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MSC Pre-Assessment for

English & Western Channel Scallop fishery

(Scallop Dredge)

Project UK Fisheries Improvements

DRAFT REPORT

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Contents

Glossary

CL	Carapace Length
DCF	Data Collection Framework
DEFRA	Department for Environment, Food & Rural Affairs
ETP	Endangered, Threatened & Protected
EU	European Union
EC	European Commission
FAO	Food and Agriculture Organisation of the United Nations
FCR	Fisheries Certification Requirements
FIP	Fisheries Improvement Project
ICES	International Council for Exploration of the Seas
IFCA	Inshore Fisheries & Conservation Authority
JRC	European Commission Joint Research Centre
LTL	Low Trophic Level
MMO	Marine Management Organisation
MSC	Marine Stewardship Council
PI	Performance Indicator
PRI	Point of Recruitment Impairment
PSA	Productivity Susceptibility Analysis
PUKFI	Project UK Fisheries Improvements
RBF	Risk Based Framework
SG	Scoring Guidepost
STECF	Scientific, Technical and Economic Committee for Fisheries
TAC	Total Allowable catch
UoA	Unit of Assessment
UoC	Unit of Certification
VME	Vulnerable Marine Ecosystem

1 Introduction

1.1 Aims/scope of pre-assessment

This report presents an update of the Marine Stewardship Council (MSC) pre-assessment of the Channel scallop fishery (Scallop Dredge) that was originally included as part of Project Inshore[1] in 2013. As such, the primary aims of this update of the earlier pre-assessment is to:

- Undertake a further review of available fishery-specific data
- Identify the key changes that have occurred in either the operation or the management of the fishery which may lead to changes in expected MSC scoring outcomes
- Based upon updated information, review the performance of the fishery against the latest version of the MSC certification requirements[2], which includes a number of changes since the time of the original pre-assessment.
- Present revised pre-assessment scoring and supporting rationale.

However, it should be noted that there is a change of scope since Project Inshore, since this project has been expanded to include all UK vessels. However, as this pre-assessment is primarily intended to be an update of an earlier pre-assessment, a simplified reporting template has been used. This seeks to include the normative requirements of the MSC pre-assessment process – in particular in relation to definition, scope and scoring of the fishery – but does not include the level of wider background and description which would sometimes be included in a pre-assessment report.

However, this simplified pre-assessment update process still involves providing a provisional evaluation against MSC Performance Indicators (PIs) and Scoring Guideposts (SGs), to inform how the fishery fares against the MSC standard and whether each PI is likely to fall within the following categories: fail (i.e. score <60), pass with conditions (60-79) or pass without conditions (≥ 80). It should be noted that the pre-assessment does not attempt to duplicate a full assessment against the MSC standard, which requires precise scoring and defined public consultation phases.

1.2 Background

The pre-assessment has been undertaken as part of Project UK Fisheries Improvements (PUKFI). This project is working towards an environmentally sustainable future for UK fisheries by running Fishery Improvement Projects (FIPs) on six UK fisheries that have been selected by the UK supply chain. They were selected due to their importance for the UK market. PUKFI will do this through strategic use of the MSC process to develop credible FIPs, giving each fishery the tools to implement changes and to ensure their sustainable future. It will use the MSC Pre-Assessment process as a gap analysis to determine current status, identify improvements and inform development of an Action Plan designed to ultimately improve the sustainability of the fishery.

PUKFI builds upon the foundation of Project Inshore, a project which ran from 2012-2014 and which sought to map and present key data on English Inshore fisheries (Stage 1); undertake MSC pre-assessments of those fisheries (stage 2) and; drawing on the conclusions of the pre-assessment,

[1] Futher details about Project Inshore, along with all reporting outputs are available on the Seafish website: http://www.seafish.org/industry-support/fishing/project-inshore

[2] MSC CRv2.1 Version 2.1 | Issued: 20 February 2015 | Effective: 1 September 2015. Available for download at: https://www.msc.org/documents/scheme-documents/fisheries-certification-scheme-documents/fisheries-certification-scheme-documents#FCR

provide strategic sustainability reviews for each[3] English Inshore Fisheries Conservation Authority (IFCA) (stage 3).

The original pre-assessment report (Stage 2) is available for download from the Seafish Website (Southall *et al* 2013)[4]. In addition, the 2013 pre-assessment results are presented in an online database[5] which allows users to search for the MSC pre-assessment results for a particular species and filter results by stock, gear type or IFCA region.

This Pre-Assessment will feed in to the development of an Action Plan for the fishery, designed to raise the scores over a defined period to a point at which the fishery could enter MSC assessment.

1.3 Constraints to the pre-assessment of the fishery

Given that this is an update of an earlier pre-assessment no site visit to the fishery has been undertaken. However, in spite of this a representative range of data has been available to the assessors. All key data sources were made available to allow appropriate assessment for this fishery and an appropriate level of stakeholder consultation was undertaken. However, the comparatively quick pre-assessment exercise still does not go into the level of detailed and rigorous scrutiny, which is undertaken as part of a full MSC assessment. For this reason, it cannot be guaranteed that the outcome of a full assessment process can be predicted with absolute accuracy. There may still be some unforeseen additional issues that arise once a fuller public consultation exercise is undertaken as part of any full assessment.

1.4 Unit(s) of Assessment

The Unit of Assessment (UoA) for this updated pre-assessment is defined as:

Table 1: Unit of Assessments

Target Stock:	Scallop (*Pecten maximus*). VIId & e
Fishing Method / gear type:	Scallop Dredge
Fishing Fleet	UK Registered vessels
Area:	ICES Area VIId & e (UK and EU Waters)

Given the open scope of the UoA definition above (i.e. all UK registered vessels), no other eligible fisheries are likely. However, if a future full MSC assessment chooses a smaller Unit of Assessment (UoA), perhaps a particular group of vessels or association, in which case other potential future eligible fishers would need to be defined.

1.5 Total Allowable Catch (TAC) and Catch Data

No TAC is set in the Channel scallop fishery. Total landed weight of scallops in 2015 by the UK fleet in area VIId and VIIe was 8,976t. Of this 97% was landed by scallop dredge (2% beam trawl and 1% others). Landings from VIId and VIIe were also dominated by English registered vessels (62%) although Scottish registered vessels also landed significant quantities (36%). Finally, of the catches from dredge fisheries almost all (95%) was by vessels over 10m LOA registered length.

[3] With the exception of Sussex IFCA, which already had relevant results from an earlier project (Dapling *et al* 2010) which piloted the multi species MSC pre-assessment approach.

