Joint Recommendation regarding the protection of Moderate energy circalittoral rock, Subtidal coarse sediment and Subtidal chalk within the South Dorset Marine Conservation Zone under Article 13(4) of Directive 2008/56/EC and Article 18 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy (the Basic Regulation).

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Joint Recommendation

1. Introduction

This joint recommendation contains a proposal for the regulation of fisheries activity and is initiated by the United Kingdom (UK) and submitted to the European Commission jointly by the UK and France, being those Member States having a direct management interest affected by the joint recommendation.

The overall aim of this joint recommendation is to ensure the protection of Moderate energy circalittoral rock (Eunis[1] habitat type A4.2), Subtidal coarse sediment (A5.1) and Subtidal chalk (Habitat Feature of Conservation Importance) within the South Dorset Marine Conservation Zone (MCZ) from fisheries, thereby contributing to the obligation to recover Moderate energy circalittoral rock and Subtidal chalk to favourable condition and to maintain Subtidal coarse sediment to favourable condition in accordance with the South Dorset Marine Conservation Zone Designation Order 2016 in compliance with Article 11 of the Common Fisheries Policy.

It is the intention of the UK government (as the initiating Member State) to take forward measures in respect to fisheries activities exercised by all vessels including fishing vessels carrying the flag of other Member States of the EU.

2. The Recommendations to be Implemented

The following recommendations for South Dorset MCZ are proposed for adoption:

- the exclusion of demersal towed gears (Table 1) across the entirety of the site to protect the listed features and an increased reporting zone around the site.

Gear Types to be prohibited within the site.	**Feature**	**Gear code Annex XI in EU Regulation No 404/2011**	**International Standard Classification of Fishing Gears**

[1] http://eunis.eea.europa.eu/habitats.jsp

Beam Trawl	Moderate energy circalittoral rock, subtidal chalk, subtidal coarse sediment	TBB	TBB
Bottom Trawl/Otter Trawl	Moderate energy circalittoral rock, subtidal chalk, subtidal coarse sediment	OTB, OTT, PTB,TBN,TBS,TB	OTB,OTT,OT,PTB,TB
Seines	Moderate energy circalittoral rock, subtidal chalk, subtidal coarse sediment	SDN, SSC, SX, SV	SB, SPR, SDN, SSC, SX, SV
Dredges	Moderate energy circalittoral rock, subtidal chalk, subtidal coarse sediment	DRB	DRB, DRH

Table 1: Gear types that are prohibited in the areas proposed for closure within the site

The coordinates of the site and management boundary are as follows (Table 2):

Point	Latitude	Longitude
1	50˚ 25’ 03.336” N	2˚24’ 31.524” W
2	50˚ 25’ 02.910” N	2˚01’ 07.781” W
3	50˚ 21’ 17.907” N	2˚01’ 07.691” W
4	50˚ 21’ 18.325” N	2˚24’ 31.166” W

Table 2: Coordinates of the site boundary (same as the proposed management boundary)

3. Control and enforcement of the proposed fisheries management measures

Control and enforcement of the proposed fisheries management measures will be based on the risk-based systems in accordance with the model developed by the UK’s Marine Management Organisation (MMO).

Key provisions which should be included in an EC regulation to facilitate control enforcement and compliance include:

- A prohibition on any demersal towed gears, seines and dredges being deployed within the MCZ. All gear types are permitted to fish in the reporting zone outside the management area with increased VMS reporting.

- Establishment of a 1nm (1.852km) reporting zone surrounding South Dorset MCZ. All fishing vessels within this area shall be required to record or report vessel positions at minimum 10 minute intervals. This area shall be defined by the reporting zone and coordinates displayed in Annex D.

- A requirement for all fishing vessels entering the reporting zone to have a system for recording and reporting vessel position which meets prescribed specifications (see Section 8.2 of Annex A for minimal requirements) and is installed and operative. Any fishing vessel entering South Dorset MCZ or the reporting zone without such a system will be committing an offence.

- A requirement for all fishing vessels transiting the prohibited area carrying prohibited gears to have all prohibited gears on board lashed and stowed.

- A requirement for all fishing vessels transiting the restricted area carrying prohibited gears to ensure that the speed during transit is not less than 6 knots except in the case of force majeure or adverse conditions[2]. In such cases the master shall inform the fisheries monitoring centre (FMC) of the flag member state which shall then inform the UK FMC.

The proposal on which gears types to prohibit is formulated in terms of Gear Codes in Annex XI in EU Regulation 404/2011 and is explained in more detail in Section 8 of Annex A.

The ongoing management needs of the site will be assessed on an annual basis. If changes to the current management status are required the UK will coordinate such a requirement in accordance with Article 11 and Article 18 of the Basic Regulation and in collaboration with those Member States with a direct management interest in the South Dorset site.

[2] Article 50 4(b) http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:343:0001:0050:EN:PDF

Joint Recommendation regarding the protection of moderate energy circalittoral rock, subtidal coarse sediment and subtidal chalk within the South Dorset Marine Conservation Zone in accordance with Article 11 necessary for the purpose of complying with obligations under Article 13(4) of Directive 2008/56/EC and Article 18 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy (the Basic Regulation).

Supporting Documentation

1. Introduction

1.1 General Remarks

The South Dorset site was designated as a Marine Conservation Zone (MCZ) in November 2013 with additional features (Subtidal mud and fan mussel) designated in 2016[3]. MCZs are designated by the UK government under the Marine and Coastal Access Act 2009 for England and Wales. These zones will contribute to the UK's commitment to have a well-managed and ecologically coherent network of MPAs by 2016 and will also assist in meeting commitments relating to the EC Marine Strategy Framework Directive (MSFD). All MCZs are designated using a separate order; in this case the South Dorset Marine Conservation Zone Designation Order 2016.

Commercial fishing has been identified as an activity which could adversely impact the integrity of the site's features and as such required to be assessed and, if necessary, managed to reduce its impact. The General Management Approaches (GMAs) for the features of South Dorset MCZ are to recover the protected broadscale habitats Moderate energy circalittoral rock (A4.2) and the Habitat Feature of Conservation Importance Subtidal chalk, and maintain the broadscale habitat of Subtidal coarse sediment (A5.1).

As the proposed area of the South Dorset site falls partly beyond 6 and 12 nautical miles (nm) of the UK coastline, all Member States have access to a proportion of the site up to the 12nm limit with exception of France which has fishing access rights to the 6nm of this site. Through VMS the UK and France are currently the Member States with an active fishing interest in the site. It is the intention of the UK government (as the initiating Member State) to take forward measures in respect to fisheries activities exercised by all vessels including fishing vessels carrying the flag of other Member States of the EU.

[3] http://www.legislation.gov.uk/ukmo/2016/29/pdfs/ukmo_20160029_en.pdf

This document covers the 11 information items[4] of the Commission's guidelines from 2008 concerning development of proposals for fisheries management measures in marine Natura 2000 areas within the scope of the Common Fisheries Policy.

1.2 Overall aim of the present proposal

The overall aim of the present proposal is to ensure adequate protection of Moderate energy circalittoral rock (A4.2), Subtidal coarse sediment (A5.1) and Subtidal chalk from fishing activities that could adversely affect feature condition and thereby to contribute to the obligation of recovering/or maintain all protected features to favourable condition in accordance with the South Dorset Marine Conservation Zone Designation Order 2016.

The Conservation Objective for the South Dorset MCZ is, subject to natural change, to ensure that Moderate energy circalittoral rock, Subtidal coarse sediment and Subtidal chalk are to remain in or be brought into favourable condition. To achieve conservation objectives, general management approach (i.e. recovery or maintenance of feature condition) have been set out for each protected feature. Except where direct evidence of condition is available, feature condition is typically based on a proxy assessment of feature sensitivity and the presence of activities to which the features may be sensitive. For the South Dorset MCZ, the General Management Approaches (GMAs) have been set to recover and/or maintain all features to favourable condition.

According to advice provided by JNCC, the UK Government's statutory scientific advisor for offshore habitats, where fishing using demersal towed gears overlaps with the features it may pose a risk to achievement of the conservation objectives for the site.

The UK is proposing to restrict fishing activity with demersal towed gears across the entire site due to the risk posed to the achievement of the conservation objectives. Where there is uncertainty regarding the impacts of fishing on the features, an "adaptive management" approach is proposed, which would allow the site to move toward achieving its conservation while providing the opportunity to improve our understanding of the impacts and subsequently adapt management accordingly. The content of the proposed fisheries management measures is explained in more detail in section 7 of Annex A.
The proposal has been reviewed by CEFAS (see section 3.5).

1.3 Recommendations to be implemented

The following recommendations are proposed for adoption:

[4] http://ec.europa.eu/environment/nature/natura2000/marine/docs/fish_measures.pdf

- the exclusion of demersal towed gears (Table 3) across the entirety of the site (Table 4 and Figure 1) to protect the listed features and an increased reporting zone around the site (see Section 8 of Annex A).

Gear Types to be prohibited within the site	**Feature**	**Gear code Annex XI in EU Regulation No 404/2011**	**International Standard Classification of Fishing Gears**
Beam Trawl	Moderate energy circalittoral rock, subtidal chalk, subtidal coarse sediment	TBB	TBB
Bottom Trawl/Otter Trawl	Moderate energy circalittoral rock, subtidal chalk, subtidal coarse sediment	OTB, OTT, PTB, TBN, TBS, TB	OTB, OTT, OT, PTB, TB
Seines	Moderate energy circalittoral rock, subtidal chalk, subtidal coarse sediment	SDN, SSC, SX, SV	SB, SPR, SDN, SSC, SX, SV
Dredges	Moderate energy circalittoral rock, subtidal chalk, subtidal coarse sediment	DRB	DRB, DRH

Table 3: Gear types that are prohibited in the areas that are proposed for closure within the site

The coordinates for both the site and management boundary are as follows:

Point	Latitude	Longitude

1	50° 25’ 03.336” N	2˚24’ 31.524” W
2	50° 25’ 02.910” N	2˚01’ 07.781” W
3	50° 21’ 17.907” N	2˚01’ 07.691” W
4	50° 21’ 18.325” N	2˚24’ 31.166” W

Table 4: Coordinates of the site boundary (same as the proposed management boundary)

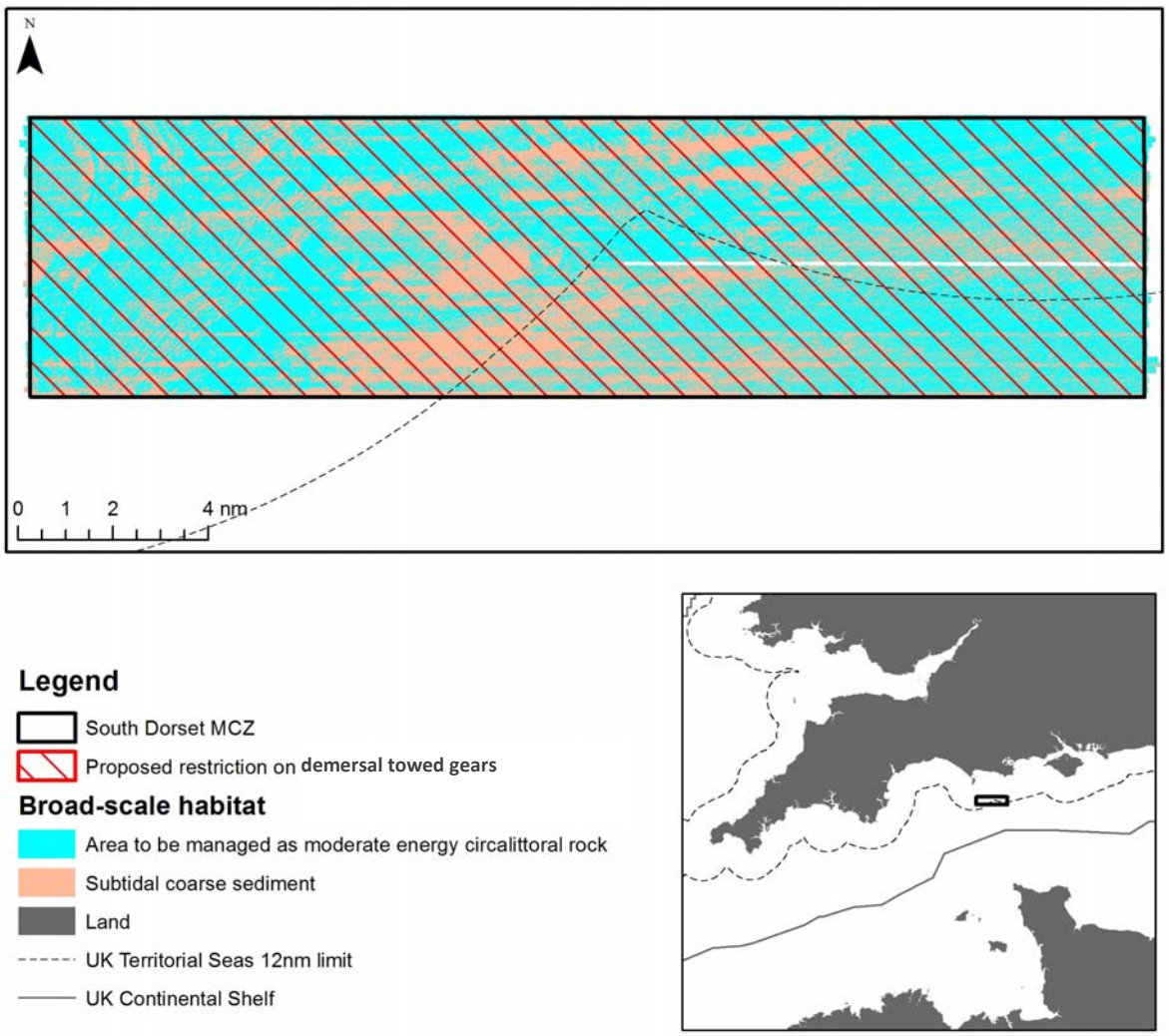


Figure 1: South Dorset MCZ site map including protected features for which management is being proposed.

2. Legal framework

2.1 Common Fisheries Policy

The Common Fisheries Policy (Regulation No 1380/2013 (The Basic Regulation) Article 11) states that Member States are empowered to adopt conservation measures not affecting fishing vessels of other Member States that are applicable to waters under their sovereignty or jurisdiction. The UK has an obligation in recovering these habitat types to favourable condition in accordance with the South Dorset Marine Conservation Zone Designation Order 2013[5].

Where a Member State ("initiating Member State") considers that measures need to be adopted for the purpose of complying with the obligations referred to above, and other Member States have a direct management interest in the fishery to be affected by such measures, the European Commission shall be empowered to adopt such measures, upon request, by means of delegated acts. For this purpose cooperation between Member States having a direct management interest is foreseen with a view to formulating a joint recommendation in agreement on draft fisheries management measures to be forwarded to the Commission.

The initiating Member State shall provide the Commission and the other Member States having a direct management interest with relevant information on the measures required, including their rationale, scientific evidence in support and details on their practical implementation and enforcement. Member States shall consult the relevant Advisory Councils.

The initiating Member State and the other Member States having a direct management interest may submit a joint recommendation within six months from the provision of sufficient information. The Commission shall adopt the measures, taking into account any available scientific advice, within three months from receipt of a complete request (Reg 1380/2013, Articles 11 and 18).

The following chapters describe how the UK, as the initiating Member State, has taken the Commission's criteria for decision making into account, as well as the requirements for regional coordination in line with the new Basic Regulation.

2.2 Fisheries Access to the South Dorset MCZ

In accordance with the Basic Regulation the following Member States operate demersal towed gears within the proposed management zone; UK and France.

[5] http://www.legislation.gov.uk/ukmo/2016/29/pdfs/ukmo_20160029_en.pdf

Of these Member States both have undertaken demersal trawling within the proposed management zone in the past 6 years; from 2010 to 2015 inclusive (details of activity and gear type can be found in table 2.1). The most significant activity was from French and UK vessels. Other Member States such as Belgian, Dutch and Irish vessels had been recorded occasionally within the site, however these were in extremely low numbers and not witnessed in a year on year basis.

2.3 Designation of the South Dorset MCZ

The South Dorset site was designated as a Marine Conservation Zone (MCZ) in November 2013 (see Figure 2). MCZs are designated by the UK government under the Marine and Coastal Access Act 2009 for England and Wales. These zones will contribute to the UK's commitment to have a well-managed and ecologically coherent network of MPAs by 2016 and will also assist in meeting commitments relating to the EC Marine Strategy Framework Directive (MSFD).

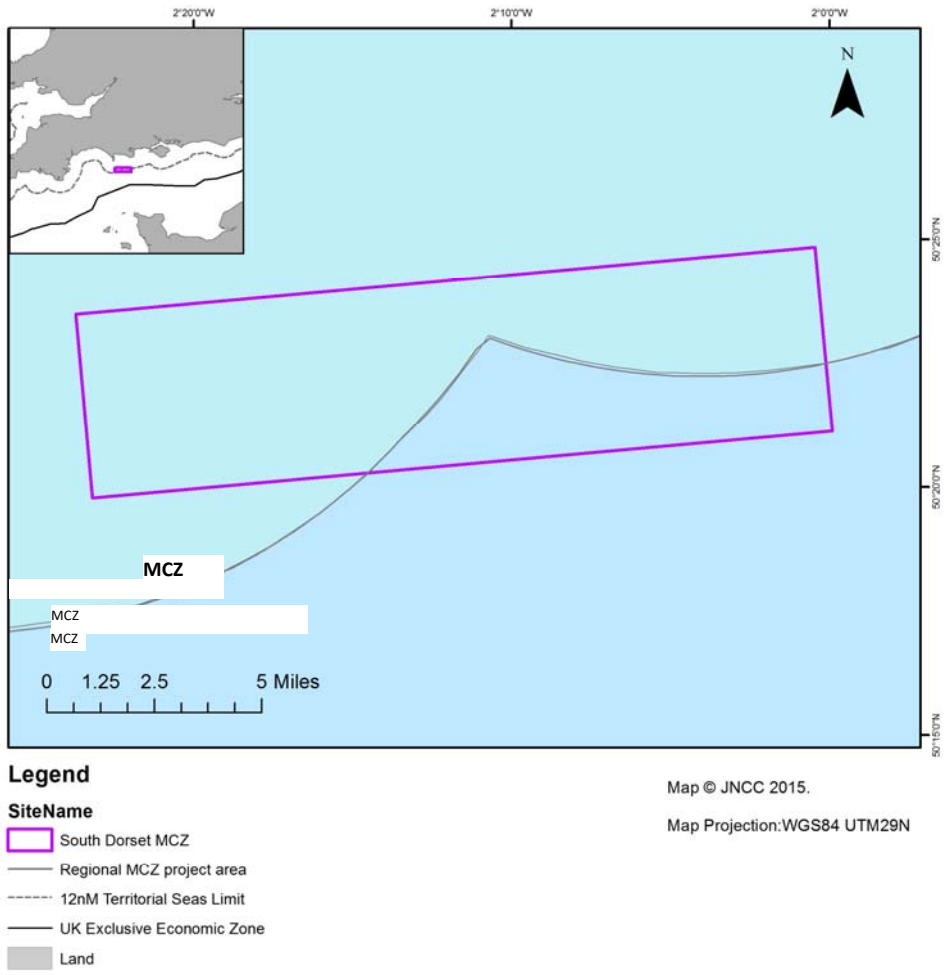


Figure 2: Site boundary for South Dorset MCZ.

