Joint Recommendation regarding the protection of Subtidal coarse sediment, Subtidal sand, Subtidal mud, Subtidal mixed sediments and Fan mussel (*Atrina fragilis*) within the South-West Deeps (West) 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 the following Member States: France, Spain and Ireland ; being those Member States who have a direct management interest affected by the joint recommendation.

The overall aim of this joint recommendation is to ensure the protection of Subtidal coarse sediment (Eunis[1] habitat type A5.1), Subtidal sand (A5.2), Subtidal mud (A5.3), Subtidal mixed sediments (A5.4) and Fan mussel (*Atrina fragilis*) (Species Feature of Conservation Importance) within the South-West Deeps (West) Marine Conservation Zone (MCZ) from fisheries, thereby contributing to the obligation to recover this habitat type to favourable condition in accordance with the South-West Deeps (West) Marine Conservation Zone Designation Order 2013[2] (and as amended in 2016[3]) 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 fishing vessels including those carrying the flag of other Member States of the EU.

2. The Recommendation to be Implemented

The following recommendation is proposed for adoption in the South-west Deeps (West) MCZ:

- the exclusion of demersal trawls and dredges (see Table 1) to protect a proportion of the sedimentary features of the MCZ, all the areas where Fan mussel (*A. fragilis*) has been recorded within the sites management boundary and an increased reporting zone around the management boundary (see Section 8 of Annex B).

Table 1: Gear types to be prohibited in the areas proposed for closure in the site

Gear types to be prohibited within the	Feature	Gear code Annex XI in EU Regulation No	International Standard Classification of Fishing

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

[2] http://www.legislation.gov.uk/ukmo/2013/21/pdfs/ukmo_20130021_en.pdf

[3] http://www.legislation.gov.uk/ukmo/2016/30/pdfs/ukmo_20160030_en.pdf

site's management boundary		404/2011	Gears
Beam Trawl	Subtidal coarse sediment, Subtidal sand, Subtidal mud, Subtidal mixed sediments, Fan mussel	TBB	TBB
Bottom Trawl/Otter Trawl	Subtidal coarse sediment, Subtidal sand, Subtidal mud, Subtidal mixed sediments, Fan mussel	OTB, OTT, PTB,TBN,TBS,TB	OTB,OTT,OT,PTB,TB
Dredges	Subtidal coarse sediment, Subtidal sand, Subtidal mud, Subtidal mixed sediments, Fan mussel	DRB	DRB, DRH

Table 2: Coordinates of the South–West Deeps (West) MCZ management zone boundaries

Area	Point	Latitude	Longitude
1	1	49° 30' 00.000'' N	9° 03' 00.000'' W
1	2	49° 30' 00.000'' N	9° 01' 42.213'' W
1	3	49° 23' 26.000" N	8° 52' 46.000" W
1	4	49° 10' 00.000'' N	9° 12' 00.000'' W
1	5	49° 20' 00.000'' N	9° 12' 00.000'' W
1	6	49° 20' 00.000'' N	9° 03' 00.000'' W
2	7	49° 10' 00.000'' N	9° 12' 00.000'' W
2	8	49° 10' 00.000'' N	9° 17' 00.000'' W

2	9	49° 0’ 00.000’’ N	9° 17’ 00.000’’ W
2	10	49° 0’ 00.000’’ N	9° 24’ 00.000’’ W
2	11	48° 50’ 00.000’’ N	9° 24’ 00.000’’ W
2	12	48° 49’ 59.139’’ N	9° 14’ 49.287’’ W
2	13	48° 51' 47.151" N	9° 11' 56.524" W
3	14	49° 1' 51.938" N	8° 56' 1.572" W
3	15	49° 12’ 48.511’’ N	8° 38’ 19.002’’ W
3	16	49° 19' 33.798" N	8° 47' 30.318" W
3	17	49° 11' 22.171" N	9° 2' 33.115" W

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 being deployed in the management area of the MCZ. All gear types are permitted to fish in the reporting zone outside the management area with increased VMS reporting.
- Establishment of a 1 nm (1.852 km) reporting zone around the South West Deeps (West) MCZ’s management area. All fishing vessels within this area shall be required to record or report vessel positions at 10 minute intervals. This area shall be defined by the reporting zone and coordinates displayed in Annex C.
- 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 the South West Deeps (West) MCZ management area 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 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 the transit is not less than 6 knots except in the case of force majeure or adverse conditions[4]. In such cases the master shall immediately inform the fisheries monitoring centre of the flag member state which shall then inform the UK Fisheries Monitoring Centre (FMC).

The proposal on which gear 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 this 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 Articles 11 and 18 of the Basic Regulation and in collaboration with those Member States with a direct management interest in the South West Deeps (West) site.

[4] 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 Subtidal coarse sediment, Subtidal sand, Subtidal mud, Subtidal mixed sediments and Fan mussel (*A. fragilis*)features within the South-West Deeps (West) 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-West Deeps (West) site was designated as a Marine Conservation Zone (MCZ) in November 2013 with additional features (Subtidal mud and fan mussel) designated in 2016. 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 Marine Protected Areas (MPAs) and will also assist in meeting commitments relating to the EU Marine Strategy Framework Directive (MSFD).

The conservation objective for South-West Deeps (West) MCZ is to recover all protected features (Subtidal coarse sediment, Subtidal sand, Subtidal mud, Subtidal mixed sediments and Fan mussel (*A. fragilis*)) to favourable condition. Commercial fishing has been identified as an activity which could adversely impact the integrity of this site's features and as such required to be assessed and, if necessary, managed to reduce its impact.

As the proposed area of the South-West Deeps (West) site falls beyond 12 nautical miles (nm) of the UK coastline, all Member States have access to the site. However, the UK, France, Ireland and Spain are currently the only Member States that have 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.

This document covers the 11 information items 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 (CFP)[5].

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

1.2 Overall aim of the present proposal

The overall aim of the present proposal is to ensure adequate protection of Subtidal coarse sediment (A5.1), Subtidal sand (A5.2), Subtidal mud (A5.3), Subtidal mixed sediments (A5.4) and Fan mussel (*A. fragilis*) from fishing activities that could adversely affect feature condition and thereby to contribute to the obligation of recovering all protected features to favourable condition in accordance with the South-West Deeps (West) Marine Conservation Zone Designation Orders 2013 and 2016 and Article 11 of the CFP.

The Conservation Objective for the South-west Deeps (West) MCZ is, subject to natural change, to ensure that Subtidal coarse sediment, Subtidal sand, Subtidal mud, Subtidal mixed sediments and Fan mussel (*A. fragilis*) are to remain in or be brought into favourable condition. To achieve the conservation objective, general management approaches (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-West Deeps (West) MCZ, the General Management Approaches (GMA) have been set to recover all features to favourable condition.

According to advice provided by the Joint Nature Conservation Committee (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 trawls and dredges across a proportion of the 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 objective 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 B.

The proposal has been reviewed by CEFAS (see section 3.5).

1.3 Recommendation to be implemented

The following recommendations are proposed for adoption:

- the exclusion of demersal trawls and dredges (Table 4) within the proposed management boundary (Figure 1) to protect the listed features and an increased reporting zone around the management boundary (See Figure 1 and Table 5).

Table 1: Gear types to be prohibited in areas proposed for closure in the site

Gear types to be prohibited within the site's management boundaries	Feature	Gear code Annex XI in EU Regulation No 404/2011	International Standard Classification of Fishing Gears
Beam trawling	Subtidal coarse sediment, Subtidal sand, Subtidal mud, Subtidal mixed sediments, Fan mussel	TBB	TBB
Bottom/Otter trawling	Subtidal coarse sediment, Subtidal sand, Subtidal mud, Subtidal mixed sediments, Fan mussel	OTB, OTT, PTB, TBN, TBS, TB	OTB, OTT, OT, PTB, TB
Dredging	Subtidal coarse sediment, Subtidal sand, Subtidal mud, Subtidal mixed sediments, Fan mussel	DRB	DRB, DRH

Table 2: Coordinates of the South–West Deeps (West) MCZ management zone boundaries

Area	Point	Latitude	Longitude
1	1	49° 30' 00.000'' N	9° 03' 00.000'' W
1	2	49° 30' 00.000'' N	9° 01' 42.213'' W
1	3	49° 23' 26.000" N	8° 52' 46.000" W

1	4	49° 10’ 00.000’’ N	9° 12’ 00.000’’ W
1	5	49° 20’ 00.000’’ N	9° 12’ 00.000’’ W
1	6	49° 20’ 00.000’’ N	9° 03’ 00.000’’ W
2	7	49° 10’ 00.000’’ N	9° 12’ 00.000’’ W
2	8	49° 10’ 00.000’’ N	9° 17’ 00.000’’ W
2	9	49° 0’ 00.000’’ N	9° 17’ 00.000’’ W
2	10	49° 0’ 00.000’’ N	9° 24’ 00.000’’ W
2	11	48° 50’ 00.000’’ N	9° 24’ 00.000’’ W
2	12	48° 49’ 59.139’’ N	9° 14’ 49.287’’ W
2	13	48° 51' 47.151" N	9° 11' 56.524" W
3	14	49° 1' 51.938" N	8° 56' 1.572" W
3	15	49° 12’ 48.511’’ N	8° 38’ 19.002’’ W
3	16	49° 19' 33.798" N	8° 47' 30.318" W
3	17	49° 11' 22.171" N	9° 2' 33.115" W

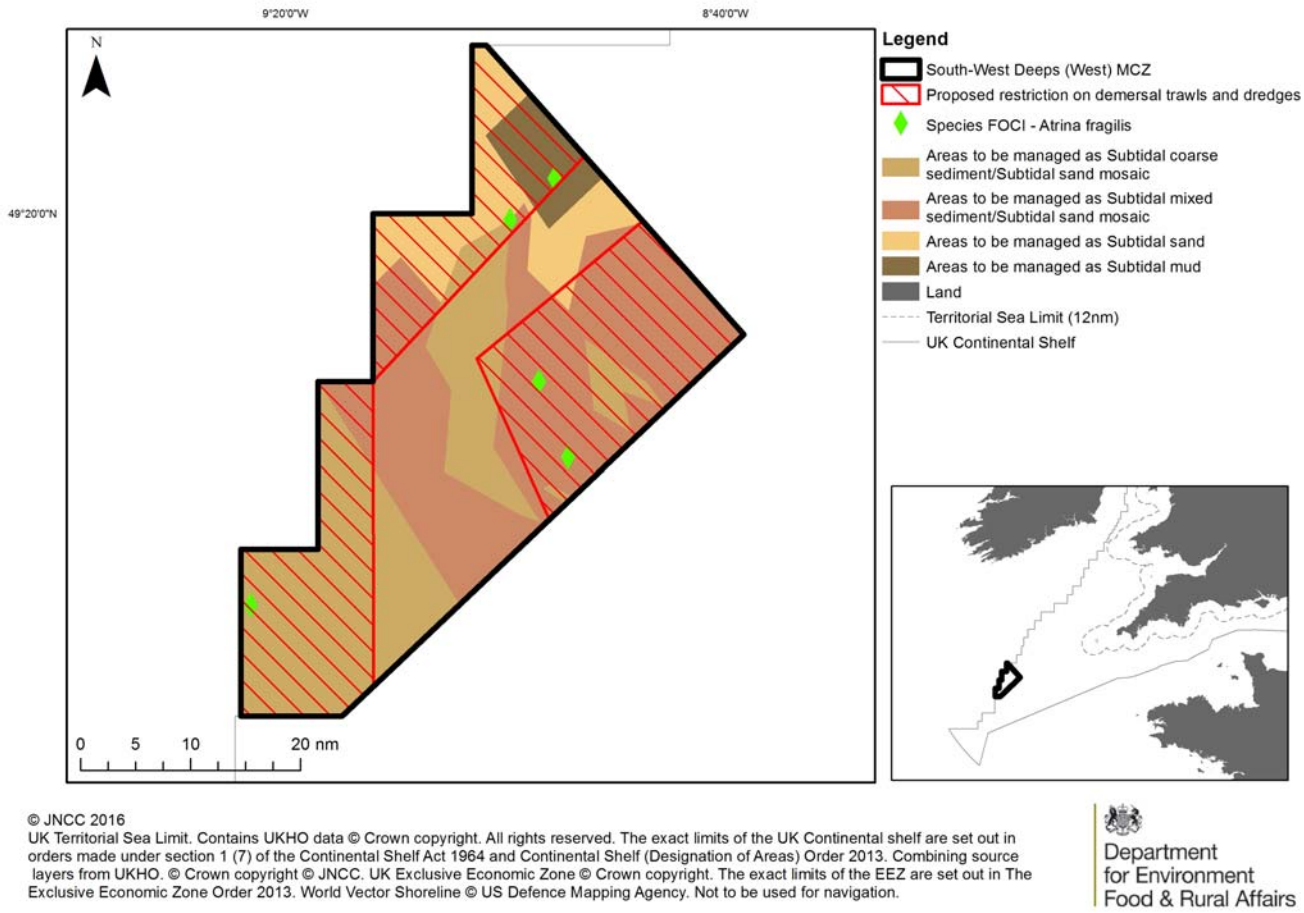


Figure 1: South-West Deeps (West) MCZ site map including protected features for which management is being proposed

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 and that are necessary to comply with the obligations under Article 13(4) of Directive 2008/56/EC.

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 West Deeps (West) MCZ

In accordance with the Basic Regulation the UK is recorded as operating demersal towed gears within the proposed management area within the years 2010-2015. French, Irish and Spanish activity within the site over this period was recorded as operating demersal towed gears within the proposed management area within the years 2010-2015. Further information on fishing activity can be found at Section 5 of Annex A.

2.3 Designation of the South West Deeps (West) MCZ

The South-west Deeps (West) site was designated as a MCZ in November 2013 with two additional features designated in January 2016 (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).

A significant way in which MCZs differ from Natura 2000 sites is that social and economic interests, such as commercial fishing, can be considered during their selection and designation process. Providing the ecological basis for an MCZ's designation is met, a site can be preferentially located in areas where impacts on social and economic interests are minimised. In such instances, a more precautionary approach to management can be taken whilst ensuring social and economic interests aren't impacted disproportionately.

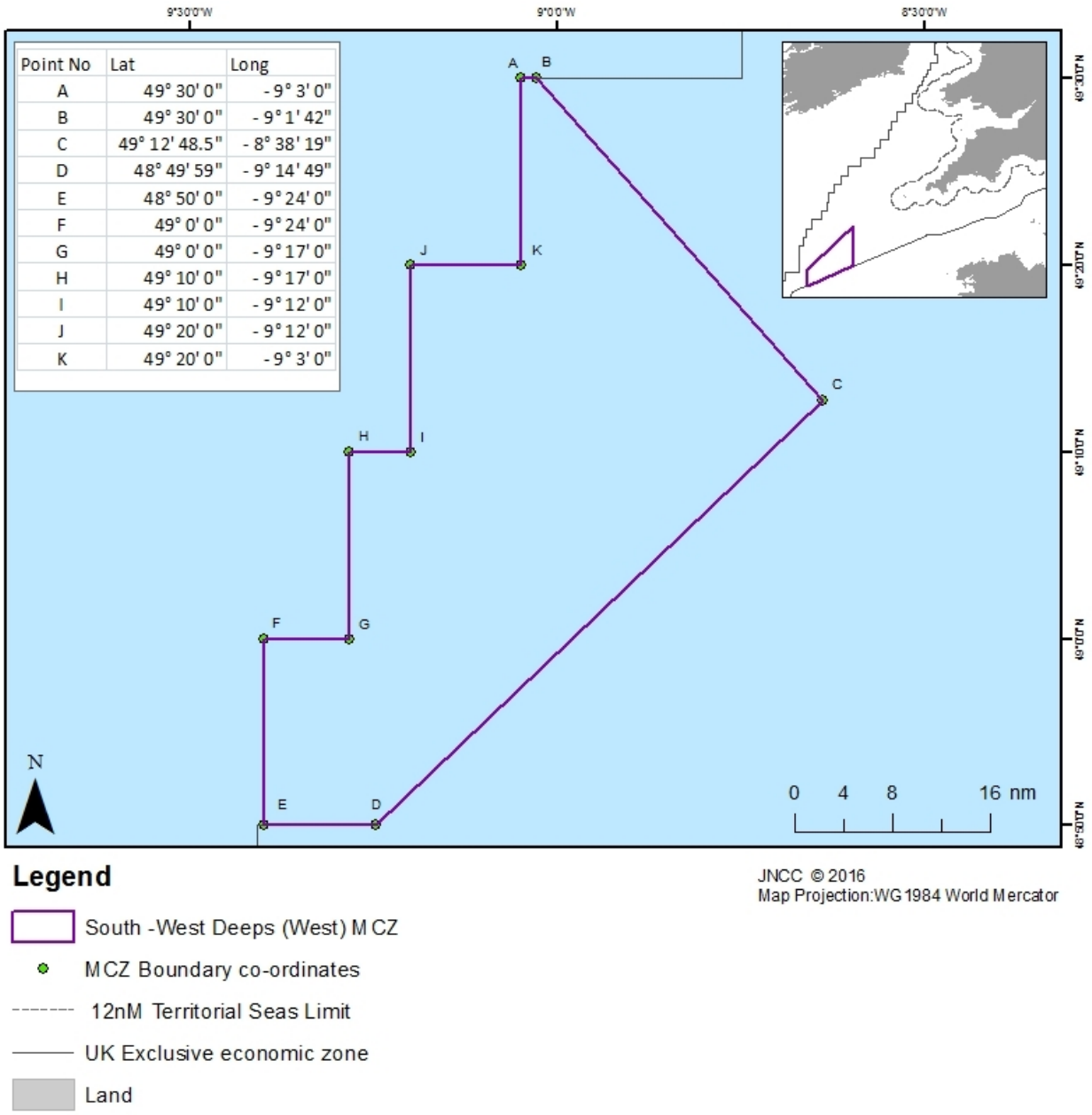


Figure 2: Site boundary for South West Deeps (West) MCZ (coordinates rounded to nearest second)

3. Process

This section describes the process from when the initiative to protect subtidal coarse sediment, subtidal sand, subtidal mixed sediments, subtidal mud and fan mussels from fisheries activities at South-west Deeps (West) MCZ were commenced at a fisheries management workshop held in Exeter in May 2016, hosted jointly by the Department for Environment Food and Rural Affairs (Defra) and the Joint Nature Conservation Committee (JNCC), until submission of fisheries management

measures in form of 'A Joint Recommendation' by the UK, France, Spain and Ireland to the European Commission.

Denmark and The Netherlands have access to the site but have not actively fished the site (using proposed prohibited gears) since 2010 (years analysed 2010-2015).

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 noted that whilst increased reporting could be used to mitigate the level of closures put forward this would not be applicable at present due to the lack of common agreement amongst member states on increased reporting requirements.

The workshop considered that management measures would only be required for demersal trawls and dredges across a portion of the site, allowing some demersal trawl and dredge activity to continue, whilst affording protection to the species and features for which the site has been designated.

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.

3.3 Formal agreement of Joint Recommendations

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.]

3.4 Involvement of the North West Waters Advisory Council

The North Western Waters Advisory Council (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. In January 2017, the UK consulted the NWWAC on proposals for fisheries management measures in 12 MPAs, in line with the provision outlined in Article 11 of the CFP. The NWWAC held a meeting on 28 February 2017 where the proposed measures were presented and discussed, which the UK attended.

