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Marine Stewardship Council (MSC) 1st Surveillance Audit Report

Cornwall Sardine

on behalf of
CSMA

prepared by
Control Union (UK) Limited

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1 Executive Summary

This is the Year 1 surveillance report for the Cornwall Sardine fishery, for ICES Subarea 7 sardine (*Sardina pilchardus*), caught using ring nets there is currently one UoA in this certification.

The assessment team consisted of Hugh Jones with a responsibility for all aspects of this audit. This surveillance evaluates the fishery against the version 2.01 of the MSC Fisheries Standard, following the MSC Certification Process version 2.3. This fishery has been certified since 2010, and is in its third cycle.

The site visit took place remotely in the week of October 2nd 2023. All stakeholders were welcome to submit written comments ahead of the site visit and / or to request a meeting with the assessment team during the site visit. A separate MSC workshop in Newlyn Cornwall, held week 25th September, was attend by all principal stakeholders and the assessment team as part of the fishery being awarded a MSC Ocean Stewardship Grant. The last day of information received was 13th October 2023.

The stock remains in good health and above proxy reference points. The HCR for the stock is set at the UoA level whilst developments in the formal HCR at the ICES level continue. Progress against the condition on PI 1.2.4 are given in Section 4.5.1. There is no significant change to the management of the fishery since certification with reflection to Principle 1 and there is no need to update any Performance Indicator.

The latest catch profile information from the fishery maintain the image of the clean nature of the fishery. There is new evidence of gear and technological developments in the fishery including REM, and net designs. The trials and the bycatch workshop held by CSMA are accounted for in the rescore of PI 2.3.2e in this report. Whilst no change of score is required the evidence base is updated. A change in rationale may be due as result of the recent seagrass interaction trials but as this report is yet to be published this is not warranted yet. There is no other significant change to the management of the fishery since certification with reflection to Principle 2 and there is no need to update any other Performance Indicator.

There is no significant change to the management of the fishery since certification with reflection to Principle 3 and there is no need to update any Performance Indicator.

CU(UK) confirms that Risk Based Framework (RBF) methodology was not used for this surveillance audit.

CU(UK) confirms that this fishery remains in scope.

CU(UK) confirms that the fishery remains in conformity with the MSC Fisheries Standard and should maintain certification.

2 Report Details

2.1 Surveillance information, as per the announcement

Table 1. Surveillance information

1	Fishery name	
Cornwall sardine fishery		
2	Unit(s) of Assessment (UoA)	
	Species	Sardine (<i>Sardina pilchardus</i>)
	Geographical range of the fishery	FAO area 27 ICES Divisions 7e and f
	Fishing gear	Ring nets (purse seine)
	Stock	Sardine (<i>Sardina pilchardus</i>) in Subarea 7 (Southern Celtic Seas, and the English Channel)
	Management System/s	The Cornwall Sardine Management Association, operating under laws of the United Kingdom and under the fishery agreement with the European Union.
	Client group	Cornish Sardine Management Association (CSMA)
	Other Eligible Fishers	None
3	Date certified	Date of expiry
28 th August 2022		27 th August 2027
4	Audit type and number	
Year 1 surveillance audit		
5	Surveillance level	
Surveillance level 3, off-site.		
<p>The fishery has a single condition (Principle 1 - PI 1.2.4) and is in its 3rd certification cycle. Information on the condition is being made available by CEFAS who are the UK fisheries body and located remote from the client fishery. All information from them and ICES can be accessed remotely. All catch information in past years has been supplied by the fishery in the form of electronic transfer. Based on the guidance (G7.29.4.b & 7.29.6.c) CU UK concluded that it will be able to access the required information remotely and that it can confirm veracity of the information. Furthermore, in the week prior to the site visit the team leader will attend a MSC workshop onsite</p>		

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with the client and stakeholders as part of the client winning a MSC grant for ETP best practice. This workshop will allow stakeholders an additional chance to speak with the assessment team as required.

6 Proposed team leader

Name	Dr Hugh Jones
Areas of responsibility	Team Leader, Principle 1/2/3, Traceability
Competency criteria (Annex PC)	<p>Dr Hugh Jones has a PhD in ecotoxicology in fish and marine ecosystems and strong background in marine research including publications and reports environmental risk assessments and fisheries research. Prior to joining CU UK, he was employed as a fisheries scientist in the development of an empirical harvest strategy for commercial abalone fisheries and fisheries assessments of estuarine bivalves. This included work on population metrics (recruitment, growth), harvest dynamics (catch rates, market selectivity), and the use of fine scale geospatial techniques as performance measures to assess stock sustainability.</p> <p>Hugh has published peer reviewed works on the trophic pathways of estuarine food webs and prey abundance in relation to environmental conditions. His work includes analysis of benthic abiotic and biotic attributes which determine the functional ecology of fish species. He has secured research funding for ecological studies of fish populations in relation to climate change, which consider the coupling between demersal and pelagic pathways. He has published research reports into the spatial variability of recruitment of commercially fished benthic species and its impact on community dynamics.</p> <p>Dr Jones has completed the Fishery Team Leader MSC training modules on the MSC Fisheries Standard v2.01, including Summary of changes v2.2 and Overview of changes v3.0, as well as ISO 9001 training, has undertaken multiple MSC assessments in the last 5 years, including for this fishery, thus meeting the Table PC1 requirements for team leaders. Hugh has more than 8 years experience of fishing impact on ecosystem dynamics, including ecosystem surveys and bycatch sampling in bivalves / gastropod fisheries. In addition he has more than 3 years experience as a Principle 2 assessor with MSC projects. Also, based on Hugh's earlier experience of auditing of this fishery and responsibility for Principle 1, CU UK is confident that Hugh meets Table PC3.1-2 Competencies and Qualification requirements for Principle 1 and, therefore, meets the MSC FCP v2.3-7.29.14.2.b requirement in full.</p> <p>Hugh has also passed the Traceability module (Table PC3.6 criterion) and meets Table PC3.5 criterion "Current knowledge of the country, language and local fishery context", having more than 2 years' experience with this fishery. The client speaks English which is Hugh's native language.</p>
Conflict of interest in relation to this fishery	No conflict of interest has been identified for this fishery
On-site or off-site	Off-site
CV	CV available on request

7 Proposed team members

None – MSC FCP v2.3 - 7.29.6.2 In the 2nd and subsequent certification periods, a reduced team of 1 team member may be used if the UoA has conditions associated with only 1 Principle, or no conditions.

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8	Audit time and location
	<ul style="list-style-type: none"> • Remote site visit with interviews available to stakeholders in the week 3rd October 2023 • Opening meeting 3rd October 2023
9	Assessment and review activities
	<p>During the audit, Control Union (UK) Limited (CU UK) will communicate with the client and any relevant stakeholders and use any available up to date information to assess and review:</p> <ul style="list-style-type: none"> • Any changes to the information provided in the Scope Declaration; • Any changes to the UoA(s) and its management; • Any personnel changes in science, management or industry and their impact on the management of the UoA(s); • Progress against the single condition on PI 1.2.4 will be evaluated; • Any potential changes to scientific information, including stock assessments; • Any changes affecting harmonization of overlapping fisheries; • Any developments or changes within the UoA(s) that affect traceability and the ability to segregate MSC from non-MSC products; • Any other significant changes in the UoA(s); • Catch / observer and MCS records will be reviewed during the audit for the past season 22/23
10	Stakeholder opportunities
	<p>CU UK would like to welcome anyone who would like to participate in the site visit. All interested stakeholders are encouraged to contact CU UK by email (stakeholderfishuk@controlunion.com), telephone or post at the below number and address:</p> <p>Control Union (UK) Limited, 2nd Floor, 56 High Street, Lymington, SO41 9AH, United Kingdom</p> <p>Tel: +44 (0)1590 613007</p> <p>Stakeholders are encouraged to provide information either through the MSC stakeholder input form or by arranging for a meeting with the assessment team in the week of the audit.</p> <p>Please note that CU (UK) will accept stakeholder input only if submitted using the aforementioned template, or if raised at the site visit. A key purpose of the site visit is to collect information and to speak to stakeholders with an interest in the fishery. To achieve a robust outcome from this consultative approach, we rely heavily on participation of a broad range of stakeholders with a balance of knowledge of the fishery. We encourage any stakeholders with experience or knowledge of the fishery to participate in these meetings.</p> <p>All members of the team are available to meet with stakeholders remotely.</p> <p>Should any stakeholder wish to meet the team in person, this can be arranged. Remote meetings can also be arranged via telephone conferencing or Skype, or written submissions made to the above-mentioned email addresses.</p> <p>For information on how stakeholders can participate in this fishery assessment, please refer to the MSC's 'Engage with a fishery assessment' webpage.</p> <p>No modifications were made to the assessment tree.</p> <p><i>Please note that stakeholders must provide objective evidence and references in support of any claims or any claimed errors of fact.</i></p>

Comments may remain unattributed. Furthermore, information that cannot be shared with any other stakeholder will not be referenced in the assessment and cannot be used in determining the outcome of the fishery's assessment nor used as a basis for an objection.