3. Process

This chapter describes the process from when the initiative to protect Moderate energy circalittoral rock, Subtidal coarse sediment and Subtidal chalk from fisheries activities at South Dorset commenced. A fisheries management workshop in Exeter in May 2016 was jointly hosted by the Department for Environment Food and Rural Affairs (Defra) and the Joint Nature Conservation Committee (JNCC) which will inform the development of fisheries management measures in form of 'A Joint Recommendation' by the UK and France to the European Commission.

3.1 Stakeholder workshop

A Defra-led workshop was held in Exeter on 18 and 19 May 2016 to discuss fisheries management measures for MPAs in the Channel and the Southwest Approaches with the intention of developing management measures in conjunction with stakeholders. The workshop was attended by French, Irish and UK fisheries representatives as well as delegates from the French, Irish and Spanish governments and the Northwest Waters Advisory Council (NWWAC). There was also representation from Non-Governmental Organisations (NGOs) and conservation organisations.

Ahead of these meetings the UK prepared fisheries management options papers for the sites which discussed the risk to achievement of the conservation objectives associated with a range of management options.

At the meeting it was clarified that patches of exposed rock existed alongside areas of overlaying sedimentary veneer within the site. Due to the distribution of the features within the site it is difficult to differentiate them effectively for management purposes. Therefore JNCC advise that the entirety of the site should be considered as the area to be managed as Moderate energy circalittoral rock. Given that, the current Defra policy is to restrict demersal towed gears in area of known rock and or/reef feature the initial proposal for management of the site was to restrict demersal towed gears contacting gears throughout the site. This is consistent with the approach taken for other sites with a similar topography.

The site specific discussion from the report of the meeting is at Annex A.

3.2 Consultation on management proposals

Draft proposals for fisheries management measures were developed using feedback from the stakeholder workshops as well as advice from the UK's statutory nature conservation bodies, the JNCC and Natural England, and offshore fisheries regulator, the MMO.

Fisheries management measures were developed in close coordination with other Member States with a direct management interest in the sites.

Draft management proposals were subject to a six week period of consultation with Member States with a direct management interest in the sites and the Northwest Waters Advisory Council.

Finalised management proposals were then presented to other Member States with a direct management interest in the sites for agreement that sufficient information had been provided in order to commence the formal agreement of the proposals as Joint Recommendations. [Following this, ad hoc meetings of the Northwest Waters Article 11 sub-group were held to start formal agreement proceedings for the Joint Recommendations. Any outstanding issues were then addressed before agreement was reached on the Joint Recommendations by members of the Northwest Waters High-Level Group and they were submitted to the European Commission for adoption.]

3.3 Formal agreement of Joint Recommendations

[To be added following completion of Art.11 procedure]

3.4 Involvement of the NWWAC

The NWWAC attended the workshop in Exeter in May 2016 where initial proposals for management were discussed and the UK presented its rationale behind the measures proposed. The UK then attended a NWWAC meeting in February 2017 to present and discuss these proposals. There were no specific comments on this site.

4. Rationale for measures

The site is predominantly exposed of circalittoral rock with overlaying deposits of Subtidal coarse sediment of varying depth. The eastern half of the site has longitudinal furrows of alternating cobbles and gravel, oriented in the direction of the tide. As it is difficult to discriminate effectively between features from a management perspective, the measures proposed are based on the feature with greatest sensitivity to the prevailing pressures (Moderate energy circalittoral rock).

Demersal towed gears

Whilst it is unlikely that demersal towed gear can affect the long-term natural distribution of Subtidal chalk or Moderate energy circalittoral rock features, there is evidence to indicate that their use can impact the structure and function of the habitat and the long term survival of its associated species. The use of towed fishing gears is likely to cause damage or death of fragile, erect species, such as sponges and corals (Løkkeborg 2005, Engel & Kvitek, 1998), and reduce habitat complexity as boulders and cobbles associated with the hard substrate are moved around (Freese et al. 1999). Other species such as hydroids, anemones, bryozoans, tunicates and echinoderms may also be

vulnerable (McConnaughey et al. 2000, Sewell and Hiscock 2005). Where fragile, slow growing species occur, even low levels of fishing have the potential to change the structure and function of the habitats and may result in the loss of some characteristic species.

Demersal static gear

Mechanical impacts of static gear on Subtidal chalk or Moderate energy circalittoral rock (e.g. weights and anchors hitting the seabed, hauling gear over seabed, rubbing/entangling effects of ropes) can damage some species (Eno et al.1996). Other species appear to be resilient to individual fishing operations but the effects of high fishing intensity are unknown (Eno et al. 2001). Recovery will be slow (Foden *et al.,* 2010) resulting in significant reduction or even loss of characteristic species. The individual impact of a single fishing operation may be slight but cumulative damage may be significant (Eno et al. 2001; Foden et al. 2010; Roberts et al. 2010).

5. Principles

Based on scientific advice from JNCC considering the risk associated with a range of management options and the consideration of socio-economic interests, the UK has decided to protect Moderate energy circalittoral rock (4.2), Subtidal coarse sediment (A5.1) and Subtidal chalk (HFCI) in South Dorset MCZ from physical disturbances due to demersal towed gears.

When formulating the Joint Recommendations, the following principles were applied:

1) Sound scientific basis

This proposal for fisheries management measures is based on available scientific evidence. JNCC has provided scientific advice in relation to the risk to achieving the conservation objective for the site. The proposal has also been reviewed by Cefas. The advice from Cefas was that this approach presents the lowest risk option for maintaining favourable condition across the site whilst also insuring against future impacts on features within the site as a result of displacement of fishing activities into areas where effort has been historically low.

2) Stakeholder involvement

An important element of the process of formulating fisheries management measures has been the involvement of stakeholders. This has been outlined in further detail in sections 3.1 and 3.2.

3) Transparency

In this proposal the UK has been transparent on the data being used, the steps being taken and the methodology used, as well as the involvement of stakeholders.

4) Proportionality

An approach was sought that would deliver a regulatory proposal that delivers a key contribution to the achievement of the conservation objectives while minimising the effect on the fishing industry. A key safeguard in the process to deliver such an outcome was to follow the European Commission guidance in this regard, which described a proportional approach towards balancing sustainable exploitation of resources and the need to conserve important habitats, including a precautionary approach to fisheries management.

5) Non discrimination

The proposal will need to ensure that measures are not applied in a discriminatory manner. A coordinated approach between Member States is the only way of ensuring non-discrimination for fleets affected by the proposed measures. Ultimately, a proposal is presented to the European Commission for regulation in the framework of the Common Fisheries Policy, ensuring a fair outcome across the fishing sector affected.

6. Proposal scope

The management boundary of South Dorset MCZ encompasses the entirety of the site providing the area necessary to ensure protection of the mosaic of habitats.

This will be enforced by the control and monitoring measures described in section 8 of Annex A.

List of Annexes:

Annex A – Meeting note from workshop

Annex B – Overview of the 11 information items in the Commission's guidelines from 2008

Annex C – Map of English MPA network

Annex D – Map and coordinates for South Dorset MCZ reporting zone with increased reporting

Annex E – References

Annex A – Meeting note from workshop

Site specific discussions

South Dorset MCZ

Attendee raised concern that if vessels are transiting through the site against the tide this could be read as fishing activity when it in fact it may not be.

There are patches of exposed rock distributed throughout the side alongside areas of overlying sedimentary veneer. As such, it was advised to treat the entire site as the area to be considered for management of the ciralittoral rock feature and hence the proposal to restrict mobile bottom contacting fisheries across the site.

Main commercial interest is in potting except for some French interest in the western area of the site.

It was suggested that this site may provide a good case study for displacement; there are not many vessels operating in the area meaning it would be easier to track where the displacement occurs as a result of closure and what the impact is as a result of that displacement.

Defra proposed a full site restriction to mobile bottom contacting fishing gears. There was general agreement amongst attendees that such a management measure was appropriate in this instance.

Annex B – Overview of the 11 information items in the Commission's guidelines from 2008

The Commission has issued guidance on a consistent approach to requests for fisheries management measures under the Common Fisheries Policy[6]. Accordingly, this document provides the scientific and technical information required to support a formal request to the Commission for fisheries regulation under the Common Fisheries Policy.

1 Comprehensive description of the natural features including distribution within the site

South Dorset MCZ is located approximately 17.5 km south of St Alban's (St Aldhelm's) Head, to the south-east of Swanage. It lies approximately 4km to the west of Wight-Barfleur Reef SAC, and 5km south of Studland to Portland SAC. The site is predominantly exposed circalittoral rock with overlaying deposits of subtidal coarse sediment of varying depth. The eastern half of the site has longitudinal furrows of alternating cobbles and gravel, oriented in the direction of the tide. Bryozoans, ascidians and encrusting sponges dominate the rocky areas of the site. Crustaceans such as the long clawed porcelain crab and common spider crab hide in the crevices and cobbles in furrows. Bivalves and echinoderms can be found in areas of Subtidal coarse sediment.

The site currently has three designated features: Moderate energy circalittoral rock, Subtidal coarse sediment, and the Feature of Conservation Importance Subtidal chalk. Subtidal chalk is typically found on the south-east and eastern coasts of the UK. This site protects the only known example of this seabed habitat located a significant distance from the coast (Figure 1).

JNCC and Natural England collaborated with Cefas on two MCZ site verification surveys to South Dorset MCZ, funded through the MB0120 Defra data collection project. A pilot survey took place between in January 2013 and a more detailed survey was undertaken between in April 2013. Acoustic and ground truth data were collected to determine the presence and extent of broad-scale habitats and features of conservation importance within the MCZ. The results of these surveys are described in a report by Downie & Curtis (2014). Additional data for the site were collected during surveys undertaken in 2006 and 2008.

An integrated analysis of the 2013 survey data produced an updated habitat map for the site, shown in Figure 1 below. The white line depicts an area where acoustic data were absent, so a habitat map was not able to be produced. The map shows the site to be characterised by exposed circalittoral rock with overlaying deposits of subtidal coarse sediment of varying depth. The MCZ site verification

[6] http://ec.europa.eu/environment/nature/natura2000/marine/docs/fish_measures.pdf

surveys found evidence of a mosaic of high energy circalittoral rock and moderate energy circalittoral rock within the site. As the exact distribution of both types of circalittoral rock habitat across the wider MCZ area is currently unknown, the mapped areas of rock are shown as “area to be managed as moderate energy circalittoral rock”. High energy circalittoral rock may be considered in future rounds of MCZ designation.

Supporting data on the presence and extent of the broad scale habitats subtidal coarse sediment and moderate energy circalittoral rock was also provided by Particle Size Analysis data of sediment samples from the 2013 site surveys, and from video tows and still images undertaken as part of the 2006, 2008 and 2013 site surveys.

Still images from a video tow undertaken as part of the 2013 MCZ site verification surveys indicate the presence of subtidal chalk at the seabed in the north-eastern corner of the site. Additional data from surveys to the site in 2006 and 2008 also indicate the presence of subtidal chalk in the western side of the site. It is known that massively bedded Upper Cretaceous chalk typically forms a characteristically smooth seabed (Collier et al., 2006), similar to that visible in the eastern, central and southern parts of the MCZ. It is likely that subtidal chalk is present at or near the seabed within a significant portion of the site (Figure 2).

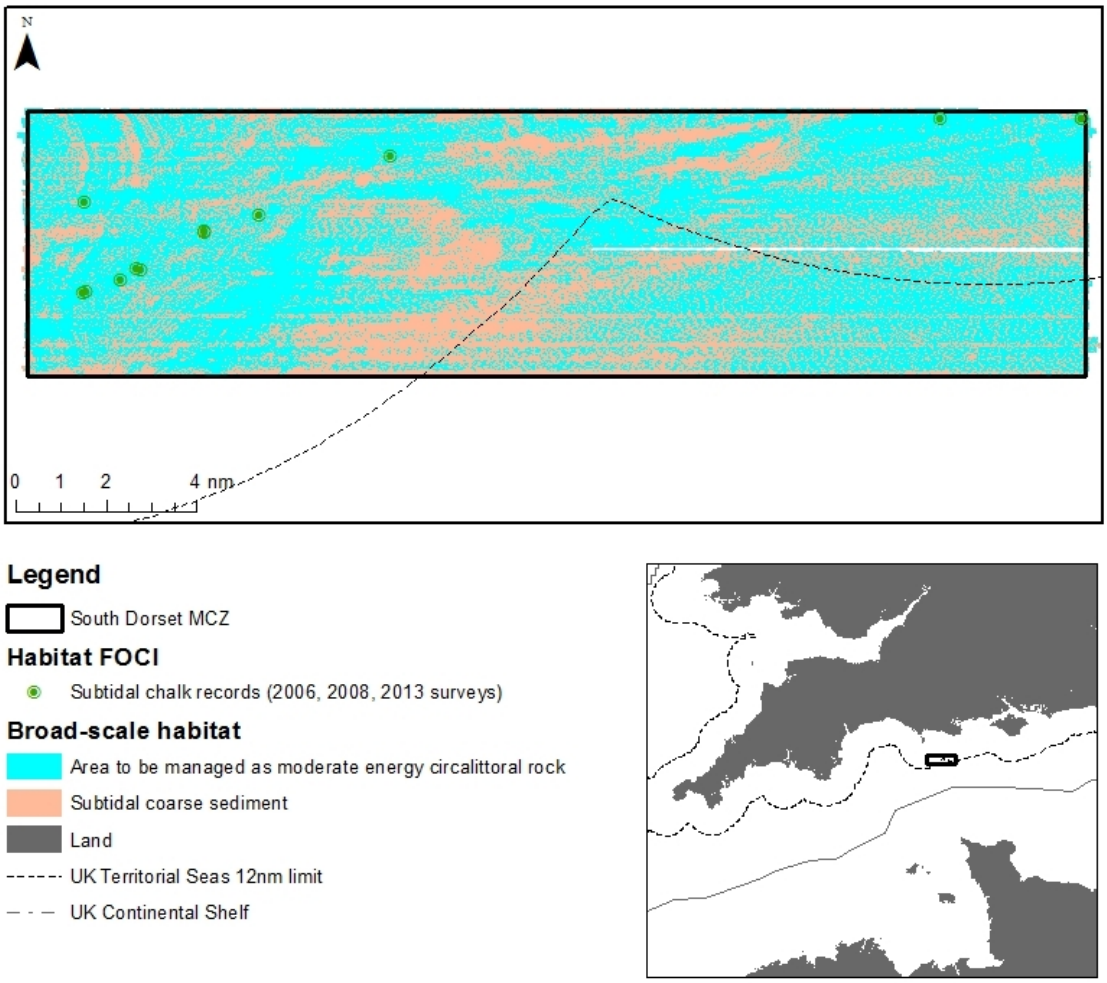
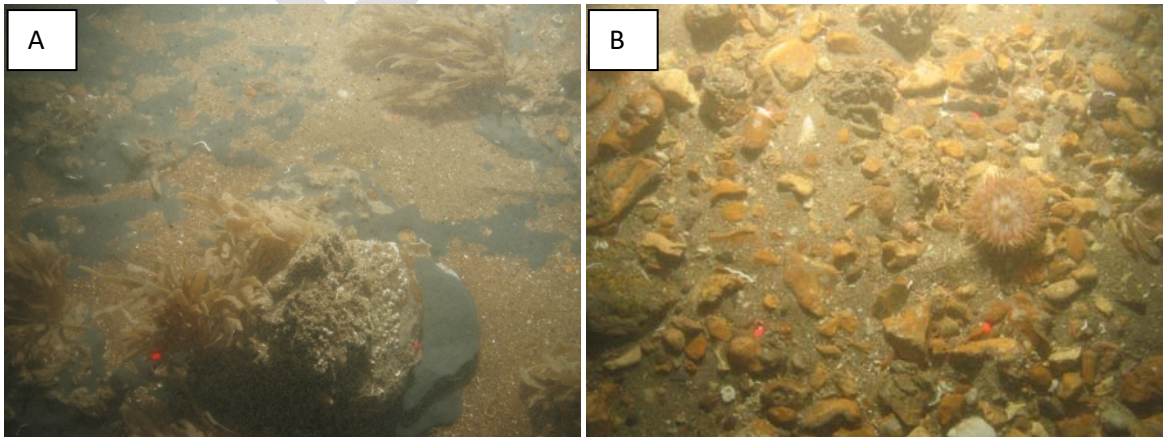


Figure 1: South Dorset MCZ site map including protected features for which management is being proposed



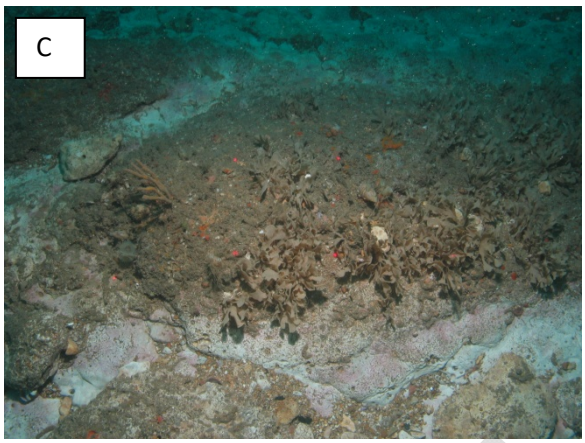


Figure 2: Photographs taken from the MB0120 survey 2013 of South Dorset

A: Moderate energy circalittoral rock with horn wrack (*Flustra foliacea*) and encrusting bryozoa

B: Subtidal coarse sediment with Anemone (*Urticina* species)

C: Subtidal chalk with encrusting fauna

2 Scientific rationale for the site's selection in accordance with the information provided in the Marine Conservation Designation Zone Order. Intrinsic value of its features. Specific conservation objectives

The UK has committed to the development of an MPA network designed to protect a range of nationally important marine species and habitats which will be central to achieving Good Environmental Status (GES) by 2020 under the Marine Strategy Framework Directive (MSFD). Such a network is also consistent with the UK's obligations under the OSPAR Convention. Due to the large number of individual habitats and species in UK waters, features were grouped into broad-scale habitats. To ensure that the full range of biodiversity in UK seas is conserved, representative examples of broad-scale habitats and specific features of conservation importance were designated within the MCZ network.

The Selection guidelines for MCZs[7] were laid out by Defra to support the initial identification of sites through four regional stakeholder projects[8]. The guidance covers the aim of the network; the involvement of stakeholders; the principles for design of an MPA network; and also the setting of conservation objectives.

The recommendations were based around the seven design principles laid out in the Ecological Network Guidance (ENG):

[7] MCZ Selection Guidelines. Available at: http://archive.defra.gov.uk/environment/biodiversity/marine/documents/guidance-note1.pdf

[8] The MCZ project: http://jncc.defra.gov.uk/page-2409

- Representativity
- Replication
- Adequacy
- Viability
- Connectivity
- Protection
- Best available evidence

The South Dorset MCZ is included in the MPA network for its contribution to the conservation of the broad-scale habitats of Moderate energy circalittoral rock (habitat type 4.2), Subtidal coarse sediment (habitat type A5.1) and Feature of Conservation Importance Subtidal chalk.

2.1 Conservation objectives

Conservation objectives set out the desired state for the protected feature(s) of an MPA. To achieve the conservation objectives a general approach to management for each designated feature has been set by JNCC based on current knowledge of condition.

The GMAs for the protected features of the MCZ are:

- **Moderate energy circalittoral rock** - Recover to favourable condition
- **Subtidal coarse sediments** –Maintain in favourable condition
- **Subtidal chalk** – Recover to favourable condition.