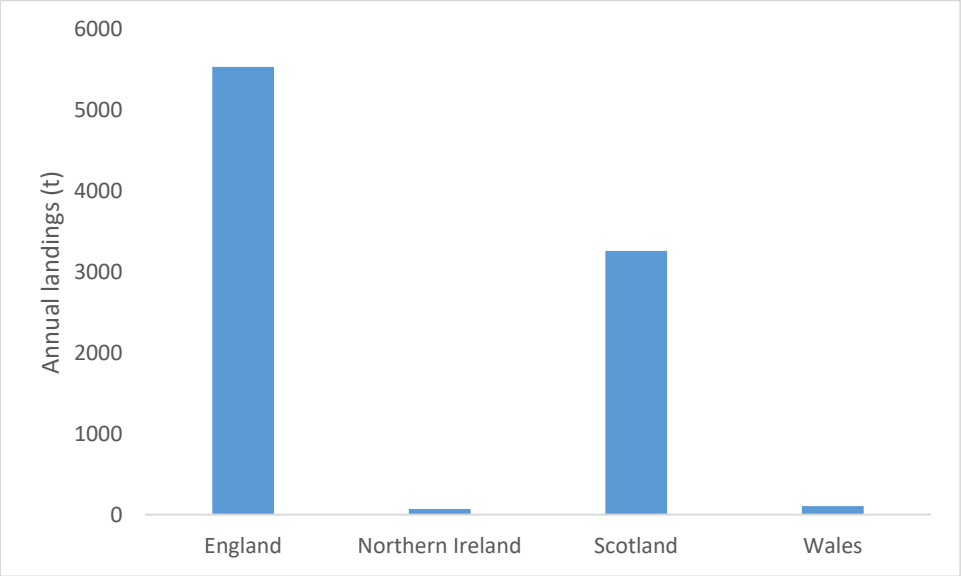
[4] http://www.seafish.org/industry-support/fishing/project-inshore/project-reports/stage-two-reports

[5] http://msc.solidproject.co.uk/msc-project-inshore.aspx

Table 2: TAC and Landing Data for North Sea Plaice Source: TAC figures from Europa Fishing TACs and Quotas Poster. Landings data from MMO landings database.

	2014	2015
Total Allowable Catch (initial allocation)	n/a	n/a
UK Share of TAC (initial Allocation)	n/a	n/a
UoA 1 (Scallop Dredge) share of catch		8,667t

Figure 1: Share of catch of scallop in VIId and VIIe by UK registered vessels (2015)



2 Description of the fishery

2.1 Scope of the fishery in relation to the MSC programme

The fishery under assessment is within scope of the MSC program as defined in FCR v2 Section 7.4.11 (i.e. the target species is not from the following taxa: amphibians, reptiles, birds or mammals; the fishery is not being conducted under a controversial unilateral exemption to an international agreement, nor does the fishery use destructive fishing practices such as poisons or explosives - such fisheries would automatically fail the MSC standard).

2.2 Introduced Species / Inseparable Stocks (IPI) / Enhanced Fishery / Low Trophic

These MSC policies do not apply in the case of this fishery and no adjustments to the standard assessment procedure will therefore be required to include these. The fishery does not target non-native or introduced species therefore the MSC Introduced Species Requirements do not apply. The species caught are easily recognizable and can separated and recorded accurately. And no fishery enhancement techniques (such as artificial reefs) are employed. Finally, the species is not classified as a Key low trophic species.

2.3 Overview of the fishery

Although the MSC pre-assessment reporting template includes a number of descriptive sections, because this report is an update of an earlier pre-assessment and because these sections are not normative requirements (i.e. the template indicates that certain sections "may" be included), these have been omitted from this reduced template. Instead, below only very limited description of key fishery parameters are included with the aim of explicitly clarifying the nature of the fishery that is being pre-assessed.

Spatial patterns of the flee

2.4 Other elements in the fishery

The MSC Fishery Certification Requirements (FCR) v2 which was released on 8 October 2014, and became effective from 15 April 2015 uses different components in scoring Principle 2 to earlier versions of the MSC standard. In the earlier pre-assessment undertaken as part of Project Inshore other species caught in the fishery (referred to as 'elements' in the scoring) were defined according to whether a 'retained' catch (PI2.1.1-2.1.3) or whether a more unwanted or typically discarded 'bycatch' (PI 2.2.1-2.2.3).

The latest version of the MSC standard re-categorises those other species caught in the fishery as either Primary (PI 2.1.1-2.1.3) or Secondary (2.2.1 – 2.2.3), regardless of whether it is retained or discarded. Primary species within Principle 2 are defined as those that have management measures and tools in place intended to achieve stock management objectives reflected in either limit or target reference points (FCRv2 SA3.1.3). If management limits or reference points are not in place then the species is classified as a secondary species (unless it is classified as Endangered, Threatened or Protected).

For Primary species a stock assessment would most likely be available but for secondary species a stock assessment is less likely to be available, therefore, the outcome status of secondary species is likely to be scored using the Risk Based Framework (as per definition in Table 3, Section 7.7.6 of FCRv2).

In order to determine the catch composition to inform this pre-assessment and to identify the other 'elements' within the fishery, the assessment team queried the MMO landings database. Specifically, querying catch compositions of trips where catches of the P1 species account for more than 5% of total catches by the gear type under assessment. This approach has some drawbacks: By using a 5%

cut off, it is possible that catches from trips where the target species contributes a negligible share of the catch is not accounted for (however, for scallops this is likely to be negligible). By contrast this does mean that a more typical 'trip' for catches of the P1 species are represented. Secondly, these figures represent landings and not catch. As part of preparation for full MSC assessment, a fuller analysis of catch composition will be useful, particularly if the UoA is to be more tightly defined – i.e. to reflect particular operational patterns of gear configurations.

This analysis revealed that there are no main Primary or Secondary Species as scallops account for 97% of landings.

3 Evaluation Procedure

3.1 Assessment methodologies used

The MSC Fisheries Certification Requirements v 2.0 was used to conduct the pre-assessment for this fishery. Although the MSC Pre-Assessment Reporting Template v 2.0 was used as the basis to create this report, some sections which were not normative requirements have been omitted, in particular in relation to the description of the fishery.

3.2 Summary of consultations during pre-assessment

This pre-assessment has been undertaken by Tristan Southall as an entirely desk based exercise, drawing on the conclusions already drawn during Project Inshore, but seeking updated landings data from MMO, and updated stock assessments from ICES. No face to face meetings or field activities were undertaken. However, a small number of phone consultations were used:

- Simon Dixon: MMO Statistics Unit

3.3 Applicability of the default assessment tree

The default assessment tree as provided in FCR v2 has been used to assess and score the fishery. No revisions of the default assessment tree are required.

3.4 Approach to Scoring

The MSC pre-assessment process involves a provisional evaluation against MSC Performance Indicators (PIs) and Scoring Guideposts (SGs), to inform how the fishery fares against the MSC standard and whether each PI is likely to fall within the following categories:

Table 5: Key to likely scoring level in Table 6 & Tables A1.1 – A1.3

Definition of scoring ranges for PI outcome estimates	Shading to be used
Information suggests fishery is not likely to meet the SG60 scoring issues.	Fail (<60)
Information suggests fishery will reach SG60 but may not meet all of the scoring issues at SG80. A condition may therefore be needed.	Pass with Condition (60-79)
Information suggests fishery is likely to exceed SG80 resulting in an unconditional pass for this PI. Fishery may meet one or more scoring issues at SG100 level.	Pass (≥80)

3.5 Stakeholders to be consulted during a full assessment

The following key stakeholders should be consulted during full assessment:

- National Government: DEFRA / MMO
- Depending on stock definition – it may be important to consult with the French national authorities / science.
- Regional Fisheries Governance (IFCAs)
- Enforcement Officers: MMO
- Vessel Skippers: All UoAs
- Fishery Scientists: (CEFAS, ICES)
- Relevant NGOs: WWF, North Sea Foundation

The stakeholders would be expected to engage in the RBF process for Principle 2 Secondary Species 2.2.1 Outcome Status.

4 Traceability (issues relevant to Chain of Custody certification)

4.1 Eligibility of fishery products to enter further Chains of Custody

As with all MSC assessments it is noted that there is a risk that catches of target species landed into ports and facilities covered by the MSC assessment, but by non-member vessels (i.e. outside of the UoC) could be sold as MSC certified product. Additionally, the same target species but caught from another adjacent stock area (once these have been defined) (and therefore not covered this assessment) maybe landed into the same ports and facilities as target species covered by the assessment. In both cases systems, will need to be in place to avoid the inclusion of non-MSC product in the Chain of Custody.