Stakeholders may raise issues with the team in confidence for the team to consider at the site visit, but any confidential information cannot be used in scoring unless in compliance with confidentiality requirements.

Information can be kept confidential if it is restricted to financial transactions about certification, the financial affairs of individual companies or information that may lead to this information being known, or information that is the subject of relevant national privacy or data protection legislation in the assessed fishery's country.

2.2 Version details

Table 2. Fisheries program documents versions

Document/Assessment Tree	Version number/Type
MSC Fisheries Certification Process	Version 2.3
MSC Fisheries Standard	Version 2.01
Assessment tree	<i>Default</i>
MSC General Certification Requirements	Version 2.5
MSC Surveillance Reporting Template	Version 2.2

3 Update on the fishery

3.1 Unit(s) of Assessment (UoA)

CU UK confirms that the fishery under assessment is within the scope of the MSC Fisheries Standard (7.4 and 7.5 of the MSC Fisheries Certification Process v2.3):

- The target species is not an amphibian, reptile, bird or mammal (FCP v2.3. 7.4.8.1);
- The fishery does not use poisons or explosives (FCP v2.3 7.4.8.2);
- The fishery is not conducted under a controversial unilateral exemption to an international agreement (FCP v2.3 7.4.8.3);
- The client or client group does not include an entity that has been successfully prosecuted for a forced or child labour violation in the last 2 years (FCP v2.3. 7.4.8.4);
- The client or client group does not include an entity that has been convicted for a shark finning violation in the last 2 years (FCP v2.3 7.4.8.5);
- The fishery has in place a mechanism for resolving disputes, and disputes do not overwhelm the fishery (FCP v2.3 7.4.8.6);
- The fishery is not an enhanced fishery as per the MSC FCP v2.3 7.4.8.7 and
- The fishery is not an introduced species-based fishery as per the MSC FCP v2.3 7.4.8.8).

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CU UK also confirms the following:

- That the client group has submitted the completed 'MSC At Sea Labour Eligibility Requirements Reporting Template' prior to the start of this assessment.
- That there are no significant changes to the management system to report this year.
- That there are no significant changes to relevant regulations to report this year.
- That there are no changes to the personnel involved in science, management or industry to report this year that would result in significant changes to the approach taken to managing the fishery.

The current Unit of Assessment (UoA) is given in Table 3.

Table 3. Unit(s) of Assessment (UoA)

Species	Sardine (<i>Sardina pilchardus</i>)
Geographical range of the fishery	FAO area 27 ICES Divisions 7e and f
Fishing gear	Ring nets (purse seine)
Stock	Sardine (<i>Sardina pilchardus</i>) in Subarea 7 (Southern Celtic Seas, and the English Channel)
Management System/s	The Cornish Sardine Management Association, operating under laws of the United Kingdom and under the fishery agreement with the European Union.
Client group	Cornish Sardine Management Association (CSMA)
Other Eligible Fishers	None

3.2 Vessel list

Table 4. Vessel list 2021. ^ vessels did not fish the UoA in 2022 but remain part of the UoA. Strikethrough the vessel has been sold and no longer part of the UoA. * This is the tugboat for Galwad-Y-Mor, used to close the purse seine and for manoeuvring in the dock. She is also used to assist in transport of fish from Galwad-Y-Mor to dock.

Vessel name	Home port	Operator	Vessel length (metres)	Port letter number	
Pelagic Marksman	Newlyn Glinski	Mark Powell	14.96	SS774	
Lyonesse	Newlyn	Sam Lamborne	11.99	PZ81	
Galwad-y-Mor	Mevagissey	Chris Blamey	11.89	FH76	
Resolute	Mevagissey	Nick Hitchens	Oceanfish	FY119	
Mayflower	Newlyn	Nick Hitchens		14.0	PZ181
Vesta	Newlyn	Peter Bullock		14.95	PZ183
Asthore	Newlyn	Peter Bullock		14.95	PZ182

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Vessel name	Home port	Operator		Vessel length (metres)	Port letter number
Charlotte Clare	Plymouth	Thomas Pascoe	Interfish	14.95	PH660
Rachel Ann [^]	Plymouth	Richard Chamberlain		14.95	PH770
Nicola May	Plymouth	Jordan Kay		14.98	PZ660
Celtic Dawn [^]	Mevagissey	John Hunkin		13.45	FY10
Serene Dawn	Newlyn	David Pascoe		11.86	PW156
Golden Harvest	Newlyn	Danny Downing		14.90	PZ63
Pride of Cornwall [^]	Newlyn	Danny Downing		9.90	SS87
Girl Rachel *	Mevagissey	Peter Blamey		9.95	PW77

3.3 Principle 1

3.3.1 Catches

Catches by all fleets are shown in Table 5 below with the UoA catches from 2017 onwards also shown. UoA data is derived from processor records and cross-referenced with MMO data.

Table 5. UoA catches as percentage of total landings for the sardine stock. Note the CSMA fishing year crosses the calendar year and therefore the start year of the season is taken as the annual year to compare against ICES landings data. Sources: ICES (2022a) and CSMA logbook records.

Year	CSMA (t)	Total landings (t)	CSMA %
2022/23	6,916	n/a	n/a
2021/22	7,449	8,524	87.4
2020/21	8,808	13,552	65.0
2019/20	6,386	7,936	80.5
2018/19	6,649	10,670	62.3
2017/18	6,675	12,662	52.7
Average	7,129	11,205	65.1

3.3.2 Stock assessment

The stock remains a category 3 stock under ICES underpinned by the PELTIC acoustic survey and fishery dependent length frequency work of the CSMA and their processors. As per the recertification of this fishery (Jones et al., 2022) the advice is based on the ratio between the last index value (index A) and the average of the two preceding values (index B), multiplied by last year's advice (the so called 1-over-2 rule). The index is estimated to have increased by 20% and thus no uncertainty cap was applied (ICES, 2022a, p. 7). The 1-over-2 rule with an uncertainty cap of 80% and a biomass safeguard is considered precautionary and as such a PA buffer was not considered. Discarding continues to be considered negligible. Total biomass estimate in 2022 is 336,306 t I_{stat} (the PRI proxy) has increased to 120,751 t and there remains certainty that the biomass estimate is way above this level and the MSY proxy of 250,000 t. ICES catch advice in 2023 is 8,306 t an increase from 2022 because of the increase in stock size (UK, 2020).