3 Basis for the spatial extent of the site boundary clearly justified in terms of conservation objectives

The site is a simple polygon with boundary lines running north to south and east to west in line with the MCZ project Ecological Network Guidance (ENG). The boundary of South Dorset MCZ was developed by the Finding Sanctuary Regional MCZ Project and has not changed since it was recommended by the Regional MCZ Project in 2011. The site boundary was guided by information on renewable energy companies and the Round 3 wind farm licensing area, and intersects the 12 nm territorial seas boundary line (Figure 3).

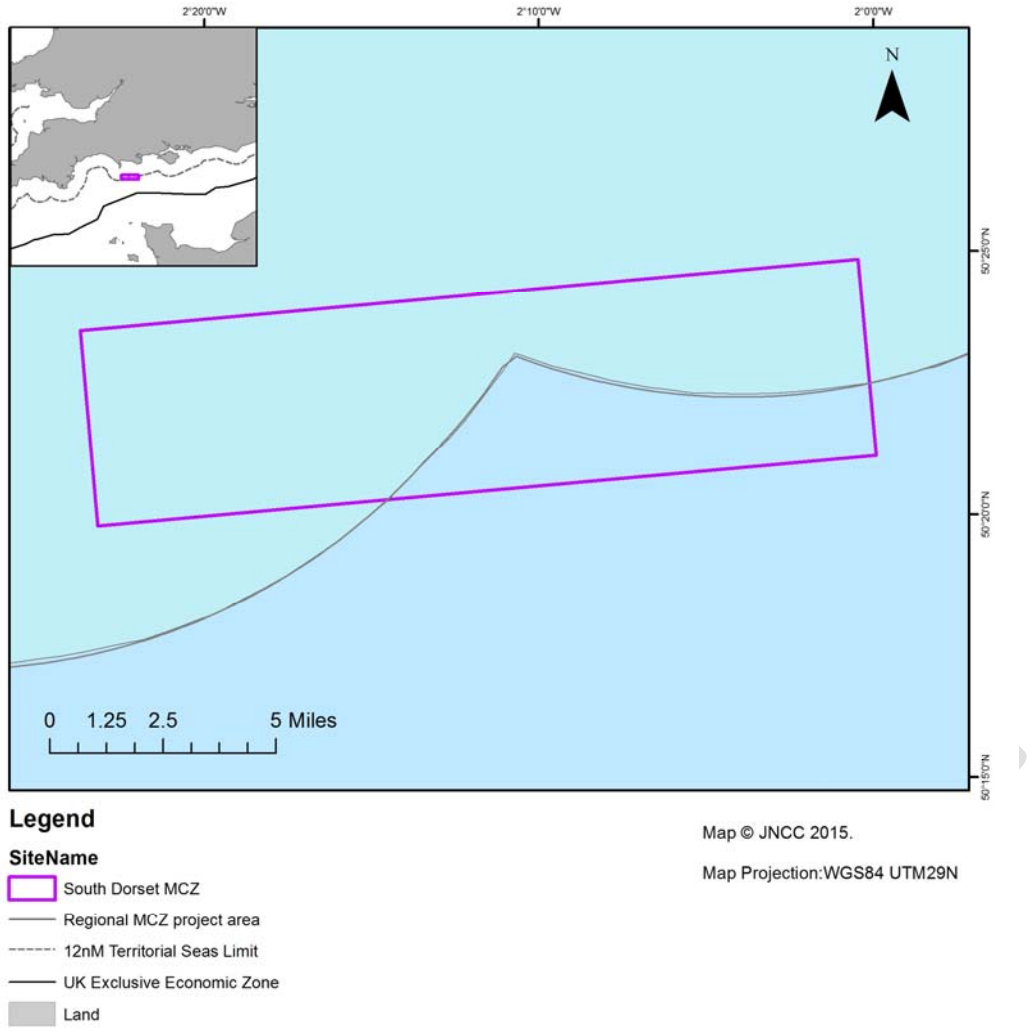


Figure 3: Site boundary for the South Dorset MCZ

4 Threats to the long-term natural distribution, structure and functions of the habitats and the long-term survival of associated species from different types of fishing gear. List of other human activities in the area that could damage the habitats

4.1 All demersal towed gears (including scallop dredges, beam trawls, otter trawl and seines)

Whilst it is unlikely that demersal towed gear can affect the long-term natural distribution of Subtidal chalk or Moderate energy circalittoral rock features, there is evidence to indicate that their use can impact the structure and function of the habitat and the long term survival of its associated species. The use of towed fishing gears is likely to cause damage or death of fragile, erect species, such as sponges and corals (Løkkeborg 2005, Engel & Kvitek, 1998), and reduce habitat complexity as boulders and cobbles associated with the hard substrate are moved around (Freese et al. 1999). Other species such as hydroids, anemones, bryozoans, tunicates and echinoderms may also be vulnerable (McConnaughey et al. 2000, Sewell and Hiscock 2005). Where fragile, slow growing

species occur, even low levels of fishing have the potential to change the structure and function of the habitats and may result in the loss of some characteristic species.

The broad scale habitat Subtidal coarse sediment includes sub-habitats with a wide range of sensitivities to trawling. Communities on unstable coarse sediments are considered to contain relatively robust fauna which are not believed to be greatly impacted by surface abrasion (Hall et al 2008). More stable gravels may support a 'turf' of fragile species which are easily damaged by trawling and recover slowly (Collie et al 2005, Foden et al 2010). Trawling may result in a modified benthic community with reduced abundance of fragile long lived species. Recovery time from dredging is longer than from trawling (Foden et al 2010).

As with demersal trawls and dredges, demersal seines may impact the structure and function of sedimentary habitats and the long term survival of their associated species. However, demersal seines (Danish and Scottish seines) lack the heavy penetrating gear components of other mobile demersal gears, such as otter doors and trawl shoes (Suuronen et al. 2012; Donaldson et al. 2010), so the risk of impact to sedimentary features may be lower. The risk to achievement of the conservation objectives posed by demersal seining would need to be considered on a site by site basis.

4.2 All demersal static gears (including gillnets, trammel nets, longlines, pots and traps)

Mechanical impacts of static gear on Subtidal chalk or Moderate energy circalittoral rock (e.g. weights and anchors hitting the seabed, hauling gear over seabed, rubbing/entangling effects of ropes) can damage some species (Eno et al.1996). Other species appear to be resilient to individual fishing operations but the effects of high fishing intensity are unknown (Eno et al. 2001). Recovery will be slow (Foden *et al.,* 2010) resulting in significant reduction or even loss of characteristic species. The individual impact of a single fishing operation may be slight but cumulative damage may be significant (Eno et al. 2001; Foden et al. 2010; Roberts et al. 2010).

On the other hand, it is unlikely that demersal static gears will have a significant effect on the long-term natural distribution of Subtidal coarse sediment, or on the structure and function of their associated biological communities.

4.3 Other Human activities

The information within this section represents current knowledge of the nature and extent of activities taking place within or close to the site.

The site is located between shipping lanes, and is subject to a relatively low level of shipping (maximum of 1222 hours in 2012). Under international law, ships have a right of passage at sea including in areas designated as MPAs (unless management specifies the restriction of ship transiting as outlined through an International Maritime Organisation measure). The pressures associated with shipping activity within South Dorset MCZ are not considered likely to impact the protected features of the site.

The site is within an MOD exercise area. The MoD have incorporated all designated MPAs into their Environmental Protection Guidelines (Maritime) and wider Marine Environmental and Sustainability Assessment Tool. These guidelines are used to manage MOD activity to minimise the associated risks to the environment.

An RYA cruising route crosses the eastern part of the site. Recreational use data indicates the site could also be subject to recreational boat based sea angling and scuba diving too.

Also, seven wrecks have been recorded by the UK Hydrographic Office within the site.

5 Fleet activity in the area and in the region, distribution of fleets (by nation, gear, and species), and information on target and bycatch species over 6 years from 2010 to 2015 inclusive.

5.1 Validity of data

In the section below relevant fleet statistics for the years 2010-2015 are provided as requested by the European Commission guidance. The UK, as the initiating Member State, analysed fishing from Member States active in the area of South Dorset MCZ over a six year period. This approach is consistent with other management proposals methodology across Member States. A four year dataset is considered to be representative of the contemporary fisheries carried out in the area and thus valid for the purposed of underpinning the current proposal.

Overall, fisheries have been changing since the early 2000s as a result of changes in economic and regulatory conditions, e.g. fuel prices and engine efficiencies, the introduction of individual

transferable quota (ITQ) systems[9] in various forms. Fishing fleets have been reduced in terms of the number of vessels and fishing effort has decreased. Fishing opportunities are dictated by stock status, market conditions, fuel prices and technological opportunities, as well as quota availability. In addition, policy decisions on alternative use of marine habitat, sustainable exploration and environmental policies will influence fishing opportunities.

The fisheries are dynamic and sound judgement is required when using the data. However, more recent datasets are expected to improve our understanding of the structure of the fisheries.

Vessels from UK and France have been present within the relevant area according to VMS reports or "pings". However, French vessels routinely report every hour and not every two hours like all other Member States' vessels. The data concerning the number of French vessels will be accurate but their activity through pings may appear distorted. To maintain consistency across all vessels and Member States' data, the information on French vessels has been displayed as it was received into the MMO Fisheries Monitoring Centre (FMC); therefore it has not been altered to reflect possible one hour vessel pings as this could alter the validity of the data further. To establish which vessels specifically report at a higher level would require additional processing and information.

To note, unknown gear classification relates to a specific VMS report which does not have valid corresponding log book information.

5.1.1 Data analysis

Data presented has been analysed by applying the standard methodology used to identify whether or not vessels have been active in a specified spatial area to the information. VMS reports ("pings") were used to indicate vessel fishing activity based on the speed of the vessel as contained within the VMS report. Each ping was classified as indicative of fishing activity if the speed was greater than or equal to zero knots and less than or equal to six knots[10].

Each speed filtered VMS ping (0-6 knots) received from a vessel in ICES statistical rectangles 29E7 (the ICES rectangle location of the site) was extracted from the UK VMS system. Each ping will hold the following information: the vessel identity (CFR) number; position and speed; and the date and

[9] Individual transferable quotas (ITQs) are a type of catch share system, which is a tool used by some governments to manage fisheries

[10] Article 50 of Council Regulation (EC) No 1224/2009 : http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:343:0001:0050:EN:PDF

time of that ping. These fishing pings from the rectangles concerned are then processed in GIS software to identify whether the position was inside or outside South Dorset MCZ. This provides a proportion of pings falling within the area for the vessels of each Member State.

5.1.2 Data limitations

The data provided in this section is subject to several limitations:

1. Data is only available from vessels that are required to carry EU VMS (i.e. vessels 12 metres and above in length). As such their pattern of activity may differ from vessels of less than 12 metres in length.
2. Vessel numbers derived from VMS can suggest increase over the years analysed, however it is important to note that during this period VMS was introduced to the 12m and above fleet, in addition to the 15m and above fleet.
3. Unless stated otherwise, all VMS data shown in this paper is over a six year period 2010-2015. Landings information is over a five year period 2010-2014, as a result of datacall to member states for information in 2015.
4. The speed thresholds (0-6 knots) used to make assumptions as to whether a vessel is fishing or not only provide indications, not definitive proof of fishing and may not be equally valid for all gear types.
5. The proportion of activity inside an area is based on the number of pings as opposed to actual fishing time.
6. VMS reports are sent by every fishing vessel at 2 hourly intervals, with the exception of the French VMS activity. This was witnessed at an hourly rate.
7. Within the UK VMS data the UK pings volume saw an increase of activity in 2013. It should be noted that at least one vessel had much higher VMS reports than all other vessels reporting 40 times in a two and a half hour period. This “over-reporting” could have been related to a faulty VMS device on board the vessel. This data has remained in the tables.

5.2 Fleet activity by state

From 2010 to 2015 vessels from two Member States (France and UK) were active within and around the South Dorset MCZ (see table 1). Other Member States such as Belgian, Dutch and Irish vessels had been recorded occasionally within the site, however these were in extremely low numbers and not witnessed in a year on year basis.

Table 1: Number of vessels and pings (0-6knots) associated with South Dorset MCZ by year and Member State.

Nationality		2010	2011	2012	2013	2014	2015
		Total	Total	Total	Total	Total	Total
Belgium	Number of vessels	2	0	3	2	1	1
	Number of pings	3	0	3	2	1	1
France*	Number of vessels	34	31	29	37	22	7
	Number of pings	554	286	369	332	133	61
Ireland	Number of vessels	0	0	0	2	1	0
	Number of pings	0	0	0	4	1	0
Netherlands	Number of vessels	2	3	0	0	1	0
	Number of pings	2	5	0	0	1	0
Norway	Number of vessels	0	0	0	0	0	1
	Number of pings	0	0	0	0	0	1
UK	Number of vessels	33	20	31	31	15	14
	Number of pings	93	53	66	114	27	22

* A proportion of the French and UK VMS data showed vessels reporting at a higher rate than the usual 2 hourly reporting period. This was not consistent across all vessels or all reports.

5.3 Landings values

As shown in Tables 2.1 and 2.2 the gear groups of major importance in terms of effort (tonnage) and economic importance (value) include (1) Beam Trawls directed at demersal fish (flatfish), (2) Otter board bottom trawls for demersal fish, (3) otter board bottom trawls for demersal and semi pelagic fish. Fishing for these species occurs in the Southern Irish Sea, Celtic Sea and North East Atlantic.

The fisheries data for 2010 – 2015 inclusive in South Dorset MCZ involve similar gear types but only two groups are of major importance regarding effort and four regarding value as can be seen in Table 2.2. Bottom trawls and demersal trawls of 120mm mesh size or over produce the highest effort and values of all the gear types of use. Demersal trawls of 70 – 99mm mesh size, Otter trawls, dredge and beam trawls also take place within the South Dorset MCZ but with much lower levels of effort and landings value.

Table 2.1: Nationality and gear type of vessels operating in ICES 29E7 (South Dorset MCZ) by year and Member State showing effort (tonnage caught)

Sum of Quantity Tonnes (29E7)		Year						
Nationality	Gear	2010	2011	2012	2013	2014	2015	Grand Total
BEL	Dredge	0.00	0.00	5.44	0.00	0.26		5.70
	Otter Trawl bottom	0.57	0.00	1.95	4.72	4.55		11.79
	Scottish Seine	8.99	30.39	95.61	75.08	0.00		210.08
	Beam Trawl	70.04	137.90	114.23	93.69	13.85		429.70
BEL Total		**79.59**	**168.29**	**217.23**	**173.49**	**18.66**		**657.26**
DNK	Pelagic trawls	0.00	0.00	110.67	119.18	171.61		401.46
DNK Total		**0.00**	**0.00**	**110.67**	**119.18**	**171.61**		**401.46**
FRA	Anchored seine	8.33	20.35	36.61	11.01	3.37		79.68
	Beam trawl	0.00	1.40	0.00	0.00	0.25		1.64
	Bottom trawls	83.05	1,713.62	2,208.71	2,642.63	2,133.80		8,781.82
	Dredge	0.80	0.93	16.03	94.48	213.34		325.58
	Lines	0.00	1.77	0.49	1.98	0.00		4.24
	Nets	0.00	316.51	12.14	9.32	7.28		345.25
	Other gears	0.00	0.00	0.00	0.00	0.00		0.00
	Pelagic trawls	26.62	521.43	369.82	144.20	247.72		1,309.79
	Traps	0.00	14.62	3.18	4.46	1.57		23.83
FRA Total		**118.81**	**2,590.61**	**2,646.99**	**2,908.07**	**2,607.34**		**10,871.82**
IRL	Otter trawl (unspecified)	0.00	0.00	20.60	8.84	0.00		29.44
IRL Total		**0.00**	**0.00**	**20.60**	**8.84**	**0.00**		**29.44**
UK	Beam trawls	584.86	544.22	974.69	621.57	591.28	609.43	3,926.04
	Boat dredges	1,164.81	677.34	772.54	581.91	404.67	271.97	3,873.23
	Gillnets (all)	11.91	5.24	0.35	3.91	5.60	7.61	34.62
	Hand fishing	5.22	6.31	0.70	0.87	3.08	4.86	21.03

Hand lines and pole-lines (hand-operated)	2.53	1.13	0.00	0.00	0.00	0.02	3.68
Hooks and lines (not specified)	15.53	12.74	10.77	17.18	20.89	17.34	94.46
Longlines (not specified)	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Miscellaneous gear	0.00	0.00	0.10	0.00	0.00	0.00	0.10
Otter trawls (Bottom and not specified)	249.28	138.72	769.70	217.26	151.16	218.21	1,744.34
Otter trawls – mid water	799.98	975.74	642.11	51.36	0.00	99.73	2,568.92
Otter twin trawls	107.59	129.05	208.48	118.65	12.87	112.69	689.33
Pair trawls - bottom	0.00	0.00	0.00	0.14	1.52	0.00	1.66
Pair trawls – mid water	430.22	144.52	129.29	361.16	441.80	378.97	1,885.96
Pots	297.10	468.28	537.88	520.58	551.51	774.34	3,149.69
Scottish seines	71.55	134.17	116.23	143.96	5.50	104.54	575.94
Trammel nets	0.00	0.00	0.00	0.67	2.54	3.74	6.95
Traps (not specified)	0.00	0.00	0.00	0.00	0.00	2.74	2.74
UK Total	**3,740.59**	**3,237.46**	**4,162.85**	**2,639.33**	**2,192.42**	**2,606.18**	**18,578.83**
Grand Total	**7,679.57**	**9,233.83**	**11,321.19**	**8,488.24**	**7,182.45**	**5,212.36**	**49,117.63**

Table 2.2: Nationality and gear type of vessels operating in ICES 29E7 (South Dorset MCZ) by year and Member State showing landing values

Sum of Values (29E7)		Year						
Nationality	Gear	2010	2011	2012	2013	2014	2015	Grand Total
BEL	Dredge	£0	£0	£9,737	£0	£342		£10,078
	Otter Trawl bottom	£954	£0	£2,613	£7,936	£14,203		£25,706
	Scottish Seine	£14,623	£45,487	£178,716	£98,559	£0		£337,384
	Beam Trawl	£207,816	£419,072	£295,238	£195,060	£36,890		£1,154,076
BEL Total		**£223,393**	**£464,559**	**£486,304**	**£301,555**	**£51,435**		**£1,527,245**
DNK	Pelagic trawls	£0	£0	£65,594	£66,737	£81,139		£213,470
DNK Total		**£0**	**£0**	**£65,594**	**£66,737**	**£81,139**		**£213,470**
FRA	Anchored seine	£9,785	£33,979	£62,857	£20,356	£4,763		£131,740
	Beam trawl	£0	£2,695	£0	£0	£422		£3,117
	Bottom trawls	£225,823	£2,403,172	£2,895,634	£3,309,866	£2,659,536		£11,494,030
	Dredge	£1,148	£2,666	£11,031	£78,869	£122,202		£215,917
	Lines	£0	£21,140	£4,073	£2,903	£0		£28,116
	Nets	£0	£1,357,361	£52,085	£47,969	£22,533		£1,479,947
	Other gears	£9	£0	£0	£0	£0		£9
	Pelagic trawls	£46,892	£407,493	£592,492	£612,341	£207,749		£1,866,968
	Traps	£0	£30,568	£12,622	£24,769	£8,387		£76,346
FRA Total		**£283,658**	**£4,259,073**	**£3,630,794**	**£4,097,074**	**£3,025,591**		**£15,296,190**
IRL	Otter Trawl (unspecified)	£0	£0	£44,314	£21,365	£0		£65,679
IRL Total		**£0**	**£0**	**£44,314**	**£21,365**	**£0**		**£65,679**
UK	Beam trawls	£1,532,637	£1,547,087	£2,284,152	£1,462,735	£1,599,430	£1,581,043	£10,007,084
	Boat dredges	£530,400	£1,248,147	£1,470,575	£1,050,666	£756,739	£563,128	£5,619,654
	Gillnets (all)	£54,503	£28,671	£1,531	£10,313	£24,158	£20,541	£139,718
	Hand fishing	£7,369	£10,513	£2,024	£2,613	£7,163	£7,584	£37,266

Hand lines and pole-lines (hand-operated)	£15,313	£1,305	£0	£0	£0	£101	£16,718
Hooks and lines (not specified)	£141,432	£127,570	£107,836	£176,557	£208,228	£175,016	£936,639
Longlines (not specified)	£0	£0	£0	£331	£0	£0	£331
Miscellaneous gear	£0	£0	£0	£0	£0	£0	£0
Otter trawls (Bottom and not specified)	£541,305	£345,060	£659,340	£368,927	£341,865	£357,705	£2,614,202
Otter trawls – mid water	£123,382	£214,427	£120,911	£18,013	£0	£33,658	£510,391
Otter twin trawls	£234,386	£379,347	£447,249	£323,794	£36,509	£240,250	£1,661,535
Pair trawls - bottom	£0	£0	£0	£2,190	£3,594	£0	£5,784
Pair trawls – mid water	£118,449	£40,067	£35,809	£122,685	£149,943	£129,995	£596,946
Pots	£461,853	£795,035	£1,007,841	£948,092	£1,153,798	£1,471,779	£5,838,398
Scottish seines	£200,843	£306,904	£347,226	£306,846	£5,147	£249,729	£1,416,694
Trammel nets	£0	£0	£0	£2,375	£7,426	£22,840	£32,641
Traps (not specified)	£0	£0	£0	£0	£0	£2,466	£2,466
UK Total	**£3,961,871**	**£5,044,132**	**£6,484,493**	**£4,796,138**	**£4,293,998**	**£4,855,834**	**£29,436,466**
Grand Total	**£8,430,792**	**£14,811,896**	**£17,195,991**	**£14,079,006**	**£11,746,162**	**£9,711,668**	**£75,975,516**

5.4 Annual variation in fishing activity

Fishing effort is indicated by the number of VMS reports at speeds indicative of fishing (from 0 to 6 knots) received by the UK Fisheries Monitoring Centre. Reports are sent by every fishing vessel at 2 hourly intervals, with the exception of some French VMS activity. A portion of this was witnessed at an hourly rate.