5 Preliminary evaluation of the fishery

The pre-assessment evaluation of the fishery is provided within Appendix 1 – Pre-assessment Scoring Sheets

Table .

Table 6: Summary of Likely Scoring Levels.

Principle	Component	PI	Performance Indicator	Scallop Dredge
1	Outcome	1.1.1	Stock status	<60
		1.1.2	Stock rebuilding	
	Management	1.2.1	Harvest Strategy	<60
		1.2.2	Harvest control rules and tools	<60
		1.2.3	Information and monitoring	60-79
		1.2.4	Assessment of stock status	≥80
2	Primary Species	2.1.1	Outcome	≥80
		2.1.2	Management	≥80
		2.1.3	Information	60-79
	Secondary species	2.2.1	Outcome	≥80
		2.2.2	Management	≥80
		2.2.3	Information	60-79
	ETP species	2.3.1	Outcome	60-79
		2.3.2	Management	60-79
		2.3.3	Information	60-79
	Habitats	2.4.1	Outcome	<60
		2.4.2	Management	60-79
		2.4.3	Information	60-79
	Ecosystem	2.5.1	Outcome	60-79
		2.5.2	Management	≥80
		2.5.3	Information	≥80
3	Governance & policy	3.1.1	Legal and customary framework	≥80
		3.1.2	Consultation, roles responsibilities	60-79
		3.1.3	Long term objectives	≥80
	Fishery specific management system	3.2.1	Fishery specific objectives	60-79
		3.2.2	Decision making processes	60-79
		3.2.3	Compliance and enforcement	≥80
		3.2.4	Mgt performance evaluation	60-79

5.1 Key findings from the pre-assessment

Scores of less than 60 in Principle 1 & 2 and a strong possibility of an average of less than 80 for Principle 3 mean that English Channel Scallop fishery would not currently be expected to meet the MSC standard.

Principle 1

Level 60 was not met for a number of PIs within Principle 1. Indeed, the only P1 PI currently expected to pass is where a default score of 80 is applied as a result of using the RBF elsewhere in Principle 1. Overall, if assessed in the current circumstances the Channel Scallop fishery would not be expected to pass P1.

Level 60 was not met for the following PIs:

- PI 1.1.1: No stock assessment or reference points available, therefore scored with the MSC Risk Based Framwork. Expected to score at high risk.
- PI 1.2.1: Harvest Strategy: stock assessment and adaptive management actions are absent, thus undermining ability to provide responsive management. The lack of definition of stock boundary and the resulting uncertainty over which jurisdictional level to apply management controls is also a major weakness in the harvest strategy.
- PI 1.2.2: Harvest Control Rules: No harvest control rule in place – or anything that could be described as 'generally understood'.

Level 80 was not met for the following PIs:

- PI1.2.3: Insufficient stock definition information.

Principle 2

The Level 60 was met for all PIs in Principle 2, except habitat outcome status. Given this result it is expected that channel scallop fishery using scallop dredge would currently fail.

In addition, likely conditions are highlighted for primary and secondary species information and all ETP PIs.

Level 60 was not met for the following PIs:

- 2.4.1: It cannot, on the available evidence, be concluded that Scallop Dredge is unlikely to cause serious or irreversible harm. MSC habitat assessments of dredges are likely to need to present a quantitative assessment of the spatial scale, the level of impact and the rate of recovery, coupled with evidence of the efficacy of management.

Level 80 was not met for the following PIs:

- 2.1.3, 2.2.3 and 2.3.3: There is a requirement for improved catch composition data, as opposed to catch data – this would increase information scores across 3 P2 information PIs. This should give particular attention to interaction with out of scope species and levels of catches of skate and rays species prohibited under EU legislation.
- 2.3.2: There is a specific requirement – across all fleets – that management strategies should be designed to manage the impact of the fishery on the ETP component specifically. No such fishery specific strategy is available. In addition, MSC CRv2 requires a review of alternative measures to minimise mortality of ETP species. No such review is evident.
- PI 2.4.2: Habitat Management & 2.4.3 Habitat Information: habitats management PI now (in latest version of the MSC CRv2) requires "information directly about the UoA". This is necessary for gears which scored less than SG80 at 2.4.1.

Principle 3

Conditions expected for Consultation, Roles and Responsibilities, plus several of the in the Fishery Specific Management PIs. Given that 4 out of 7 P3 PIs are expected to attract conditions, it may be that overall the level of scoring for P3 is less than 80, therefore being a further cause of the fishery failing to meet the MSC standard. However, the work to address the conditions in Principle 1 are likely to benefit P3 scores.

Level 80 was not met for the following PIs:

- PI 3.1.2: Uncertainty over management responsibility for stock science and management as a result of lack of definition of stock boundaries.
- PI 3.2.1: Lack of Fishery Specific Management Plan means objectives are only implicit.
- PI 3.2.2: Lack of management plan means that decision-making processes are generally understood
- PI 3.2.4: No holistic review or evaluation of the fishery management system has been undertaken.

5.2 • Expectations regarding use of the Risk-Based Framework (RBF)

The Risk-Based Framework (RBF) is not required for Principle 1. Due to the lack of stock status reference points Performance Indicator (PI) 2.2.1would be expected to use RBF although, the information available in the pre-assessment indicates that there are no main secondary species, so this would not be required to score at the SG80 level.

Appendix 1 – Pre-assessment Scoring Sheets

Table A1.1: Simplified Scoring sheet – Principle 1

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points

Outcome	1.1.1	Stock status	N	<60	The scallop stock, or stocks in ICES area VII are either poorly defined or not defined, nor recognised by management. This is something that was acknowledged at a recent meeting (October 2016) of the ICES Scallop Assessment Working Group (WGScallop) although there is sufficient understanding to conclude that the working group is "moving towards an understanding of the status of the stocks within the ICES Areas". WGScallop refer to planned work on the "Baie Des Seines/English Channel" stock. Earlier reports of the WGScallop refer to different 'stocks' within VIId & e:
					• 2015 WGScallop proposed the following potential stock units in the English Channel:
					  ○ Western Channel North – from Penzance to Bournemouth. This unit encompasses a region of the south Cornwall (Penzance – Falmouth) and the western part of the North Channel population that is characterized by slower growth compared to animals to the east or south.
					  ○ Eastern Channel North – from Bournemouth to Dover. This stock unit, although genetically the same as the western Channel, is typified by faster growth rates and shorter lifespan (although this may be a fishery induced artefact).
					• 2014 WGScallop referred to a greater number of smaller stock units in the English Channel such as Greenwich Bouy, Sussex and Bay of St-Brieuc.
					CEFAS refer to other English Channel stock areas, such as 'Inshore Cornwall' and 'Lyme Bay' (Bell *et al* 2014). It is therefore a key precursor to any scallop FIP that the stock unit is defined.
					There are clearly several proposed stock areas. These must be agreed by management and used as the basis for stock assessment.
					In the absence of a stock assessment or defined reference points (MMO are currently tendering for a Scallop Stock assessment in English Waters, which also seeks to define MSY - Evidence requirement R039), the MSC Risk Based Framework will be used to score PI 1.1.1.