On 30 March 2017, the UK replied to a response from the Secretariat covering general comments on the proposals as well as some specific comments on several of the proposals for the MPAs in question. With respect to South-West Deeps West MCZ, where remarks were made regarding the requirement to lash and stow gear, the UK responded: *that "lashed and stowed" is the direct wording in the Control Regulations (Article 50.4(a)) and as such believes this to be an appropriate requirement.*

4. Rationale for measures

While the site predominantly consists of sediment mosaics of Subtidal sand with Subtidal coarse or mixed sediments, there are patches of Subtidal sand and mud in the north of the site. There are several records of the Feature of Conservation Importance, Fan mussel (*A. fragilis*) also occurring throughout the site. The sedimentary habitats are known to support a range of animal species, including those which live within the sediment (e.g. polychaete worms, venerid molluscs) and those that live on the surface of the seabed (e.g. sea urchins and starfish).

Impacts of demersal towed gears (including scallop dredges, beam trawls, otter trawls and seine nets)

Whilst it is unlikely that demersal towed gears can affect the long-term natural distribution of the sedimentary features within the site, there is some evidence to indicate that the use of demersal trawls and dredges can impact the structure and function of the habitat and the long term survival of its associated species. This site covers a broad range of habitats and biological communities which is likely to be reflected in an equally broad range of sensitivities to demersal trawl and dredge activity. It is expected that such activities could result in some degradation of the associated benthic communities relative to the un-impacted state particularly with a reduction in the abundance of fragile long lived species. Stable sediments are likely to be more susceptible to disturbance from mobile demersal fishing gears while in higher energy areas much of the natural fauna will be well adapted to recover from disturbance. There is evidence that severity of impact over certain habitats may be cumulative and may be less severe where fishing pressure is low. 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 gear components of other demersal towed gears, such as otter doors and trawl shoes (Suuronen *et al*. 2012; Donaldson *et al*. 2010), so the risk of impact to sedimentary features and thus to achieving the conservation objective for the site is likely to be lower.

There is some evidence to suggest that demersal towed gears can affect the long-term natural distribution of the Fan mussel (*A. fragilis*) feature. The species may be at risk of uprooting from trawl gear components that penetrate the sediment (Hall-Spencer *et al*. 1999). Once uprooted, *A. Fragilis* is subject to higher mortality rates as they are unable to dig back into the sediment (Yonge, 1953). However, the species is likely to be adapted to damage of the upper (exposed) portion of its shell, as most soft tissues of the mantle are withdrawn into the posterior margin of the shell upon contact with the exposed outer surface (Yonge & Thompson, 1976). The ability to regenerate shell material is likely to make it less sensitive to lighter surface-contacting gears (e.g. demersal seines). Evidence from related other pinnid species (e.g. penshells) suggests that recovery of *A. fragilis* may be slow due to their long life, slow growth, limited reproductive output and sporadic recruitment (Butler *et al* 1993)

Impacts of static demersal gears (including gillnets, trammel nets, longlines, pots and traps)

It is not expected that demersal static gears will have a significant impact on sedimentary features within the site. While fan mussels may be sensitive to the effects of demersal static gears (Tillin *et al*. 2010), the species is likely to be adapted to damage of the upper (exposed) portion of its shell and the ability to regenerate shell material may make it less sensitive to lighter static gears. For both the protected sedimentary features and for the Fan mussel feature, the impacts of repeated exposure to these types of fishing gear at high levels of fishing activity are unknown.

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 Subtidal coarse sediment (A5.1), Subtidal sand (A5.2), Subtidal mud (A5.3), Subtidal mixed sediments (A5.4) and Fan mussel (FOCI) in South-West Deeps (West) MCZ from physical disturbance due to demersal trawl and dredge activity.

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 reduces the pressures from demersal trawls and dredges sufficiently to contribute to long term progress in recovering the features towards favourable condition.

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 proposed management boundary for a closure to demersal trawls and dredges encompasses approximately 63% of the site. Of the areas to be considered for management for the designated features, approximately 74% for Subtidal mud, 69% of the Subtidal sand and in excess of 60% for both the sediment mosaics (Subtidal coarse sediment-Subtidal sand and Subtidal mixed sediment-Subtidal sand). All records of fan mussel (*A. Fragilis*) are included in the proposed management boundary.

List of Annexes:

Annex A – Meeting note from the May 2016 workshop in Exeter.

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 the South West Deeps (West) MCZ reporting zone with increased reporting

Annex E – References

Annex A – Meeting note from workshop

South-west Deeps (West) MCZ

Clarification was sought on the basis for differentiating gear impacts of beam and otter trawls in relation to their respective risk of impact on fan mussel feature. It was stated for the record that while this distinction was less of an issue for the current site, any decisions taken on management of gear impacts for these sites would form a precedent for the wider region and such a distinction would have to be clearly justified.

It was noted that increased reporting could be used to reduce the need for closures around particular species; however there is currently no common agreement amongst Member States on requirements for increased reporting and therefore this cannot be introduced at this time. The UK is continuing discussions with other Member States and dependent on how those discussions progress it may influence the measures ultimately put in place for this site.

It was queried whether a vessel's landing value for specific sites is taken account of as a proportion of the vessel's entire landings value when management is being considered? It was confirmed that all information that is available to the Member State initiating proposals for management is included in the proposal papers.

It was observed that for fan mussel sites in Scottish waters the highest concentration of the species were found in areas that contained high-levels of trawl activity; similar to the case in this site. However, JNCC noted that there is no indication of how many fan mussels were previously contained within the site and when developing measures the risk to the species needs to be duly considered.

It was noted through information provided by Spanish colleagues that the Spanish vessels in the site with an "unknown" gear classification through the gear register were most likely gill netters.

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-West Deeps (West) MCZ is situated approximately 230 km offshore from the south west of England. The site is an area of continental shelf that is predominantly sandy with a mixed distribution of coarse and mixed sediments across the site extent. The geomorphological feature, Celtic Sea Relict Sandbanks, runs down the length of the site, from north to south. The sand banks are some of the largest examples of this feature on Earth and some of the ridges extend up to 200 km long, 15 km wide and 50 m high.(Figure 1)

The site protects subtidal habitats that are representative of offshore habitats in UK waters (Figure 2 – images). This includes the protection of almost 1500 km^2 of Subtidal sand, as well as Subtidal coarse and mixed sediments and Subtidal mud. These habitats support a range of animal species including polychaete worms, veneroid molluscs and echinoderms, including sea urchins and starfish. Cnidarians, such as anemones, are also present alongside a variety of crustaceans and fish species. A detailed survey was undertaken in May 2013 and the resulting data confirmed the presence of the species Feature of Conservation Importance, the Fan Mussel, (*Atrina fragilis*).

South-West Deeps (West) MCZ is situated 200km from East of Haig Fras MCZ, which was also designated in November 2013, and 132km North West from North-West of Jones Bank MCZ. These sites contribute to connectivity and representativity of the features within the Western Channel and Celtic Sea biogeographic area.

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

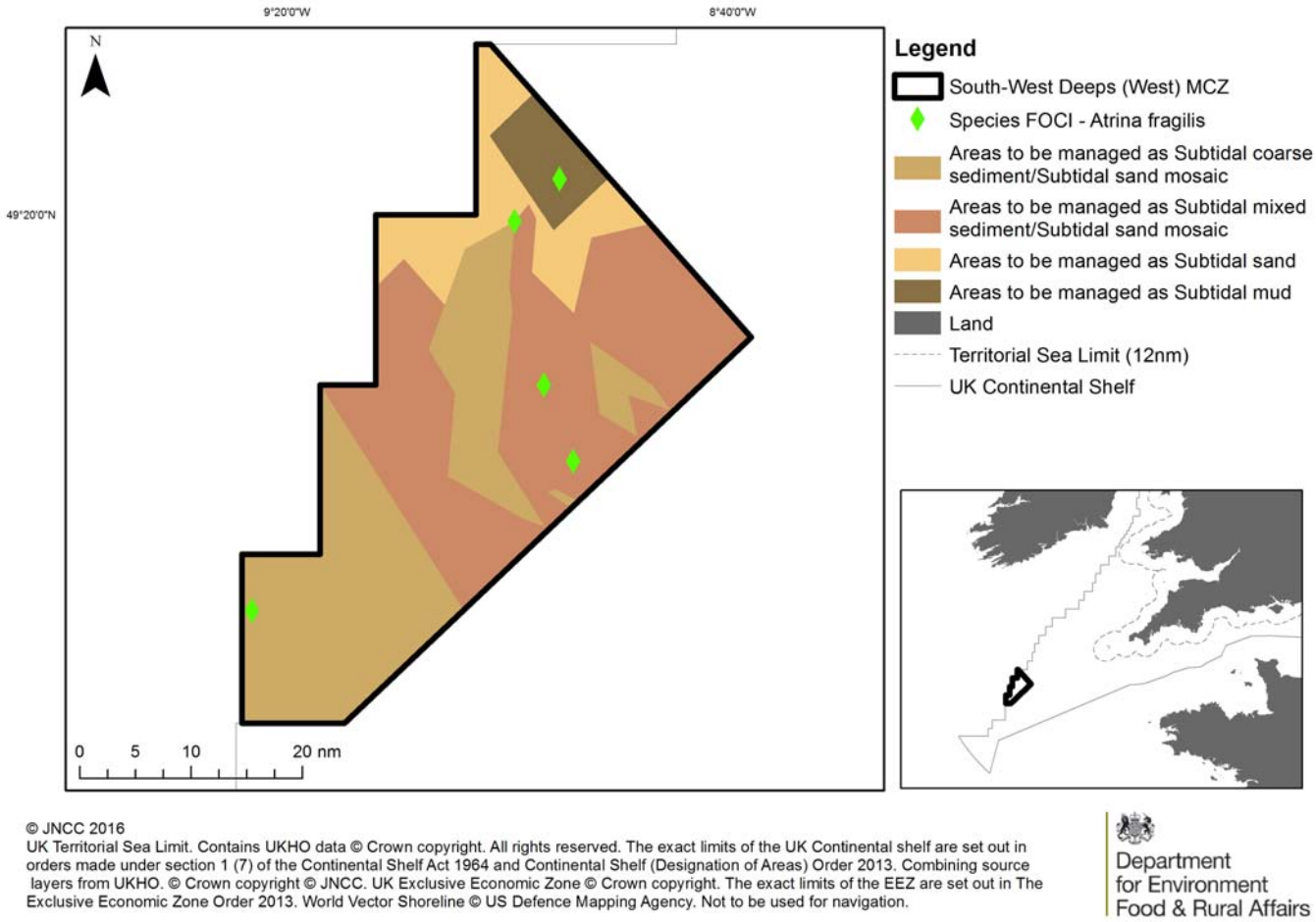
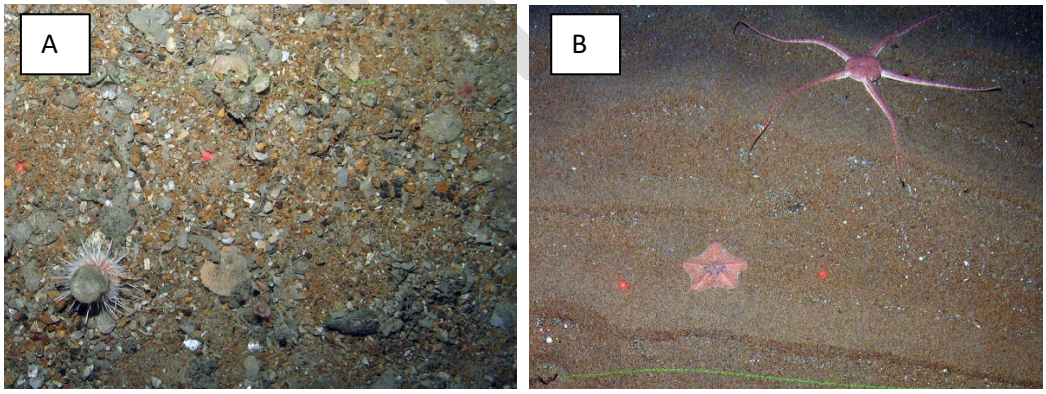


Figure 1. Site map for the South West Deeps (West) MCZ, including features for which management measures are being proposed



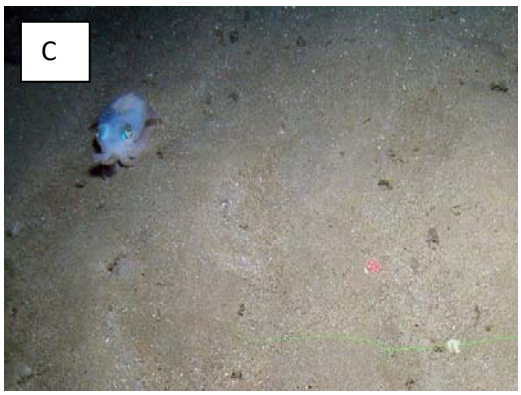


Figure 2. Examples of broad scale habitats from the 2013 MB0120 survey to South West Deeps (West) MCZ **©** JNCC & Cefas

A: Sea urchin and anemones in **Subtidal coarse sediment**

B: Goose foot starfish and brittle star on **Subtidal sand**

C: Squid on **Subtidal mud**

2 Scientific rationale for the sites' selection in accordance with the information provided in the Marine Conservation Zone Designation 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.

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

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

- Representativity

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

South-west Deeps (West) is included in the MPA network for its contribution to the conservation of the broad-scale habitats of Subtidal coarse sediment (EUNIS habitat type A5.1), Subtidal sand (EUNIS habitat type A5.2, Subtidal mud (EUNIS habitat type A5.3) and Subtidal mixed sediments (EUNIS habitat type A5.4). It also provides a contribution to the conservation of the species feature of conservation importance Fan mussel.

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:

- **Subtidal coarse sediments** - Recover to favourable condition
- **Subtidal sand** – Recover to favourable condition
- **Subtidal mixed sediments** - Recover to favourable condition
- **Subtidal mud** – Recover to favourable condition
- **Fan mussel** – Recover to favourable condition

Further information on the conservation objectives and GMA for the site can be found on the relevant JNCC Site Information webpage[7].

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

The western boundary of South-West Deeps (West) MCZ aligns with the UK Continental Shelf boundary and the site polygon is completed by three simple straight lines. The boundary is in

[7] JNCC Site Information Centres: http://jncc.defra.gov.uk/default.aspx?page=6895

accordance with the MCZ Ecological Network Guidance, which advises using a minimum number of simple lines to delineate the site. As the site is adjacent to the UK Continental Shelf boundary, the boundary of the site was amended to align with the UK Continental Shelf boundary when it changed in 2014 (Figure 3)

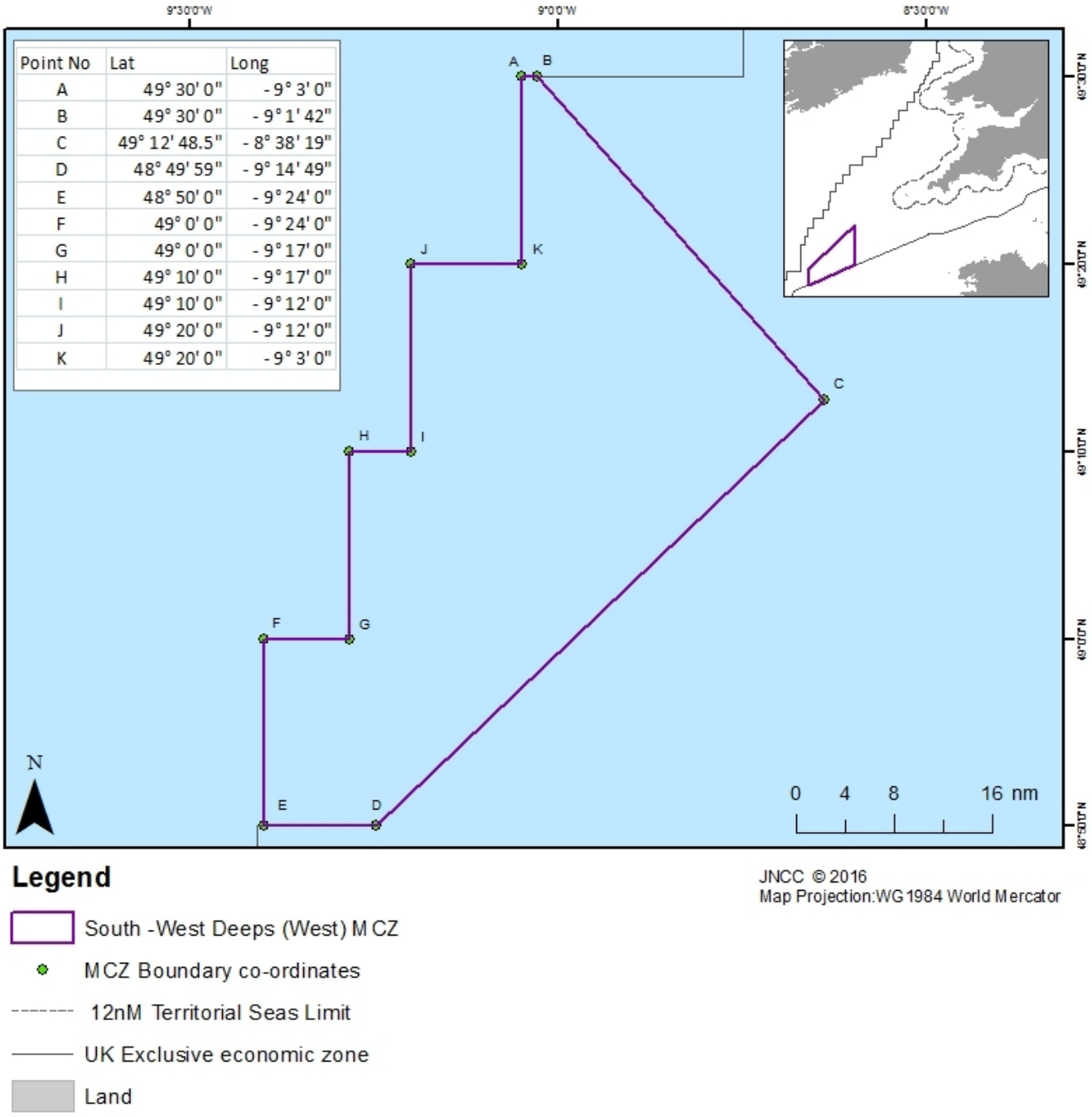


Figure 3: Site boundary for the South West Deeps (West) MCZ

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 trawls and seine nets)

It is unlikely that demersal trawls and dredges can affect the long-term natural distribution of **Subtidal mud, Subtidal sand, Subtidal coarse sediment and Subtidal mixed sediment.** However, there is evidence to indicate that their use can impact the structure and function of the habitats and the long term survival of their associated species.

The extent to which mobile gear impacts on **Subtidal sand** communities can vary considerably, according to the type of gear, the intensity of fishing and the sediment composition. Trawling and dredging tend to cause increased mortality of fragile and long lived species and favour opportunistic, disturbance-tolerant species (Bergman & Van Santbrink, 2000; Eleftheriou & Robertson, 1992). Some particularly sensitive species may disappear entirely (Bergman & Van Santbrink, 2000). The net result is benthic communities modified to varying degrees relative to the un-impacted state (Bergman & Van Santbrink, 2000; Kaiser *et al*. 2006). In higher energy locations, for example the sandy bank tops or wave and/or tide exposed areas, the associated fauna tend to be well adapted to disturbance and as a result are more tolerant of fishing-related disturbance (Dernie *et al*. 2003; Hiddink *et al*. 2006). The habitat may be maintained in a modified state; however modification is likely to be low relative to natural variation. In lower energy locations, such as muddy sands and sand in deep water, or on the flanks and towards troughs between banks, sediments tend to be more stable and their associated fauna less tolerant of disturbance (Kaiser *et al*. 2006; Hiddink *et al*. 2006). The habitat may be maintained in a modified state with reduced abundance of fragile, long lived species.

As with sandy habitats, 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).