VMS Activity

Over the years analysed (VMS 2010-2015), the total volume of vessels fishing in the MCZ were 179 from other Member States and 144 from the UK, making a total of 323, averaging 54 VMS vessels per year. Vessels have been counted more than once if they enter the MCZ in separate years. See Table 1.

Numbers of French vessels fishing within the MCZ remained stable through 2010-2013, ranging from 34 in 2010 to 37 in 2013. However in recent years the number has decreased to 22 vessels in 2014 and 7 in 2015. The numbers of VMS pings have decreased over the years analysed, from 554 pings in 2010 down to 61 pings in 2015. The location of the French VMS activity is spread across the southern half of the site with no true concentrated area of activity. Although France has historic access rights within the 6nm to 12nm section of the site, the majority of French activity has occurred beyond the 12nm limit and south of the site (see figures 8 and 9).

The UK fishing fleet numbers within this MCZ had been stable through 2010-2013, although there has been a drop in numbers in recent years with 15 vessels in 2014 and 14 vessels in 2015. The number of VMS pings has fluctuated over years, starting with 93 pings in 2010, dropping to 53 pings in 2011 before increasing up to 114 in 2013. This then dropped a second time to 27 pings in 2014 and 22 pings in 2015. Although the volume of UK pings would suggest that there had been an increase of activity in 2013 it should be noted that at least one vessel had much higher VMS reports than all other vessels reporting 40 times in a two and a half hour period. This “over-reporting” could have been related to a faulty VMS device on board the vessel. The location of UK VMS activity is spread across the southern half of the site with no true concentrated area of activity.

Part of the South Dorset is within the 6-12nm inshore area and smaller UK vessels (less than 15metres in length) are active in the area. Vessels under 12metres in length do not have VMS

devices installed so estimations of activity are much more difficult. From FisherMap[11] some information can be accessed that can give an indication of activity from smaller vessels. FisherMap information implies that there is some dredging and trawling activity in the site but not at moderate or high levels. Some low levels/occasional static and potting activity also occur in the vicinity.

Landings information

The values (£) and landings (tonnes) effort taken around the MCZ in ICES rectangle 29E7 varies between each member state.

The UK landings have gradually decreased in terms of tonnes over recent years. From 3,740 tonnes in 2010 with an approximate value of £3.9million, down to 2,606 tonnes with a greater approximate value of £4.8million. The majority of the landings in ICES 29E7 in 2015 came from four gear groups, Potting with 774 tonnes, Beam trawls with 609 tonnes, Mid water Pair trawls with 387 tonnes and Boat dredges with 271 tonnes. Although when comparing this with VMS, the mid water Pair trawling seem to operate south of the MCZ.

With the exception of 2010 the French landings within ICES rectangle 29E7 have remained fairly static, with an average of around 2,688 tonnes landed per year. In 2010 there were just 118 tonnes landed with an approximate value of £283,658, but in 2011 there were 2,590 tonnes landed with an approximate value of £4.2million, this then rose to 2,908 tonnes in 2013 with an approximate value of £4million before decreasing slightly in 2014 with 2,607 tonnes an a value of £3million. The majority of landing came from three gear groups, primarily from bottom trawls but also from pelagic trawls and dredges.

11 http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=1&ProjectID=18126

Figure 4: VMS reports indicating all fishing activity in South Dorset MCZ 2010 by Nationality

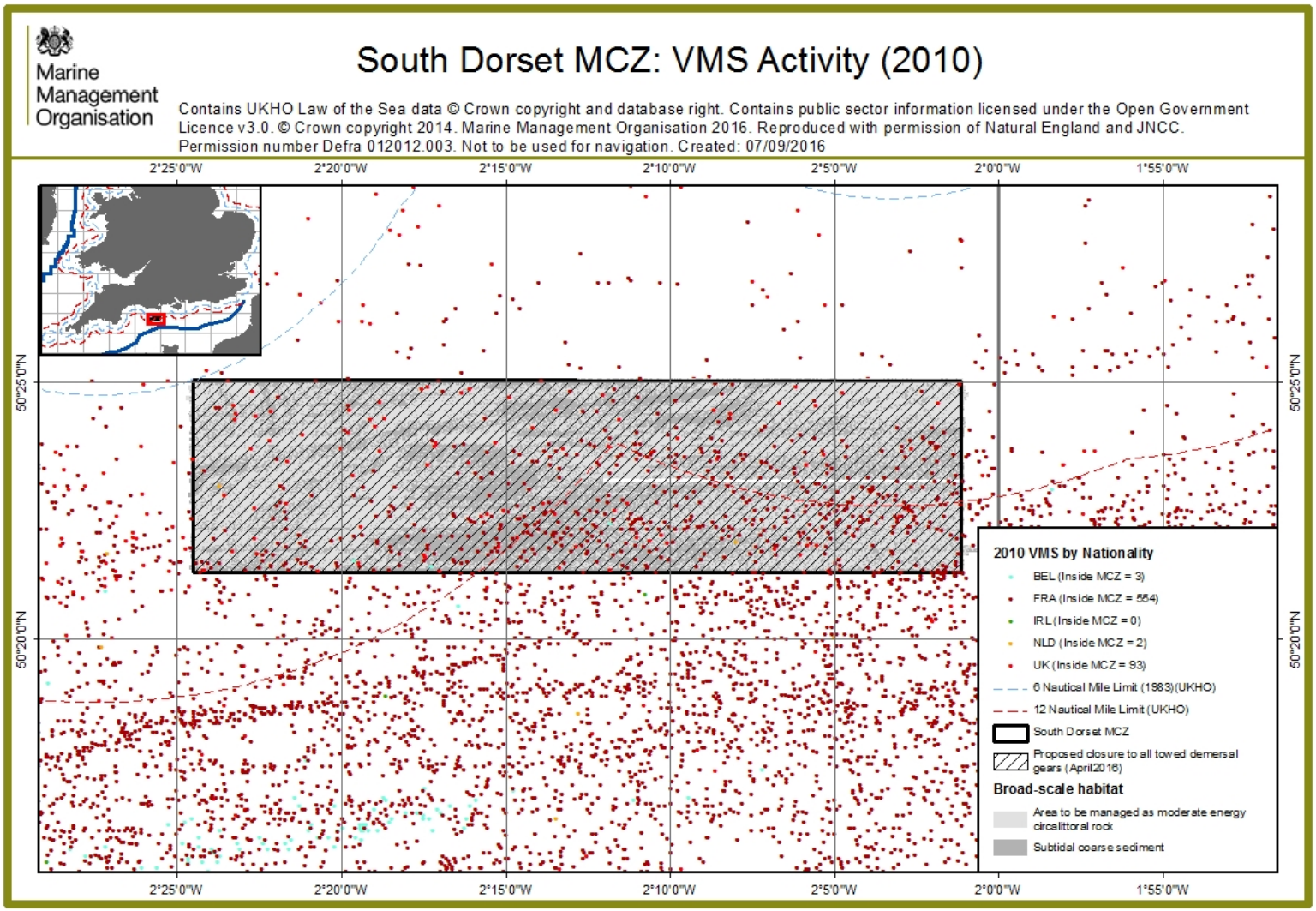


Figure 5: VMS reports indicating all fishing activity in South Dorset MCZ 2011 by Nationality

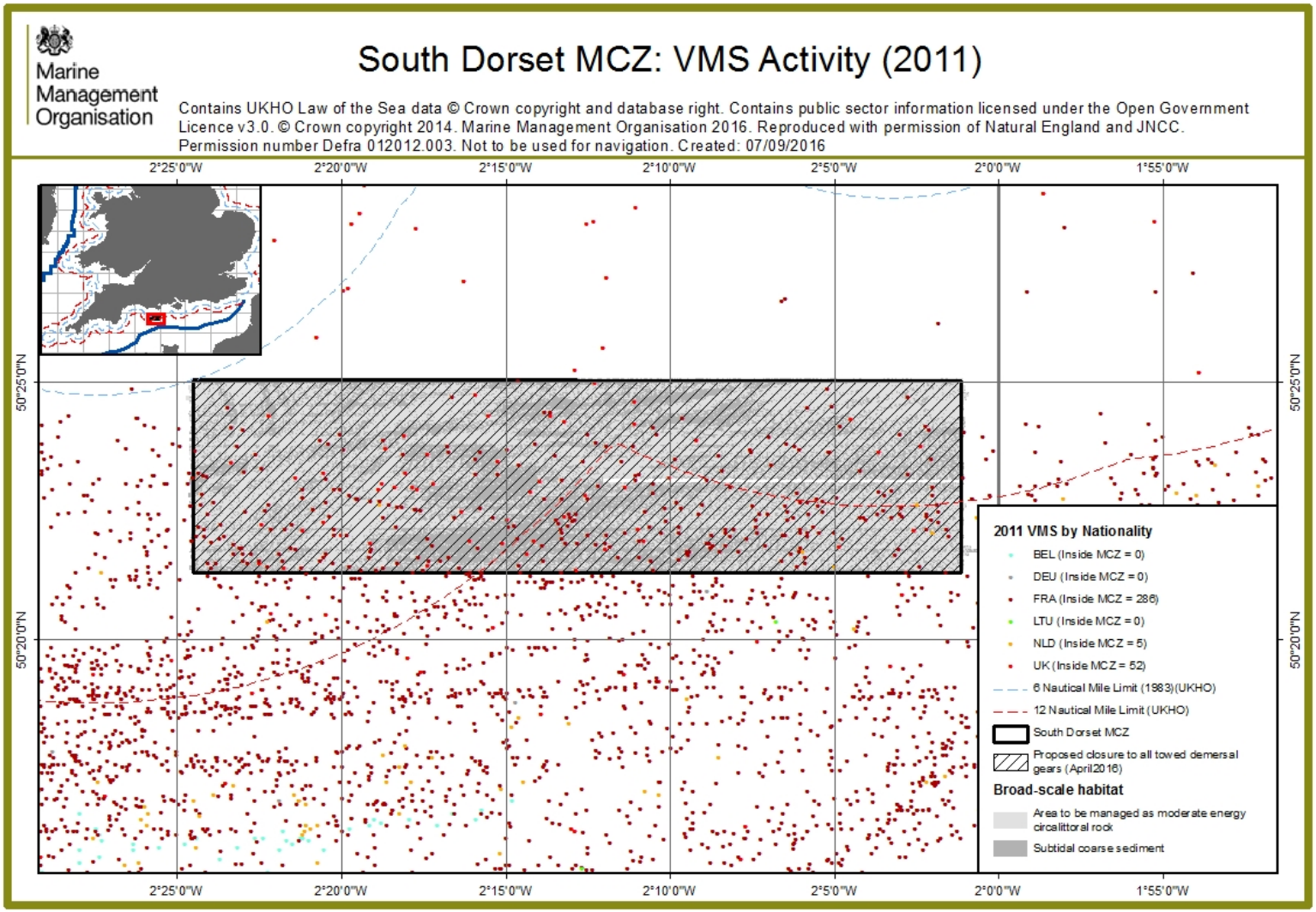


Figure 6: VMS reports indicating all fishing activity in South Dorset MCZ 2012 by Nationality

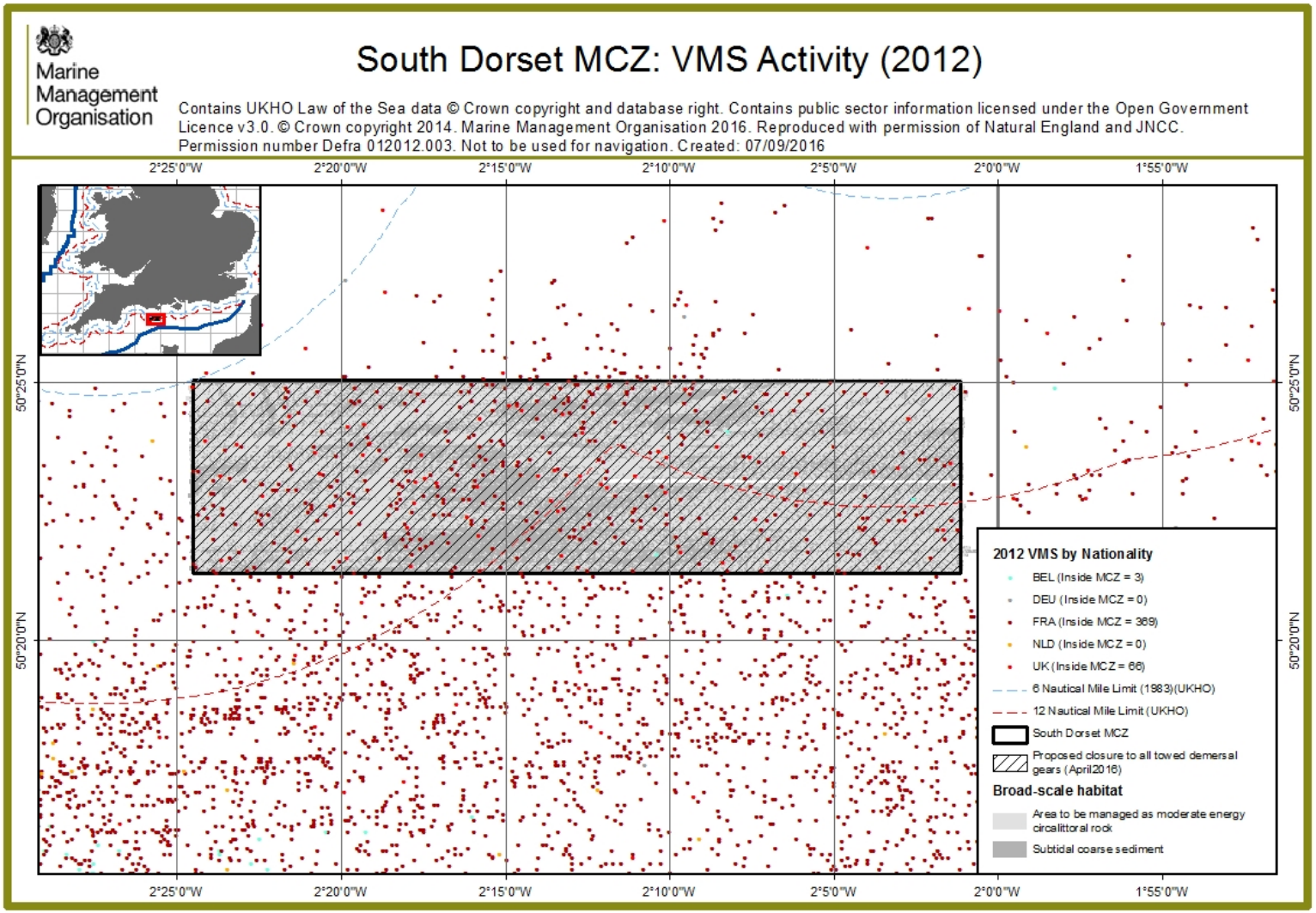


Figure 7: VMS reports indicating all fishing activity in South Dorset MCZ 2013 by Nationality

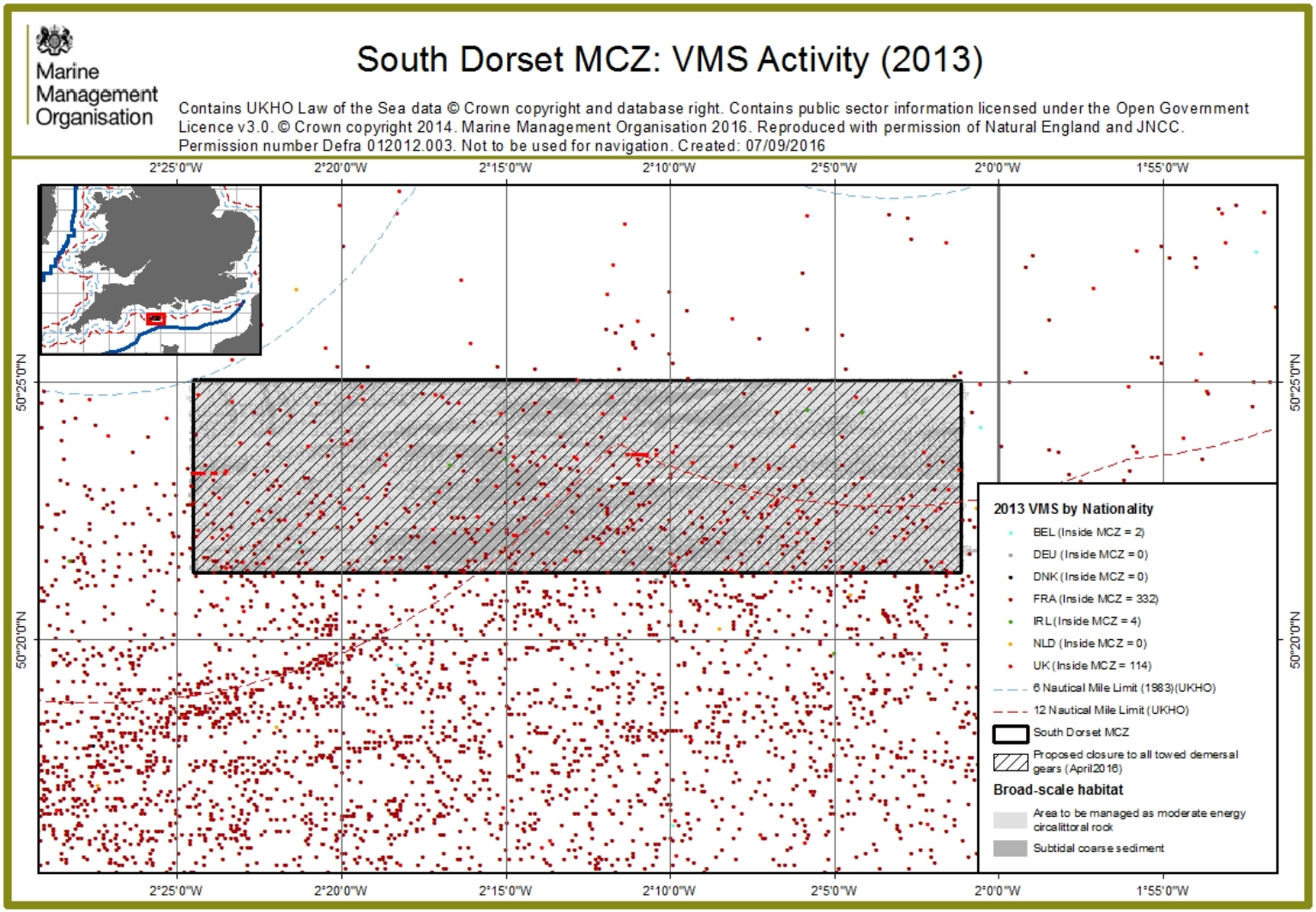


Figure 8: VMS reports indicating all fishing activity in South Dorset MCZ 2014 by Nationality