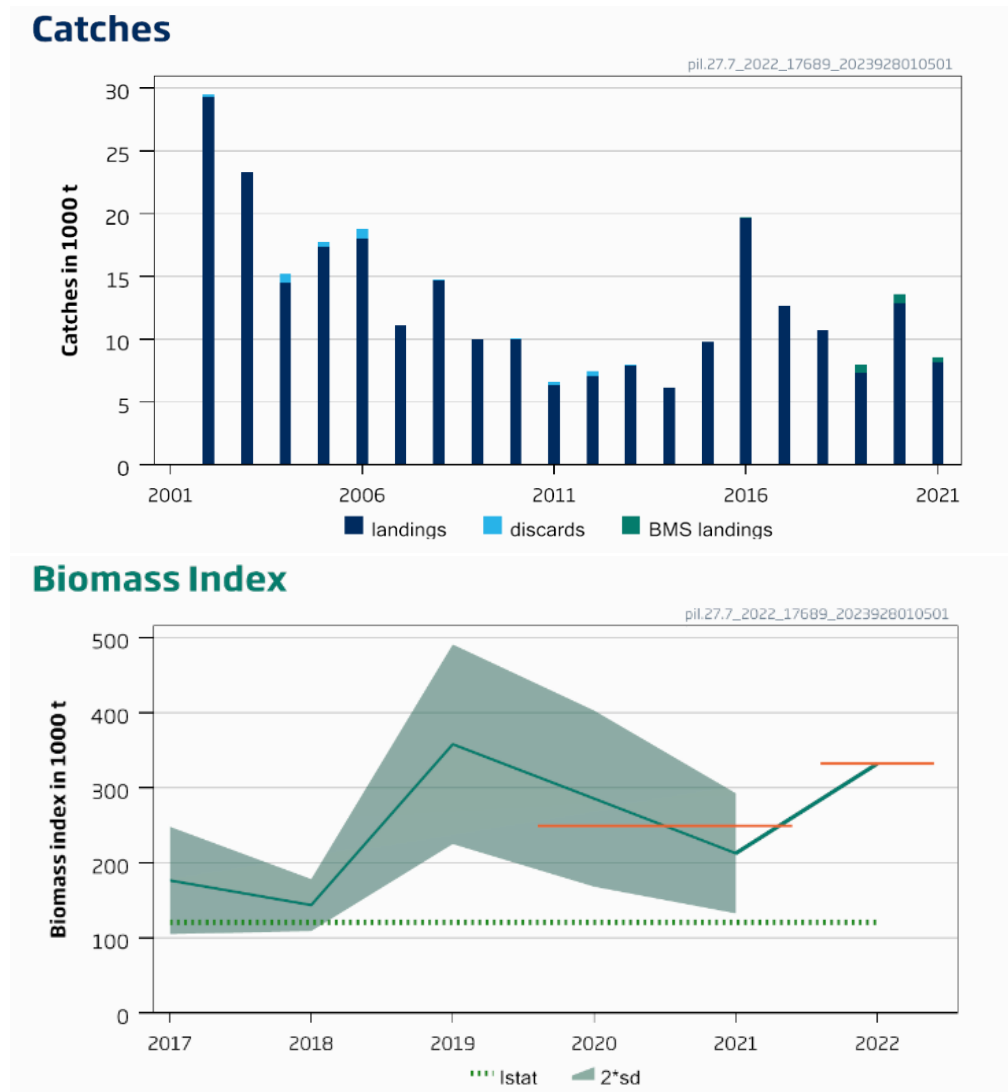


Figure 1. Sardine in Subarea 7. Top: Catches disaggregated by category since 2002, including below minimum size (BMS) landings. Bottom: The biomass was estimated from the total area of the acoustic survey PELTIC, and the shaded areas on the biomass plot represent 95% confidence intervals (the calculation of the PELTIC survey [A6259] index in 2022 did not allow for confidence intervals). The orange horizontal lines indicate the biomass index for 2022 and the average for 2020–2021. Source: <http://standardgraphs.ices.dk/ViewCharts.aspx?key=17689>

3.3.3 Stock management

There has been no change in the overall management structure of the fishery since 2022 (Jones et al., 2022). As described in the reassessment (Jones et al., 2022) ICES catch advice is not implemented via any management measure e.g. a TAC and the Harvest Control Rule which produces the catch advice is viewed as not being appropriate (see Condition 1 and the background and scoring in the PCR). In brief ICES advice for data limited stocks is implicitly designed to be applied to fisheries where previously there has been no ‘catch limit’ and stocks that are being fished at or above FMSY. ICES acknowledges that such guidance might not be appropriate for stocks moderately exploited that can support higher fishing pressures, as has occurred for sardine in subarea 7. Given the fishing pattern of the Cornish sardine fleet and recently low reported catches from opportunistic fleets of Denmark and

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The Netherlands, this default guidance uses information from two years when the harvest rates are very low, which leads to low catch advice which is not reflective of the stock status. This when identified at the Reassessment led to the condition on HCR appropriateness in PI 1.2.4.

An alternative HCR is set by CSMA via the annual harvest limit for the fleet in their code of conduct (CoC) based on the latest advice (CEFAS or ICES) and this formalises the fishery's HCR tool within the context of the HS. It is this HCR which is scored predominately under PI 1.2.2. In 2023 the CSMA requested advice from CEFAS to evaluate and consider an increased UoA catch limit of 11,150 t from 10,480 t in 2022, based on the increased estimated biomass (336,306 t in 2022 from 212,772 t in 2021) in the 2022 ICES advice. CEFAS formally agreed in writing that this rate of harvest would be precautionary and would not lead to overexploitation of the stock and this was adopted by CSMA members (section 5.2.1). As of October 2023 the current catch level is ~4,000 t and the CSMA do not expect to catch >8,000 t by the end of 2023 which is below both the ICES catch advice in 2023 8,306 t and the agreed limit with CEFAS (11,150 t) (CSMA chair pers. comm.).

In 2023 there will be a process change in the length frequency work for the fishery with an independent contractor being responsible for the measurement of the fish on the dock post fishing trip which will remove the requirement from the crew. This is in response to quality control issues identified by CEFAS with respect to how fish are measured by crew onboard vessels. The issue centres around the need for measurements at 0.5 cm intervals which was proving problematic for the fishers at sea and how the fish is held at point of measure e.g. without tail being unduly stretched). The new system is in place and should increase data quality for the stock assessment. In addition processors are continuing to provide length frequency, weight and fat content to CEFAS.

3.3.4 Principle 1 overall conclusion

The stock remains in good health and above proxy reference points. The HCR for the stock is set at the UoA level whilst developments in the formal HCR at the ICES level continue with CEFAS developing the HCR options including a possible Management Strategy Evaluation (MSE). Progress against the condition on PI 1.2.4 are given in Section 4.5.1. There is no significant change to the management of the fishery since certification with reflection to Principle 1 and there is no need to update any Performance Indicator.

3.4 Principle 2

3.4.1 Data availability

3.4.1.1 Logbooks and processor records

Based on the information available from the UoA and externally verified sources the fishery continues to be a clean target species dominated fishery. Records of landed catch composition from the UoA are available from the CSMA logbooks and processor records (Table 6). Sardine remains the dominant catch and all other species were less than 5% of the landed weights in 2022 (Table 6) which follows the same trend for all years assessed at the Reassessment (Jones et al., 2022). Slipped species composition (1.65% of total catch) consists of 81% sardine and 18% anchovy. Other landed fish (<0.1%) comprise of squid, cuttlefish, john dory, plaice, whiting and sole. (Table 7).

There were 72 bird interactions with the fleet reported in the CSMA logbooks, dominated by Black back gull (*Larus marinus*) and other gull categories. Importantly there was no recorded mortality. 2022

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also saw 12 seal interactions with individuals jumping over head-lines to access the fish and then jumping back out prior to the haul being completed.

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Table 6. Bycatch small pelagic species landing in kilograms and MSC classification under Principle 2. Note: none of these stock conform to the classification of less resilient as per FCR 2.021 - SA3.4.2.2. Source CSMA logbooks and processor records.

2022	SARDINES	ANCHOVY	SPRATS	HERRING	MACKEREL	SCAD	Other (Bass)	Other (Etc)	SLIPPED	DISCARD	TIME Sea in Hours	DAYS
Latin name	<i>Sardina pilchardus</i>	<i>Engraulis encrasicolus</i>	<i>Sprattus sprattus</i>	<i>Clupea harengus</i>	<i>Scomber scombrus</i>	<i>Trachurus trachurus</i>	<i>Dicentrarchus labrax</i>					
TOTALS	7,514,901	23,838	0	0	13,194	587	0	87	101,700	4,000	1750	590
%	99.5%	0.3%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	1.65%	0.05%		

Table 7. Bycatch non-small pelagic species landings in kilograms or counts where relevant. Classification under the MSC classification - Principle 2 are shown. * Source CSMA logbooks and processor records.

Species	2022 volume by weight (kg) or unit	Fate and comments	MSC classification
Seabass <i>(Dicentrarchus labrax)</i>	119	Discarded – Under EU legislation ring netting is not an authorised gear for seabass and have to be legally discarded	Secondary Minor
Tuna (unspecified)	4 individual	released	Secondary Minor
Bluefin tuna <i>(Thunnus thynnus)</i>	7 individuals	Released alive (from 2021 licence variation allows vessels to land 1 per trip)	Primary Minor
Sunfish <i>(Mola mola)</i>	4 individuals	released	Secondary Minor
Electric ray <i>(Torpedo marmorata)</i>	1 individual	Unknown (most likely released)	Secondary Minor
Thresher shark <i>(Alopiidae spp.)</i>	2 individuals	Released alive	Secondary Minor
Black back gull	25 individuals	Released alive	ETP

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Species	2022 volume by weight (kg) or unit	Fate and comments	MSC classification
<i>(Larus marinus)</i>			
Gull (unspecified)	43 individuals	Released alive	ETP
Bird unknown	4 individuals	Released alive	ETP
Common dolphin (<i>Delphinus delphis</i>)	0 individuals	N/A	ETP
Harbour porpoise (<i>Phocoena phocoena</i>)	0 individuals	N/A	ETP
Seal (<i>Halichoerus grypus</i>)	12 individuals	Climbed over headline and then released alive	ETP

3.4.1.2 Observer data

A routine observer program run by Sea Mammal Research Unit (SMRU) began for the UoA in 2018 and has continued since. An annual target up to a maximum of 20 sea days was agreed by the Bycatch Monitoring Program steering group given the previously perceived low risk. In 2018, 13 days were observed accounted for approximately 2% of the sea days for the fleet for the 2018 season. The only ETP interactions recorded through the observer programme were with herring gulls (*Larus argentatus*) no mortalities. In 2019, 14 days observations were made across 4 months (40% of months fished) and 6 vessels (50% of vessels active in 2019) (SMRU 2019). The data for 2019 shows a single herring gull (*Larus argentatus*) was recorded as bycatch and was dead on retrieval to the vessel. The in 2020 and 2021 (covid restricted yeas) 20 days sampling was achieved during 14 trips on 4 different vessels. No ETP bycatch mortality was recorded during any of these operations. For 2022 12 days sampling achieved during 9 trips on 5 different vessels and months and totalled 6 observed hauls (SMRU, 2023). On several trips the gear was not deployed, either due to a lack of suitable marks or because of shoals dispersing before the gear could be shot. No protected/sensitive species bycatch was recorded. The vast majority of the commercial catch consisted of pilchard, with a single bluefin tuna also retained from one trip. Since data collection started in the fishery in 2018, observers have observed 59 days at sea. Recorded bycatch so far consists of 12 seabirds, 11 of which were released alive and 1 was dead (SMRU, 2023).