The broad scale habitat **Subtidal mud** covers a range of habitats and biological communities on muds and sandy muds. While some variability in sensitivity is to be expected at this broad scale, many instances of this habitat occur in sheltered areas characterised by undisturbed muddy sediments with a rich and diverse fauna. The stable nature of the sediments makes them generally

susceptible to disturbance from demersal towed gears. There is evidence that severity of impact is cumulative (Hinz *et al*. 2009) so may be less severe where fishing pressure is low (Ball *et al*. 2000; OSPAR, 2010). *Nephrops* may be an important component of the benthic community, so fisheries that greatly alter its abundance or size composition may be seen to have a negative impact.

The broad scale habitat **Subtidal mixed sediments** covers a wide range of different types of sediment from muddy, gravely sands to mosaics of cobbles and pebbles in or on a sand, gravel or mud seabed. Areas of mixed sediments may also include instances where waves or ribbons of sand form on the surface of a gravel bed (Anon, 2010). These different habitats can be expected to vary greatly in their sensitivity to fishing impacts (Roberts *et al*. 2010). However, as there are very few studies that directly evaluate fishing impacts on subtidal mixed sediments it is not possible to give general advice for this broad scale habitat. In the absence of specific advice, a reasonable proxy may be to consider the advice given for other, similar constituent habitats, outlined in the information above.

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 gear components of other demersal towed gears, such as otter doors and trawl shoes (Suuronen et al. 2012; Donaldson et al. 2010), so the risk of impact to sedimentary features is likely to be lower.

There is some evidence to suggest that demersal towed gears can affect the long-term natural distribution of the **Fan mussel** (*A. fragilis*) feature. The species may be at risk of uprooting from trawl gear components that penetrate the sediment (Hall-Spencer *et al*. 1999). Once uprooted, *A. Fragilis* is subject to higher mortality rates as they are unable to dig back into the sediment (Yonge, 1953). However, the species is likely to be adapted to damage of the upper (exposed) portion of its shell, as most soft tissues of the mantle are withdrawn into the posterior margin of the shell upon contact with the exposed outer surface (Yonge & Thompson, 1976). The ability to regenerate shell material is likely to make it less sensitive to lighter surface-contacting gears (e.g. demersal seines). Evidence from related other pinnid species (e.g. penshells) suggests that recovery of *A. fragilis* may be slow due to their long life, slow growth, limited reproductive output and sporadic recruitment (Butler *et al* 1993)

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

It is not expected that demersal static gears have a significant impact on sedimentary features within the site. While fan mussels may be impacted by demersal static gears (Tillin *et al*. 2010), the species is likely to be adapted to damage of the upper (exposed) portion of its shell and the ability to regenerate shell material may make it less sensitive to such gears. For both the protected sedimentary features and for the Fan mussel feature, the impacts of repeated exposure to these types of fishing gear at high levels of fishing activity are unknown.

4.3 Other Human activities

The information within this section represents current knowledge (November 2015) of the nature and extent of activities taking place within or close to the site.

One active cable intersects the site. Also, Ministry of Defence (MoD) training and exercises may take place in or around the site. The MoD have incorporated all designated MPAs into their Environmental Protection Guidelines (Maritime) and wider Marine Environmental and Sustainability Assessment Tool.

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 this section 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 South West Deeps (West) MCZ over a six year period. This approach is consistent with other management proposal methodologies 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 purpose 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[8] 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

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

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 fisheries.

Vessels from six Member States 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); 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 fishing in a specified spatial area. 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[9].

Each speed filtered VMS ping (0-6 knots) received from a vessel in ICES statistical rectangles 26E0, 27E0 and 27E1 (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 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 the South West Deeps (West) MCZ or the proposed management areas. This provides a proportion of pings falling within the area for the vessels of each Member State. A very small area of this site clips the edge of

[9] 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

ICES statistical rectangle 26E1. Due to the small area that this covers we are unable to identify any VMS reports in this portion of the site so have not included this ICES rectangle in any of our analysis.

This proportion was then applied to landings data to allow estimates of landings value and quantity derived from within the South West Deeps (West) MCZ or proposed management areas. Landings values and quantities for UK vessels were derived from UK statistical data held by the MMO.

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. Although landings from Germany have been supplied for ICES rectangles 26E0, 27E0 and 27E1. No German VMS has been recorded within the site.
8. No Spanish landings have been provided to the UK.

5.2 Fleet activity by state

From 2010 to 2015 vessels from six Member States were active within and around the South West Deeps (West) MCZ (see table 1). Of these, the most significant activity was from Spanish and French vessels, with low, but substantive, levels of activity from UK and Irish vessels (see table 1).

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

Nationality		2010	2011	2012	2013	2014	2015
		Total	Total	Total	Total	Total	Total
Denmark	Number of vessels	1	0	0	0	3	0
	Number of pings	1	0	0	0	6	0
France*	Number of vessels	9	26	21	14	28	23
	Number of pings	1112	1058	975	196	838	1448
Ireland	Number of vessels	5	3	3	2	5	3
	Number of pings	5	70	134	36	49	110
Netherlands	Number of vessels	1	0	0	0	0	0
	Number of pings	3	0	0	0	0	0
Norway	Number of vessels	0	0	0	0	0	1
	Number of pings	0	0	0	0	0	5
Spain	Number of vessels	44	26	26	26	19	10
	Number of pings	3531	1504	2077	1705	502	671
UK	Number of vessels	22	13	10	15	9	9
	Number of pings	809	130	74	69	53	62

* French VMS reporting is on average hourly, all other Member States' reporting is on average two hourly.

To note, no German VMS was recorded within the site during this period. Vessels may have operated elsewhere within one of the ICES rectangles (26E0, 27E0, 27E1).

5.3 Landings values

As shown in Tables 2 and 3 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 West Deeps (West) MCZ involve similar gear types but two groups are of major importance regarding effort (Pelagic and Bottom (demersal) trawls). Three regarding value (Pelagic, (Pelagic trawls, Bottom (demersal) trawls and netting) can be seen in Table 3.

Table 2.1: Landings (tonnes) from vessels operating in ICES rectangles 26E0, 27E0, 27E1 by gear type, year and Member State

Sum of Quantity Tonnes (26E0, 27E0, 27E1)		Year						
Nationality	**Gear**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**Grand Total**
DEU	Pelagic trawls	88.75	0.00	139.94	19.23	666.92		914.83
DEU Total		**88.75**	**0.00**	**139.94**	**19.23**	**666.92**		**914.83**
DNK	Pelagic trawls	70.00	1,520.50	2,420.00	350.00	1,360.00		5,720.50
DNK Total		**70.00**	**1,520.50**	**2,420.00**	**350.00**	**1,360.00**		**5,720.50**
FRA	Bottom trawls	10.88	797.05	923.85	736.74	850.91		3,319.43
	Dredge	3.57	70.59	22.92	12.85	0.00		109.93
	Lines	0.00	5.54	18.52	33.82	3.35		61.23
	Nets	0.00	217.57	556.08	286.61	593.30		1,653.56
	Pelagic trawls	0.00	23.67	84.96	8.41	97.23		214.28
	Traps	0.00	24.33	18.76	4.70	17.98		65.77
FRA Total		**14.45**	**1,138.75**	**1,625.10**	**1,083.12**	**1,562.78**		**5,424.20**
IRL	Otter (unspecified)	19.33	304.39	172.03	181.63	87.06		764.44
	Pelagic trawl (unspecified)	3,682.00	1,232.00	1,776.27	1,930.55	2,755.00		11,375.82
IRL Total		**3,701.33**	**1,536.39**	**1,948.30**	**2,112.18**	**2,842.06**		**12,140.26**
NLD	Otter Trawl midwater	0.00	70.39	0.00	0.00	0.00		70.39
NLD Total		**0.00**	**70.39**	**0.00**	**0.00**	**0.00**		**70.39**
UK	Beam trawls	0.00	0.00	0.00	0.00	0.75	0.34	1.09
	Gillnets (all)	27.87	16.05	24.16	64.14	40.84	23.50	196.55
	Longlines (not specified)	26.74	0.00	3.86	0.00	0.00	0.00	30.60
	Mid water trawls (not specified)	1,496.54	0.00	0.00	0.00	0.00	0.00	1,496.54
	Nephrops trawls	0.00	0.00	0.00	0.00	0.00	4.37	4.37
	Otter trawls - bottom	91.35	41.68	53.55	183.03	206.35	202.61	778.57
	Otter trawls – mid water	2,799.50	82.21	0.00	0.00	0.00	0.00	2,881.71
	Otter trawls (not specified)	298.05	141.80	85.44	0.00	0.00	0.00	525.29

	Pair trawls – mid water	0.00	0.00	0.00	0.00	217.29	0.00	217.29
	Set longlines	30.81	0.00	6.07	37.10	19.97	3.28	97.22
	Trammel nets	0.81	0.00	1.30	0.00	3.84	10.72	16.66
UK Total		**4,771.67**	**281.74**	**174.37**	**284.27**	**489.04**	**244.82**	**6,245.91**
Grand Total		**8,646.20**	**4,547.78**	**6,307.70**	**3,848.79**	**6,920.79**	**244.82**	**30,516.08**

Table 2.2: Landings values (£) from vessels operating in ICES rectangles 26E0, 27E0, 27E1 by gear type, year and Member State

Sum of Value £		Year						
Nationality	**Gear**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**Grand Total**
DEU	Pelagic trawls	£55,910	£0	£34,284	£4,711	£409,137		£504,042
DEU Total		**£55,910**	**£0**	**£34,284**	**£4,711**	**£409,137**		**£504,042**
DNK	Pelagic trawls	£7,553	£344,993	£416,704	£74,220	£160,879		£1,004,349
DNK Total		**£7,553**	**£344,993**	**£416,704**	**£74,220**	**£160,879**		**£1,004,349**
FRA	Bottom trawls	£26,493	£1,654,435	£1,995,867	£1,494,500	£1,701,016		£6,872,313
	Dredge	£6,482	£129,025	£32,739	£38,207	£0		£206,453
	Lines	£0	£9,743	£32,408	£49,318	£4,499		£95,968
	Nets	£0	£422,384	£947,282	£475,943	£979,727		£2,825,336
	Pelagic trawls	£0	£15,611	£77,953	£4,451	£105,631		£203,646
	Traps	£0	£44,941	£25,690	£5,503	£17,992		£94,125
FRA Total		**£32,975**	**£2,276,139**	**£3,111,939**	**£2,067,923**	**£2,808,865**		**£10,297,841**
IRL	Otter trawl (unspecified)	£39,993	£616,596	£336,421	£324,741	£136,903		£1,454,653
	Pelagic trawl (unspecified)	£379,096	£136,246	£395,504	£210,812	£1,127,312		£2,248,970
IRL Total		**£419,089**	**£752,842**	**£731,925**	**£535,553**	**£1,264,214**		**£3,703,623**
NLD	Otter trawl midwater	£0	£25,826	£0	£0	£0		£25,826
NLD Total		**£0**	**£25,826**	**£0**	**£0**	**£0**		**£25,826**
UK	Beam trawls	£0	£0	£0	£0	£1,701	£794	£2,495
	Gillnets (all)	£116,029	£59,954	£80,799	£176,310	£70,305	£20,032	£523,429
	Longlines (not specified)	£61,800	£0	£7,361	£0	£0	£0	£69,161
	Mid water trawls (not specified)	£91,948	£0	£0	£0	£0	£0	£91,948
	Nephrops trawls	£0	£0	£0	£0	£0	£17,957	£17,957
	Otter trawls - bottom	£219,717	£102,633	£158,355	£463,337	£575,659	£593,118	£2,112,820
	Otter trawls – mid water	£173,593	£41,103	£0	£0	£0	£0	£214,696
	Otter trawls (not specified)	£837,049	£369,623	£251,676	£0	£0	£0	£1,458,347

	Pair trawls – mid water	£0	£0	£0	£0	£232,500	£0	£232,500
	Set longlines	£59,303	£0	£20,772	£99,960	£57,190	£0	£237,226
	Trammel nets	£3,796	£0	£6,983	£0	£14,645	£42,861	£68,285
UK Total		**£1,563,236**	**£573,313**	**£525,947**	**£739,607**	**£952,000**	**£674,763**	**£5,028,866**
Grand Total		**£2,078,763**	**£3,973,113**	**£4,820,799**	**£3,422,014**	**£5,595,095**	**£674,763**	**£20,564,548**

5.4 Annual variation in fishing activity

VMS Activity

Over the years analysed (2010-2015) through VMS, the total volume of vessels fishing in the South West Deeps West MCZ from other Member States are 299 and 78 from the UK, making a total of 377 (an average of 62 vessels per year). However, vessels have been counted more than once if they enter the MCZ in separate years. See Table 1.

The French activity has fluctuated over recent years in terms of vessel numbers. In 2010 there were 9 vessels operating in the area, rising to 26 the following year. This dropped to with 14 vessels in 2013, before rising and dropping again in 2014 with 28 vessels and 2015 with 23 vessels. However the numbers of pings fluctuating in the site from France are more dramatic, starting with 1,112 pings in 2010, decreasing to 975 in 2012 before a significant drop of 196 pings in 2013. The level of activity quickly increases back to previous levels the following years with 838 pings in 2014 and 1448 pings in 2015. The location of the French activity has been spread across the site however a large portion of VMS pings generated by the vessels operating bottom otter trawls (OTB) are located in the centre of the site outside the proposed closures.

The Irish activity has also fluctuated over recent years in terms of vessel numbers. In 2010 there were 5 vessels operating in the area, gradually decreasing to just 2 vessels in 2013, before rising and dropping again in 2014 with 5 vessels and 2015 with 3 vessels. However the numbers of pings fluctuating in the site from Ireland more significant, with a low of 5 pings in 2010, rising to 134 in 2012, before decreasing to 36 in 2013 and 49 in 2014. The volume of pings then rose to 110 in 2015. The location of the Irish activity has generally occurred across one of the proposed closures through vessels operating drift nets (GND) not considered affected by the measure.

The Spanish activity in terms of vessel numbers is more significant, but has decreased over the years. In 2010 there were 44 vessels operating in the area, decreasing to 10 vessels in 2015. The number Spanish VMS pings has also decreased from a high of 3,531 pings in 2010, decreasing to 671 pings in 2015, a fifth of the activity in 2010. The location of the Spanish fishing activity has been across the whole site, both inside and outside of the proposed closures. The majority of this activity has been by vessels operating bottom otter trawls (OTB) and a smaller amount of long lining gears (LLS).

The UK activity in terms of vessel numbers has decreased in recent years, from 22 vessels operating in the area in 2010 to 9 vessels in 2015. The number of VMS pings has significantly decreased as well, going from 809 pings in 2010 down to 62 in 2015. The UK activity is primarily from vessels operating bottom otter trawls (OTB).

Denmark, the Netherlands and Norway were only observed in isolated years in very few numbers (see table 1).

Landing information

French landings within ICES rectangles 26E0, 27E0 and 27E1 have increased over the recent years in terms of tonnes landed and value taken. In 2010 there was only 14 tonnes landed with an approximate value of £32,975 this rose to 1,562 tonnes in 2014 with an approximate value of £2.8million. This has resulted from an increase of activity from bottom trawls and netting.

Irish landings within ICES rectangles 26E0, 27E0 and 27E1 have fluctuated over recent years in terms of tonnes landed and value taken. In 2010 there was 3,701 tonnes landed with an approximate value of £419,089, decreasing to 1,536 tonnes and a value of £752,842 the following year in 2011. This has then gradually increased to 2,842 tonnes in 2014 with an approximate value of £1.2million. The majority of the landings have been generated through the use of pelagic trawls.

UK Landings within ICES rectangles 26E0, 27E0 and 27E1 has significantly decreased over recent years in terms of tonnes landed and value taken. In 2010 there was 4,771 tonnes landed with an approximate value of £1.5million, this has dramatically decreased to 244 tonnes and a value of £674,763 in 2015. This seems to have been generated because mid water trawls and mid water otter trawls were only recorded operating in 2010 (1,496 tonnes and 2,799 tonnes respectively). In the last few years (2013 to 2015) the main activity has stemmed from bottom otter trawls, gillnets and longlines.

No Spanish landings information has been provided to the UK for this site.

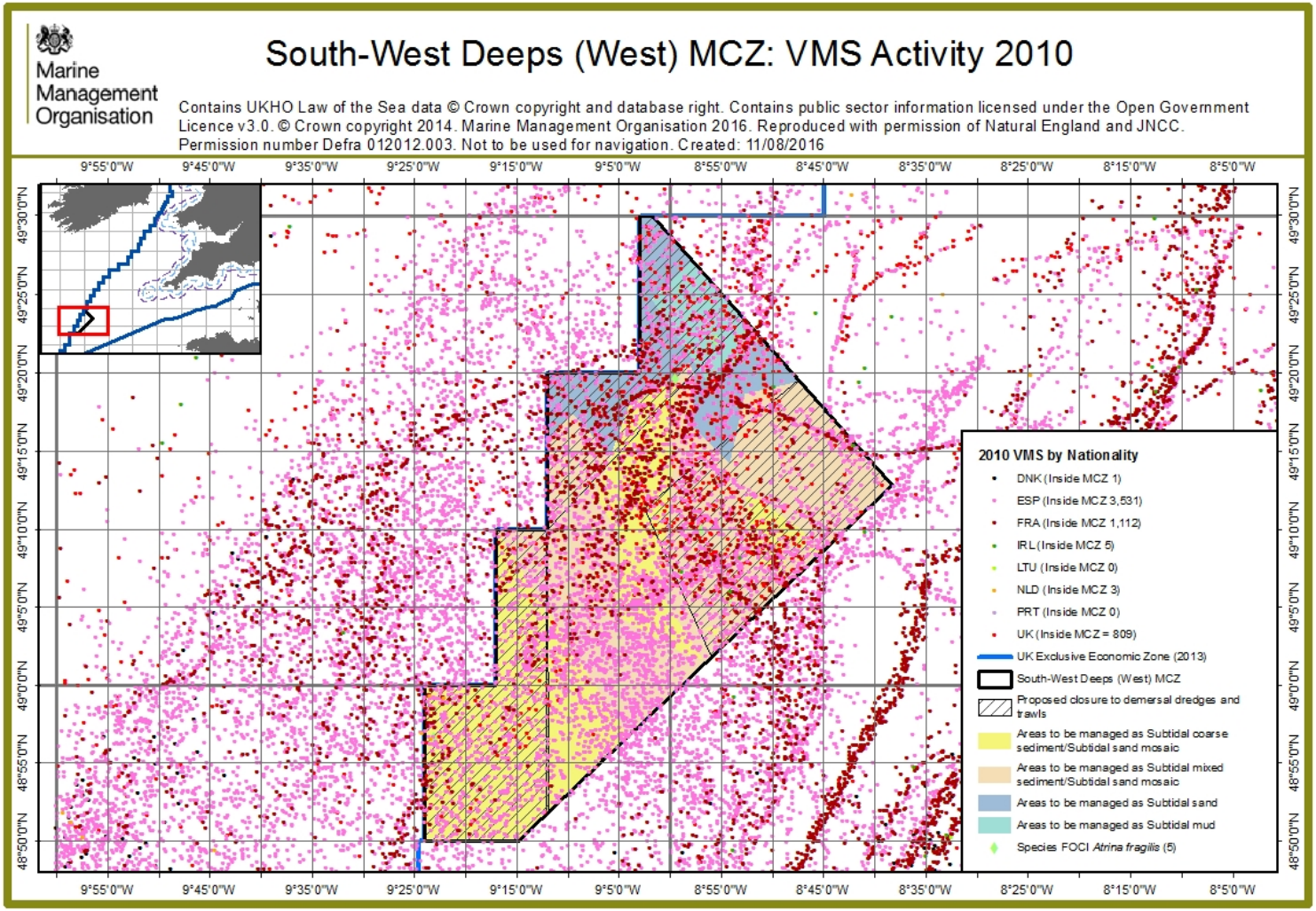


Figure 4: VMS reports indicating all fishing activity in the South West Deeps (West) MCZ 2010 by Nationality