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					Given the lack of stock assessment there are no material differences in understanding of stock status since the scoring of the fishery using RBF conducted in 2013 by Project Inshore. This concluded that: "Landings have increased recently, MLS is above the size at maturity suggesting that it is likely that the stock is above the point at which recruitment would be impaired (SG60a); However, no reference points have been identified (SG60b-). The application of the RBF to assess the stock status of scallops stocks estimated a high risk score. There is no harvest strategy in place for scallop at the unit stock level other than a minimum landing size. It is not clear how effective the minimum landing size is in protecting spawning potential. There are no conservation measures for scallop indicating high susceptibility to fishing and a subsequent high risk score."
	1.1.2	Stock rebuilding	N/A		PI1.1.1 probably scores less than 80 therefore PI 1.1.2 (rebuilding) should be scored. However, the conclusion in relation to stock status is more due to insufficient information and lack of defined MSY reference point. Once reference points are defined, as part of a more analytical stock assessment, it may become clearer whether an actual rebuilding plan is required.
Management	1.2.1	Harvest Strategy	N/A	<60	The MSC defines Harvest Strategy as "The combination of monitoring, stock assessment, harvest control rules and management actions". Some of these elements are in place for the English Channel scallop fishery but other are not. For example, there are some management actions including effort restrictions, limited licencing, and technical measures (minimum mesh sizes) but stock assessment is lacking as are adaptive management actions to provide responsive management. The lack of definition of stock boundary and the resulting uncertainty over which jurisdictional level to apply management controls is also a major weakness in the harvest strategy. Within 6nm of the English coastline, IFCAs may apply management controls which could be responsive to the state of the stock *if it was first demonstrated that the scallop populations within IFCA waters had sufficient biological integrity to be managed as a single stock*.
	1.2.2	Harvest control rules and tools	N/A	<60	The minimum size regulation is the main rule in place at the stock level. This may be effective in protecting spawning potential but is not responsive to changes in stock status in relation to reference points. There is no harvest control rule for scallops in the English Channel, neither at EU, UK or IFCA level. The main controls on exploitation – namely effort, gear and landing size restrictions do not appear to be

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					linked to an understanding of stock status and or not applied at the same spatial scale as the 'stock' therefore may not safeguard against over-exploitation.
	1.2.3	Information and monitoring	N/A	60-79	Data on landings, effort, fleet composition are available (SG60a); catch rate indicators are potentially available (SG60b); there are significant removals by fleets from other jurisdictions which are recorded (SG60c). There is also a reasonably good level of information on aspects such as productivity, growth rate and maturity for the scallops (certainly sufficient to carry out an MSC PSA risk based scoring exercise). Some information is available on stock structure, although this has not yet been used by management to define stocks.
	1.2.4	Assessment of stock status	N/A	≥80	If the MSC Risk Based Framework is used to score stock status (1.1.1) then a default score of 80 is applied for stock status (PI1.2.4).

Table A1.2: Simplified Scoring sheet – Principle 2

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
Primary Species	2.1.1	Outcome	No	≥80	There are no main primary species – at least when landings are referred to. A different conclusion may be drawn if *catch* composition is assessed. The target species comprise 98% of landings. Monks or Anglers comprise 1% of landings so would be regarded as minor. Stock assessment indicates that *Lophius piscatorius* in divisions 7.b–k, 8.a–b, and 8.d (southern Celtic Seas, Bay of Biscay) fishing mortality (up to 2014) is below the FMSY proxy and stock biomass (up to 2015) is above the MSY Btrigger proxy. All other primary species comprise less than 1% so would not need to be scored. However, other primary species are likely to be caught, such as sole and plaice. It will therefore be important to verify the catch composition of these to verify that they are not "main".
	2.1.2	Management	N/A	≥80	Any main primary species are (by definition of being primary) managed according to reference points and informed by stock assessment, in turn informed by appropriate levels of data collection. It is noted that the requirement for management strategy is caveated by "if necessary", therefore the score of SG80 for PI2.1.1 implies scoring of SG80 in PI2.1.2. Shark finning is not taking place. The final scoring issues (e) is new to the latest version of the MSC standard MSC CRv2) and requires that there is a review of alternative measures to reduce unwanted catches of unwanted main primary species. Given the conclusion of 2.1.1 that there are no "main" primary species, it follows that such a review is not required – at least to reach the SG80 scoring level. However, if a further review of catch composition (as opposed to landings) for 2.1.1 concludes that some primary species do represent more than 5% of the catch, then a review would be required to reduce this level of unwanted catch. It should also be noted that this scoring issue refers to the UoA - so there is clear potential for the fleet under assessment to also initiate regular reviews of alternative measures focused on the particular gear type.
	2.1.3	Information	N/A	60-79	Primary species are typically explicitly mentioned in the EU Data Collection Framework Requirements, are subject to regular ICES working group review and assessments, supported by sampling and survey. This is a good indicator that information will be adequate. Furthermore, there is good information about the level of the fleet activity.

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					It will be important to demonstrate that data on *catches* as well as landings are available, so that total mortality (including unobserved mortality) from the UoA maybe estimated. Without accurate catch composition data, then it may be concluded that the SG80 level is not met.
Secondary species	2.2.1	Outcome	Yes	≥80	A number of commercial secondary species (i.e. they do not have reference points) have the potential to be caught in scallop dredgers, such as turbot, brill, cuttlefish, brown crab. In addition, Project Inshore identified the following non-commercial discard species: Green shore crab (>80); Swimming crab (>80); Lesser spotted dogfish (60-80); Nursehound (60-80); Dragonet (>80); Green sea urchin (>80); Starry ray (>80); Smelt (>80); Ocean quahog (60-80). Finally, other benthic fauna species such starfish (a key predator of scallops) may also feature. From the *landings* composition, there do not appear to be any secondary main species – i.e. any secondary species with a commercial value do not comprise more than 5% of the landings. A different conclusion may be drawn if *catch* composition is assessed. If any of the secondary species referred to above were to feature more than 5% in the catches then the MSC RBF scoring exercise would be required (indeed an RBF exercise would be needed anyway if scores at the SG100 level are to be demonstrated). But given the high productivity of the species noted above, or the prospect of post capture survival, and the fact that encounterability and areal overlap may be lower there is a good chance that no high risk scores will be concluded. One note of caution, there are some ray species caught in scallop dredges. Some of these will be ETP (see 2.3.1) but some will be secondary (e.g. thornback ray). From the landings data it does not appear that any of these would be "main". However, if the catch composition exercise showed any of these to be "main" (especially as the lower threshold of 2% of catches may be applied for these less productive species), these may score lower in any RBF exercise. Finally, it should also be noted that any out of scope species (i.e. birds, mammals, reptiles, amphibians) which are caught will automatically be considered secondary main, regardless of the level of catch. It is therefore possible (although scallop dredges are not associated with interactions with these species) that there will be some out of scope species identified as secondary main for all gears. If any of these are below PRI without evidence of recovery, then there will need to be a demonstrably effective strategy in place between all MSC UoAs. Further analysis may be required before a full assessment; however, it is anticipated that the UoAs here would not be hindering the recovery of any out of scope species.