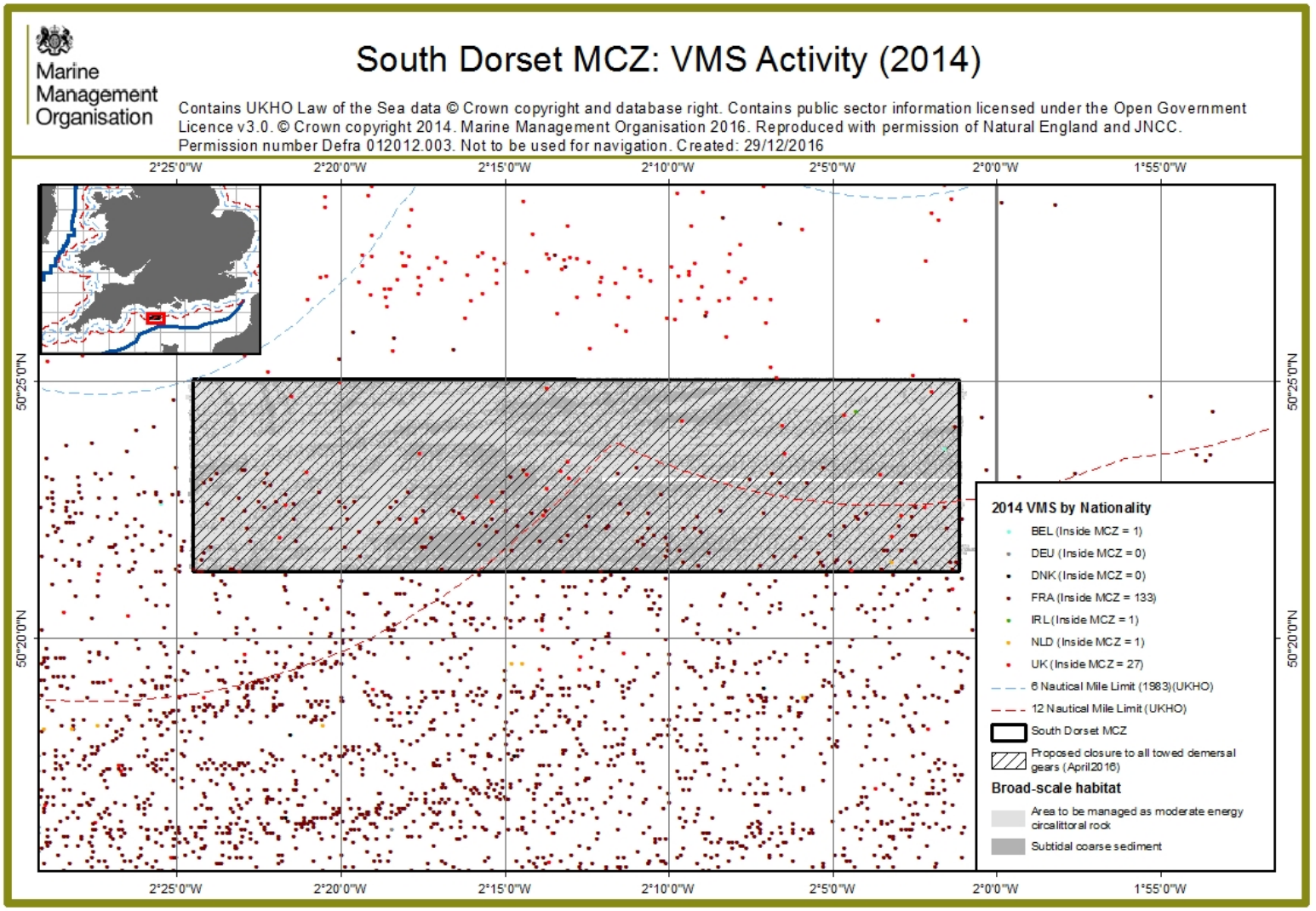
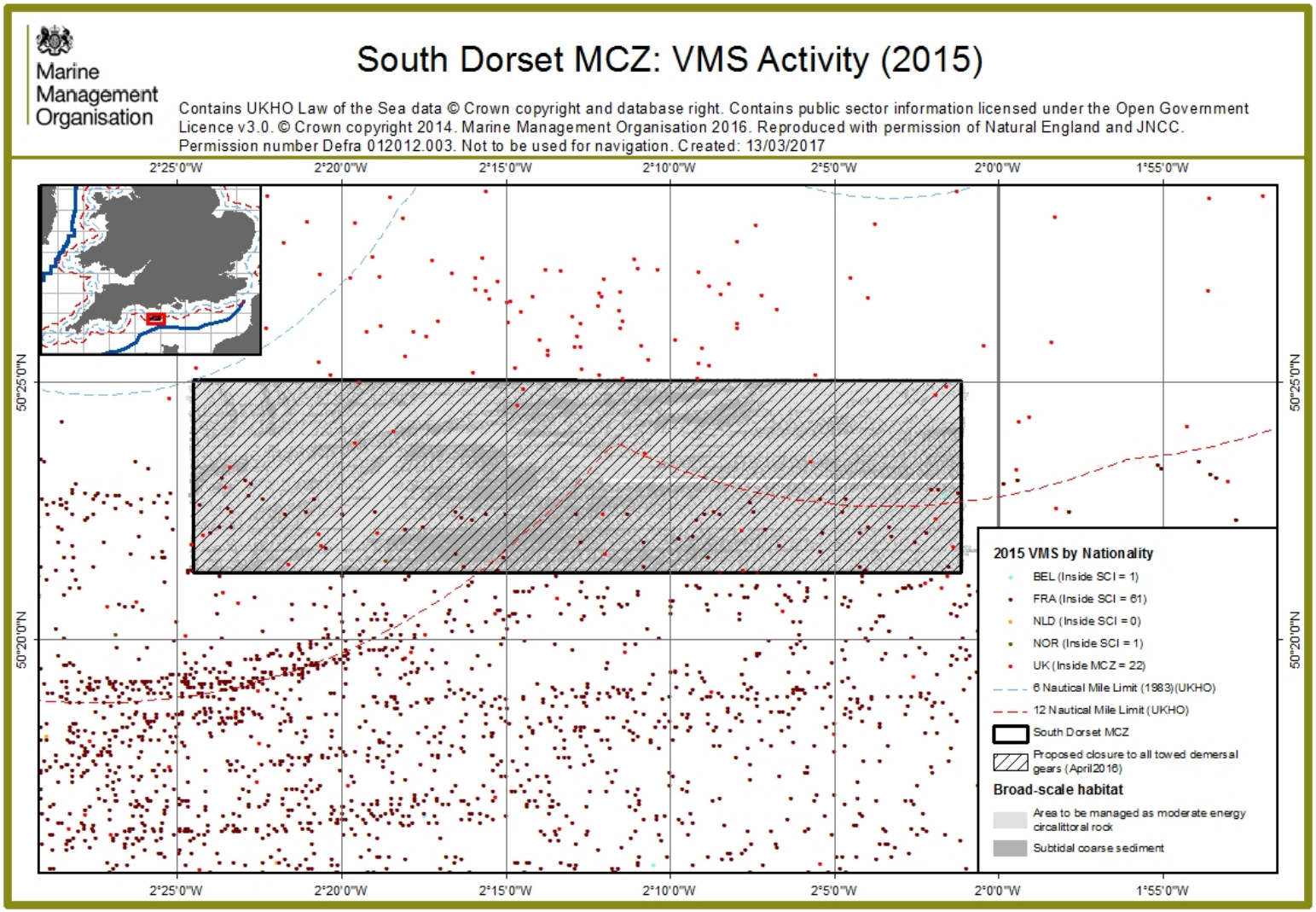


Figure 9: VMS reports indicating all fishing activity in South Dorset MCZ 2015 by Nationality



5.5 Fleet activity by gear group – Geographical distribution

In the charts depicted in Section 5.5, demersal gears have been classed as all gear types which are to be excluded from South Dorset MCZ as stipulated in the gear table on page 6. The charts show all demersal and non-demersal gear types for each year and each Member State and where possible, the specific gear type recorded has been included.

Figure 10: VMS reports indicating demersal /non demersal towed fishing activity in South Dorset MCZ 2010

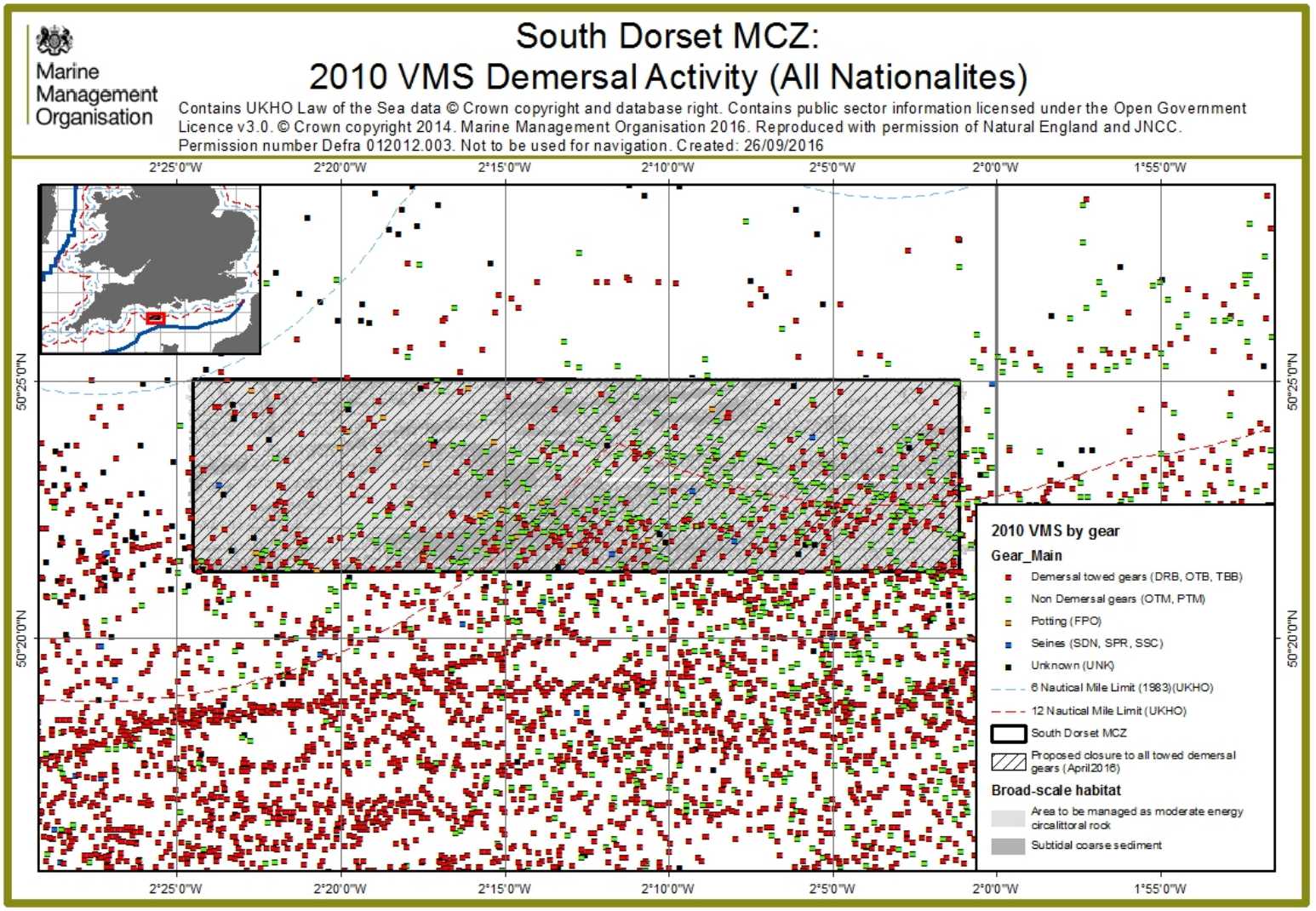


Figure 11: VMS reports indicating demersal /non demersal towed fishing activity in South Dorset MCZ 2011

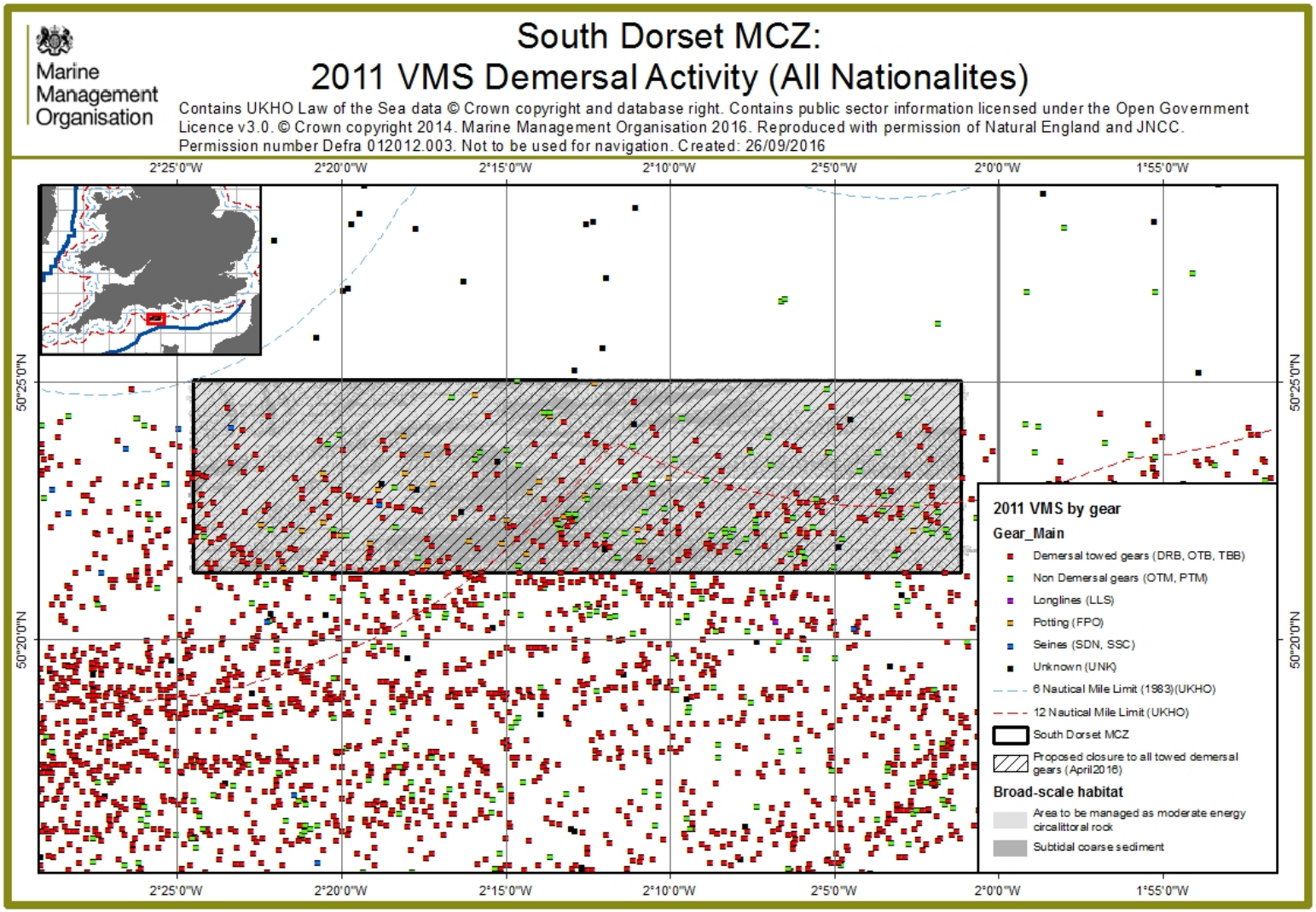


Figure 12: VMS reports indicating demersal /non demersal towed fishing activity in South Dorset MCZ 2012