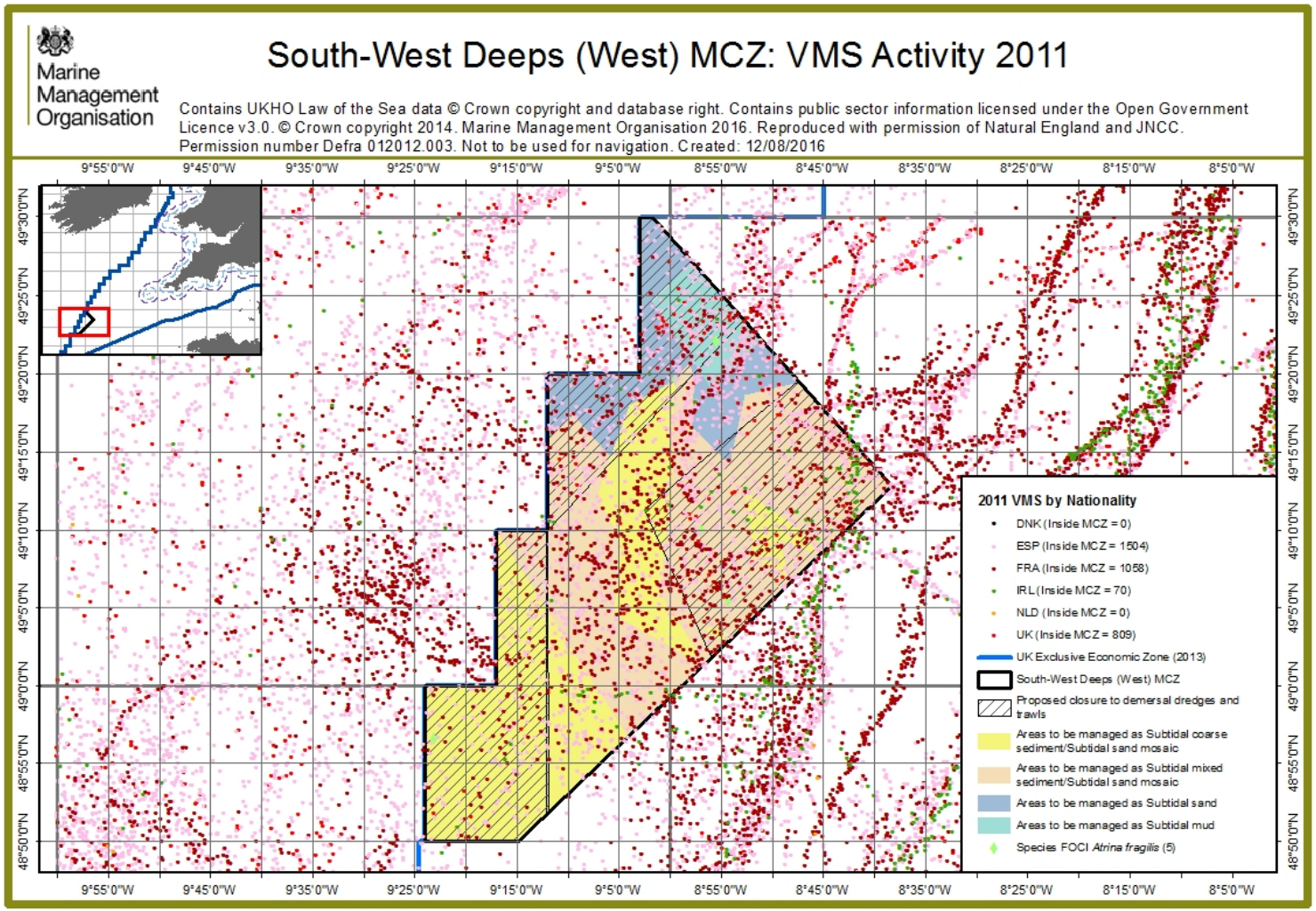


Figure 5: VMS reports indicating all fishing activity in the South West Deeps (West) MCZ 2011 by Nationality

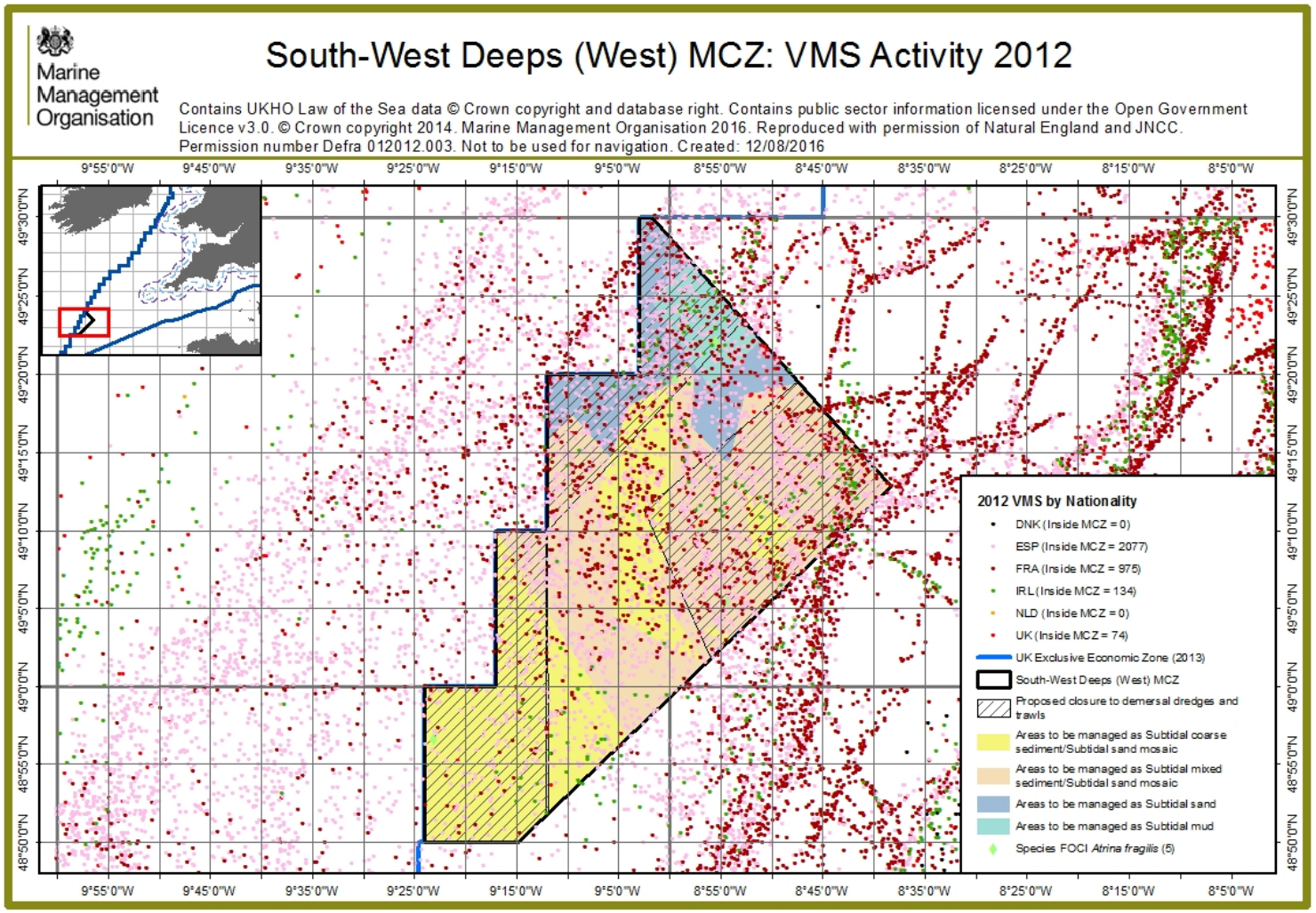


Figure 6: VMS reports indicating all fishing activity in the South West Deeps (West) MCZ 2012 by Nationality

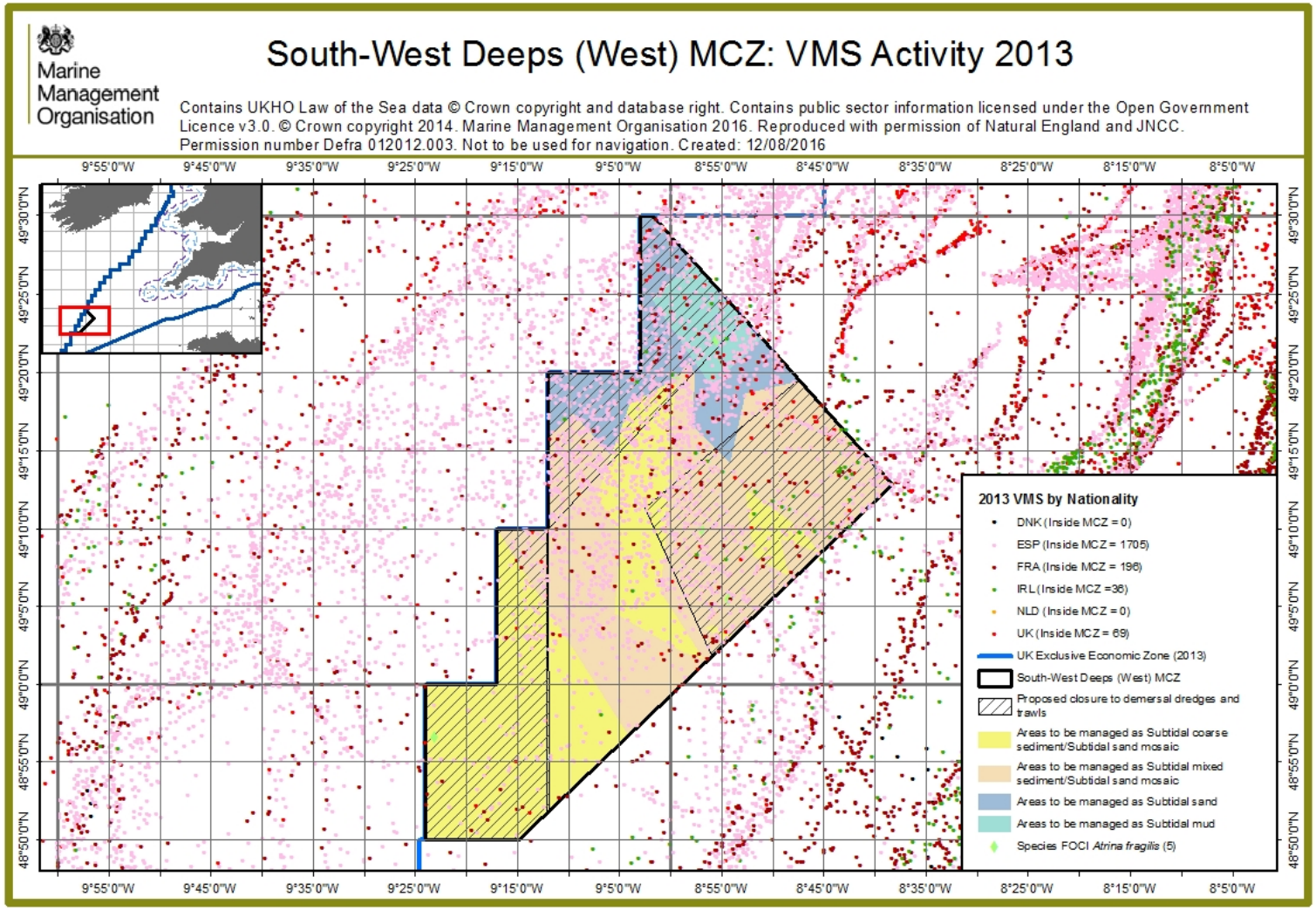


Figure 7: VMS reports indicating all fishing activity in the South West Deeps (West) MCZ 2013 by Nationality

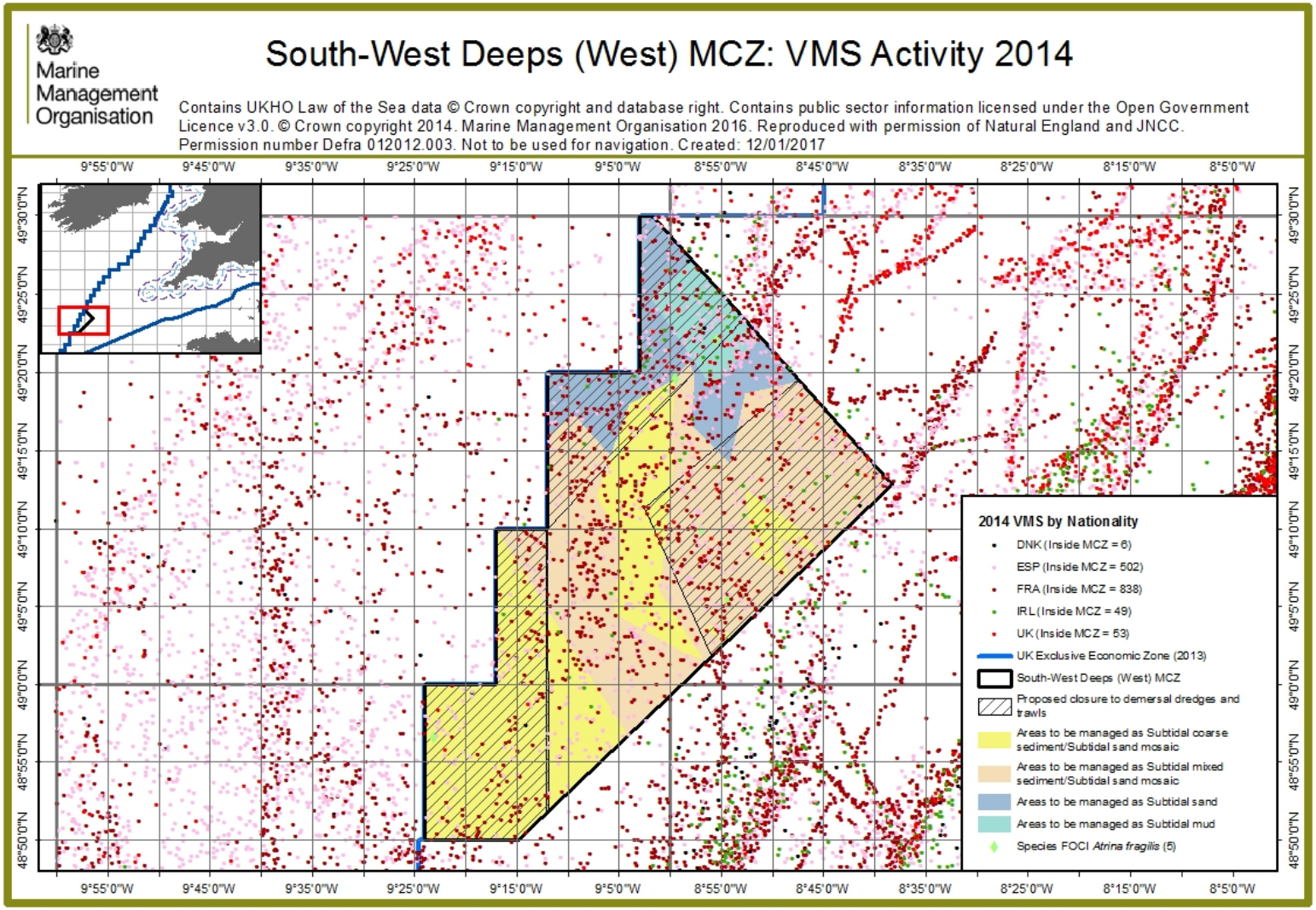


Figure 8: VMS reports indicating all fishing activity in the South West Deeps (West) MCZ 2014 by Nationality

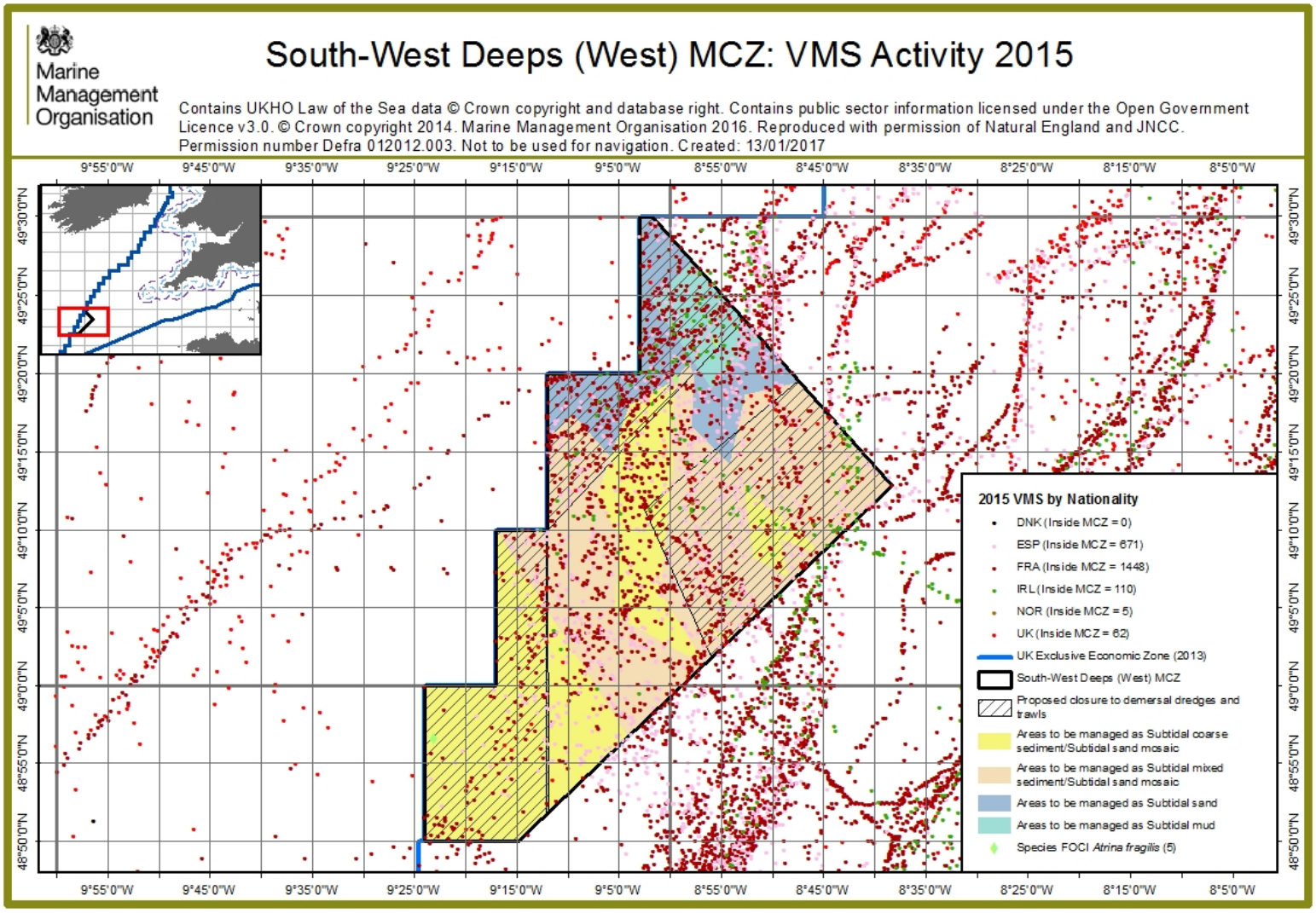


Figure 9: VMS reports indicating all fishing activity in the South West Deeps (West) MCZ 2015 by Nationality

5.5 Fleet activity by gear group – Geographical distribution

In the charts depicted in this section demersal gears have been classed as all gear types which are to be excluded from the closed area 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.