A code of conduct for cetacean bycatch was developed by the CSMA with direct input from the SMRU, as rare interactions are known. The code is designed to ensure that any cetacean interactions that might occur in the fishery are dealt with safely and promptly, and with minimal effect on animals, to minimise any risk of mortality or injury (SMRU, 2023).. This code of conduct is unchanged in 2022.

3.4.2 **ETP management updates**

There are no updates on ETP management known to the assessment team that require PI updates through enquires at this site visit. At the international level in 2022 an ICES workshop on mortality of marine mammals (WKMOMA) published advice for OSPAR about suitable mortality thresholds for ETP species, including harbour porpoise and common dolphins in the UoA (ICES, 2022b). Bycatch estimates at the ICES level remain in the same order of magnitude for common dolphin and harbour porpoise as per previous estimates with gears and areas responsible for catches outside of the UoA scope. The report does note that the overall mortality of both species is above proposed thresholds (common dolphin - 6405 individuals (95% CI 3051 9414). Proposed modified PBR (mPBR) of 985, harbour porpoise - 738 individuals (284-2240) mPBR of 43) but that the proposed thresholds have not been formally adopted as limits by any international or national management organisation. SMRU report that there is ongoing debate in the cetacean monitoring community about the appropriateness of the mPBRs and hence they are not yet adopted. The ICES Working Group on Bycatch of Protected Species (WGBYC) included in their 2022 report a traffic light system of impacts by métier - Bycatch Evaluation and Assessment Matrix (BEAM) (ICES, 2022c). Three species were selected for each of the four taxonomic groups (mammals, turtles and seabirds, and fish) and were used as case studies to test the conceptual approach. Whilst common dolphin and grey seal were included in the analysis they were not in the UoA ecoregion nor include the ringnet métier and are therefore not directly applicable to the UoA yet. The status of the proposed thresholds and the BEAM will be kept under review, as they could affect the assessment outcome/management and information PIs in the future.

3.4.3 CCTV

As reported at the reassessment all CSMA vessels are fitted with CCTV which are used for internal compliance purposes. All vessels have agreed to provide footage to the CSMA when requested and allow for independent assessment /verification of incidents as required. The independent assessment is carried out by CIFCA. No requests were made in 2022 thus no updates are required from those in the reassessment audit. See section 3.4.4 for two further remote electronic monitoring (REM) schemes being piloted by the CSMA.

3.4.4 Gear and Technology developments

3.4.4.1 Dyneema nets and purse rings

At the site visit the assessment team were shown new net designs and technology being used by up to five vessels in the fleet. The new nets and purse rings (Figure 2) are made from Dyneema (UHMWPE¹) by gannet nets (<https://www.gannetnets.com/>). The nets are tear resistant reducing chances of catch loss and loss of some parts of the net in event of snagging. In addition both nets and rings are buoyant with UoA fishers reporting that sets made with these nets result in the net hanging above the bottom with minimal ground contact through sets, reducing chances of benthic impacts.



Figure 2. Dyneema (UHMWPE) purse rings by gannet nets (<https://www.gannetnets.com/>) on two UoA vessels and by comparison a more traditional stainless steel purse ring (right image). Credit: CU UK

¹ Ultra-High Molecular Weight Polyethylene

3.4.4.2 Clean catch UK

Clean Catch UK (CCUK - <https://www.cleancatchuk.com/>) is collaborative program to reduce accidental capture of wildlife by commercial fishing vessels by the UK government. Its key objectives are centred on the UK Fisheries Act (UK, 2020) ecosystem objective (incidental catches of sensitive species and minimised and where possible eliminated) and bycatch objective (reduce bycatch of non-target commercial fish species). The program has three management levels:

- National steering Group – strategic direction
- Regional working Group – Finding and considering new research
- Local Focus Group – engagement and application with local fisheries

In terms of the CSMA vessels are engaged in two programs both of which aim to use the data to assess whether the UK is meeting its Good Environmental Status (GES) requirements as part of the UK Marine Strategy (2010):

- The CSMA can utilise a smartphone application for recording catch as part of the fishery management system. Under the CCUK program the self-reporting app has an extension for bycatch species which is being trialled by UoA vessels (Figure 3). The principal aim of the application is for small scale fisheries where observer coverage is low and to increase the understanding of spatial and temporal trends in bycatch capture. Skippers are in the testing phase of the bycatch pages with improvements being made to usability.

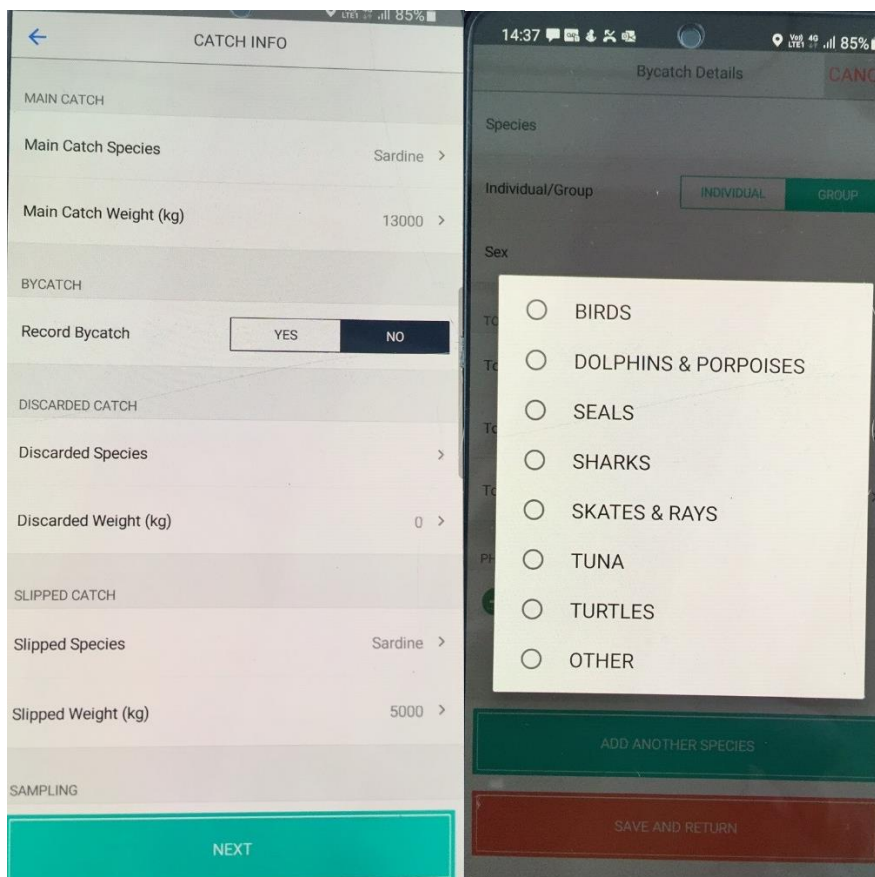


Figure 3. Clean catch UK extension to the catch application for recording ETP bycatch being piloted by some UoA vessels.

- remote electronic monitoring (REM) – two vessels from the CSMA fleet has been involved in the CCUK remote electronic monitoring trial for ETP events. This trial is in addition to existing CCTV systems which are carried by all UoA vessels (see Jones et al., 2022), but are analysed in full (100% coverage). The key objectives of the program are for enhanced data on species catches and to compliment other data collection methods (self-reporting above). At the MSC workshop held October 2023 CCUK representatives provided data for the single UoA vessel over the initial 18 month period (January 2021- June 2022). In total 180 trips were analysed totalling 83 hauls. This resulted in only two possible ETP bycatch captures both of which were unidentified rays, which could not be confirmed as protected species (Joanna M. and Hannah W. CEFAS pers. comm)

3.4.4.3 Insight360

The MSC workshop 2023 presented work undertaken by two vessels as part of a further REM trial which is an innovative use of REM coupled to Artificial Intelligence technology utilising voice recognition and an array of supporting technologies to help monitor bycatch events. Installed since August 2022 on three UoA vessels, the Insight360 system records video and skipper /crew voice notes onto a closed server on the vessel. The system is not active / recording at all times but allows the vessel to select when to activate and record video and voice notes (Figure 4). The system can then be interrogated later. At present the system records the location as well as interaction video and voice notes but updates to come include automatic haul detection (RFID – Evidence of fishing events), auto GPS logging, Net and Gear sensors (temperature, depth) and potentially legacy recording. Insight360 hope to launch the system by September 2024 (Alasdair Davies – Arribada initiative, pers comm.)