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
	2.2.2	Management	N/A	≥80	Following the conclusion from 2.2.1 – there are no main species, so scoring at the SG80 level is expected. Furthermore, a number of generic fleet management measures contribute to the management of secondary species – even where not designed specifically for that component. For example, limited licencing, technical measures (gear limits, minimum sizes), effort restrictions, spatial closures etc. all contribute to management of secondary species, bycatch limits, catch monitoring. Shark finning is not taking place. The final scoring issues (e) is new to the latest version of the MSC standard MSC CRv2) and requires that there is a review of alternative measures to reduce unwanted catches main secondary species. Given the conclusion of 2.2.1 that there are no "main" secondary species, it follows that such a review is not required – at least to reach the SG80 scoring level. However, if a further review of catch composition (as opposed to landings) for 2.2.1 concludes that some secondary species do represent more than 5% of the catch, then a review would be required to reduce this level of unwanted catch. It should also be noted that this scoring issue refers to the UoA - so there is clear potential for the fleet under assessment to also initiate regular reviews of alternative measures focused on the particular gear type. In addition, as any out of scope species unintentionally caught will be classified as secondary main there is a requirement for a review of alternative measures to minimise UoA related catches of these. The assessors are not aware of any such review having been carried out, however no obvious out of scope species have been identified for scallop dredge, so such a review may not be required to meet SG80.
	2.2.3	Information	N/A	60-79	Secondary species are typically subject to a lower level of monitoring, sampling, survey. However, the fleet are themselves highly monitored. The MSCs RBF would be used to inform the status assessment of any main secondary species. Information is likely to be adequate to enable this for any commercial fish species likely to be classed as secondary main – indeed many have some form of annual advice provided by ICES (albeit insufficient to warrant consideration as Primary species). Additionally, any out of scope species (bird, mammal, reptile or amphibian) will be considered as main, regardless of the level of catch. However, the conclusion above (2.2.1) is that this is not likely to be an issue in the scallop dredge fishery. But if any out of scope species do feature in the catch composition, then information would also be required to assess the impact of the UoAs – regardless of their status.

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					Given that the level of catches may be low, the perceived consequences to populations low, this may be a challenging requirement to meet. It will be important to demonstrate that data on catches as well as landings are available, so that total mortality (including unobserved mortality) from the UoA maybe estimated. This should include specific consideration of whether any out of scope species feature in the catch. Without accurate catch composition data, then it may be concluded that the SG80 level is not met.
ETP species	2.3.1	Outcome	No	60-79	An exercise should be undertaken to identify the ETP species in the area of the fishery with the potential to interact. Under MSC CRv2 the ETP list may differ from that in Project Inshore as not only is a wider range of international conventions included (including more listing bird species), but any out of scope species which are listed as vulnerable, endangered or critically endangered on the IUCN redlist are now classified as ETP species even if they are not protected by national or international legislation. In addition, Article 13 of Council Regulation (EU) 2016/72 which sets EU fishing opportunities for 2016 lists Prohibited Species. These should also be considered ETP. This includes a number of skate and ray species which are caught in demersal fisheries (such as starry ray -*Amblyraja radiata* – and common skate - *Dipturus batis*) and shark species, such as porbeagle. Mobile demersal gears such as scallop dredge are associated with wide range of non-target species which may include several ETP species – particularly those listed in (EU) 2016/72. As well as direct capture, scallop dredging activity may also indirectly impact ETP species such as skates and rays by damaging substrates and habitat that are important to reproductive phases as well as directly damaging egg cases for some species. Some habitat forming species may also be considered ETP, depending on the level of protection. Project Inshore noted that damage to horse mussel beds from scallop dredging may be considered under ETP. Difficult to determine whether fishery impacts are highly likely to be within national and international requirements for the protection of ETP species.
	2.3.2	Management	N/A	60-79	Although the Management Strategy PIs across Principle 2 typically require a 'Partial strategy' at the SG80 level. For the ETP management PI (2.3.2) there is a requirement at the SG80 level for a 'strategy'. In other words, the management threshold is higher for ETP than for other Principle 2 components. For ETP, management strategies should be designed to manage the impact of the fishery on the ETP component specifically. Project Inshore (in 2013) concluded that there were measures in place (i.e. scoring at the

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					SG60 level) but that no ETP management strategies (using the MSC definition) were in place for any fisheries. The assessors are not aware of any regular review of the potential effectiveness and practicality of alternative measures to minimise UoA related mortality of ETP species (unlike for Primary and Secondary, for ETP this review of alternative measures for does not include the caveat "main" at the SG80 level). Therefore SG80 is not met for scoring issue e. Finally, consideration must be given to additional management measures applied at the level of the UoA. Given Project UK Fisheries Improvement is inclusive all UK vessels using the defined gear type, no such fleet specific additional measures are included for consideration here.
	2.3.3	Information	N/A	60-79	For most ETP species there is a reasonable level of information – with species distribution, some trend information coupled with good information on fleet activity and good understanding of the level of interaction with the fleet. Although not specifically focussed on the UoA it is still relevant to point to the work that has been undertaken across all fleets at a European level to improve understanding of ETP interactions – such as EU Regulation 812/2004 laying down measures concerning incidental catches of cetaceans in fisheries, which stipulates the level of monitoring required. Given the definition of certain ray species as ETP as a result of the prohibition under Council Regulation (EU) 2016/72, it will be important to address the UoA related mortality to these. This will only be possible with improved catch composition data – with sufficient coverage to pick up the level of capture. The need for improved catch composition data – already highlighted for 2.1.3 and 2.2.3 is repeated here. In addition, once a fuller ETP species list is compiled, it will be important to further consider the level of knowledge of the scale of impact on this wider species list.
Habitats	2.4.1	Outcome	No	<60	**Commonly encountered habitats:** Scallop inhabit on or partially buried within surface sediments, preferring sand, gravel or pebble/cobbles. **VMEs:** VMEs within the UoA includes reefs and seagrass beds. **Minor habitats:** These need only be scored at SG100 level so are not considered in the pre-assessment.

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					Dredge: There is general consensus amongst the scientific community and from previous MSC assessments that dredges are have the potential to cause considerable impact on benthic habitats. The key question for an MSC assessment is the likelihood that this impact is serious and irreversible, as defined by the standard. Additionally, dredges gain significant attention from stakeholders; which would be expected during a full assessment of this UoA. That said, some dredge fisheries have been able to demonstrate and evidence base and management regime such that the gear is able to meet the MSC standard. The level of damage is expected to vary depending on the type of sediment encountered. On soft sediments, dredges can scrape or furrow, and cause re-suspension of the sediment. On rocky habitats, physical structures can be removed and damaged. The latter habitat is felt to be impacted to a higher degree and less able to recover. Of particular concern, VMEs such as reef structures are at high risk from dredge damage, where recovery times are often long due to the slow growing and long living nature of corals and other vulnerable organisms such as Sea Pens. In order for a dredge fishery to achieve the pass mark in relation to habitat status it will therefore be necessary to construct a robust and scientifically sound argument, backed up by good levels of information (particularly focusing on the extent to which the UoA is accurately targeting softer sediments and avoiding hard, rocky substrate) and an appropriate management strategy. In practice this is likely to mean building in appropriate mitigation into the management plan, on-going research and routine monitoring.
	2.4.2	Management	N/A	60-79	Effort restrictions (on days at sea), gear restrictions and certain spatial closures are considered as 'management measures'. Since the time of the 2013 Project Inshore scoring exercise the Marine Conservation Zone Project has been completed. This was set up in 2008 and led by the JNCC and Natural England to identify and recommend Marine Conservation Zones (MCZs). To date 50 sites were designated within English waters. Additionally, European Marine Sites (SACs & SPAs) are designated throughout the assessment area. With the developing work on MCZs and on-going work on habitat mapping, it can be concluded that at least a partial 'strategy' is in place through the combination of International, EU, UK and local management regimes (i.e. IFCA vessel size and spatial restrictions). The key question is whether this is