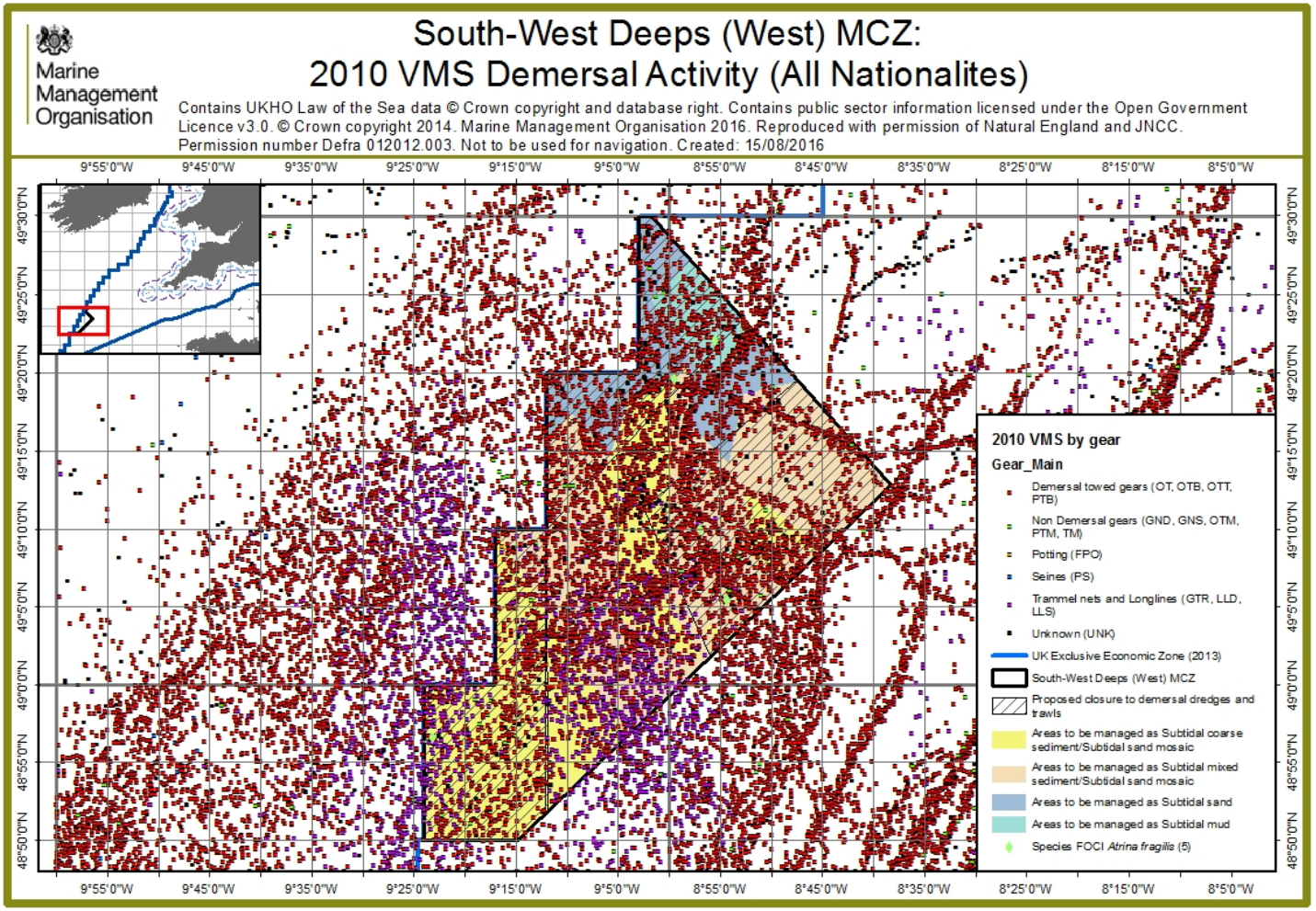


Figure 10: VMS reports indicating demersal activity in South West Deeps (West) MCZ 2010 by Member State

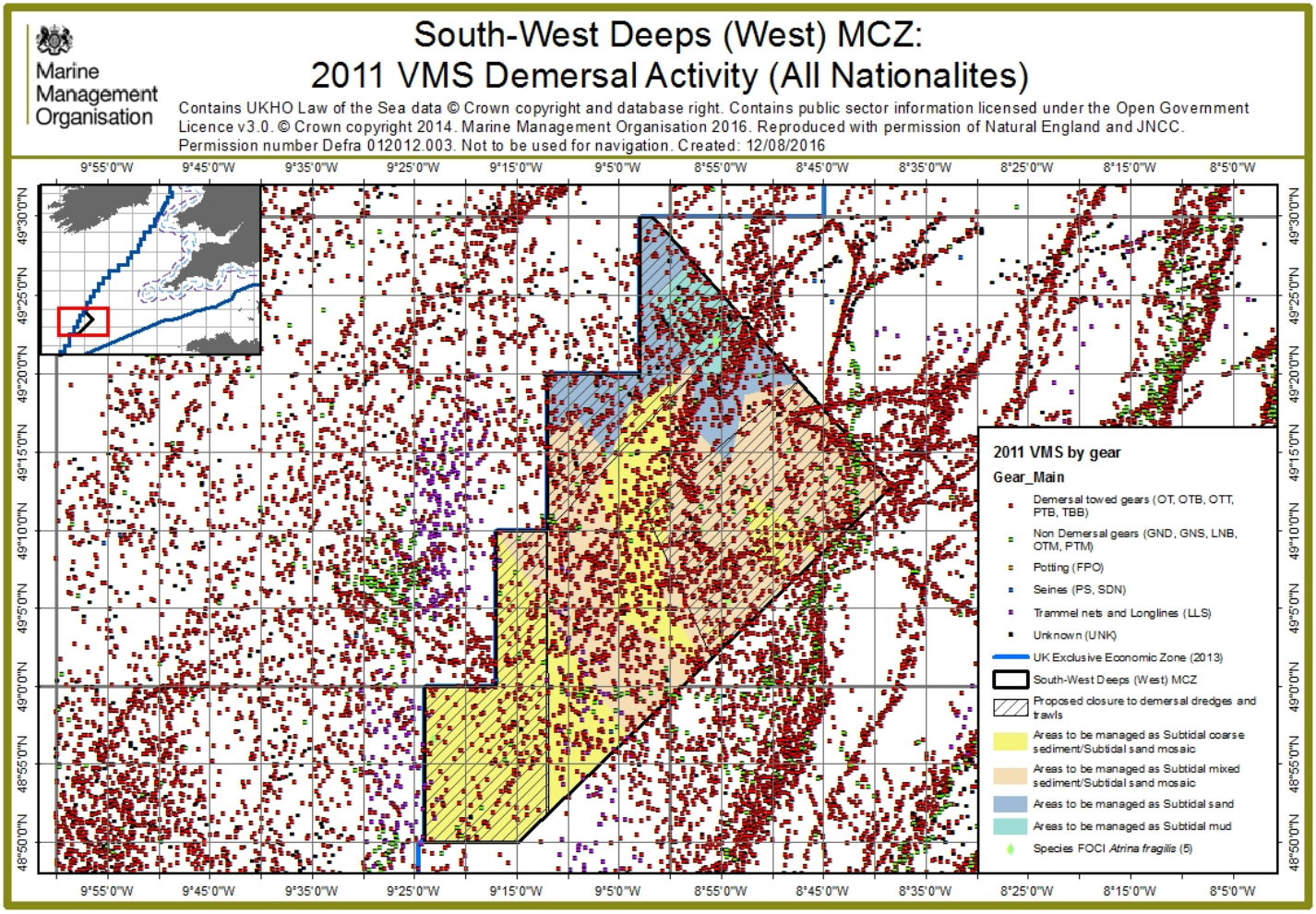


Figure 11: VMS reports indicating demersal activity in South West Deeps (West) MCZ 2011 by Member State

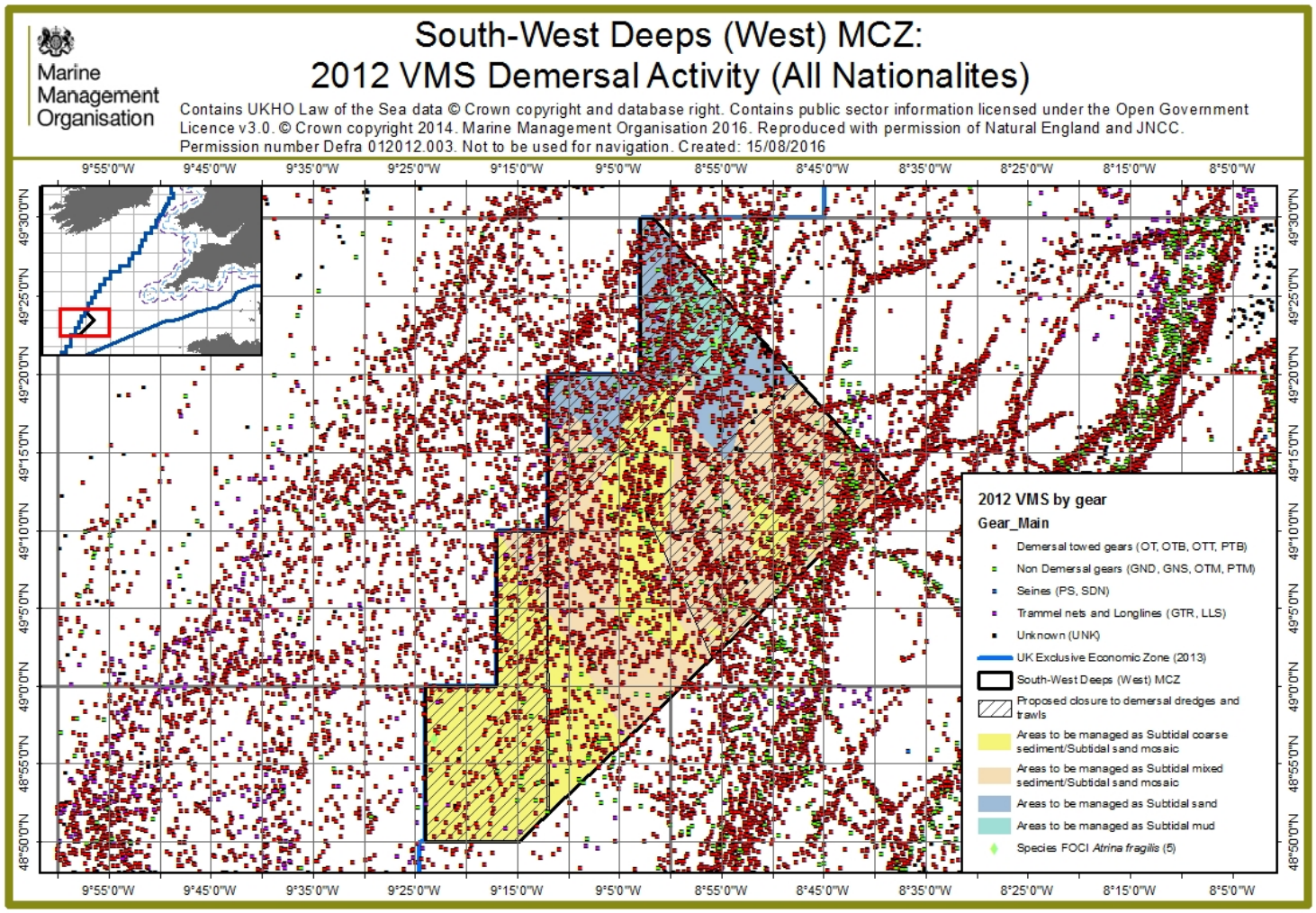


Figure 12: VMS reports indicating demersal activity in South West Deeps (West) MCZ 2012 by Member State

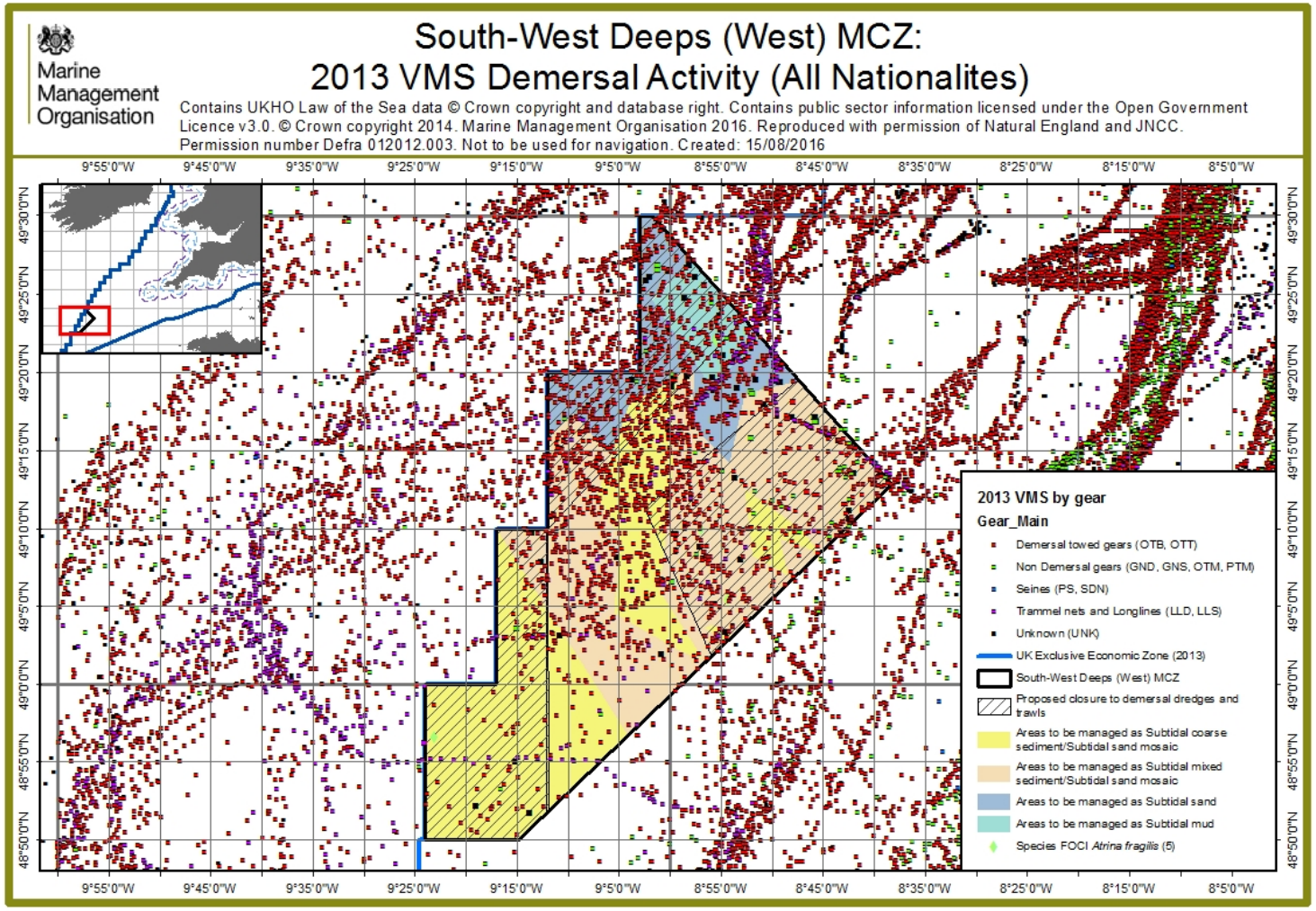


Figure 13: VMS reports indicating demersal activity in South West Deeps (West) MCZ 2013 by Member State

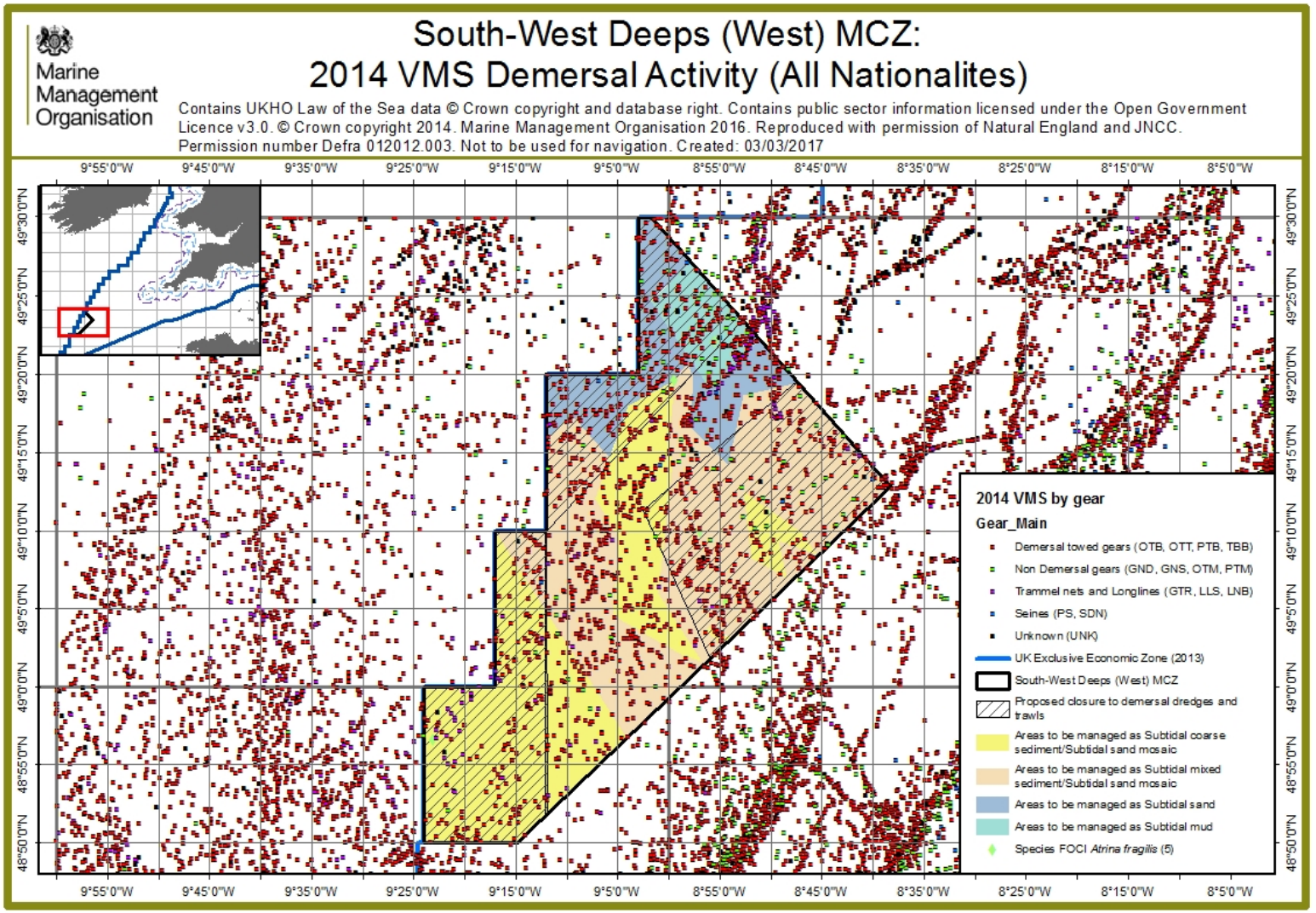


Figure 14: VMS reports indicating demersal activity in South West Deeps (West) MCZ 2014 by Member State