A guide for testing Insight360

To start recording, say **'RECORD NOW'**

To stop recording, say **'STOP RECORDING'**

Something not working?
 Contact Al Davies:
 07934 588099

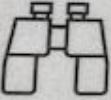

Event	WHAT to say	HOW to record	WHEN to record
SIGHTING 	<ul style="list-style-type: none"> Sighting What animal How many Alive or dead Where 	"Record now. Sighting. One common dolphin. Alive. 10m from the boat. Stop recording."	Immediately after sighting
BYCATCH 	<ul style="list-style-type: none"> Bycatch What animal How many Alive or dead when caught Alive or dead when released Sex, length, age (if known) 	"Record now. Bycatch. One juvenile harbour porpoise, 1m long, caught alive, released alive. Stop recording."	Immediately after bycatch
NO SIGHTING AND/OR NO BYCATCH	<ul style="list-style-type: none"> No sighting AND / OR No bycatch 	"Record now. No sighting and/or no bycatch. Stop recording."	After each haul

Figure 4. Insight360 protocol as viewed on one UoA vessel. Source CU UK

3.4.5 Research developments

New published research from a similar ring net fishery for sardine in Portugal highlighted the interaction rates with ETP (Dias et al., 2022). The researchers found that in 10% of the fishing sets, there were interactions with one of three species of cetaceans: common dolphin (*Delphinus delphis*), bottlenose dolphin (*Tursiops truncatus*), and harbour porpoise (*Phocoena phocoena*). The common dolphin was the most frequently observed species, occurring in 89% of all interaction events, and the only species with observed mortality.

3.4.6 Seagrass

In June 2023 a BACI (Before, After, Control, Impact) was carried out on the seagrass region of Mounts Bay with the aim to understand the interaction between the foot rope and net of a ring net and sea grass during fishing and identify the resulting impact, if any, to the sea grass. The collaborative project between the IFCA and CSMA utilised one of the ringnet vessels and Cornwall IFCA Seaspyder camera system deployed from Cornwall IFCA's survey vessel before and after the fishing event. The proposal for this work was provided to the assessment team as part of the audit and is available on request. The report from this work is under external review at the time of the audit, but initial comments from the CSMA and IFCA staff indicate that no impact on the seagrass was evident (. Until the report is published no update on SI scores (PI2.4.1-3) is warranted.

3.4.7 Principle 2 overall conclusion

The latest catch profile information from the fishery maintains the image of the clean nature of the fishery. There is new evidence of gear and technological developments in the fishery including REM, and net designs. The trials and the bycatch workshop held by CSMA are accounted for in the rescore of PI2.3.2e in this report. Whilst no change of score is required the evidence base is updated. A change in rationale may be due as result of the seagrass BACI trials but as this report is yet to be published this is not warranted yet. Equally the team consider that no change is yet warranted in terms of marine mammal management as no new limits are yet formally adopted. There is no other significant change to the management of the fishery since certification with reflection to Principle 2 and there is no need to update any other Performance Indicator.

3.5 Principle 3

3.5.1 Management updates

There has been no significant update to the national (UK) or international (EU) management system since the PCR and therefore no updates to the overall management system scoring required.

At the client level CSMA minutes of meetings were shared with the assessment team.

Key elements of discussion at the CSMA AGM were:

- An agreed minor restructure of the CSMA voting process (now all skippers (subject to 2 years in the fishery) and each processor receive 1 vote.
- Discussions on membership transfer and retirement and replacements of vessels
- Eelgrass trials (see P2)
- Australia Sardine exchange trip (see section 5.2.1)
- HCR and catch updates (See P1)

There has been no update to the Code of Conduct from 2022, nor any update required to the slippage policy.

3.5.2 Compliance updates

3.5.2.1 CSMA logbook compliance

2022 compliance rates for CSMA logbooks are shown in Table 8. Only 9 vessels were active in this year. Of the two vessels with missing / no entries these were explained at the site visit to be a. due to a new owner of the vessel in 2022 not understanding the need for logbook completion in addition to the MMO official logbooks. CSMA have since spoke with the captain/owner and provided training. 2. The skipper leaving the fleet and not submitting records to the CSMA prior to departure. For the partial data vessels (light green in Table 8) the missing data is the result of the continuing Catch app trials with CEFAS for recording this information. The data from these vessels is being recorded in the Catch app and not available in the CMSA logbooks and there are continuing issues with downloading and viewing the outputs from the catch app (v6) which require resolution. CEFAS and CSMA are engaged in this process, and this will be reviewed at next year's audit.

3.7 Total Allowable Catch (TAC) and catch data

There is no TAC on the stock and therefore Table 10 can only be completed for UoA Catch

Table 10. Allowable Catch (TAC) and catch data in t.

TAC / Catch Data	Year	Amount
TAC	2022	N/A
UoA share of TAC	2022	N/A
Total catch by UoC (most recent year)	2022	6,916
Total catch by UoC (second most recent year)	2021	7,449

3.8 Changes which impact traceability systems

There are no changes to the traceability of the fishery based on audit outcomes. There are still four processors (Godfrey Adams at Trelawny, Falfish, Oceanfish and Intrafish) which are CSMA members and take catch from the fishery. A new bespoke IQF (individual Quality Frozen) factory is due to be opened in last 2023 by Falfish, which may alter fishing practices (trips per day) in the future. However, this factory and any change is not in place and is beyond the end point of the fishery certificate (dockside) and therefore not required in the traceability assessment.

Table 11. Changes affecting traceability and segregation.

Are there any developments or changes within the fishery that affect traceability and the ability to segregate MSC from non-MSC products?
NO

4 Surveillance Results

4.1 Principle level scores

Table 12. Principle level scores

Principle	Score
	UoA 1
Principle 1 – Target Species	80.8
Principle 2 – Ecosystem Impacts	86.3
Principle 3 – Management System	92.3

4.2 Summary of Performance Indicator level scores

Table 13. Performance Indicator scores. Condition in yellow.

Principle	Component	Wt	Performance Indicator (PI)		Wt	Score
One	Outcome	0.33	1.1.1	Stock status	0.5	80
			1.1.2	Stock rebuilding	0.5	N/A
	Management	0.67	1.2.1	Harvest strategy	0.25	90
			1.2.2	Harvest control rules & tools	0.25	80
			1.2.3	Information & monitoring	0.25	80
		1.2.4	Assessment of stock status	0.25	75	
Two	Primary species	0.2	2.1.1	Outcome	0.33	100
			2.1.2	Management strategy	0.33	90
			2.1.3	Information/Monitoring	0.33	85
	Secondary species	0.2	2.2.1	Outcome	0.33	80
			2.2.2	Management strategy	0.33	90
			2.2.3	Information/Monitoring	0.33	80
	ETP species	0.2	2.3.1	Outcome	0.33	80
			2.3.2	Management strategy	0.33	85
			2.3.3	Information strategy	0.33	80
	Habitats	0.2	2.4.1	Outcome	0.33	100
			2.4.2	Management strategy	0.33	85
			2.4.3	Information	0.33	80
	Ecosystem	0.2	2.5.1	Outcome	0.33	100
2.5.2			Management	0.33	80	

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Principle	Component	Wt	Performance Indicator (PI)		Wt	Score
			2.5.3	Information	0.33	80
Three	Governance and policy	0.5	3.1.1	Legal &/or customary framework	0.33	85
			3.1.2	Consultation, roles & responsibilities	0.33	95
			3.1.3	Long term objectives	0.33	100
	Fishery specific management system	0.5	3.2.1	Fishery specific objectives	0.25	80
			3.2.2	Decision making processes	0.25	100
			3.2.3	Compliance & enforcement	0.25	95
			3.2.4	Monitoring & management performance evaluation	0.25	90

4.3 Summary of conditions

Table 14. Summary of conditions

Condition number	Condition	PI & SI	Status	PI original score	PI revised score
1	By Year 4 the fishery should ensure that the the stock assessment and subsequent advice from ICES is appropriate for the harvest control rule.	1.2.4a	On target	75	75 (no change)

4.4 Re-scoring Performance Indicators

Old text is shown in ~~strike through~~ with new text in blue.

4.4.1 PI2.3.2e

e	Review of alternative measures to minimize mortality of ETP species			
Guide post	There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species.	There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species and they are implemented as appropriate.	There is a biennial review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality ETP species, and they are implemented, as appropriate.	
Met?	Yes	Yes	Yes	

Rationale

With respect to scoring this SI the team referred to MSC clause SA3.11.1 - When scoring the ETP Management Strategy PI SGs teams shall consider the need to minimise mortality.