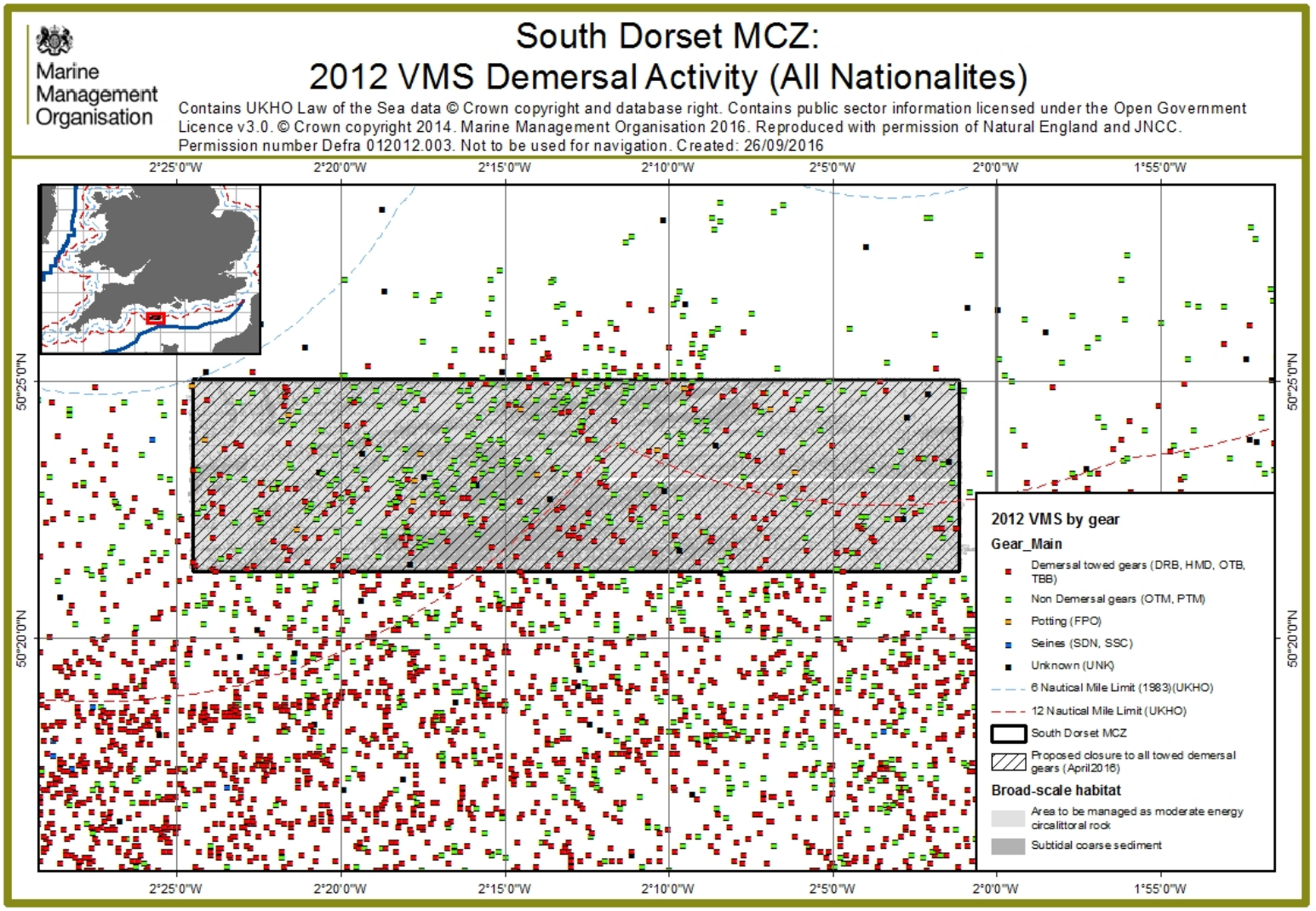


Figure 13: VMS reports indicating demersal /non demersal towed fishing activity in South Dorset MCZ 2013

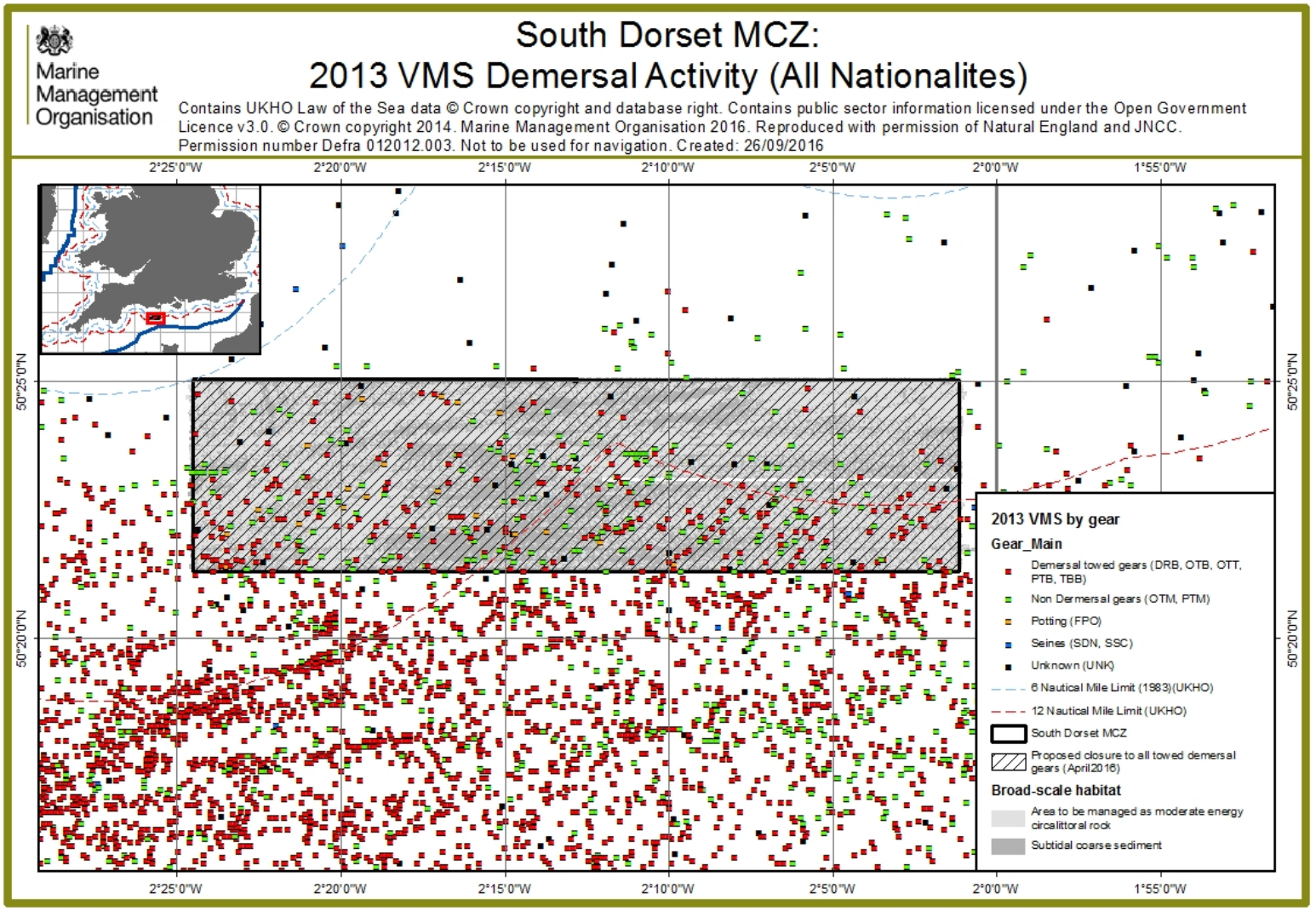


Figure 14: VMS reports indicating demersal /non demersal towed fishing activity in South Dorset MCZ 2014

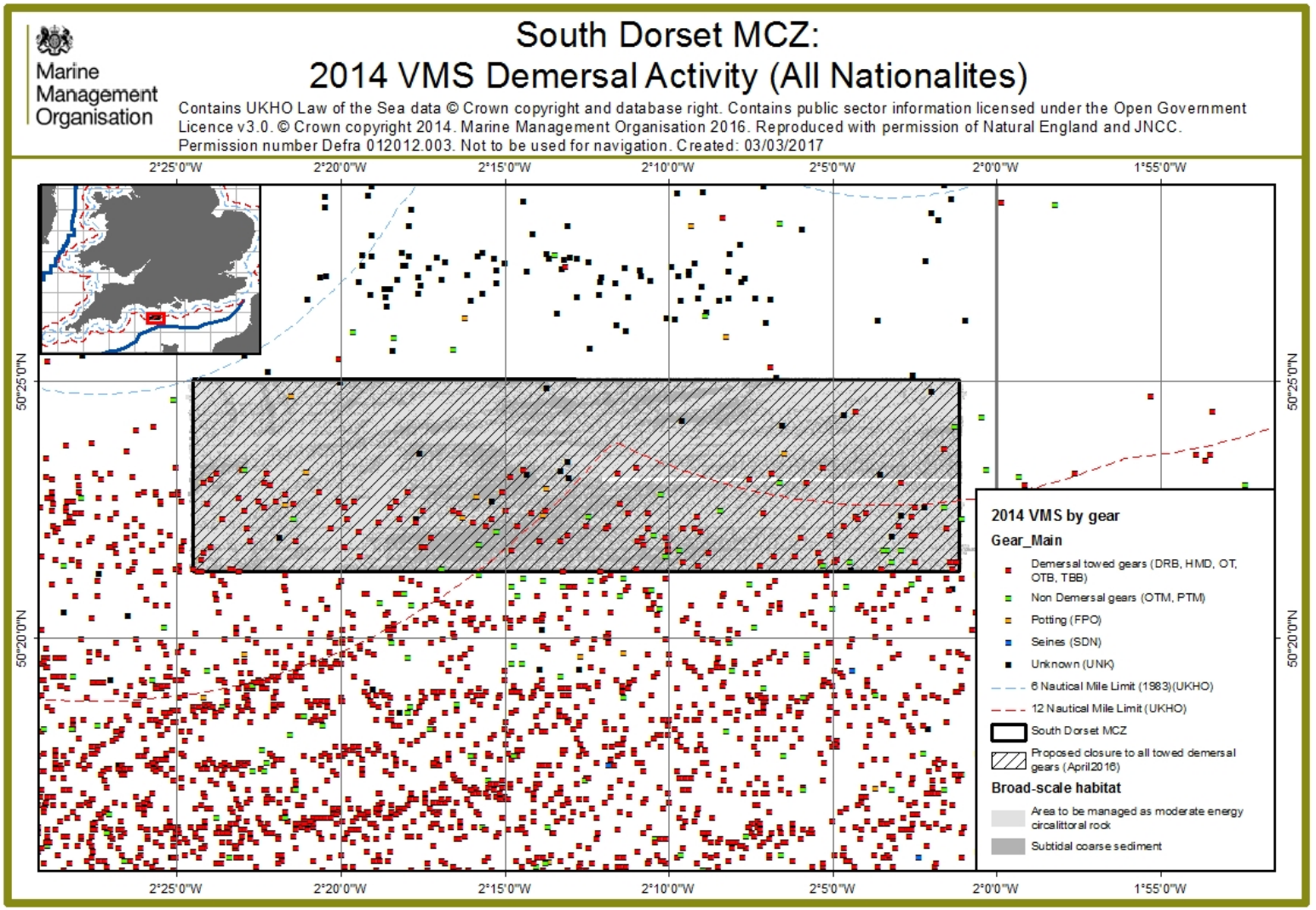
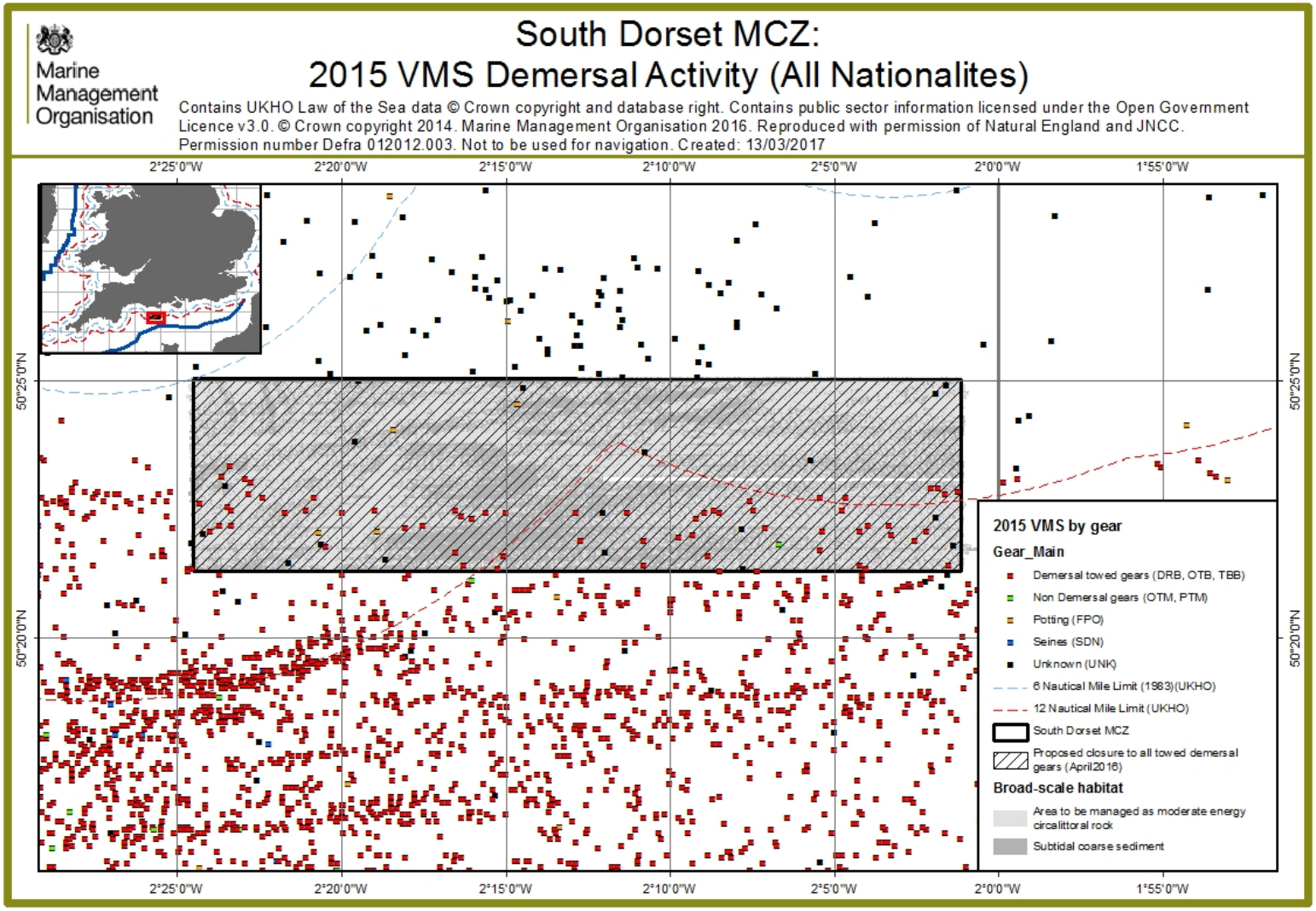


Figure 15: VMS reports indicating demersal /non demersal towed fishing activity in South Dorset MCZ 2015



5.6 By-catch

Bottom (demersal) trawling, pelagic trawling and dredging are the most common activities taking place in the site based on landings associated with the ICES rectangle. Bottom (demersal) trawling and dredging being the most common activities recorded in the site based on VMS activity. The demersal activity in the Channel mainly targets sole, plaice, bass, whiting and cod to name a few. The flatfish fisheries (beam and bottom otter board trawl) land a number of other species as by-catch (e.g. cod, lemon sole). Where these species are landed these are included in the total gross landing value statistics. Additional species may also be caught as bycatch but are not landed and there are no current systematic statistics available for these catch components.

The fishery focuses on all four species group, Pelagic, Mollusc, Demersal and Crustacean.

- UK Demersal top species landed in terms of weight are Horse Mackerel, Whelks, Scallops, Sole, Plaice, Crabs, Bass and Herring.
- Other member states generally land Mackerel, Herring, Sole, Whiting, Plaice, Cod, Scallops and Squid

With the introduction of Common Fisheries Policy reform, which includes a landing obligation (namely a ban on the discard of certain species by certain vessels/within certain circumstances), it could become possible in the future to collate information on bycatch that could contribute to the overall catch and landings statistics in certain areas. A ban on demersal fish discards was introduced at the end of 2015, following a discard ban on pelagic fish introduced at the end of 2014, with a ban on discarding all other quota species by 2016.[12].

[12] http://ec.europa.eu/fisheries/cfp/fishing_rules/discards_en

6 Seasonal trends in fisheries over 6 years 2010 to 2015 inclusive

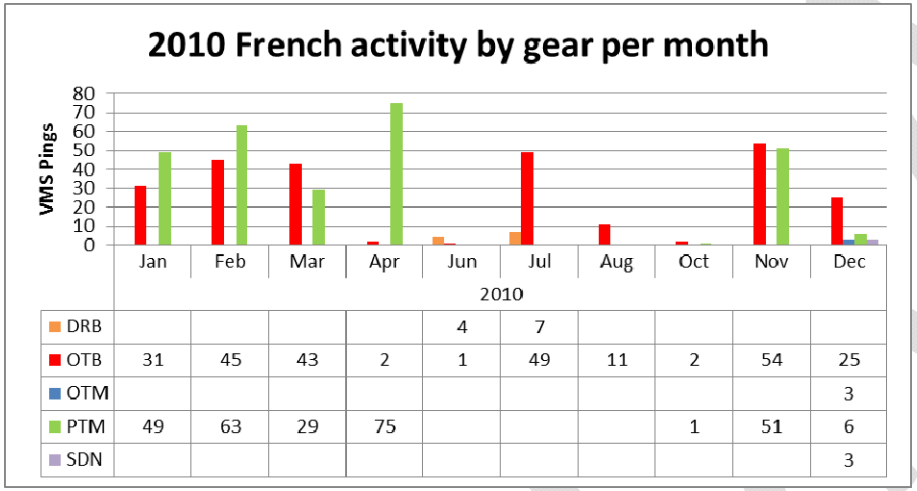
Belgian activity in this site is very low. Two bottom otter trawl VMS reports in March 2010 and one report in June for beam trawl.

No activity in 2011. One Belgian VMS report for beam trawl in both June and November 2012 with one bottom otter trawl in October.

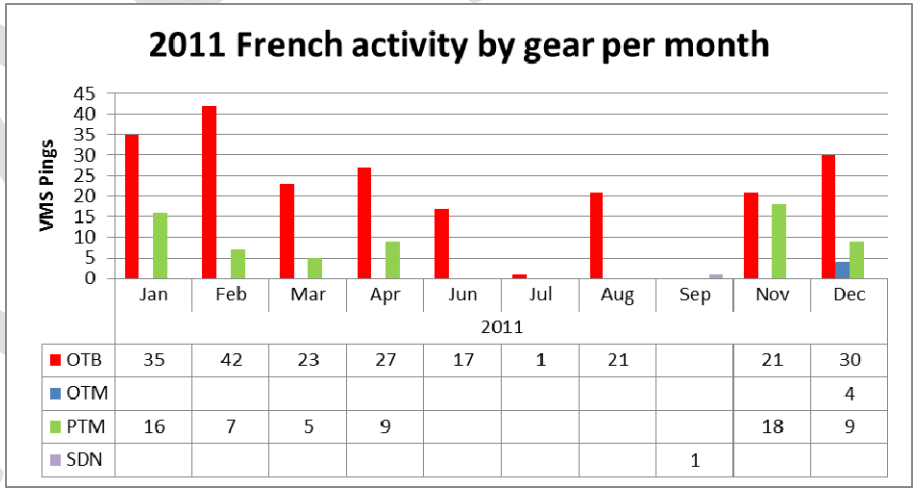
One Belgian beam trawl report in April and one bottom otter trawl report in June 2013 with one beam trawl report in November for both 2014 and 2015.

Note: charts will only show the months when activity occurs in the site.