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					likely to be sufficient to achieve the status / outcome level of SG80 for habitats, especially in the context of the likely low scores for dredge in 2.4.1. In 2013, DEFRA announced a revised approach to assessing impacts of activities on the features for which a site is designated. High priority features require the relevant IFCA introduces management measures to prevent damage. There is now evidence of some of the key measures within the strategy being implemented in order to protect at-risk habitats (e.g. restrictions on dredge activity within the IFCA areas and a ban on shellfish dredging within the designated European Marine Site at Lyme Bay). However, this is less clear for offshore areas, where there are fewer restrictions on vessel size and activity. The process does include assessments for both inshore and offshore habitats, public consultation and regular monitoring. No direct evidence of VME compliance has been seen, though the presence of on-board VMS systems mean evidence is likely to exist. Finally, it should be noted that the habitats management PI requires "information directly about the UoA". Therefore, the low outcome status score (PI2.4.1) management may need to be informed by information on the impacts of the UoA. This suggests that, for more impacting gears UoA specific information is required.
	2.4.3	Information	N/A	60-79	High degree of knowledge in relation to habitat distribution within English inshore and offshore waters - including vulnerable habitats. Much of this data is now combined and presented at The EMODnet Seabed Habitats website (http://www.emodnet-seabedhabitats.eu), which provides a single portal for the outputs of the EUSeaMap and MESH projects and includes a seabed habitats mapping portal. This mapping portal also enables OSPAR priority habitats (VMEs) to be mapped (which supports OSPAR qualifying MPAs, of which there are 267 in UK waters). There is also a high degree of knowledge on the spatial and temporal patterns of fleet operations (in particular for vessels over 15m (now 12m) via VMS) but increasingly inshore vessel activity is also being reliably mapped through surveillance data or dedicated inshore projects to map fleet spatial patterns. Finally, there is a good level of research information into the impacts of dredge onto different seabed types and the resulting rates of recovery.

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					It should be noted that much of the information requirements are phrased in terms of 'adequacy'. Therefore, the low outcome status scores for dredge (in PI 2.4.1) may imply that a greater level of information on the impacts of the UoA might be necessary, than for other gear types which may achieve a higher score. As mentioned above in relation to habitat management PI (2.4.2), it should also be noted that the habitats management PI requires "information directly about the UoA". This suggests that though the broad scale level of information of habitat impact may be sufficient for some gears, for more impacting gears, such as scallop dredge, UoA specific information is required.
Ecosystem	2.5.1	Outcome	No	60-79	Project Inshore concluded that "Scallop dredging has a significant impact on habitats and biota, especially biogenic structures. Overall effects are likely to be somewhat less than benthic trawls since fishing is more clearly targeted on scallop beds. Actual impact will be highly site specific". Resulting in a score of SG60-79. However, the most likely cause of ecosystem impact relates to the action of the dredge on the substrate. Given that the habitat PIs examine the structure *and function* of those habitats, it follows that the ecosystem impact of that damage may already have been addressed under PI2.4.1. The relatively precautionary level of scoring in the Project Inshore exercise reflects the likely level of stakeholder focus on this issue. Therefore, in preparation for full assessment it will be important to provide evidence in support of a conclusion of SG80 for 2.5.1. In the view of this assessor, if the issues identified under 2.4.1 and 2.4.2 are adequately addressed to reach the SG80 level, the it would be expected that 2.5.1 would also meet the SG80 level. Without those issues being addressed then at score of less than 80 is possible.
	2.5.2	Management	N/A	≥80	There is an increasing focus on ecosystem management at the EU CFP and ICES advisory level. Recent evidence for this includes the issuing of ICES of mixed fisheries advice and proposals for mixed fisheries multi-annual management plans. Although these do not include scallop dredging, they do at least demonstrate that within the overall management system more integrated ecosystem advice is being built into fisheries management. In addition, there is considerable focus at an EU level of the marine Ecosystem. For example, the EU Marine Strategy Framework Directive requires member states to assess the current state of their seas against agreed targets for 'good environmental status' and to establish both a programme of measures to meet these targets and a monitoring programme to measure progress.

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
	2.5.3	Information	N/A	≥80	The English Channel is a well-studied ecosystem. Good quality information is available for key elements e.g., abiotic & biotic productivity modelling, plankton recording; CEFAS trophic work, habitat mapping & fish stock assessment. The impacts of fisheries on these elements is adequately understood e.g., habitat damage, biomass removal, species size & maturation studies, etc. And the nature of impacted communities is understood, e.g. target and bycatch spp. (composition, volume & function), ETP e.g. seal & skates / rays / birds are known; Consequences can be inferred from gear studies, impact assessments (and key elements in some cases), but not many specific studies; Some spatial data, seabird and cetacean surveys, WQ assessments, hydrographic and oceanographic studies. Biodiversity assessments can show ecological risks. Information covers both fisheries-dependent and fisheries-independent variables.

Table A1.3: Simplified Scoring sheet – Principle 3

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
Governance & policy	3.1.1	Legal and customary framework	N/A	≥80	The detail of scoring of this PI will depend upon the definition of the scallop stock. Without this, it is difficult to describe the legal and customary framework, other than in a more generic way. For example, if the stock is defined as "Channel" then the bilateral / EU elements of the management framework is key, whereas if a stock is defined as more inshore, then the legal framework surrounding UK management – including IFCAs becomes more relevant. Without a local stock definition, the following assumes a "Channel" stock. The English Channel scallop fishery occurs in the waters of (and is fished by vessels of) the EU – both UK and French waters. There is therefore a need in the MSC requirements of both an "effective national legal system" and also "organised and effective cooperation with other parties" (scoring issue a). Effective and organised cooperation within the EU occurs through the Common Fisheries Policy (Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy). No coastal states cooperation is required. In addition, scientists from EU member states collaborate effectively in the provision of ICES stock assessments and advice which underpins management – although for scallop this is a relatively recent innovation (ICES WGScallop). Within the UK there is an effective national legal system implementing both the CFP and domestic fisheries law. At both a national and EU level there is an effective mechanism for the resolution of legal disputes (scoring issue b). Finally, no "rights created explicitly or established by custom of people dependent on fishing for food or livelihood" have been identified (scoring issue c). As a result, scoring of this PI is likely to be at the SG80 level or above. The decision of the UK electorate on June 23, 2016 to leave the European Union (i.e. 'Brexit') looks likely to begin a process in which the UK will repeal key EU legislation - perhaps including the CFP, subsidiary laws and marine environmental legislation - although with the potential to absorb parts of EU legislation directly into UK legislation. Scoring in this pre-assessment is based upon the situation at the time of writing and makes no predictions about how the process will proceed. However, at the time of any full assessment it will be important to demonstrate that there is still "organised and

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					effective cooperation with other parties" to deliver management outcomes consistent with MSC Principles 1 & 2.
	3.1.2	Consultation, roles and responsibilities	N/A	60-79	Typically, within the EU, the process of management is relatively clear, transparent and well understood and the roles and responsibilities of those involved are clearly defined and understood. For example, science is coordinated at an ICES level, with input from EU member state scientists, such as from CEFAS (in England). Scientific advice is reviewed at an EU level by STECF. And fishing opportunities are set annually by the European Council informed by a proposal from the European Commission (i.e. Council Regulation (EU) 2016/72 of 22 January 2016 fixing for 2016 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters). Enforcement of the quota clearly lies with the MMO (in England) other member states if outside UK waters (in close coordination with MMO and coordinated and reviewed via the European Fisheries Control Agency (EFCA)). The process of fisheries representation is well established and representative bodies (such as NFFO in England) are formally involved in the consultative processes of management through Regional Advisory Councils (i.e. the North Western Waters Regional Advisory Council). There are examples of extensive consultation processes, such as on the latest reform of the CFP and DEFRA consultations on a revised English Scallop order: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/82327/110826-scallops-condoc.pdf . But, in some areas there is less clarity of roles and responsibilities for non-pressure, non-quota stocks such as scallop. At present, (as noted in PI1.1.1) there is a lack of clarity over management responsibility for stock management. The fundamental cause of this is the lack of definition over stock boundaries. For example, some management steps are applied at an EU level (i.e. effort regime and technical measures), some are applied by the French for their vessels on the southern side of the Channel, some are applied at the UK level by DEFRA / MMO (i.e. the English Scallop Order) and others are applied at the IFCA level (further gear restrictions and spatial restrictions). In spite of this, if stock status was to decline (or prior to stocks being defined within management) if catch rates were to fall, it is not clear which jurisdiction would be primarily responsible for reducing exploitation rates. In