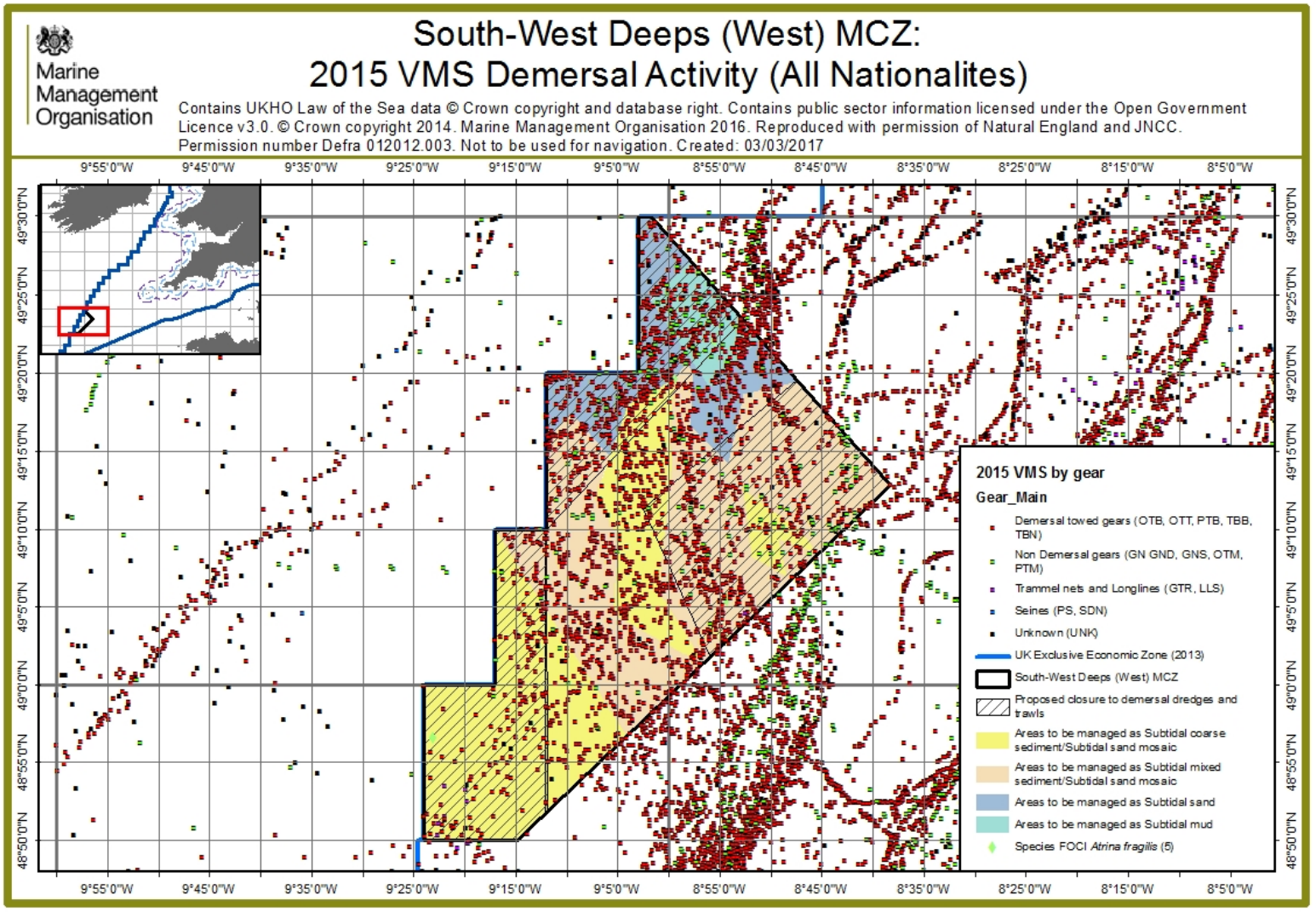


Figure 15: VMS reports indicating demersal activity in South West Deeps (West) MCZ 2015 by Member State

5.6 By-catch

Both mid-water (pelagic) and bottom (demersal) trawling using otter trawls are the most common activities by taking place in the site based on landings. 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. France and Spain mainly focused on bottom trawling (OTB) over the past years analysed, although at a declining rate over the years (see chart 6.2 and chart 6.3).

The fishery focuses on both demersal and pelagic species.

- UK Demersal top species landed in terms of weight are Megrim, Anglerfish (Monkfish), Hake, Conger Eels, Cod and Skate, Mackerel being the only pelagic species.
- Other member states generally land Hake, Megrim, Anglerfish (Monkfish), Haddock, Skate and Cod (along with other species at smaller numbers). Mackerel being the pelagic species landed.

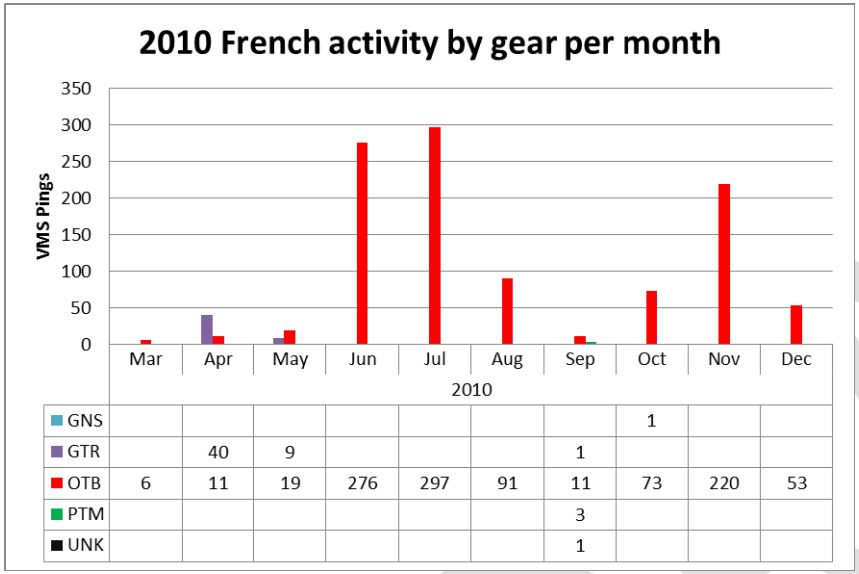
With the introduction of Common Fisheries Policy reform, which includes a landing obligation(namely a ban on the discard of certain species by certain vessels/within certain circumstances), it could become possible in the future to collate information on bycatch that could contribute to the overall catch 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.[10]

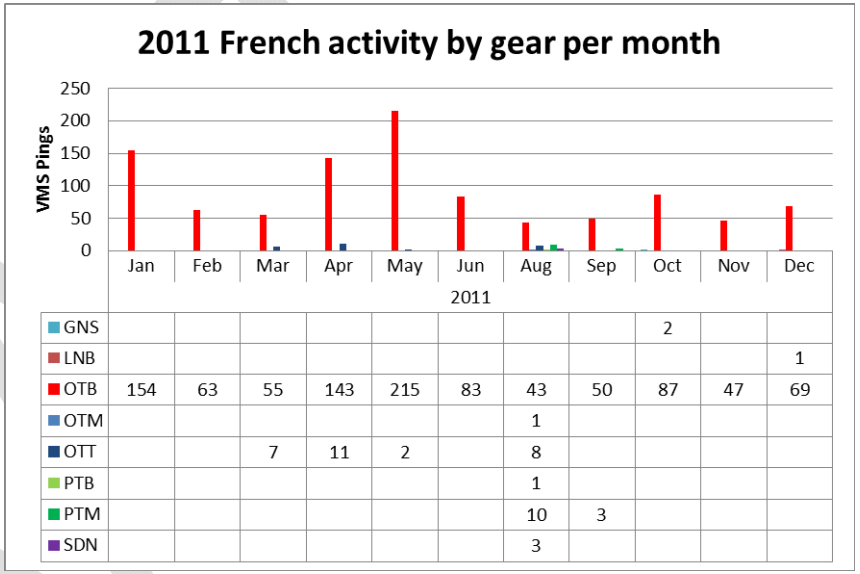
[10] http://ec.europa.eu/fisheries/reform/docs/discards_en.pdf

6 Seasonal trends in fisheries over years 2010 to 2015 inclusive

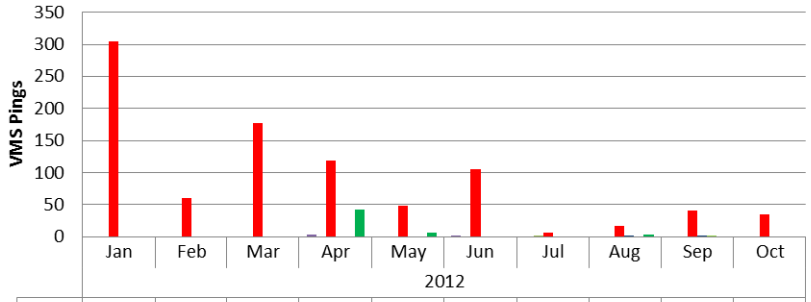
During the period analysed, 2010-2015, only one Danish vessel was recorded in 2010, three in 2014 and one Dutch vessels in 2010.

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



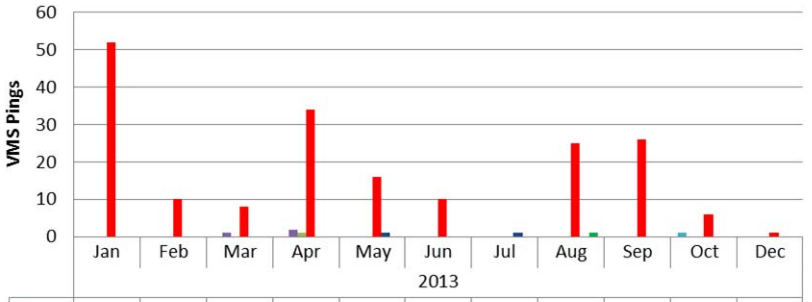


2012 French activity by gear per month



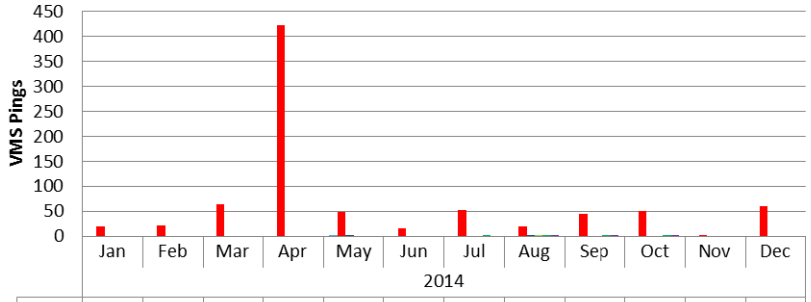
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
GTR				4		1				
LLS							1			
OTB	304	60	177	119	49	106	6	17	41	35
OTT								1	1	
PTB									1	
PTM				42	6			4		

2013 French activity by gear per month



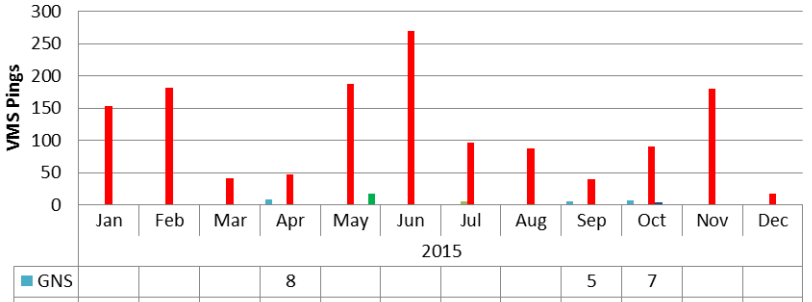
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Dec
GNS										1	
GTR			1	2							
LLS				1							
OTB	52	10	8	34	16	10		25	26	6	1
OTT					1		1				
PTM								1			

2014 French activity by gear per month



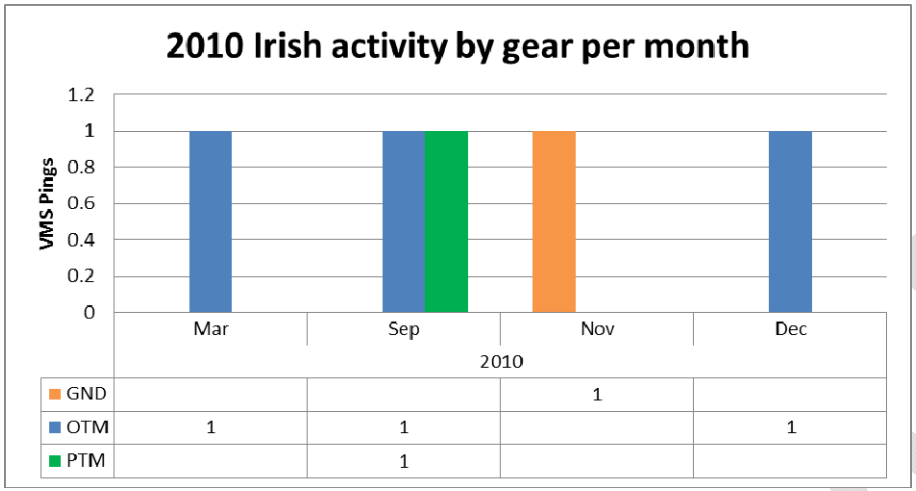
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
GNS					1							
OTB	19	21	64	423	48	16	52	19	44	50	1	61
OTT					1			2				
PTB								1				
PTM							1	3	2	3		
SDN								2	3	1		

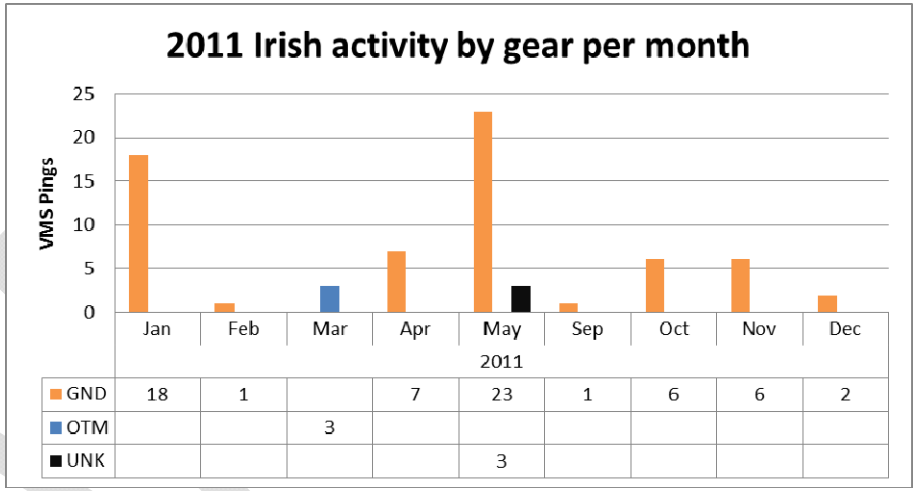
2015 French activity by gear per month

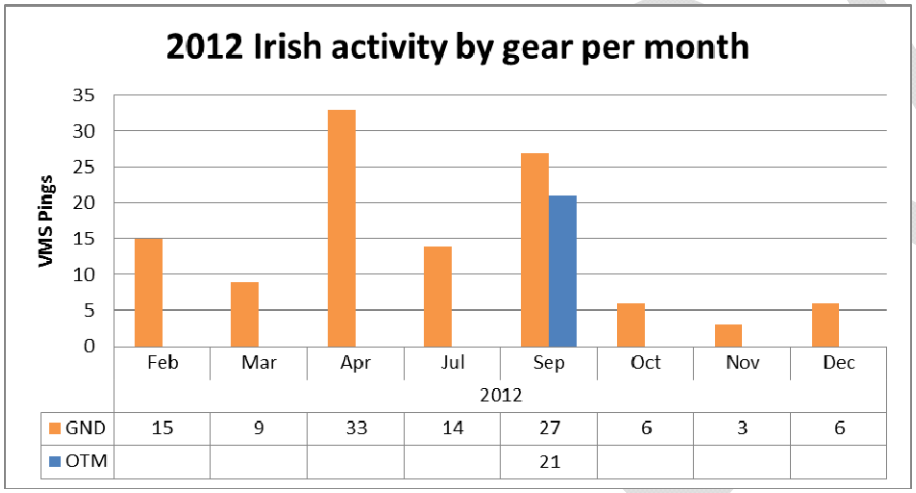


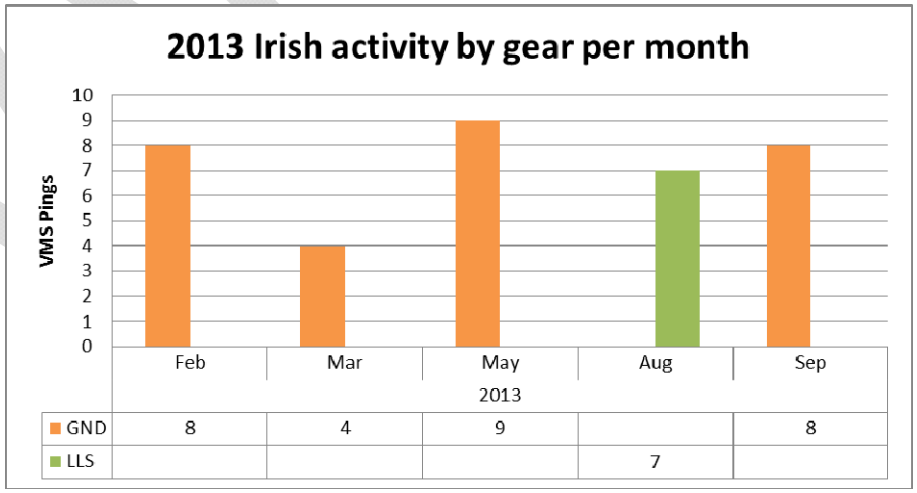
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
GNS				8					5	7		
GTR			1									
LLS							6					
OTB	153	181	41	48	187	269	96	88	40	91	180	18
OTT				1		2		1	1	4		
PTB									1			
PTM					17	1				1		

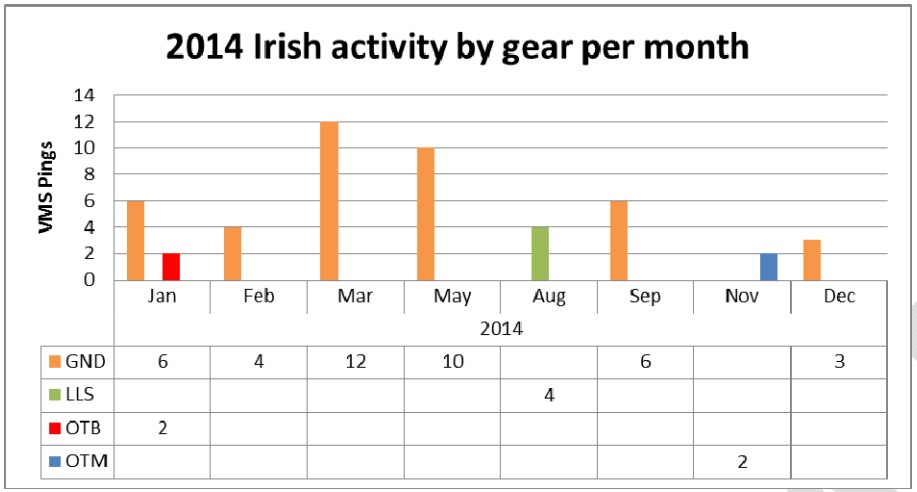
Charts 6.2: Irish seasonal fishing activity (all gears) in South West Deeps (West) MCZ

