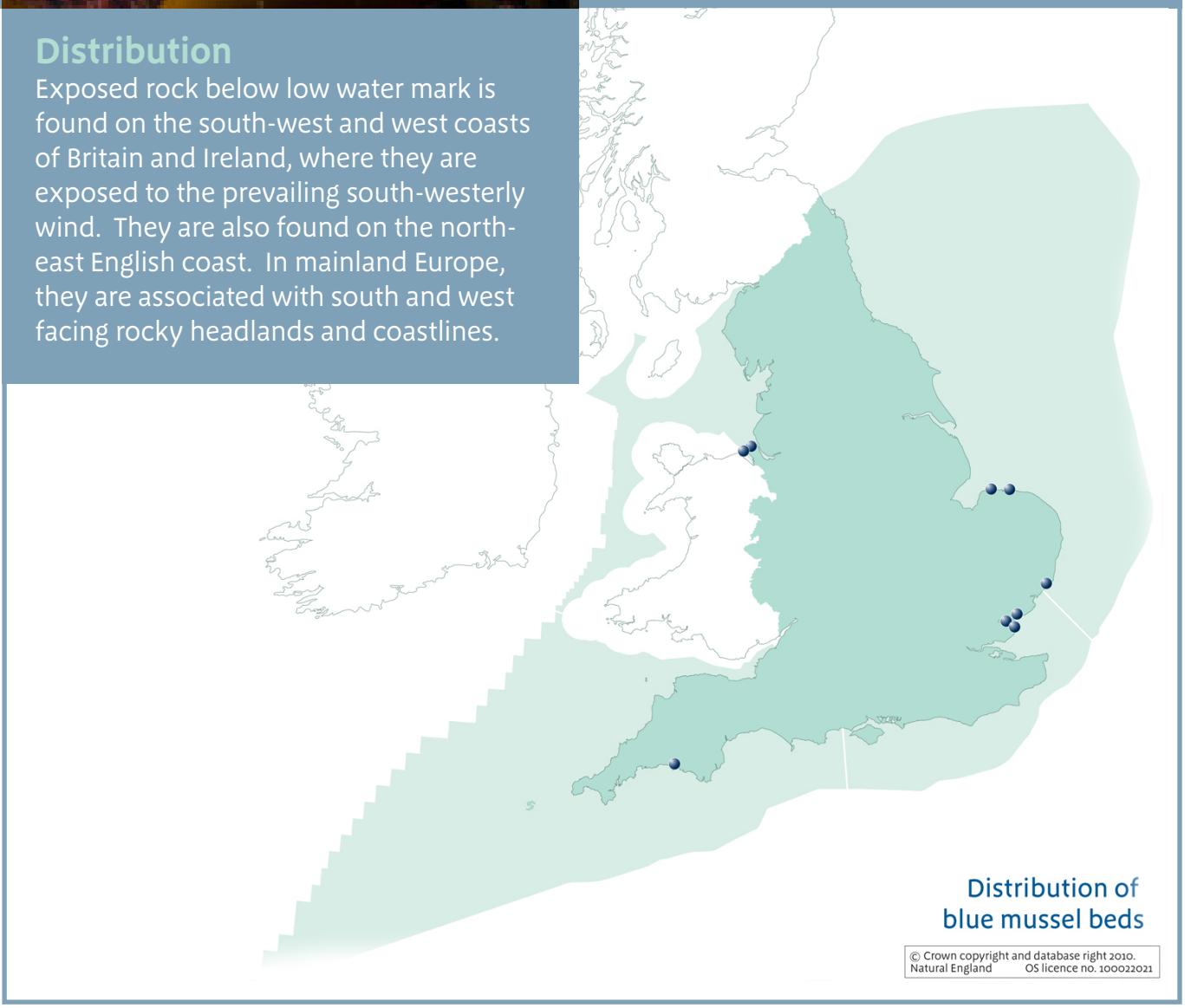
Habitat name

High energy infralittoral rock

Shallow water rock, below the tides, exposed to very strong waves and currents

Distribution

Exposed rock below low water mark is found on the south-west and west coasts of Britain and Ireland, where they are exposed to the prevailing south-westerly wind. They are also found on the north-east English coast. In mainland Europe, they are associated with south and west facing rocky headlands and coastlines.



Distribution of blue mussel beds

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On exposed rocky coastlines that are subject to strong waves or swift tidal currents, the shallow underwater environment (which may be exposed to the air on the lowest of tides) tends to be dominated by the large kelps and some smaller red seaweeds.

The width of the kelp zone is all down to the amount of light penetrating the water. Seaweed, like plants, needs sunlight to survive. Where the water is very clear, this zone can be wide, reaching as far as an exceptional 45m deep.

Kelp does not establish in areas where the water movement is strongest or in surge gullies and caves, from which red seaweeds may also be absent in low light levels. The rock walls in these areas are dominated by animal communities of sponges, sea squirts, sea mats, mussels and barnacles.

Even where the kelp is present, there are large communities of animals. Many small creatures including worms, crabs, sea snails and shrimp-like animals live in the holdfast by which the kelp attaches to the rock. Kelp forests are also important for young fish.

This habitat is found on rocky coastlines, exposed to the full force of the prevailing south-westerly wind.

Conservation status / need

N/A

Alginates obtained from kelp are found in products as diverse as tomato ketchup, ice cream, postage stamps, medical dressings and beer.

Further information

http://www.jncc.gov.uk/marine/biotopes/biotope.aspx?biotope=JNCCMNCR00001955