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					seeking to develop management proposals it is unclear whether the UK should lead on this, or the IFCAs or whether this should be undertaken in an EU / bilateral forum (with France). The lack of clarity of jurisdiction over stock management has knock on effects in other areas of responsibility – such as science and stock assessment. At present, it appears CEFAS is leading on the science – and participating in WGScallop, however the fact that MMO are currently tending for stock assessment (Evidence requirement R039) implies this is not fixed. And should a stock be defined within IFCA waters, it seems likely that the responsibility for management will fall on the IFCAs.
	3.1.3	Long term objectives	N/A	≥80	This PI seeks to ensure that "Management Policy has clear long-term objectives to guide decision-making that are consistent with MSC fisheries standard and incorporate the precautionary approach". This PI assesses objectives contained in high level or broader government policy, rather than on fishery specific operational objectives. The overarching objectives which are binding on all subsidiary pieces of fisheries legislation are those defined in the EU Common Fisheries Policy Legislation. Article 2 of the CFP legislation sets out these objectives. These are explicit and in line with the MSC Principles & Criteria. There is also explicit mention of the Precautionary Approach and the Ecosystem based approach to fisheries management. At the UK level, the Marine & Coastal Access Act 2009 which establishes the MMO, states that the organisation must operate in accordance with the Government's principles of sustainable development. In 2009 the UK Government (including the devolved administrations) published a set of High Level Marine Objectives within "Our Seas: A Shared Resource" which further details these high-level objectives. These high-level objectives at both an EU and UK wide level which guide management decision making are fully consistent with the MSC fisheries standard and would support scoring at the SG80 level.
Fishery specific management system	3.2.1	Fishery specific objectives	N/A	60-79	Fishery specific objectives under the scallop order (SI 2283: The Scallop Fishing (England) Order (2012)) do not address all aspects of principles 1 & 2 and therefore do not achieve 80. Likewise, objectives relating to the Western Waters effort regime (COUNCIL REGULATION (EC) No 1954/2003) are not clearly stated. Currently the combination of these, plus the binding nature of the high level objectives described in PI3.1.3 mean that objectives are implicit.

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
	3.2.2	Decision making processes	N/A	60-79	Typically within EU fisheries the process of decision making is as follows, EU member states monitor fisheries and collect fisheries data (as per the requirements of the EU Data Collection Framework). This forms the basis to enable national scientists to contribute to the stock assessment process within the ICES working group structure; annual ICES advice is then formulated by the ICES Advisory Committee (ACOM); EC STECF then review the advice; and EU Fishery Ministers decide upon a TAC. However, for non-quota (non-pressure) stocks, with no long-term management plan the process is less clear. There is no management plan in place for scallops. The lack of definition of stock boundaries and the resulting lack of clarity over management responsibility directly impacts on the clarity of the decision-making process. For example, some management decisions are taken at an EU level (i.e. effort regime and technical measures), some by single member states (i.e. French regulations in southern channel and DEFRA / MMO (i.e. the English Scallop Order) in the Northern Channel Waters) and others are taken at the IFCA level (further gear restrictions and spatial restrictions). There is a lack of clarity about the frequency, scope and guiding objectives of these decisions. Even in the present situation, decision making processes probably meet the minimum (conditional) requirement for MSC, insofar as there are informal decision-making processes which respond to the fishery specific objectives (even if, as noted above, those objectives are implicit and poorly defined). Similarly if research, monitoring, evaluation or consulation threw up serious issues, these would probably be responded to in the management decision making process – either at an IFCA, UK or EU level.
	3.2.3	Compliance and enforcement	N/A	≥80	Monitoring, Control and Surveillance (MCS) is coordinated across EU member states and the EU waters. This enables vessels of different member states to be subject to appropriate levels of enforcement when fishing or landing catch in another member state. The European Fisheries Control Agency (EFCA) coordinates Joint Deployment Plans (JDP) to review and enhance the deployment of fisheries control across Europe. A number of over-arching pieces of legislation set out the EU control regime, such as: (i) Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy and; (ii) Council Regulation (EC) No 1005/2008 of 29

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					September 2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing. In general, the MCS systems in Northern European waters are highly developed. All vessels over 12m are required to have VMS, electronic logbook reporting is in place along with additional controls such as the 'Registration of Buyers and Sellers' (and the resulting requirements for sales notes), designated landing ports and inspection on land and at sea. There is also a high level of enforcement coverage in the UK through MMO in England (in association with the Royal Navy Fishery Protection Squadron) and the IFCAs within their 0-6nm jurisdiction. Within the UK there is an effective judicial system to impose incremental sanctions for non-compliance with fisheries management measures. There is no evidence of systematic non-compliance. Overall, it is expected that this would enable scoring at least at the SG80 level.
	3.2.4	Management performance evaluation	N/A	60-79	Fisheries with long term management plans are subject to the greatest level of evaluation and the highest degree of internal review, from the likes of ICES and STECF and external scientists particularly in benchmarking. However, no such management plan is in place for scallops. In spite of this it is possible to point to some evaluations of relevance to the fishery: • European Commission Review of fishing effort management in western waters SEC (2010) 1367 • STECF Reviews of the Western Waters Effort regime (i.e. STECF 2014) • DEFRA Consultation on the evidence base for a proposed new English Scallop Order (April 2011) sets out a number of ises for the fisheries which the new legislation seeks to address. This implies a certain degree f review has been undertaken to inform this: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/82327/110826-scallops-condoc.pdf • ICES WGScallop now undertakes some review of scallop fisheries within the ICES area – although the focus of this is on the development of stock science. Other key aspects of the management system are also evaluated, such as monitoring control and surveillance.

Component	PI	Performance Indicator	RBF required (y/n)	Likely scoring level	Rationale/ Key points
					In spite of this, there is no fishery specific, holistic management evaluation which gives consideration to Pi and P2 aspects.

Appendix 2 References

Bell, E. D., Palmer, D. P., Vanstaen, K. R. (2014): Cefas Red Bag Scheme Final Report. Issue date: 2nd July 2014. Cefas contract report MB005A.

Beukers-Stewart, B. D. & J. S. (2009). Principles for the Management of Inshore Scallop Fisheries around the UK. University of York.

COUNCIL REGULATION (EC) No 1954/2003 of 4 November 2003on the management of the fishing effort relating to certain Community fishing areas and resources and modifying Regulation (EC) No 2847/93 and repealing Regulations (EC) No 685/95 and (EC) No2027/95

Council Regulation (EC) No 1005/2008 of 29 September 2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing.

Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy

Council Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy

Council Regulation (EU) 2016/72 of 22 January 2016 fixing for 2016 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters

Dapling T.M., Clark R.W.E., & Vause B.J., Medley, P., C.R.C. Carleton (2010). "Navigating the Future". Developing Sustainable Inshore Fisheries. The UK Inshore Fisheries Sustainability Project"

ICES. 2016. Report of the ICES Scallop Assessment Working Group (WGScallop), 3–7 October 2016,Aberdeen, UK.ICES CM 2016/ACOM:24. 39pp.

Howarth, L. M. & Stewart, B. D. (2014) The dredge fishery for scallops in the United Kingdom (UK): effects on marine ecosystems and proposals for future management. Report to the Sustainable Inshore Fisheries Trust. Marine Ecosystem Management Report no. 5, University of York, 54pp.

Pawson, M. G. (1995). Biogeographical Identification of English Channel Fish and Shellfish Stocks. Fisheries Research Technical Report, no. 99. Ministry of Agriculture Fisheries and Food, Directorate of Fisheries Research. pp 9 – 10.

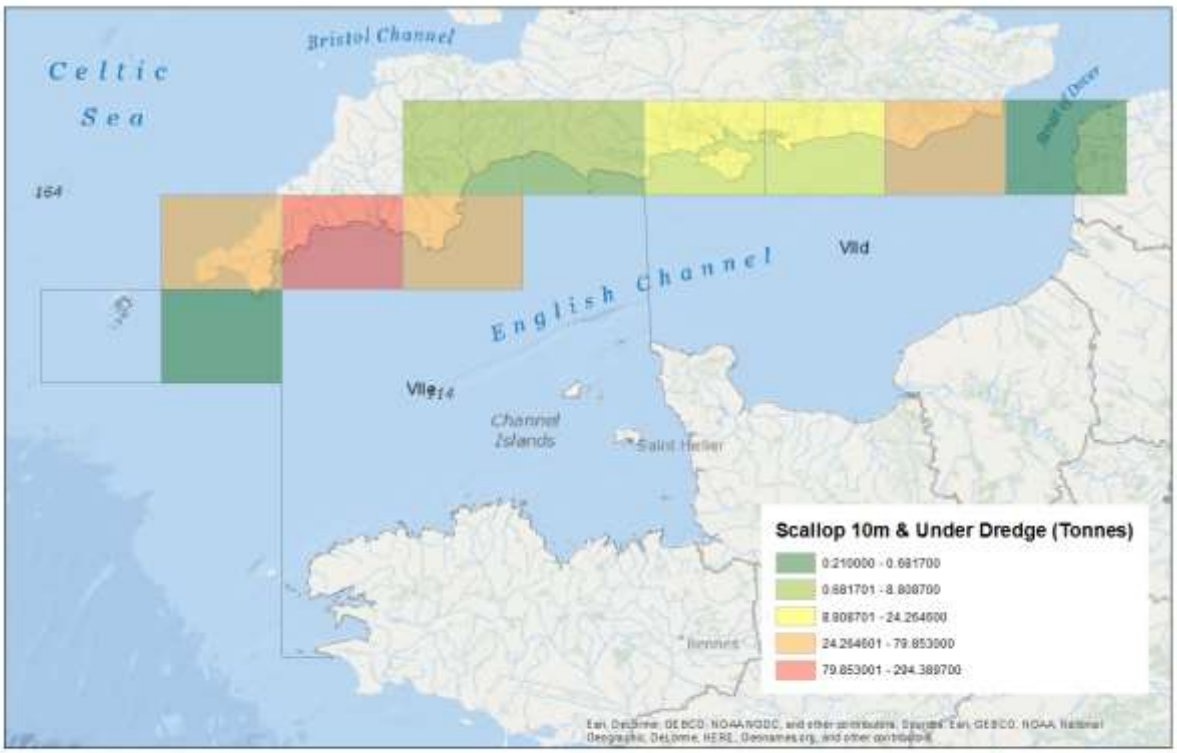
Southall T. D, Cappell R, Hambrey J.B, Hervas A, Huntington T.C , Medley P.A.H, Nimmo F, Pfeiffer N & Tully O.(2013). Project Inshore Stage 2 Report. Prepared for Seafish by Food Certification International Ltd. Available for download (link verified October 2016): http://www.seafish.org/media/921067/2013.07.23_project_inshore_s2_v5.pdf

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of Fishing Effort Regimes in European Waters - Part 2 (STECF-14-20). 2014. Publications Office of the European Union, Luxembourg, EUR 27027 EN, JRC 93183, 844 pp.

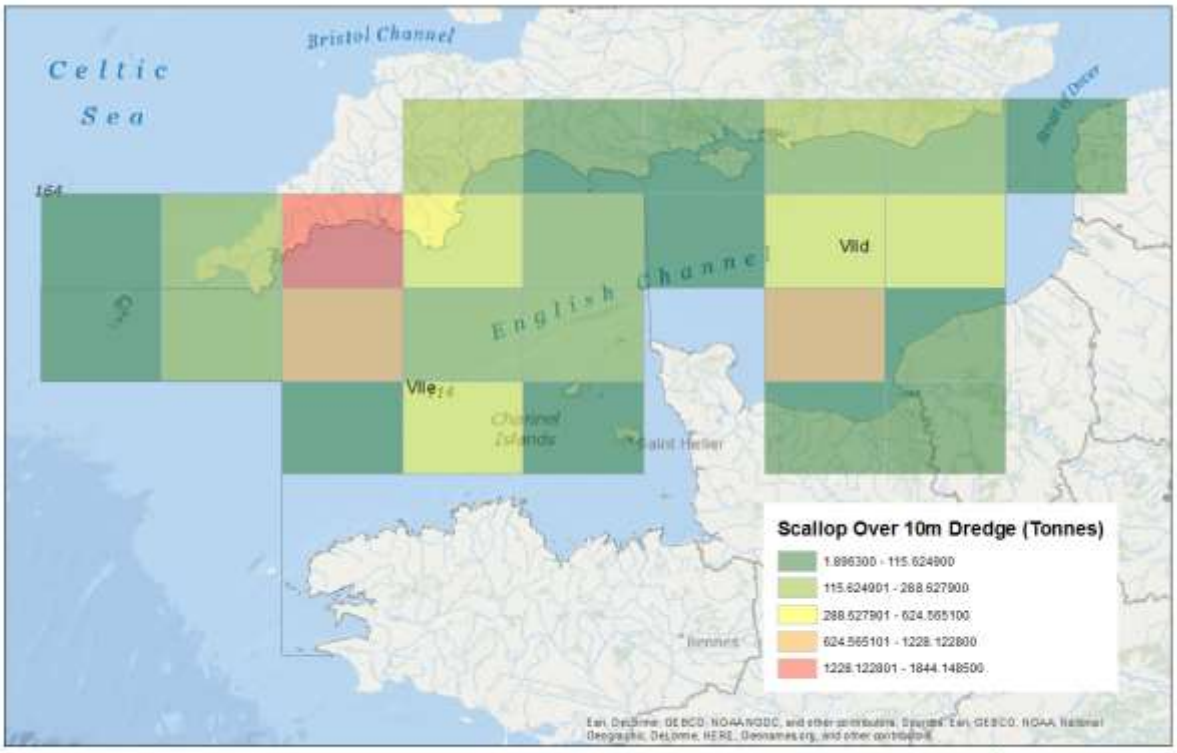
The Scallop Fishing (England) Order (2012). Statutory Instrument No. 2283 SEA FISHERIES, ENGLAND CONSERVATION OF SEA FISH

Appendix 3 UoA Spatial Patterns

Scallop Dredge – Under 10m



Scallop Dredge (over 10m)



Scallop Dredge (combined)