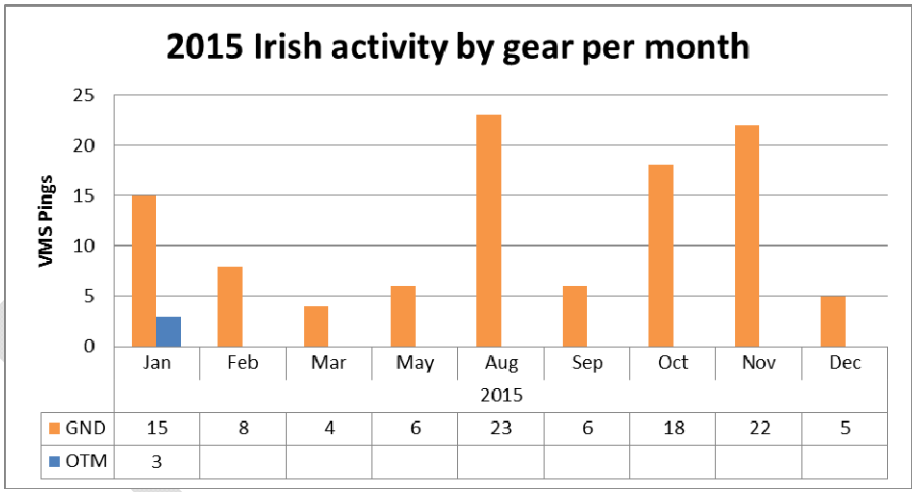




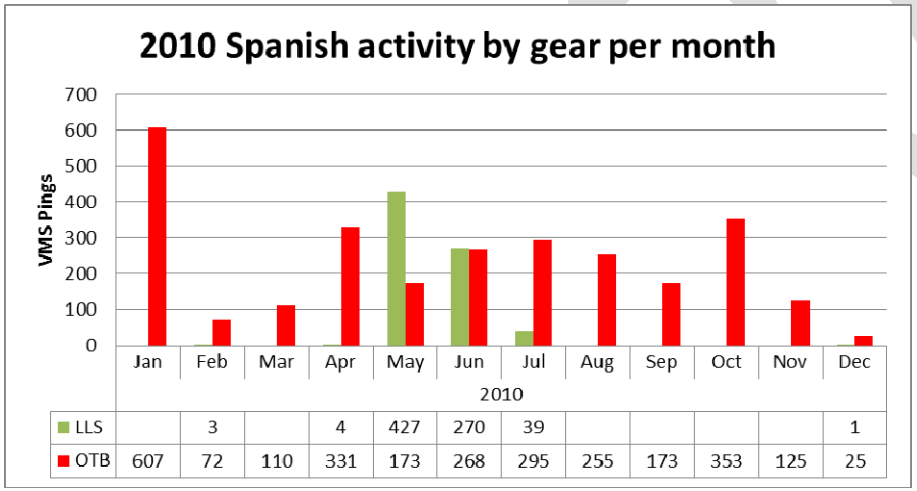


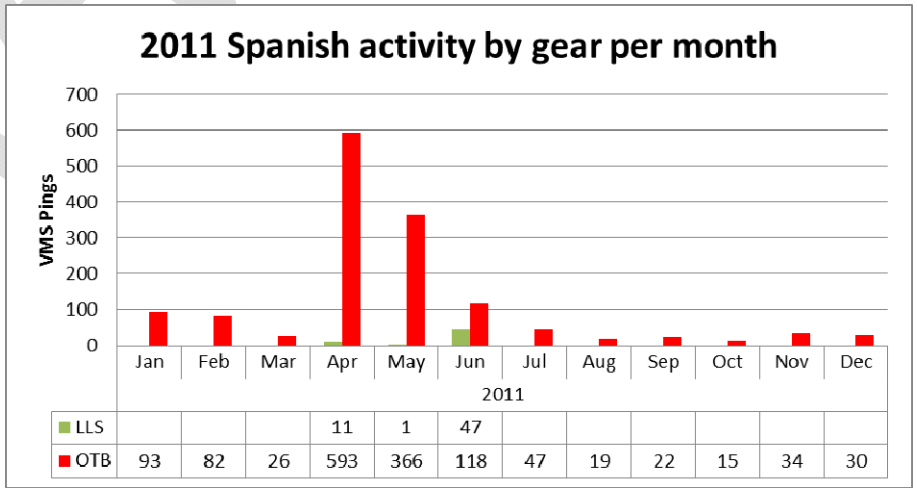


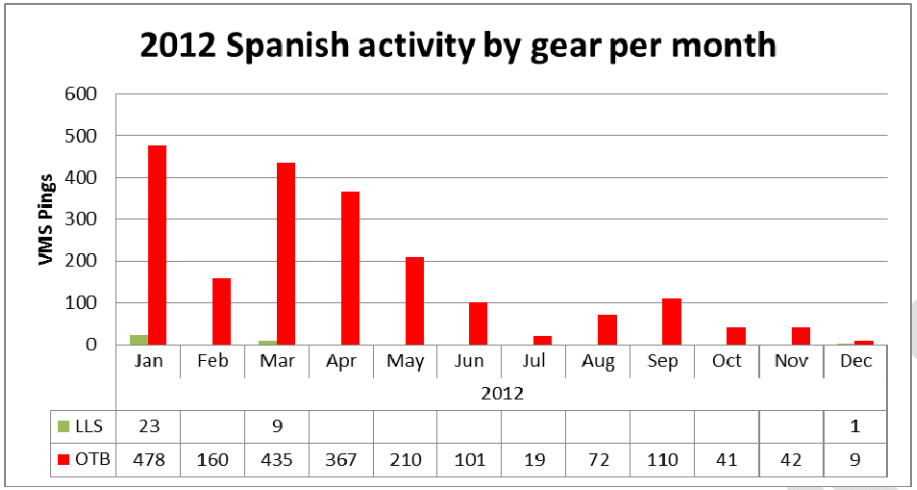


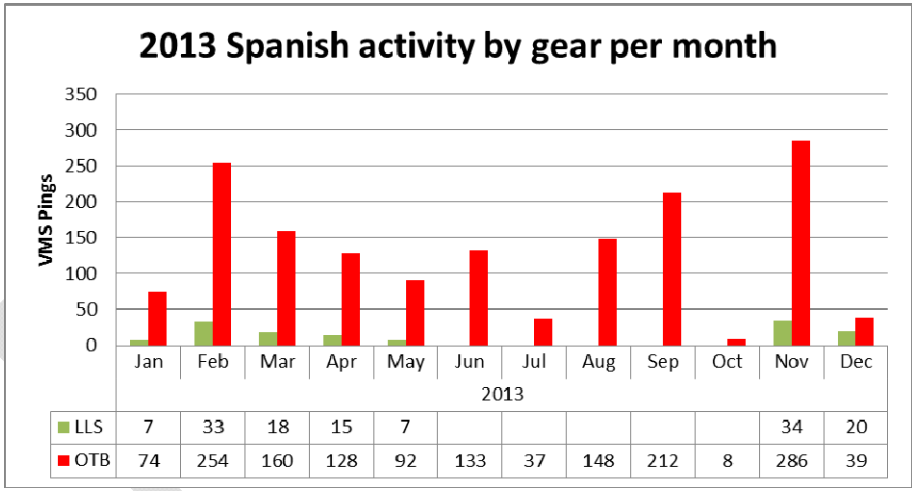


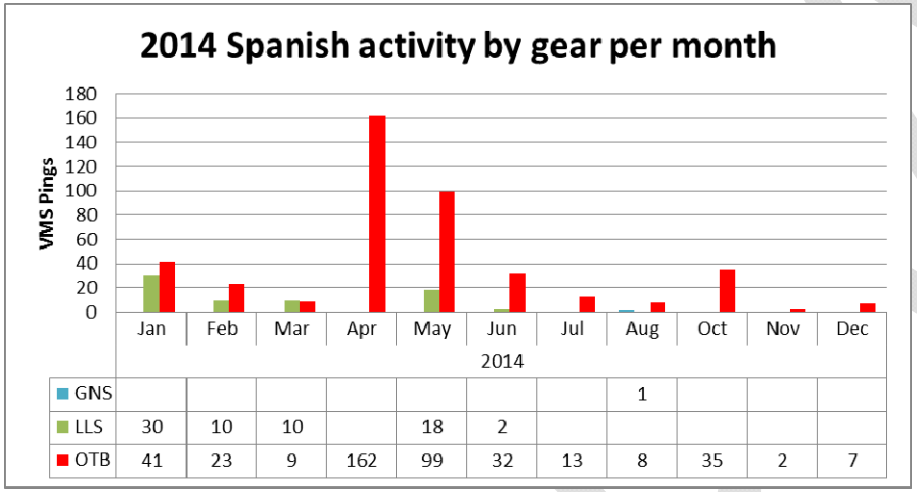
Charts 6.3: Spanish seasonal fishing activity (all gears) in South West Deeps (West) MCZ

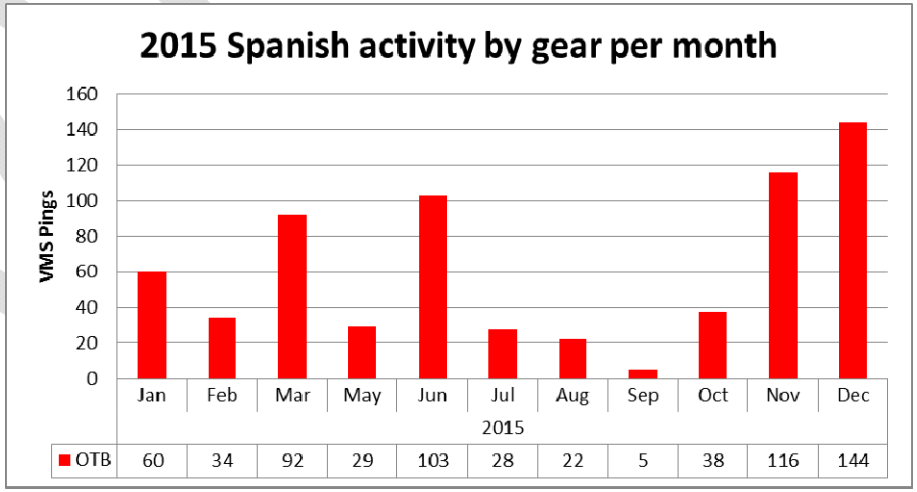




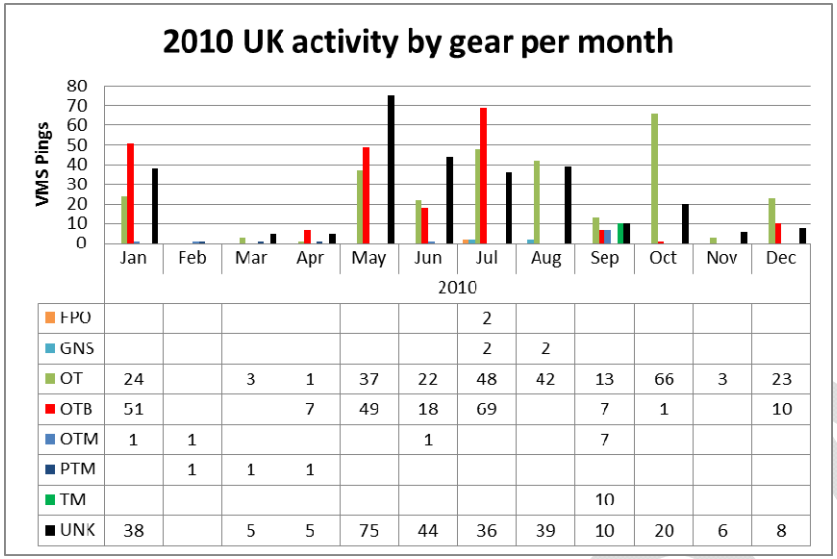

2012 Spanish activity by gear per month
VMS Pings
600
500
400
300
200
100
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2012
LLS 23 9 1
OTB 478 160 435 367 210 101 19 72 110 41 42 9


2013 Spanish activity by gear per month
VMS Pings
350
300
250
200
150
100
50
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2013
LLS 7 33 18 15 7 34 20
OTB 74 254 160 128 92 133 37 148 212 8 286 39

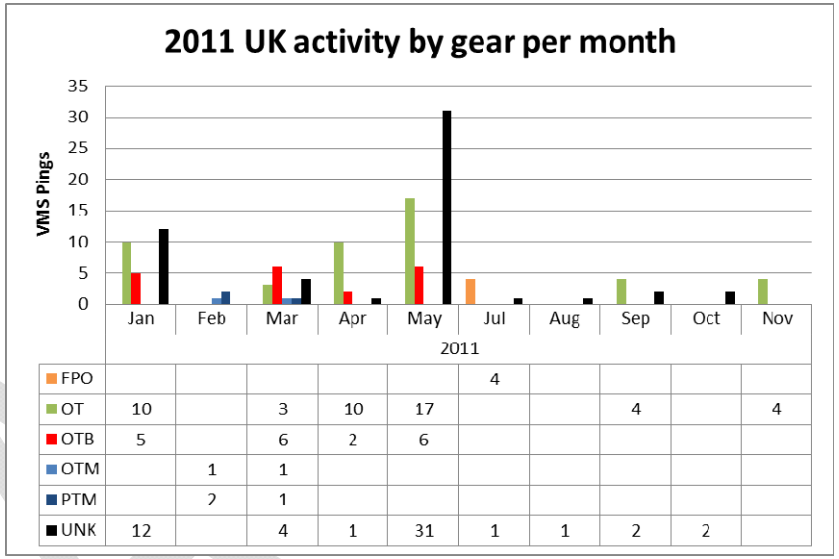

2014 Spanish activity by gear per month
VMS Pings
180
160
140
120
100
80
60
40
20
0
Jan Feb Mar Apr May Jun Jul Aug Oct Nov Dec
2014
GNS 1
LLS 30 10 10 18 2
OTB 41 23 9 162 99 32 13 8 35 2 7


2015 Spanish activity by gear per month
VMS Pings
160
140
120
100
80
60
40
20
0
Jan Feb Mar May Jun Jul Aug Sep Oct Nov Dec
2015
OTB 60 34 92 29 103 28 22 5 38 116 144

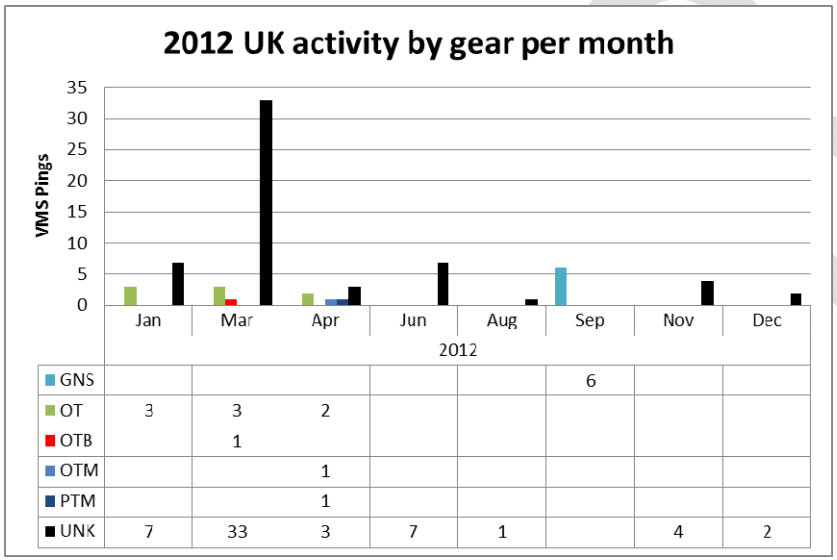
Charts 6.4: UK seasonal fishing activity (all gears) in South West Deeps (West) MCZ



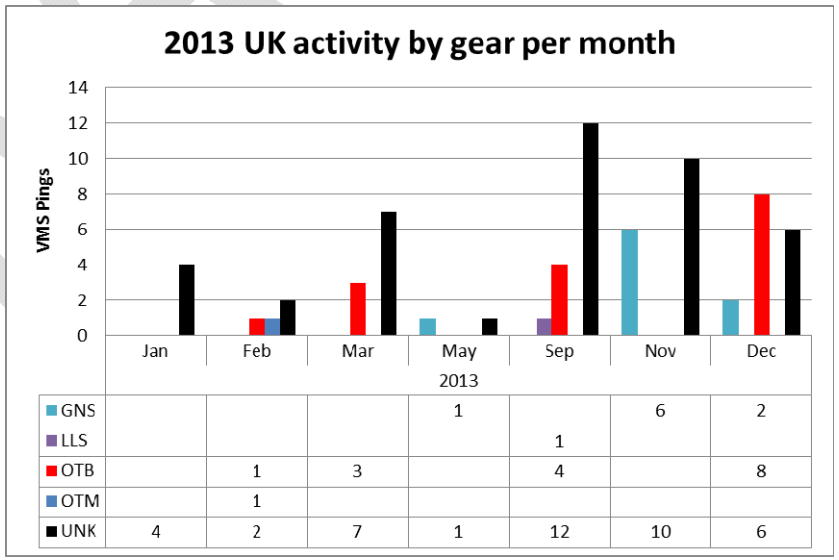
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FPO							2					
GNS							2	2				
OT	24		3	1	37	22	48	42	13	66	3	23
OTB	51			7	49	18	69		7	1		10
OTM	1	1				1			7			
PTM		1	1	1								
TM									10			
UNK	38		5	5	75	44	36	39	10	20	6	8



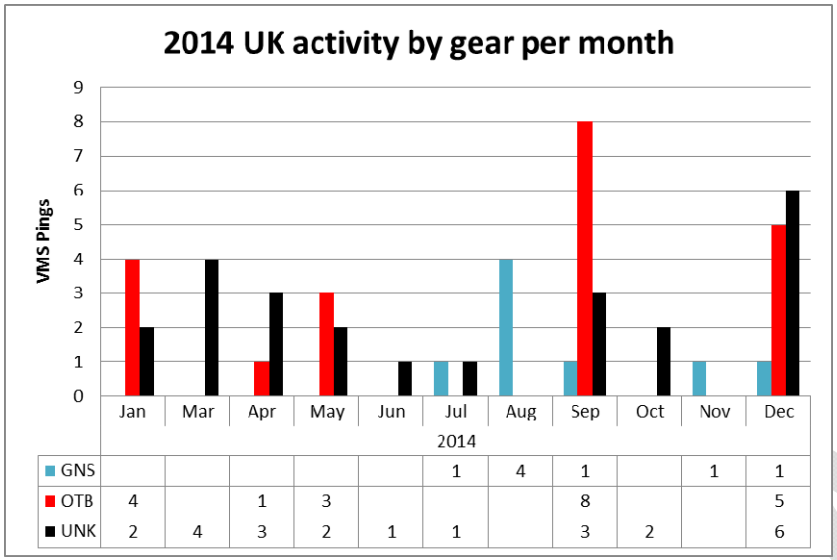
	Jan	Feb	Mar	Apr	May	Jul	Aug	Sep	Oct	Nov
FPO						4				
OT	10		3	10	17			4		4
OTB	5		6	2	6					
OTM		1	1							
PTM		2	1							
UNK	12		4	1	31	1	1	2	2	

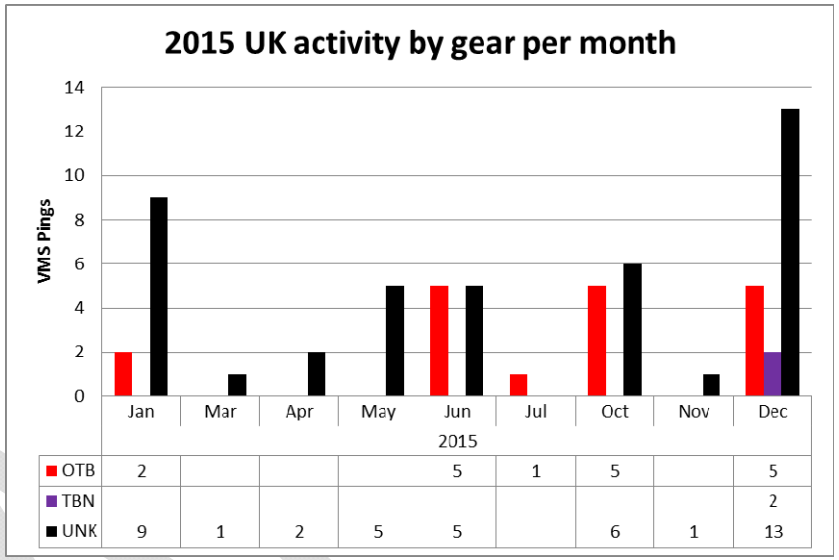


	Jan	Mar	Apr	Jun	Aug	Sep	Nov	Dec
GNS						6		
OT	3	3	2					
OTB		1						
OTM			1					
PTM			1					
UNK	7	33	3	7	1		4	2



	Jan	Feb	Mar	May	Sep	Nov	Dec
GNS				1		6	2
LLS					1		
OTB		1	3		4		8
OTM		1					
UNK	4	2	7	1	12	10	6


2014 UK activity by gear per month
VMS Pings
9
8
7
6
5
4
3
2
1
0
Jan
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2014
GNS 1 1 4 1 1 1
OTB 4 1 3 8 5
UNK 2 4 3 2 1 1 3 2 6


2015 UK activity by gear per month
VMS Pings
14
12
10
8
6
4
2
0
Jan
Mar
Apr
May
Jun
Jul
Oct
Nov
Dec
2015
OTB 2 5 1 5 5
TBN 2
UNK 9 1 2 5 5 6 1 13

7 Proposed fisheries management measures to recover the habitat features in favourable condition. Are they proportionate and enforceable? Other conservation measures that apply to the areas

7.1 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

Management measures proposed for South-West Deeps (West) MCZ

The proposed management option is to reduce/limit pressure by restricting fishing activity with demersal trawls and dredges across a proportion of the site to include each protected feature (Figure 11).