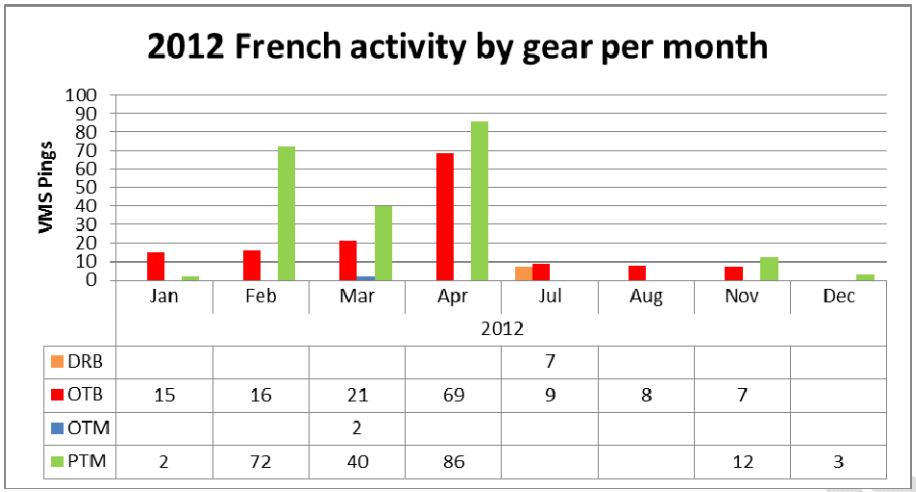
Charts 6.1: French seasonal fishing activity (all gears) in South Dorset MCZ

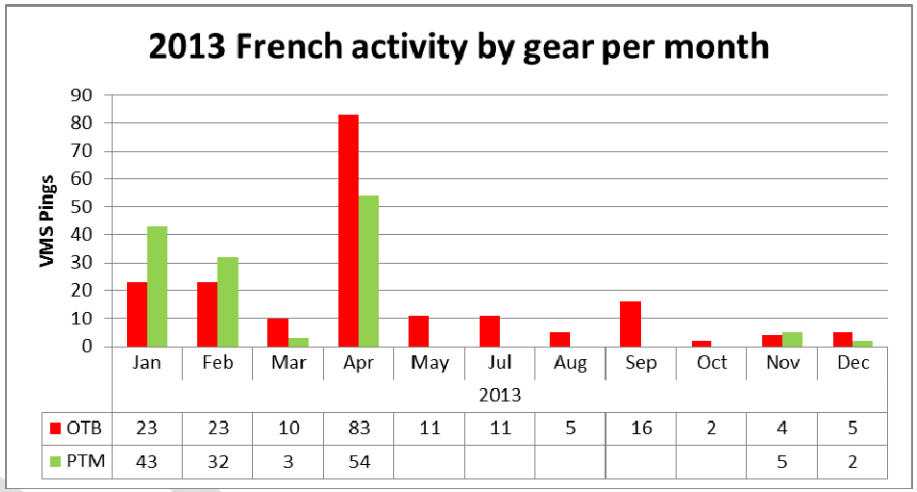


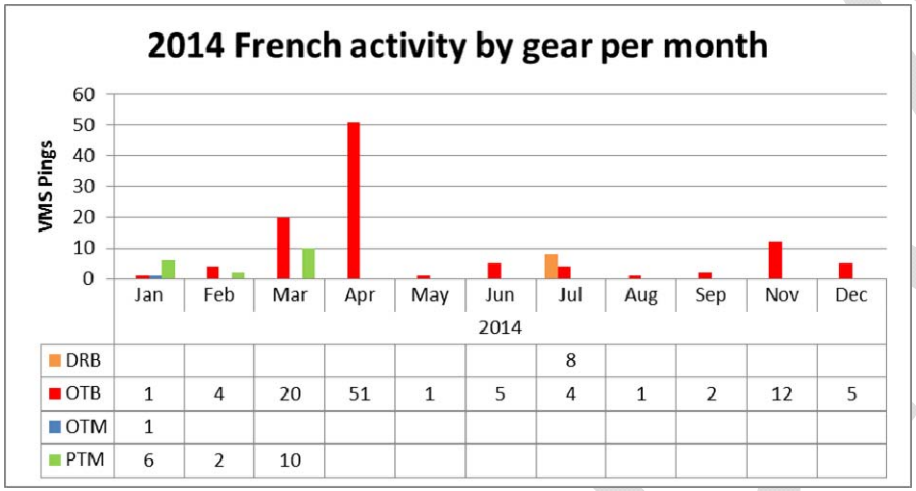
	Jan	Feb	Mar	Apr	Jun	Jul	Aug	Oct	Nov	Dec
DRB					4	7				
OTB	31	45	43	2	1	49	11	2	54	25
OTM										3
PTM	49	63	29	75				1	51	6
SDN										3

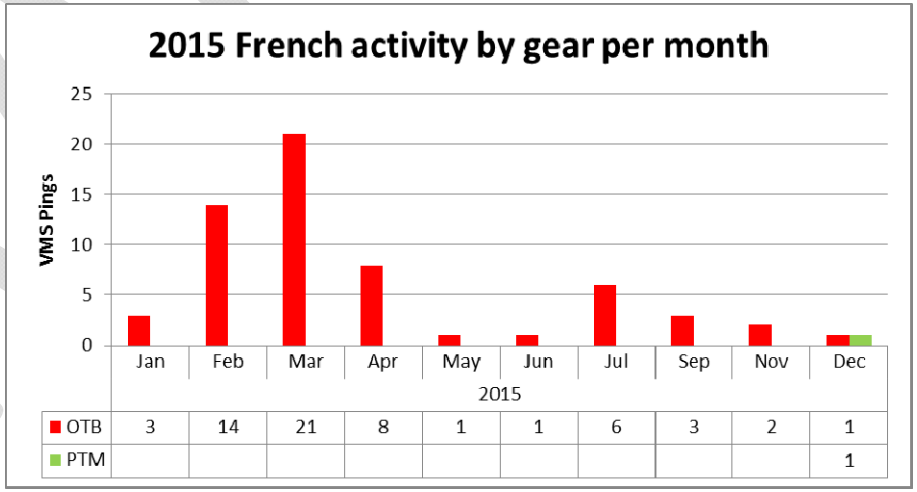


	Jan	Feb	Mar	Apr	Jun	Jul	Aug	Sep	Nov	Dec
OTB	35	42	23	27	17	1	21		21	30
OTM										4
PTM	16	7	5	9					18	9
SDN								1		



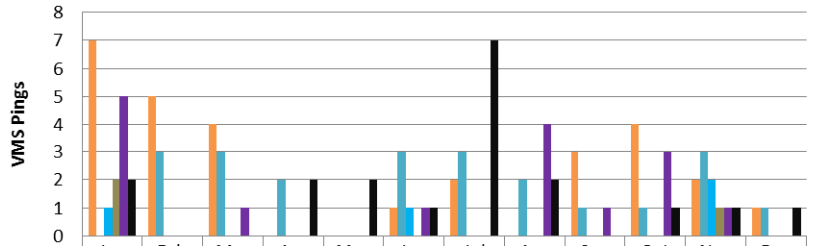






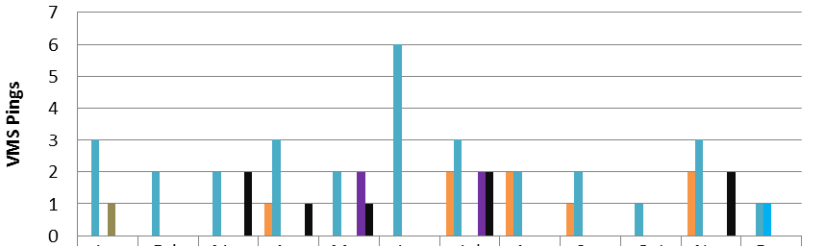
Charts 6.2: UK Seasonal fishing activity (all gears) in South Dorset MCZ

2010 UK activity by gear per month



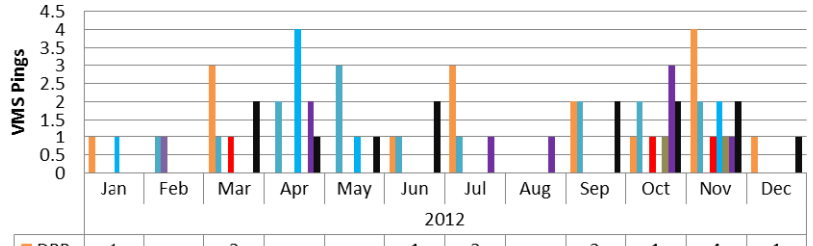
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
DRB	7	5	4			1	2		3	4	2	1
FPO		3	3	2		3	3	2	1	1	3	1
OTM	1					1					2	
PTM	2										1	
TBB	5		1			1		4	1	3	1	
UNK	2			2	2	1	7	2		1	1	1

2011 UK activity by gear per month



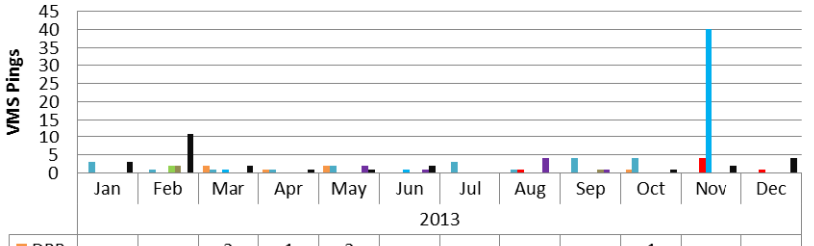
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
DRB				1			2	2	1		2	
FPO	3	2	2	3	2	6	3	2	2	1	3	1
OTM												1
PTM	1											
TBB					2		2					
UNK			2	1	1		2				2	

2012 UK activity by gear per month

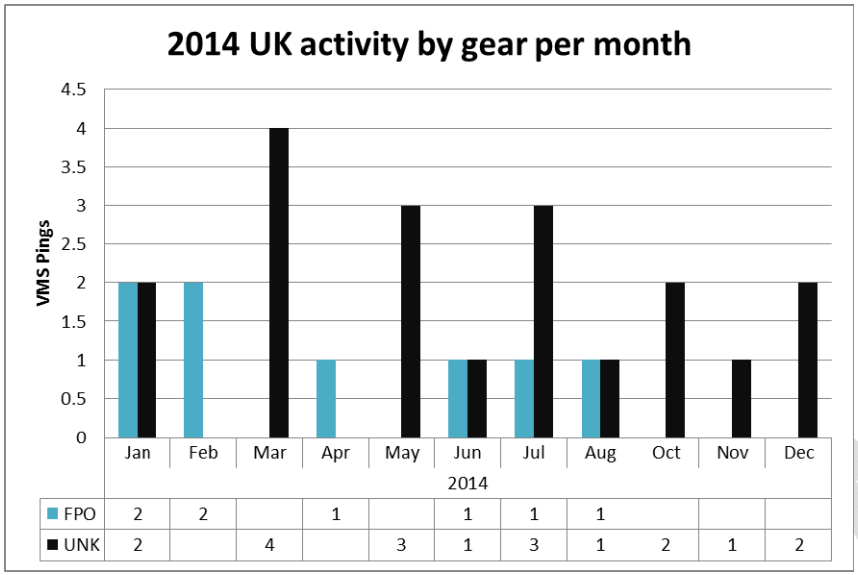


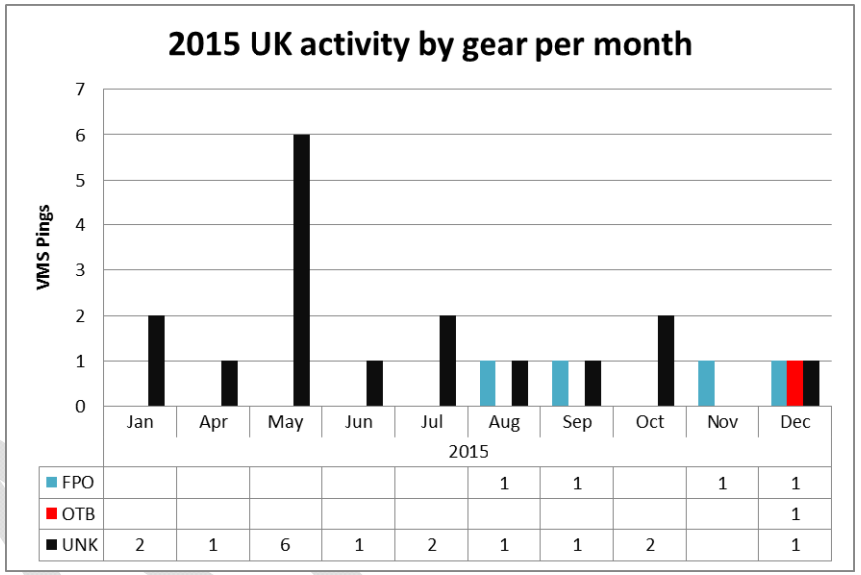
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
DRB	1		3			1	3		2	1	4	1
FPO		1	1	2	3	1	1		2	2	2	
HMD		1										
OTB			1							1	1	
OTM	1			4	1						2	
PTM										1	1	
TBB				2			1	1		3	1	
UNK			2	1	1	2			2	2	2	1

2013 UK activity by gear per month



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
DRB			2	1	2					1		
FPO	3	1	1	1	2		3	1	4	4		
OTB								1			4	1
OTM			1			1					40	
PTB		2										
PTM		2							1			
TBB					2	1		4	1			
UNK	3	11	2	1	1	2				1	2	4


2014 UK activity by gear per month
VMS Pings
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Jan Feb Mar Apr May Jun Jul Aug Oct Nov Dec
2014
FPO 2 2 1 1 1 1
UNK 2 4 3 1 3 1 2 1 2


2015 UK activity by gear per month
VMS Pings
7
6
5
4
3
2
1
0
Jan Apr May Jun Jul Aug Sep Oct Nov Dec
2015
FPO 1 1 1 1
OTB 1
UNK 2 1 6 1 2 1 1 2 1

7 Options for fisheries management

A range of MPA fisheries management options are available to managers, differing in the degree of restriction they would play on fishing operations, and the risk they would pose to achieving the conservation objectives. These have been grouped into three broad categories of possible management: No additional management, additional management to reduce/limit pressures and additional management to remove pressures.

Although it is not generally possible to quantify the degree of risk to achieving the conservation objectives posed by each option, it is possible to identify where risks may exist, and where this could be reduced through the introduction of management measures.

Risks have been evaluated using existing data and information on protected features and our understanding of the relationships between the feature and relevant activities.

Broad management options categories

1) **No additional management** – where fisheries managers choose to apply no additional site specific fisheries management within a site. For some gear/feature combinations, where the feature is not considered sensitive to the pressures associated with demersal fishing activity, this management option may pose little or no risk to achievement of the conservation objectives. For features which are considered sensitive to the pressures associated with certain demersal fishing activities, the risk posed to achieving the conservation objectives will increase as the sensitivity of the feature increases. As outlined in the features fisheries impacts section, this will vary between features and gear types.

2) **Additional management to reduce/limit pressures** – where fisheries managers may wish to consider a range of measures that could be used to reduce the risk posed by fishing activity to achieving the conservation objectives. These could include:

    - Area restrictions: This would involve closing some or all of a specific feature's area. Restrictions could be permanent in some cases or temporary/adaptive in others. The risk of the conservation objectives not being met will increase as the size of areas restricting pressure decrease, or if the pressure reduction across the site relative to natural change is low.
    - Gear restrictions: This could involve restricting the use of gears to which a feature is more sensitive.

In situations where there is high uncertainty regarding the impacts of fishing on features, management measures to reduce/limit pressures could be “adaptive”, i.e. changes in the feature’s condition following the introduction of management measures will be monitored and future management may be adapted accordingly.

3) **Additional management to remove pressures** – where managers choose to exclude fishing activities known to adversely affect a feature. Such exclusions may apply to the parts of the site where the feature is present, or to an entire site. This would reduce the risk of not achieving the conservation objectives to the lowest possible level.

7.2 Proposed management option

The proposed management option is to remove pressure by excluding demersal towed gears across the entire MCZ (see figure 12). This option will prohibit the use of demersal towed gear over the entire area to be managed as moderate energy circalittoral rock feature. The features within the site form a mosaic, and therefore it has not been considered possible to pursue a zoned approach to the management of the Subtidal coarse sediment feature.

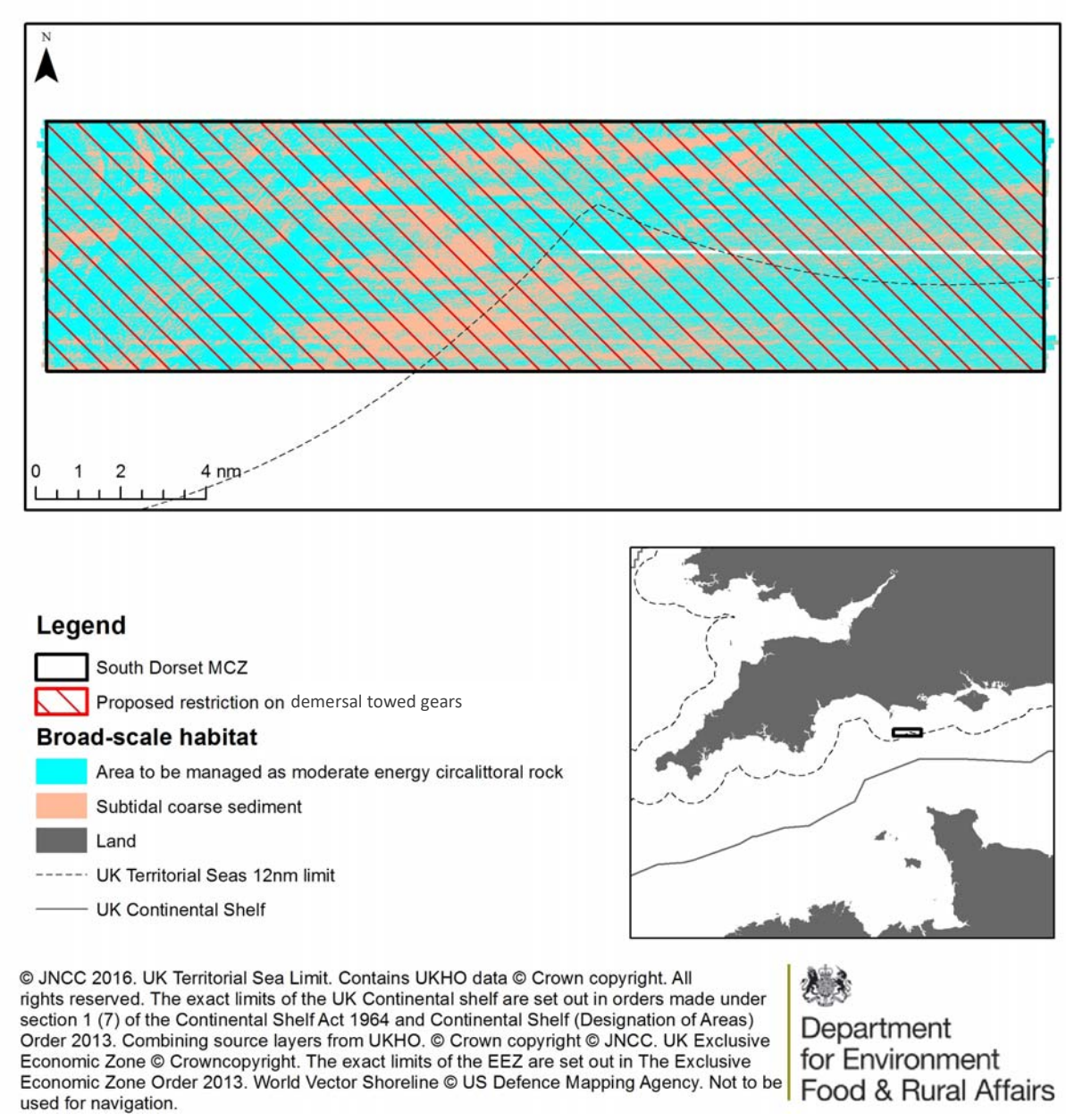


Figure 12: South Dorset MCZ site map including protected features for which management is being proposed.

7.3 Other fisheries measures which apply to the site

The South Dorset MCZ lies within an area where Commission Regulation (EC) 494/2002 of 19 March 2002 establishing additional technical measures for the recovery of the stock of hake in ICES sub-areas III, IV, V, VI and VII and ICES divisions VIII a, b d, e applies.