There is evidence of review of measures from the 2019 slippage policy document, which included techniques which can be used to mitigate marine mammal encounters, these include backdown procedures and the use of medina panels (<https://www.bmis-bycatch.org/mitigation-techniques/backdown-procedure-and-medina-panel>). The introduction of the observer program in 2018 was the result of stakeholder feedback and active management by the fishery. Logbook amendments (to include ETP species types) have been enacted since the last certification cycle and there continues to be active dialogue on improving bycatch rates as evidenced in the 2020 meeting minutes (described in the PCR) which reviews improvement to slippage management. ~~Finally, in 2021 all vessels will now have~~ carried CCTV cameras to document operations in the fishery. ~~In 2022-3 3 vessels have been involved in Remote Electric Monitoring (REM) trials through two schemes associated with CEFAS. As detailed in Section 3.4.4 of the Year 1 report this includes 100% review of REM data for the Clean catch program (with no ETP interactions). In 2022-23 there is also evidence of trails of the new catch app for recording ETP interactions for the UoA. Finally in 2023 a workshop held by the CSMA through MSC Ocean Stewardship money acted as review for the ETP best practice with collaboration of multiple research/government and similar fisheries.~~ Taken as whole these reviews and the implementation of measures in the past few years are more frequent than every 2 years and **are suitable to meet the requirements of SG60, SG80 and SG100.**

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Overall Performance Indicator score	85
Condition number (if relevant)	N/A

4.5 Conditions

4.5.1 Progress against conditions

Table 15. Condition 1

Performance Indicator	1.2.4
Score	75
Justification	<p>The WKWEST data compilation workshop of 2021 concluded that the landings (including that of the UoA) and the biomass data provided by the PELTIC survey for sardine in Subarea 7 are appropriate to assess the stock and provide advice. The extension of the PELTIC survey from 2017 provides good coverage of the stock distribution, and the area where the majority of the fishery happens. In addition, the short time-lag between the survey observations (October) and the assessment (November) further support the use of PELTIC biomass estimates as input data for stock assessment.</p> <p>The availability of the biomass data to assess the stock now allow the stock to be classified as category 3 and the benchmark panel agreed that a SPiCT model should be used to assess the status of the stock based on the relative biomass and fishing mortality to the reference points (B_{MSY}, F_{MSY}). However, ICES (2021a) acknowledged that the estimates of absolute biomass (B), fishing mortality (F) and the reference points (F_{MSY} and B_{MSY}) provided by the model were considered unreliable, and therefore, the catch advice would be based on the biomass trend estimated with the data provided by the acoustic survey PELTIC. The benchmark provides a biomass safeguard from the historical biomass index in the ‘total area’ of the stock and set it at 109,965 t. If the biomass index fell below this value, the benchmark recommended that the advised catch should be reduced in proportion to the drop. The major features of the target stock are its distribution which is accounted for in the PELTIC survey and its short life-span which is accounted for in the model type (SPiCT models have been designed and MSE tested on simulated sardine stocks). The UoA supply logbook data and fishery dependent length-frequency data and discard into the assessment process, although the time-series of this is weak for the length frequency at present and prevents its use in the current assessment, this is covered by the survey data.</p> <p>ICES advises the use of the 1-over-2 rule with 80% symmetric uncertainty caps for short-lived stocks in category 3 (ICES 2020b) ICES applied the 1 over 2 rule to this stock for the first time in December 2021 (WGHANSA) to provide catch advice for 2022. ICES set its advice basis at 6,906 t based on this 1 over 2 rule (Figure 17). This advice value is not considered appropriate for the stock with reference to the starting point of the HCR, subsequent HCR simulations and scientific opinion (see Appendix 8). The starting point for the 1 over 2 rule is low because of a combination of market forces, the CSMA catch limit and lack of opportunistic harvesting of the stock in the past 2 years. ICES adopted and tested the 1 over 2 rule on the assumption that the exploitation rate at the point at which the HCR is applied is at or near MSY whilst for the sardine stock it was only moderately exploited in recent years and therefore higher fishing mortality ($>F$ in 2019 and 2020 but $<F_{MSY}$) would have resulted in higher advice</p>

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	<p>without compromising the status of the stock. Clear evidence of this comes from the harvest rate in 2019 (the start point for the HCR) which was 1.95%, which is well below the harvest rate in previous years (around 7% in 2017 and 2018) and which CEFAS consider well below the rate the stock can accommodate (CEFAS - Appendix 4 - HR with values of 9 -10% don't usually impact a stock. From a survey you estimate the catchability of the stock and for sprat (in subarea 7) at 10% was considered precautionary [as an example]). Given this fishing pattern, if the 1o2 rule is applied to recent landings, the catch advice is unnecessary low and ICES showed the 1 over 2 rule could result in catches between 6,906 t and 13,777 t depending on the start point. According to CEFAS the key issue with the ICES HCR on this stock is that catches do not track stock size. However, this HCR was adopted by ICES by default because no other HCR simulation had been MSE tested within the data limited workshops. Alternative approaches to implementing this rule for the first time in sardine in Subarea 7 were discarded as they deviated from the recommended practice and ICES notes that the rule should be considered as a provisional HCR with the aim of achieving a better management approach within ten years.</p> <p>Whilst the ICES HCR is not considered appropriate the CSMA and CEFAS HCR utilises the assessment information to define the catch limits and requires annual 'approval' confirmation with CEFAS that the advice is appropriate to the current stock status and the reference points. As such the assessment is capable of providing an appropriate HCR. The HCR allows for catch limits above the ICES advice (because of the issues in the ICES HCR, discussed above) but importantly requires annual 'approval' confirmation with CEFAS that the advice is appropriate and does not risk F being too high (above F_{MSY}).</p> <p>Overall the team felt that although the CMSA HCR was the one with the associated HCT tool and is based on the stock advice may be considered appropriate for the stock, because the ICES advice basis is based on an inappropriate harvest rate calculation it cannot be said that the assessment is appropriate for the HCR (1 over 2 rule) ICES use and SG80 is not met for 1.2.4.a.</p>
Condition	By Year 4 the fishery should ensure that the the stock assessment and subsequent advice from ICES is appropriate for the harvest control rule.
Condition deadline	Year 4 Surveillance
Milestones	<p>Year 1: the CSMA should hold meetings with CEFAS and discuss a plan that is likely to lead to lead to the development of an appropriate HCR at the stock level from the ICES stock assessment. Evidence of these engagements and the plan should be shown to the CAB at the 1st surveillance audit. Score 75.</p> <p>Year 2-3: The CSMA should implement the plan developed in year 1, monitor its progress and redevelop/revise as required. At the Year 2 surveillance the client should provdie the CAB with an update and status report. Score 75.</p>

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	<p>Year 4: the CSMA should provide the CAB with evidence that the plan developed in year 1 has been successfully implemented and has resulted in a assessment which is appropriate for the HCR. Score 80</p>
<p>Progress on Condition (Year 1)</p>	<p>The action plan items for year 1 were:</p> <ul style="list-style-type: none"> • CSMA and Cefas discuss a strategy to present to ICES an alternative assessment model and HCR for the stock • Cefas requests funding to develop a management strategy evaluation (MSE) to test the performance of a set of HCR to provide advice for the stock. <p>The assessment team were provided with evidence of two meetings between CSMA and CEFAS (Feb 2023 and June 2023) where proposed catch limits and HCR development were discussed (email summary in section 5.2.2). At the site visit the team were informed by CEFAS that at the last benchmark ICES were content that the survey data from the PELTIC survey contained the stock and that the survey should be continued survey. Self-sampling data (from the CSMA) which provide the length frequency through the season are not yet robust / certain enough to be used on the stock assessment and improvements were needed. As reported in section 3.3.3 of this report changes have been made to accomplish this (dock side measurements) in 2023. The proposed stock assessment model (SPICT) model wasn't taken forward at the WKWEST 2020 benchmark because of high level of uncertainty in the model but this remains the aim once increased data is collected.</p> <p>At interview for this Year 1 audit the lead scientist from CEFAS provided the following information on HCR and stock assessment progress since certification:</p> <p>(Section 5.2.3)</p> <p>The 2022 stock assessment model was completed using the 1o2 rule and the 2023 stock assessment will remain using this rule and will be out in December, based on the PELTIC survey of October 3023.</p> <p>CEFAS have begun working on the Management Strategy Evaluation (MSE) for the stock but due to other commitments this will not be completed in 2023 and will run into 2024. The plan is that the MSE will be presented to ICES in 2024 and a call will be made to reevaluate the stock based on this. The exact pathway for this in ICES is unclear as recently there was a process change at ICES where another stock went through MSE, then held a workshop and new advice was published on the back of that workshop within a year. This is not the normal process in ICES where an MSE would lead to a benchmark then a new stock assessment. The normal pathway takes 2-3 years (Year 1 - MSE approval, benchmark request, Year 2 – benchmark and new stock assessment (if benchmark is successful)). The preference would be for the workshop process as this is quicker but it will depend on ICES in 2024 with the presentation of the MSE.</p> <p>A guided timeline for the new HCR from CEFAS and ICES is:</p> <p>2024 – MSE</p> <p>2025 – benchmark</p>