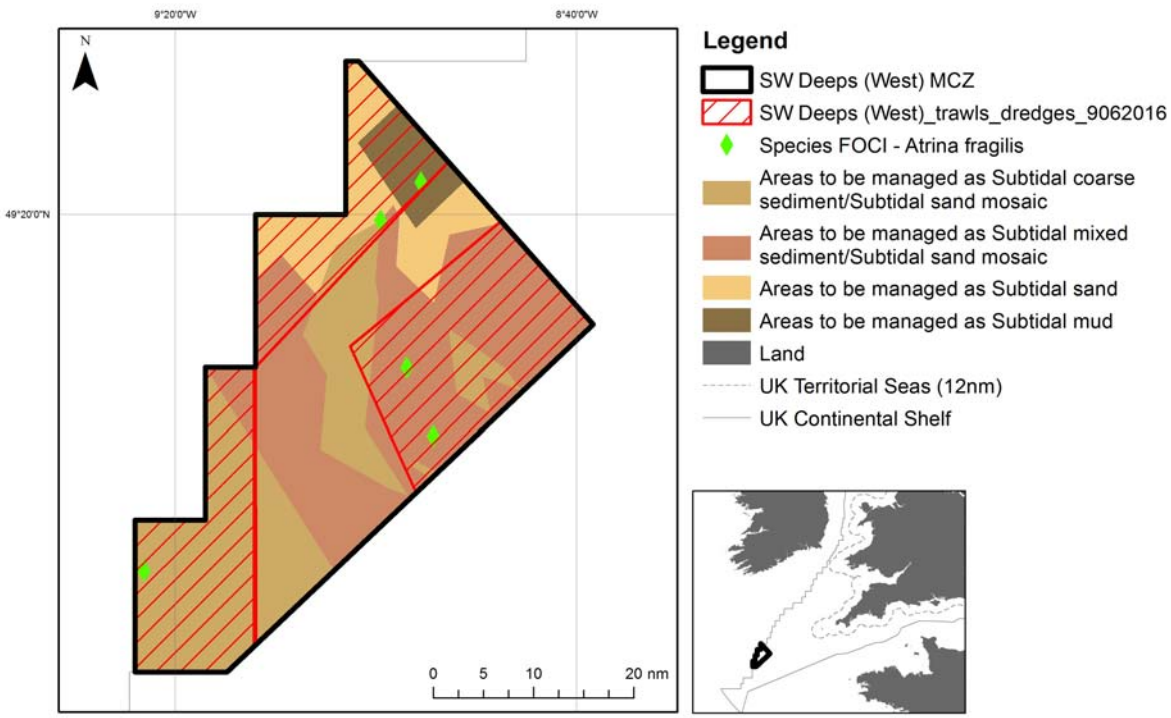


Figure 16: South-West Deeps (West) MCZ site map including protected features for which management is being proposed.

7.3 Other fisheries measures which apply to the site

South West Deeps (West) MCZ is within the Hake Effort Areas (EC Reg 811/2004 Art 7) and the Hake Recovery Zone (EC Reg No 494/2002). Theses recovery zones are decided monthly so are not always active. There are no recovery zones in September each year.

8 Control measures envisaged by the Member States, 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 West Deeps (West) MCZ consists of a reporting zone around the prohibited zone, increased reporting within zones, 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-West Deeps (West) MCZ will be continued under the existing surveillance plans for the English Channel and Celtic Sea. The plans will coordinate the at-sea surveillance capacity of the UK (which may include Navy fisheries protection vessels, or other enforcement vessels and aerial response). Changes to surveillance will be in line with the MMO's risk based compliance and enforcement strategy.

8.1.2 Remote Vessel Monitoring

Increased Positioning Reporting

Vessels entering the South West Deeps (West) MCZ prohibited zone 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 cross 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.

Vessels will be allowed to transit the prohibited zone. Increased reporting will also allow the UK 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 monitoring system requirements

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[11] 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 the South West Deeps (West) 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 for the site.
- Transmitting position reports via GPRS/GSM[12](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 a vessel enters a reporting or prohibited zone for the site.
- High frequency reporting would end when a vessel leaves the reporting area for the site.
- 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 widely available for offshore sites; enforcement action using this system will therefore be retrospective.

In the UK, vessels which are fitted with a VMS+ device can meet all the above system requirements. The VMS+ device is 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

[11] 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.

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

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[13] is approximately **$0.06**[14] (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.

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

[14] GPRS values are presented in US dollars

8.3 Key provisions to include in EC regulation to manage the South West Deeps (West) MCZ

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

- A prohibition on any demersal trawls and dredges being deployed in the management area of the MCZ.
- Establishment of a 1nm (1.852km) increased reporting zone around the management area of the South West Deeps (West) MCZ. All fishing vessels within this area shall be required to record or report vessel positions at 10 minute intervals. This area shall be defined by the map and coordinates displayed in Annex C.
- A requirement for all fishing vessels entering the increased 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 the management area of the South West Deeps (West) MCZ or the reporting zone without such a system will be committing an offence.
- A requirement for all fishing vessels transiting the management area carrying prohibited gears to have all gears on board lashed and stowed.
- A requirement for all fishing vessels transiting the management area carrying prohibited gears to ensure that the speed during transit is not less than six knots 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 to prohibit is formulated in terms of Gear Codes in Annex XI in EU Regulation 404/2011. In general prohibited gear types are demersal towed gears including dredges. 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 gears 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

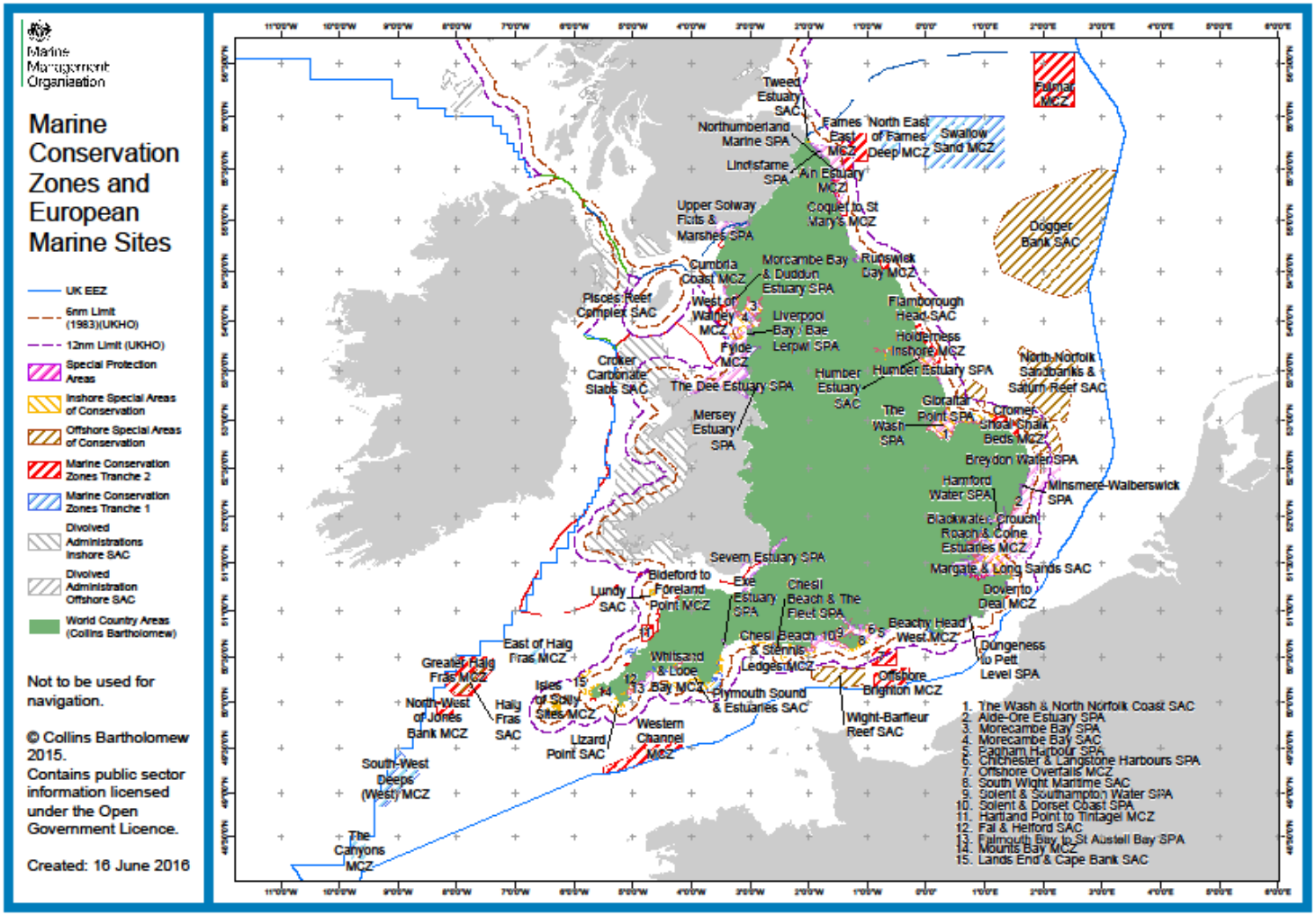
As the MCZ will be closed to demersal trawls and dredges, some displacement is likely to occur both within and outside the MCZ.

Displacement is difficult to quantify, and it is impossible to predict where exactly activities will be displaced to. As a result of stakeholder input in the management process, some of the areas currently fished within the site will remain open to fishing thus reducing the potential for displacement.

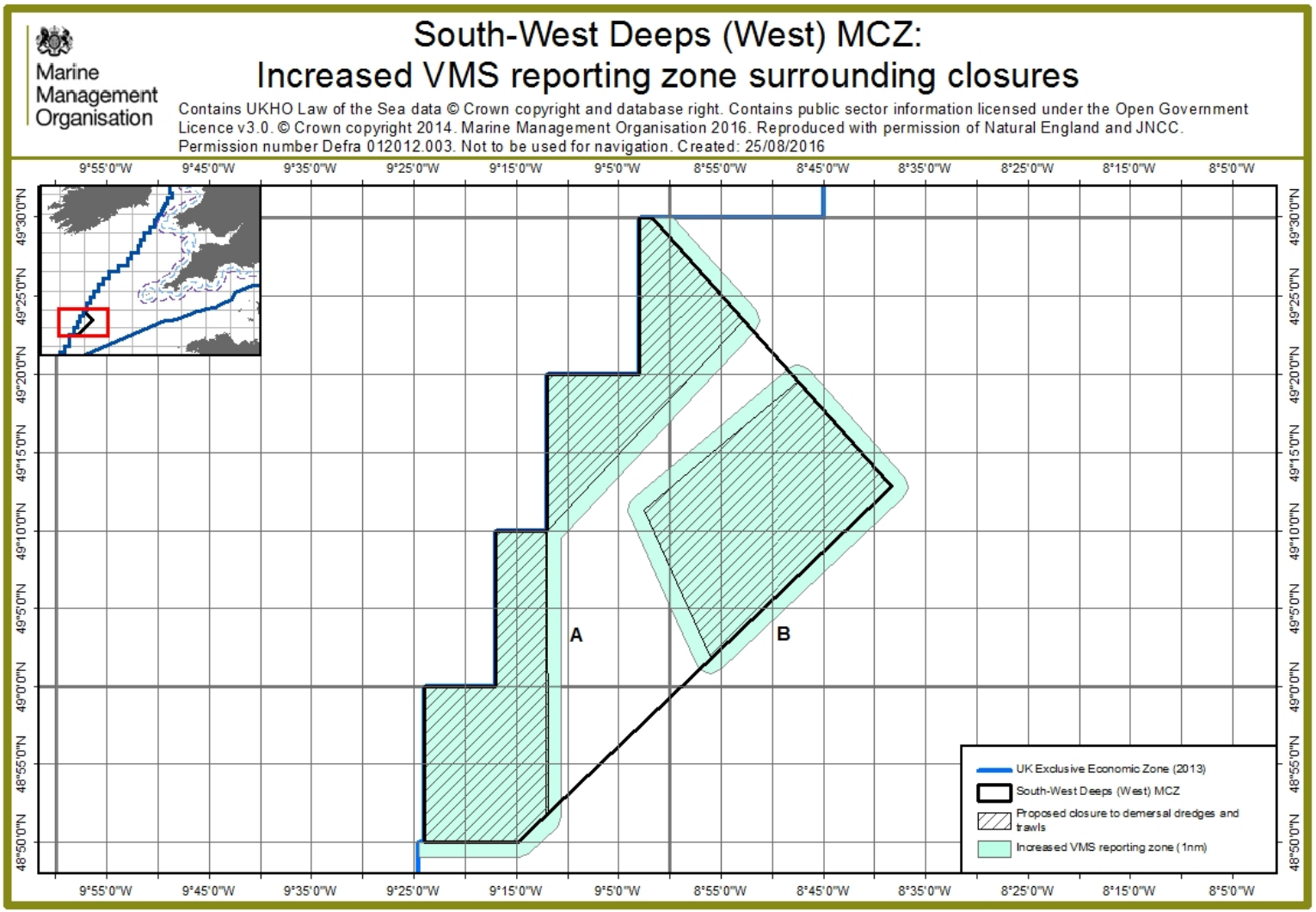
Displacement is dependent on the intensity and distribution of fishing activities within the site before the closure and on external factors (such as fish distribution, TAC/quota, fuel prices, other spatial claims).

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 the South West Deeps (West) MCZ increased reporting zone



Coordinates for the South West Deeps (West) MCZ increased reporting zone

Reporting Zone A:

	Degrees Minutes		Degrees Minutes Seconds	
Point	**Lat**	**Lon**	**Lat**	**Lon**
1	49°30.00120'	-008°59.64300'	49°30'00.0720"	-008°59'38.5800"
2	49°24.09420'	-008°51.61320'	49°24'05.6520"	-008°51'36.7920"
3	49°23.46300'	-008°51.23640'	49°23'27.7800"	-008°51'14.1840"
4	49°22.75920'	-008°51.65100'	49°22'45.5520"	-008°51'39.0600"
5	49°18.94740'	-008°57.13020'	49°18'56.8440"	-008°57'07.8120"
6	49°09.73140'	-009°10.29840'	49°09'43.8840"	-009°10'17.9040"
7	49°09.52740'	-009°10.61880'	49°09'31.6440"	-009°10'37.1280"
8	49°05.71320'	-009°10.61880'	49°05'42.7920"	-009°10'37.1280"
9	48°55.67820'	-009°10.61880'	48°55'40.6920"	-009°10'37.1280"
10	48°51.64140'	-009°10.59420'	48°51'38.4840"	-009°10'35.6520"
11	48°50.99220'	-009°11.00580'	48°50'59.5320"	-009°11'00.3480"
12	48°49.21680'	-009°13.85520'	48°49'13.0080"	-009°13'51.3120"
13	48°49.00860'	-009°14.73720'	48°49'00.5160"	-009°14'44.2320"
14	48°49.00860'	-009°21.42000'	48°49'00.5160"	-009°21'25.2000"
15	48°49.00860'	-009°24.54180'	48°49'00.5160"	-009°24'32.5080"

Then re-join to point 1 following the UK EEZ contour.

Reporting Zone B:

	Degrees Minutes		Degrees Minutes Seconds	
Point	**Lat**	**Lon**	**Lat**	**Lon**
1	49°00.91980'	-008°56.51340'	49°00'55.1880"	-008°56'30.8040"
2	49°01.12020'	-008°57.04680'	49°01'07.2120"	-008°57'02.8080"
3	49°01.45440'	-008°57.42180'	49°01'27.2640"	-008°57'25.3080"
4	49°05.21100'	-009°00.00000'	49°05'12.6600"	-009°00'00.0000"
5	49°10.43340'	-009°03.58920'	49°10'26.0040"	-009°03'35.3520"
6	49°10.92960'	-009°03.93180'	49°10'55.7760"	-009°03'55.9080"
7	49°11.25300'	-009°04.07460'	49°11'15.1800"	-009°04'04.4760"
8	49°11.59980'	-009°04.04040'	49°11'35.9880"	-009°04'02.4240"
9	49°11.91840'	-009°03.82440'	49°11'55.1040"	-009°03'49.4640"
10	49°12.16020'	-009°03.47580'	49°12'09.6120"	-009°03'28.5480"
11	49°14.03820'	-009°00.00000'	49°14'02.2920"	-009°00'00.0000"
12	49°15.37620'	-008°57.52260'	49°15'22.5720"	-008°57'31.3560"
13	49°19.67040'	-008°49.68480'	49°19'40.2240"	-008°49'41.0880"
14	49°20.31300'	-008°48.50820'	49°20'18.7800"	-008°48'30.4920"
15	49°20.48760'	-008°48.07560'	49°20'29.2560"	-008°48'04.5360"
16	49°20.56020'	-008°47.61480'	49°20'33.6120"	-008°47'36.8880"
17	49°20.54340'	-008°47.17380'	49°20'32.6040"	-008°47'10.4280"
18	49°20.43540'	-008°46.73100'	49°20'26.1240"	-008°46'43.8600"
19	49°20.23020'	-008°46.34040'	49°20'13.8120"	-008°46'20.4240"
20	49°13.46880'	-008°37.16100'	49°13'28.1280"	-008°37'09.6600"
21	49°13.15140'	-008°36.87300'	49°13'09.0840"	-008°36'52.3800"
22	49°12.76620'	-008°36.78480'	49°12'45.9720"	-008°36'47.0880"
23	49°12.38760'	-008°36.93180'	49°12'23.2560"	-008°36'55.9080"
24	49°12.08760'	-008°37.26660'	49°12'05.2560"	-008°37'15.9960"
25	49°01.14720'	-008°54.97680'	49°01'08.8320"	-008°54'58.6080"
26	49°00.95880'	-008°55.40700'	49°00'57.5280"	-008°55'24.4200"
27	49°00.87300'	-008°55.92120'	49°00'52.3800"	-008°55'55.2720"

Then re-join back to point 1

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