Regulation 494/2002 contains the following measures:

- Catch composition rules requiring the maximum allowed proportion of hake in a total catch for gear types.
- Gear specification requirements, including twine thickness and mesh sizes for various gear types.
- Within a specified area[13] (which encompass South Dorset MCZ), it is prohibited to use any fixed gear of mesh size less than 120mm.
- Within a specified area (which encompass South Dorset MCZ), it is prohibited to use any towed net of mesh range 55 to 99mm, except for east of 7° 30'W where beam trawls of mesh range 55 to 99mm may be deployed from April to October.

8 Control measures envisaged by the Member State, possible ecological and control buffer zones to ensure site protection and/or effective control and monitoring measures

8.1 Measures envisaged by Member states for Control, Enforcement and Compliance

The proposed control, enforcement and compliance regime for South Dorset MCZ consists of a combination of a reporting zone around the site with increased reporting and remote monitoring of vessel position and at-sea surveillance measures. Such a regime would be in line with future control and enforcement challenges of the Common Fisheries Policy.

8.1.1 Surface surveillance

Surface surveillance of South Dorset MCZ will be continued under the existing surveillance plans for the English Channel. These plans will coordinate the at-sea surveillance capacity of the UK which may include Navy fisheries protection vessels, or other capable vessels and aerial response. Changes to surveillance will be in line with MMO's risk based compliance and enforcement strategy.

8.1.2 Remote Vessel Monitoring

Increased Position reporting

Vessels entering the prohibited areas will be subject to increased vessel position reporting (every 10 minutes). EU fishing vessels over 12m in length are required to report, through satellite, every two hours. Reports can be viewed in real time but this reporting frequency would allow vessels to access the prohibited area of the MCZ without being identified between the two hourly reporting times. Increased reporting within the prohibited zone will reduce this risk.

[13] As defined by article 5, paragraph 1(a) of Commission Regulation (EC) 494/2002 of 19 March 2002 establishing additional technical measures for the recovery of the stock of hake in ICES sub-areas III, IV, V, VI and VII and ICES divisions VIII a, b d,e

Vessels will be allowed to transit the prohibited zone. Increased reporting will allow the MMO Fisheries Monitoring Centre (FMC) to identify fishing or transiting patterns and identify non-compliance.

Increased Reporting Zone

Vessels fishing within 1nm of the prohibited zone will be subject to 10min reporting.

Fishing patterns are likely to result in vessels 'clipping' the prohibited zone, or cutting across a corner rather than transiting across the entire site. A reporting zone which surrounds the prohibited area adds additional feature protection and ensures non-compliant vessels can be identified.

Vessels will still be allowed to fish in the increased reporting zone.

8.2 Vessel position and gear deployment monitoring

Increasing the frequency of vessel position reporting is integral to the preferred control, enforcement and compliance plan.

Increased reporting can be set up using geofences[14] recognised by the vessel's VMS devices, which would trigger higher frequency reporting if a vessel enters the reporting zone.

In order to improve monitoring and compliance, fishing vessels within South Dorset MCZ and the reporting zone should be required to carry a system capable of:

- Recording high frequency position reports (up to one report per ten minute interval) when within the prohibited area or reporting zone around South Dorset MCZ
- Transmitting position reports via GPRS/GSM [15](when available)
- When GPRS/GSM signal is not available: storing positions and forwarding stored reports when the signal is available.
- Recreate prohibited area and reporting zone coordinates and associated reporting frequency rules in the form of geofences.
- Transmitting an email and/or text message alert via GPRS/GSM (when signal available) to the flag state and MMO FMC when the vessel enters the reporting zone for South Dorset MCZ
- High frequency reporting would end when a vessel leaves the reporting area around South Dorset MCZ

Increased reporting via GPRS/GSM is recommended to reduce the reporting cost (which will be borne by the fishing vessels) as charges are made per report. Satellite reporting, currently used, is costly at high frequency.

Mobile network signal is not currently available in the South Dorset area; enforcement action using this system will therefore be retrospective.

[14] A geofence is a spatial virtual barrier. Programs that incorporate geofencing allow an administrator to set up triggers such as increased reporting so when a device enters (or exits) the boundaries defined by the administrator it performs the trigger and if required a text message or email alert.

[15] General Packet Radio System (GPRS) and Global System for Mobile communications (GSM): These are types of mobile phone technology which meet European telecommunications standards.

In the UK, vessels which are fitted with a VMS+ device can meet all the above system requirements. The VMS+ device is also capable of transmitting increased reporting either through satellite or GPRS/GSM. There is also development work on another device known as I-VMS (inshore vessel monitoring system), which although designed primarily for the English inshore fleet (those vessels under 12m in length), can also meet the above requirements.

Estimation of the increased reporting costings for offshore Marine Protected Areas in English waters.

This information relates to the UK estimates of the increased reporting proposals.

The cost of a VMS report through GPRS[16] is approximately **$0.06**[17] (As of April 2015). Please find below a table of the total cost of increased after a period of X minutes.

GPRS Costs	Total duration cost after X minutes					
Reporting rate (X minutes)	**60**	**120**	**180**	**240**	**300**	**360**
1 minute	$3.60	$7.20	$10.80	$14.40	$18.00	$21.60
10 minutes	**$0.36**	**$0.72**	**$1.08**	**$1.44**	**$1.80**	**$2.16**
30 minutes	$0.12	$0.24	$0.36	$0.48	$0.60	$0.72
60 minutes	$0.06	$0.12	$0.18	$0.24	$0.30	$0.36

To note: The UK proposes a reporting rate of ten minutes.

Increased reporting caveats:

- These costs are based on a 'pay as you go' (PAYG) service and correct as April 2015.
- Costs will vary depending individual member states VMS service providers.
- GRPS Network roaming may affect overall costs

It should be noted that fishing vessels affected by the proposed closures may potentially modify or change their activities, along with fishing patterns as a result of the implementation of an increased reporting zone.

8.3 Key provisions to include in EC regulation to manage South Dorset MCZ

Key provisions which should be included in an EC regulation to facilitate control enforcement and compliance include:

- A prohibition on demersal trawls, dredges and seines being deployed within the MCZ.

[16] General Packet Radio System (GPRS) and Global System for Mobile communications (GSM): These are types of mobile phone technology which meet European telecommunications standards.

[17] GPRS values are presented in US dollars

- Establishment of a 1nm (1.852km) increased reporting zone around South Dorset MCZ. All fishing vessels within this area shall be required to record or report vessel positions at minimum 10minute intervals. This area shall be defined by the coordinates displayed in Annex D.
- A requirement for all fishing vessels entering the reporting zone to have a system for recording and reporting vessel position which meets prescribed specifications (see Section 8.2 for minimal requirements) and is installed and operative. Any fishing vessel entering South Dorset MCZ or the reporting zone without such a system will be committing an offence.
- A requirement for all fishing vessels transiting the prohibited area carrying prohibited gears on board lashed and stowed.
- A requirement for all fishing vessels transiting the management area carrying prohibited gears to ensure the speed is not less than six knots during transit except in the case of force majeure or adverse conditions. In such cases the master shall immediately inform the FMC of the flag member state which shall then inform the UK FMC.

The proposal on which gears types to prohibit is formulated in terms of Gear Codes in Annex XI in EU Regulation 404/2011. In general prohibited gears types are demersal towed gears, dredges and seines. Formulation of the regulation requires clear and precise definitions which distinguish allowed gear types from prohibited gear types. This includes, for trawls which can be operated both with and without bottom contact, distinguishing between these different gear riggings (if such a distinction is not feasible these gear types should be prohibited).

Management measures for the site will be periodically reviewed in line with advancements in technology, specifically the development of improved remote vessel monitoring and gear in/out technologies.

9 Measures to monitor and assess the maintenance and/or recovery of the features within the site

Cefas/JNCC are currently leading a research and development programme to develop an integrated system of monitoring for marine biodiversity. The ambition is to cost-effectively encompass Defra's policy and statutory obligations, such as the:

· Marine and Coastal Access Act
· OSPAR Convention;
· EC Habitats Directive; and
· EC Marine Strategy Framework Directive (MSFD)

For benthic marine habitats, the task of developing monitoring options is extremely complex. The UK has 48 offshore Marine Protected Areas designated for benthic habitats covering an area of over 126,000 km^2. This presents a challenge due to the diversity of benthic habitats occurring in UK waters and the number, size and geographic spread of offshore MPAs, the paucity of data on the range, extent and condition of many habitat types (especially in the offshore environment) and the underdeveloped nature of suitable state and pressure indicators for monitoring.

The draft offshore habitats monitoring options evaluate the risk of damage to habitats in UK offshore MPAs, assess the type of monitoring required for each MPA and estimate the indicators,

equipment and number of samples required to assess change in the condition of the habitats within MPAs. Due to the number of UK offshore MPAs, the area of seabed encompassed within the offshore MPAs, the diversity of offshore habitats and the cost of offshore monitoring surveys, it may not be possible to monitor every MPA within a single reporting cycle. In certain cases, monitoring studies to assess the effectiveness of management measures in one MPA may be used as a proxy for assessing the effectiveness of management measures in MPAs with similar features and management measures in the same regional sea.

10 Coordination with neighbouring Member States as appropriate

Fisheries management measures were developed in close coordination with other Member States with a direct management interest in the sites.

Draft management proposals were subject to a six week period of consultation with Member States with a direct management interest in the sites and the Northwest Waters Advisory Council.

Finalised management proposals were then presented to other Member States with a direct management interest in the sites for agreement that sufficient information had been provided in order to commence the formal agreement of the proposals as Joint Recommendations. [Following this, ad hoc meetings of the Northwest Waters Article 11 sub-group were held to start formal agreement proceedings for the Joint Recommendations. Any outstanding issues were then addressed before agreement was reached on the Joint Recommendations by members of the Northwest Waters High-Level Group and they were submitted to the European Commission for adoption.]

11 Evaluation of possible displacement of fishing effort and impact on new areas

As the MCZ will be closed to demersal trawls, dredges and seines, some displacement is likely to occur both within and outside the MCZ.

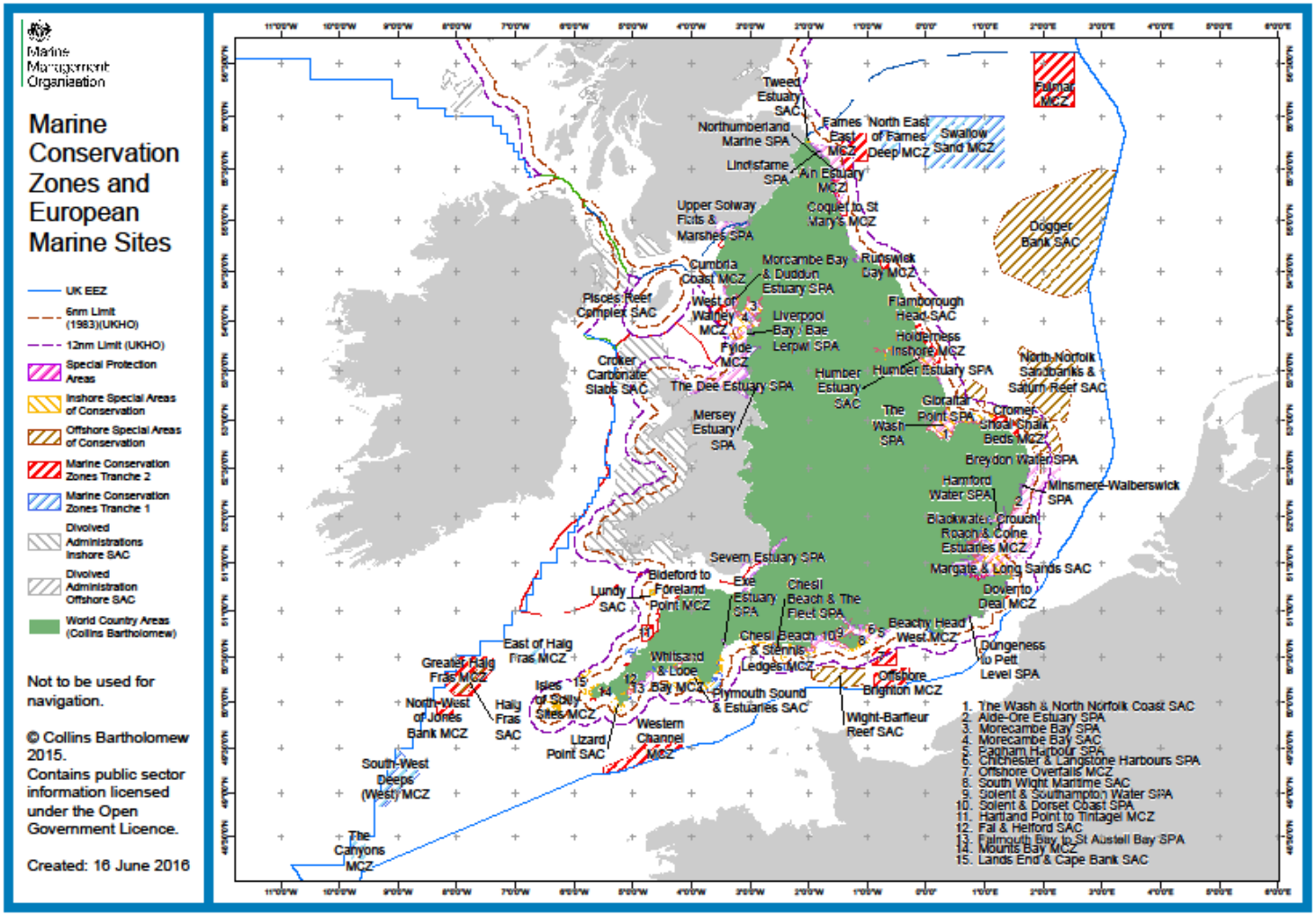
Displacement is difficult to quantify, and it is impossible to predict where exactly activities will be displaced to.

Displacement is dependent on the intensity and distribution of fishing activities within the site before the closure and on external factors (such as fish distribution, TAC/quota, fuel prices, other spatial claims).

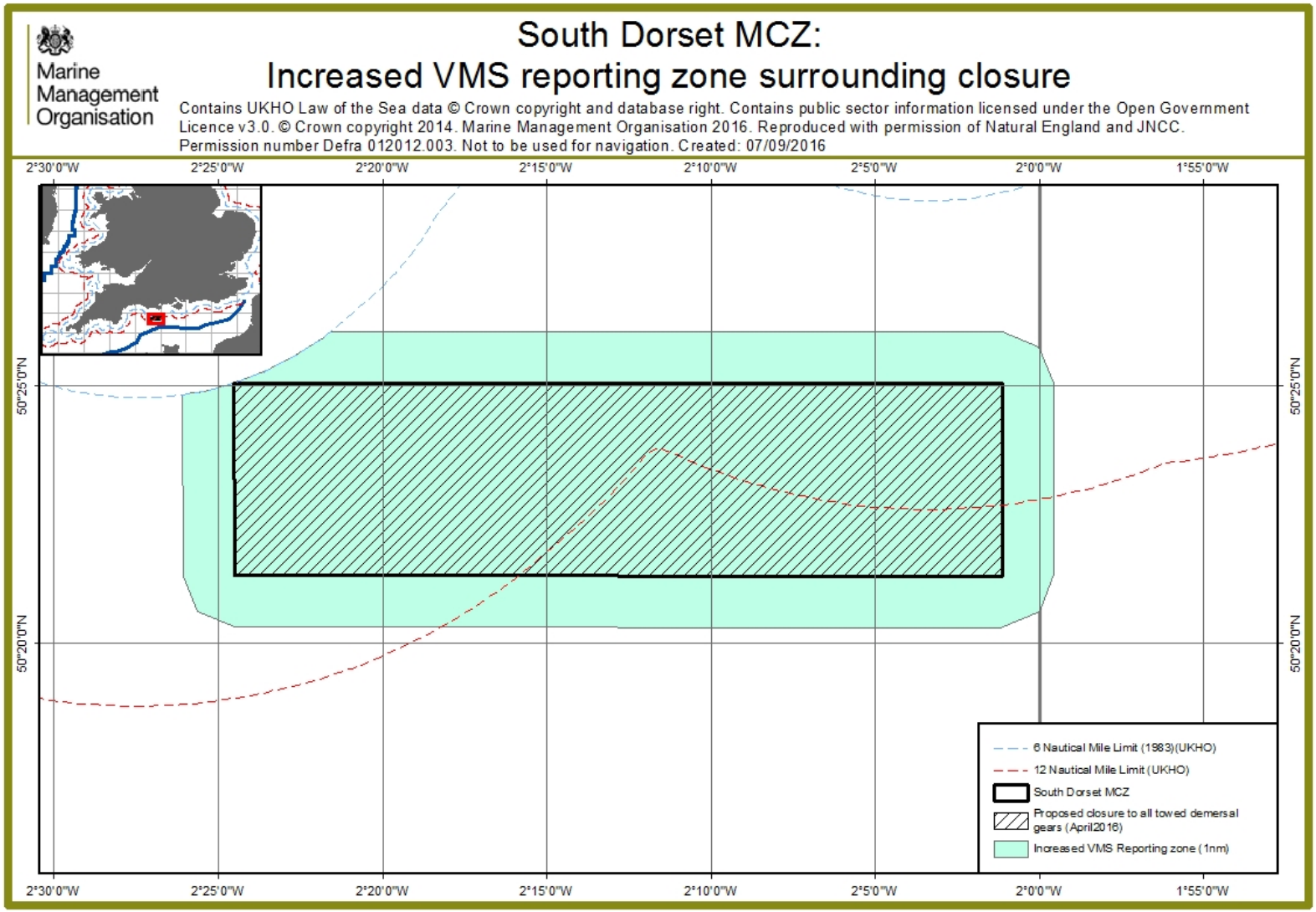
As part of the MMOs risk-based enforcement, regular monitoring of fishing activity is collated on a Monitoring Control and Surveillance System (MCSS). MCSS does not analyse fishing trends and

activity, but stores information, which can be accessed at any time. The MMOs monitoring of activity in each site could assist in any future considerations relating to displacement and could be used to indicate any changes in fishing trends and activity.

Annex C – Map of English MPA network



Annex D – Map and coordinates for South Dorset MCZ reporting zone with increased reporting



Coordinates for South Dorset MCZ reporting zone with increased reporting

	Degrees Minutes		Degrees Minutes	
Point	Lat (North)	Lon (West)	Lat (North)	Lon (West)
1	50°26.05680'	-002°21.57180'	50°26'03.4080"	-002°21'34.3080"
2	50°26.04600'	-002°01.12140'	50°26'02.7600"	-002°01'07.2840"
3	50°25.75380'	-002°00.01800'	50°25'45.2280"	-002°00'01.0800"
4	50°25.05060'	-001°59.56200'	50°25'03.0360"	-001°59'33.7200"
5	50°21.33180'	-001°59.56320'	50°21'19.9080"	-001°59'33.7920"
6	50°20.60940'	-001°59.99880'	50°20'36.5640"	-001°59'59.9280"
7	50°20.30100'	-002°01.18140'	50°20'18.0600"	-002°01'10.8840"
8	50°20.30760'	-002°24.51960'	50°20'18.4560"	-002°24'31.1760"
9	50°20.61240'	-002°25.64820'	50°20'36.7440"	-002°25'38.8920"
10	50°21.30180'	-002°26.08500'	50°21'18.1080"	-002°26'05.1000"
11	50°24.82680'	-002°26.09280'	50°24'49.6080"	-002°26'05.5680"

Then from Point 11, follow the 6nm limit boundary re-joining to Point 1.

Annex E – References

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