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	<p>2025/6 – stock assessment</p> <p>This matches the required timeline of the condition on this assessment.</p> <p>ICES has a hierarchy of preferred models for the stock. These are:</p> <ol style="list-style-type: none"> 1. SPICT, 2. Constant Harvest rate 3. 1o2 <p>This stock is currently 1o2 (#3). The MSE will be run on the Constant Harvest Rate using simulation models of life history traits (#2). In addition to the MSE CEFAS lead scientist is continuing with the SPICT model which was initially presented at the 2020 benchmark but rejected on the grounds of uncertainty and temporal availability of biomass and time series of catches. As of 2023 there will be ~10 years of usable PELTIC survey data to underpin the biomass estimates for the model and 10 years of catch data. Should the model be robust (in the eyes of CEFAS) this may well be taken forward in 2024. SPICT acceptance at ICES would lead to the stock being raised to a CAT 2 stock, with associated Catch Advice but without TAC, which would still come in the form of CSMA catch limits. The SPICT model provides FMSY and MSY RPs.</p> <p>Based on the above and the Year 1 milestone it can be said that the CSMA have held meetings with CEFAS and discuss a plan that is likely to lead to the development of an appropriate HCR at the stock level from the ICES stock assessment and the required evidence has been provided and received by the assessment team.</p>
Progress status	On target
Remedial action	NA
Additional information	NA

4.6 Client action plan

Not required

5 Appendices

5.1 Evaluation processes and techniques

5.1.1 Site visits

The site visit was held remotely on the 05/10/2023. The individuals met during the site visit and their roles in the fishery are listed in Table 16. In addition to the remote site visit. On the week 25th September the CSMA hosted a workshop for the fishery in association with South Australian Sardine Association as part of MSC Ocean Stewardship Grant. The assessment team attended this workshop along with a number of key stakeholders. The agenda and attendance list is shown in section 5.2.1.

Email requests for official comment were sent to CIFCA, SMRU, MMO and CEFAS the input into the assessment from these is shown in 5.2. For CIFCA no official comment was received. For SMRU a 2022 observer report was provided (SMRU, 2023) and is available on request.

Table 16. List of attendees at the on-site meetings.

Name	Position	Type of consultation
Hugh Jones	CU UK auditor	lead
Richard Caslake	CSMA chair	Fishery update

5.1.2 Stakeholder participation

Details of interviewees are given in Table 16.

a) Media announcements: CU UK selected the MSC as media outlet. The MSC press release targeted a wide range of stakeholders within the sustainable seafood industry, ensuring that key stakeholders were notified of this fishery's announcement.

b) Methodology for information gathering: Review of data and documentation, interview of stakeholders.

c) Scoring process: Scoring was agreed by the team via email correspondence. Consensus was reached for all scores.

The scores were decided as follows:

How many scoring issues met?	SG60	SG80	SG100
All	60	80	100
Half	FAIL	70	90
Less than half	FAIL	65	85
More than half	FAIL	75	95

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Note: that where there is only one scoring issue in the SG, the issue can be partially scored – in this case the team used their judgement to determine what proportion of it was met, e.g., at the 100 level, a small part met = 85, about half met = 90, nearly all met = 95.

5.2 Stakeholder Input

5.2.1 CSMA bycatch workshop

**Cornish Sardine Management Association (CSMA)
Bycatch Workshop 26th September 2023**

Conference Venue: Newlyn Filmhouse. 23-31 The Coombe Newlyn TR18 5HS

Tuesday 26th September

08:00 Ring net vessel visit conducted by skippers – meet @ RNLI building, Newlyn Harbour

Workshop

09:00 Registration and Coffee, Newlyn Filmhouse

10:00 Welcome

10:10 Nick Howell, The Pilchard Works. “Meat, Money and Light, all in one Night!”

10:40 Gus Caslake, CSMA Chairman “The Cornish Sardine Management Association”

10:50 Claire Webber, SASFA Executive Officer “The South Australian Sardine fishery “

11:15 Jeroen Van Der Kooij & Spike Searle (Cefas) “Sardine Stock Assessment & catch sampling”.

11:40 Refreshments Break

12:00 Joanna Murray, Hannah Wolstenholme, Cefas “Clean Catch UK (CCUK) Overview & REM technology”

12:30 Lunch – (short film on the Cornish sardine fishery to be screened during lunch)

14:00 Alasdair Davis, Arribada “Insight 360 innovative camera technology”

14:40 Al Kingston (SMRU) “Pinger trials in Portuguese Purse Seine fishery”

15:00 Nick Tregenza (Chelonia) “Acoustic monitoring of Cetaceans and deterrents”

15:25 Workshop Round up.

16:00 Close

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5.2.2 CEFAS

From: Richard Nash (Cefas) <richard.nash@cefass.gov.uk>
Sent: 02 June 2023 11:53
To: Richard Caslake <Gus.Caslake@seafish.co.uk>; Jeroen Van Der Kooij (Cefas) <jeroen.vanderkooij@cefass.gov.uk>; Rosana Ourens (Cefas) <rosana.ourens@cefass.gov.uk>
Subject: RE: CSMA Sardine catch Limit for 2023

Hi Gus

I do apologise this is somewhat late, I know I should have replied immediately before this got buried in my inbox.

Cefas is of the opinion that, based on historical catches and recent biomass estimates from the PELTIC survey in 2022, the catch limited proposed by CSMA (11,150 t) for sardine in 2023 will not have an adverse impact on the sardine stock in ICES Subarea 7 in the short term.

If you have an questions please ask.

Yours Richard

Richard D.M. Nash

Centre for Environment, Fisheries and Aquaculture Science (Cefas)
Pakefield Road, Lowestoft, Suffolk, NR33 0HT, UK
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Mob:+44(0) 7510 690366

Please note my email address has changed to richard.nash@cefass.gov.uk



www.cefass.co.uk



From: Richard Caslake <Gus.Caslake@seafish.co.uk>
Sent: Friday, March 31, 2023 1:10 PM
To: Jeroen Van Der Kooij (Cefas) <jeroen.vanderkooij@cefass.gov.uk>; Richard Nash (Cefas) <richard.nash@cefass.gov.uk>; Rosana Ourens (Cefas) <rosana.ourens@cefass.gov.uk>
Subject: CSMA Sardine catch Limit for 2023

WARNING - This email originated from outside of the organisation. Do not click links , forward or open attachments unless you recognise the sender and have established the content is safe.

Afternoon Jeroen, Rosana & Richard

In discussions with CSMA members regarding setting a CSMA catch limit for Sardines for 2023.

Taking into account potential catching and processing capacity we intend to set our catch limit at 11,150 tonnes. Please could you confirm that catches at this potential level by CSMA members will not lead to an over exploitation of the Area VII Sardine stock.

5.2.3 CEFAS interview at Site visit

Topic of discussion	stakeholder meeting – HCR development
Date	13/10/2023
Format of discussion	Conference call
Scope of Audit/Assessment	Cornwall sardine year 1 audit
Audit team members present	HJ
Client representation	Richard Caslake (CSMA)
Stakeholder representation	Rosana Ourens, (Cefas)
Summary of main points	<p><u>Stock assessment and HCR development</u></p> <p>The 2022 model was completed by Joe Rivera with Rosana on maternity, and Joe will lead the 2023 model with supervision by Rosana. It will remain the 1o2 rule and will be out in December.</p> <p>CEFAS have begun working on the MSE for the stock but due to other commitments this will not be completed in 2023 and will run into 2024. The plan is that the MSE will be presented to ICES in 2024 and a call will be made to reevaluate the stock based on this. The exact pathway for this in ICES is unclear as recently there was a process change where another stock went through MSE, then held a workshop and new advice was published on the back of that workshop. This is not the normal process in ICES where a MSE would lead to a Interbenchmark then a new stock assessment. The normal pathway takes 2 years (Year 1 - MSE approval, benchmark request, Year 2 – benchmark and new stock assessment (if successful)). The preference would be for the workshop process as this is quicker but it will depend on ICES in 2024 with the presentation of the MSE. A guided timeline for the new HCR from CEFAS and ICES is:</p> <p>2024 – MSE</p> <p>2025 – benchmark</p> <p>2025/6 – stock assessment</p> <p>This matches the required timeline of the condition on this assessment.</p> <p>ICES has a hierarchy of preferred models for the stock. These are:</p> <ol style="list-style-type: none"> 1. SPICT, 2. Constant Harvest rate 3. 1o2

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	This stock is currently 1o2. The MSE will be run on the Constant Harvest rate using simulation models of life history traits. In addition to the MSE Rosana is continuing with the SPICT model which was initially presented at the 2020 benchmark but rejected on the grounds of uncertainty and temporal availability of biomass and time series of catches. As of 2023 there will be ~10 years of usable PELTIC survey data to underpin the biomass estimates for the model and 10 years of catch data. Should the model be robust (in the eyes of CEFAS) this may well be taken forward in 2024. SPICT acceptance at ICES would lead to the stock being raised to a CAT 2 stock, without TAC. The SPICT model provides relative F_{MSY} and MSY RPs.
Action points to follow	N/A
Addition info	N/A

Table 17. stakeholder input transferred into MSC stakeholder template as per <https://mscstandards.my.site.com/interpret/s/article/Stakeholder-input-not-submitted-using-the-relevant-templates-FCP-v2-1-v2-2>

PI	Condition	Input summary	Input detail	Evidence or references	Stakeholder input code	CAB response to stakeholder input	CAB response code
1.2.2 and 1.2.4	1	See above	See above	See above		Thank you for the input this confirms the current rationale holds for 1.2.2 and updates the required milestones progress for 1.2.4 condition 1	Accepted – condition on target

5.3 Revised surveillance program

Table 18. Fishery surveillance programme

Surveillance level	Year 1	Year 2	Year 3	Year 4
3	off-site surveillance audit	On-site surveillance audit	off-site surveillance audit	On-site surveillance audit & re-certification site visit

Table 19. Timing of surveillance audit

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
2	August 2024	August 2024	None required

Table 20. Surveillance level justification

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Year	Surveillance activity	Number of auditors	Rationale
2	On-site audit	1 auditor on-site	N/A.

