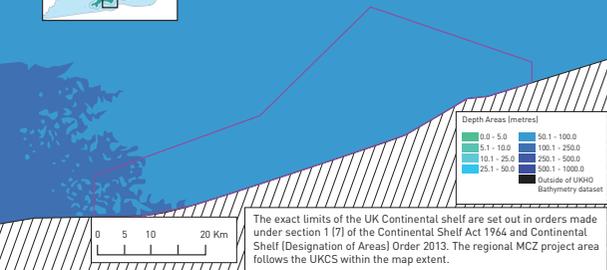


WESTERN CHANNEL RECOMMENDED MCZ



THE SITE

Western Channel is one of the largest rMCZs, located 54km south-east of Lizard Peninsula, in the westernmost part of the English Channel and abutting the 200 nautical mile continental shelf limit/EEZ and the median line between UK and French waters. It is 50 – 100 m deep, with a deeper area at the western end. The seabed consists primarily of sediment with some sand. The main use of the site is commercial fishing by UK and French vessels, with some use by vessels from other countries.

BENEFITS TO PEOPLE

People draw many benefits from the environment which cannot readily be monetised. Many studies have tried to measure these benefits, whether non-use values of an area or the ecosystem services that a site provides. Where figures have been estimated, these are given; where not available, a qualitative description of the value is given.

NON-USE AND BEQUEST VALUE

People value places, habitats and species and want to protect them now and for future generations even if they never use the site themselves. Although this value cannot be directly measured, it can be estimated in different ways. One study gives a best estimate for Western Channel of £414,600/yr, using information from divers and anglers. A method has been designed to extrapolate this to the wider public, which results in a best estimate of £12,060,000/yr.

REGULATION OF POLLUTION (NUTRIENT CYCLING)

Subtidal sediments are known to act as pollution sinks. Protection of this habitat may result in improvement in its condition and thus its capacity to process waste.

GAS AND CLIMATE REGULATION

Marine sediments, through processes that occur in their upper layers, play an important role in the global cycling of carbon and nitrogen. Protection of these habitats, resulting in improved condition, may increase site benthic biodiversity and biomass, and thus improve their regulating capacity.

ENVIRONMENTAL RESILIENCE

Rising sea temperatures and sea levels, greater storm frequency, increasing numbers of severe storm surges, and changes in the timing of plankton production, composition and distribution are all a result of climate change, and damage ecosystems. Protected sites with healthy diverse ecosystems will be more resilient to such threats, in the same way that healthy humans tend to be more resistant to stress and disease.

ESTIMATED BENEFITS AND COSTS PER YEAR



HEALTH AND WELLBEING VALUES

The study using information from divers and anglers also ranked UK marine sites according to specific benefits related to health and well-being. For Western Channel, if the MCZ were to be designated, scores for all these values are positive (→3). Compared to other sites across the UK, Western Channel is in the lower third (light green) of rankings which is a reflection of the fact that it lies far offshore and cannot easily be visited.

Impact on life	4.00
Engagement with nature	3.81
Spiritual value	3.75
Health	3.71
Social benefit	3.69
Sense of belonging	3.46

FISH AND SHELL FISH FOR HUMAN CONSUMPTION

Both of the habitats to be protected are important for fish and shellfish. Once the site is managed, fish and shellfish populations may increase within and outside the boundaries, benefiting commercial fishers and anglers. The rMCZ is large and currently has a fairly high level of fishing, particularly by bottom trawlers. Reducing fishing pressure, for example by regulating bottom trawling, is likely to benefit stocks of commercial species, which will benefit those able to continue fishing with other gears within the rMCZ. Other fishers outside the rMCZ might benefit from the "spill-over" effect.

RESEARCH AND EDUCATION

Research within designated sites will increase our understanding of marine ecosystems and how they are useful to us. Regular monitoring of the MCZ will increase our understanding of how the marine environment changes as a result of human activities and management. The MCZ would play a role in education (e.g. television programmes, articles in magazines and newspapers, and educational resources developed for use in schools).

FEATURES PROPOSED FOR PROTECTION



2 Broad scale habitats:

Subtidal coarse sediments

Subtidal sand



The Marine Socio Economics Project (MSEP www.mseproject.net) have developed a 'Infographic Impact Assessment' (IIA) for the Marine Conservation Zone (MCZ) process. The MSEP partners (New Economics Foundation, Marine Conservation Society, RSPB, the Wildlife Trusts and WWF) have used costs and benefits of protecting sites from the Defra consultation documents and relevant studies, and presented these in a visual way to make the trade-offs clearer than a simple Cost-Benefit Analysis (CBA) could achieve on the summary page of an Impact Assessment (IA). June 2015.

WESTERN CHANNEL RECOMMENDED MCZ

CONTEXT

Although not often visible, the seas around our coast are home to some of the best marine wildlife in Europe, with a wide diversity of underwater landscapes habitats and species. The marine environment is also essential to our social, economic and environmental well-being providing many goods and services including food, building materials, recreation, transport, oil, gas, renewable energy, potential carbon capture and pollution control.

However, at present our seas and their wildlife are being damaged by many human activities. The Marine and Coastal Access Act requires that a network of MPAs, including examples of all features of UK waters, is created to help improve the health of the marine environment. A network of well managed MPAs will allow damaged marine ecosystems to recover, and protect those that are healthy, more effectively than would individual, unrelated protected sites. Western Channel rMCZ would form part of the network and thus help to fulfil this obligation.

IMPORTANCE OF THIS rMCZ WITHIN THE MPA NETWORK

The Western Channel rMCZ is an essential part of the UK MPA network if the required amount of subtidal coarse sediment is to be protected and so this site fills a major gap. The rMCZ's location is also important for improving spatial connectivity between MPAs.

The sediment habitats proposed for protection support numerous species (e.g. burrowing anemones, segmented worms, sea urchins and hermit crabs) that provide a source of food for fish and other predators. Subtidal sand may appear desert like, but flat fish and sand eels live in and on the surface, and worms and bivalves within the sand. The southern part of the site is an area of particularly high species richness.

This rMCZ covers part of a seasonal thermal front which provides a rich source of food for many animals. Such fronts occur where plankton rise up from cooler deeper waters and flourish in the sunlit surface waters. Basking sharks, foraging seabirds, and the short-beaked common dolphin all occur here, and the rMCZ is likely to be an important fish spawning and nursery area.

COSTS TO BUSINESS PER YEAR



UK COMMERCIAL FISHERIES

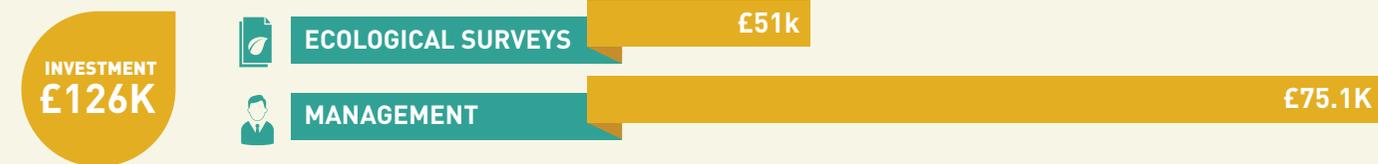
The area is a productive fishing ground. Bottom trawling is the main type of fishing, and takes place mainly in the western part of the site. There are also low levels of potting, netting and fishing with hooks and lines but the site is not regularly used with these gears. The site was once dredged for scallops, and vessels sometimes do some dredging to assess the viability for this fishery; the site might thus be used again in the future for scallops.

There are two potential management scenarios for the site: closure to dredges and bottom trawls; or closure to dredges and bottom trawls with zoning for pots and traps, nets, and hooks and lines. The best cost estimate to the fishing sector, recognising these potential restrictions, is £12,700/yr. Fishing representatives are concerned that the current recommendation does not allow for trawl corridors, as originally proposed.

NON-UK COMMERCIAL FISHING

The site is fished mainly by France (95% of non-UK fishery revenue, mainly using bottom trawls and dredges), predominantly in the western part of the rMCZ. Monk fish, sole and cuttle fish are targeted. Germany (mid-water trawls), Ireland (pelagic trawls), Belgium (bottom trawls) and the Netherlands (mobile and static gear) also fish in the area. French and Dutch vessels also use pots and traps. Estimated total revenue from non-UK fishing in the site is £2,823,000/yr of which 82% comes from bottom trawlers and dredgers. The best estimate of the cost of designation to the non-UK fishery is £601,000/yr. N.B. these costs are not included in the UK costs to business.

PUBLIC SECTOR INVESTMENT PER YEAR



MANAGEMENT

Both habitats in this site are considered to be in unfavourable condition and thus require regulation of fishing activities by the MMO. The best estimate cost for management of the ten tranche 2 sites that require fisheries regulation is £751,000/yr, so the average cost/site for fisheries management is £75,100/yr. Costs cover enforcement and surveillance and do not take account of possible savings through single measures for several MCZs.

ECOLOGICAL SURVEYS

JNCC will monitor the condition of the MCZ features in order to report on success of protection. Cost estimates for ecological surveys vary according to the number of features in a site. Defra provides a best estimate cost of £1,171,000 for all 23 rMCZs, and so the average cost/site is estimated at £51,000/yr.

NATIONAL DEFENCE

The Ministry of Defence uses the site for training. Activity which is harmful to features can be avoided through additional planning during operations and training. The best estimate of costs for those sites in tranche 2 which are used for by the MOD is £2,000/yr and so the cost for one site will be extremely small.

SECTORS UNLIKELY TO BE AFFECTED

COMMERCIAL FISHING

With mid-water trawls.

SHIPPING

Transit of ships.

CABLES

Existing interconnectors and telecom cables (three active cables cross site).