5.4 Harmonised fishery assessments

The MSC Fisheries Certification Process v2.3 details the harmonisation requirements to ensure consistency of scoring, rationales and conditions across overlapping UoAs.

The MSC's intent is that harmonisation of assessments of overlapping UoAs takes place once a year and the harmonised assessment outcomes are subsequently applied to all UoAs, regardless of whether they are subject to an initial assessment, reassessment, scope extension assessment, transition assessment or surveillance audit. The CABs of the UoAs subject to harmonisation are expected to collectively and collaboratively determine the timing of annual harmonisation activities and organise harmonisation activities accordingly. CABs consider the timing of management advice and surveillance audit schedules when organising annual harmonisation activities.

5.4.1 Overlapping UoAs

CU UK used the [MSC's harmonisation database](#) to identify overlapping UoAs that meet the following criteria (FCP v2.3 PB1.2.1):

- UoAs that have the same P1 stock (FCP v2.3 7.5.2.a).
- UoAs that operate in the same geographical area (FCP v2.3 7.5.6).
- UoAs that impact the same P2 scoring elements (MSC Fisheries Standard SA3.1).
- UoAs that are subject to management by the same jurisdictions (MSC Fisheries Standard SA4.1.1).

A list of overlapping UoAs is presented below. This table also identifies which Performance Indicators and Scoring Issues are subject to harmonisation based on the information in Table PB1 of the FCP v2.3, which is recreated in Figure 6. Where overlapping UoAs have been assessed against different versions of the MSC Fisheries Standard, harmonisation is only necessary for those Performance Indicators that have the same intent. CU UK has used the [MSC's Change Tracker Report – FS 2.01 to 3.0](#) to identify the Performance Indicators that have the same intent in v2.01 and v3.0 of the MSC Fisheries Standard.

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Table PB1 – Harmonisation requirements per PI

PI/Sis	Required to harmonise	
All P1 PIs	Yes	Teams shall harmonise P1 assessment outcomes for any UoA that has the same P1 stock.
PI 2.1.1.a (FS v3.0 & FS v2.01/v1.3)	Partially	For stocks that are 'main' in both UoAs, teams shall harmonise status relative to PRI (at SG60, 80 and 100), and if below PRI, harmonise cumulative impacts at SG80 (not at SG60).
PI 2.2.1.a (for fisheries assessed against v1.3 and v2.0/v2.01 only)	Partially	For stocks that are 'main' in both UoAs, teams shall harmonise status relative to biologically based limits (at SG60, 80 and 100), and if below biologically based limits, harmonise cumulative impacts at SG80 (not at SG60).
PI 2.3.1.a (for fisheries assessed against FS v1.3 and v2.0/v2.01 only)	Partially	Harmonise recognition of any limits applicable to both UoAs (at SG60, 80 and 100), and cumulative effects of the UoAs at SG80 and SG100 (not at SG60).
PI 2.4.1.b (FS v2.01) PI 2.3.1.b (FS v3.0)	Partially	Teams shall harmonise identification of more sensitive habitats (v3.0)/VMEs (v2.01) where both UoAs operate in the same "managed area(s)" (see Guidance to the MSC Fisheries Standard).
PI 2.4.2.a, c (FS v2.01) PI 2.3.2.a, c (FS v3.0)	Partially	Teams shall harmonise scoring with consideration of cumulative impacts at SG100 as all UoA impacts are considered (not at SG60 or SG80).
All P2 PIs	Situation dependent	If UoAs are identical in scope (7.5.2), even if the UoCs are different (e.g. separate clients), teams shall harmonise P2 assessment outcomes.
PIs 3.1.1–3.1.3	Situation dependent	If overlapping UoAs are part of the same larger fishery or fleet or have stocks in either P1 or P2 that are at least partially managed by the same jurisdiction(s) (nation states, RFMOs, or others) or under the same agreements, teams shall harmonise assessment outcomes for PI3.1.1–3.1.3 where management arrangements apply to overlapping UoAs. The MSC accepts that it may be impractical to attempt full harmonisation, due to the large number of fisheries that may be managed under the relevant policy framework, and the differences in application between them.
PIs 3.2.1–3.2.4	Situation dependent	If overlapping UoAs have stocks within either P1 or P2 that are at least partially managed by the same jurisdiction(s) (nation states, RFMOs, or others) or under the same agreements, the teams shall harmonise assessment outcomes for PI 3.2.1–3.2.4 where management arrangements apply to overlapping UoAs (e.g. at the RFMO level but not the national level in the case of 2 separate national fleets both fishing the same regional stock).

Figure 6. Table PB1 from MSC FCP v2.3 detailing when harmonisation is required.

Principle 1

None, there are no other MSC fisheries which target this stock.

Principle 2

Based on FCR2.01 there is a need for harmonisation on P2 at least in part on a number of outcome PIs as per table GPB1. As per <https://mscportal.force.com/interpret/s/article/Assessing-P2-species-cumulatively-between-v2-0-and-1-3-fisheries-GSA3-1-9-1527262006140> only V2.01 fisheries need harmonisation on Principle 2 only if both fisheries are FCR2.01. The MSC harmonisation database was

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accessed 13/11/2023 to seek all possible overlapping fisheries. shows the overlap with the fisheries relevant to this fishery. The scoring elements concerned for harmonisation are harbour porpoise and common dolphin.

Table 21. P2 overlapping fisheries for harbour porpoise and common dolphin based on MSC harmonisation Database.

Harbour Porpoise	Harmonise outcome?	Rationale for No
Compagnie des Pêches de St Malo and Euronor Northeast Arctic cod and haddock fishery	N	different stock/Population
Shetland & Scottish Mainland Rope Grown mussel Enhanced Fishery	N	different stock/Population
SFSAG Northern Demersal Stocks	Y	
Cornwall sardine fishery	this fishery	
Faroe Islands queen scallop	N	different stock/Population
Fishery Shipowners Association (FSA) Western Bering Sea Walleye pollock	N	different stock/Population
Netherlands blue shell mussel (translocation, bottom & cultured) fishery	Y	
US Acadian redfish, pollock and haddock otter trawl fishery	N	different stock/Population
FPO Icelandic capelin	N	different stock/Population
Poland flatfish trawl	N	different stock/Population
Southern New England winter and little skate	N	different stock/Population
BSAI and GOA flatfish	N	different stock/Population
Denmark, Estonia, Germany, Sweden Baltic herring and sprat	N	different stock/Population
Cornish hake gill net	Y	
Canada Highly Migratory Species Foundation (CHMSF) British Columbia Albacore Tuna North Pacific	N	different stock/Population
NZRO Gulf of Riga herring and sprat trawl fishery	N	different stock/Population
Joint demersal fisheries in the North Sea and adjacent waters	Y	
Ireland rope grown mussel	Y	
Scanfjord Swedish rope grown mussel fishery	N	different stock/Population

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Estonia North East Arctic cold water prawn and cod	N	different stock/Population
FFA Finland Baltic herring & sprat	N	different stock/Population
US Gulf of Maine and Georges Bank haddock, pollock and redfish trawl	N	different stock/Population
ISF Iceland capelin	N	different stock/Population
Common Dolphin		
Small Pelagics Fishery in Sonora, Gulf of California	N	different stock/Population
PFA, SPSG, SPFPO, DFPO and DPPO North Sea Herring	Y	
Northern Ireland Pelagic Sustainability Group(NIPSG) North Sea herring	Y	
Cornwall sardine fishery	this fishery	different stock/Population
SI WCPO skipjack and yellowfin tuna purse seine fishery	N	different stock/Population
Atlantic Scup Trawl Fishery	N	different stock/Population
Southern Gulf of California Thread Herring	N	different stock/Population
US Acadian redfish, pollock and haddock otter trawl fishery	N	different stock/Population
Tri Marine Western and Central Pacific skipjack, yellowfin and bigeye tuna fishery	N	different stock/Population
Spencer Gulf king prawn	N	different stock/Population
Solomon Islands skipjack and yellowfin tuna purse seine and pole and line	N	different stock/Population
Southern New England winter and little skate	N	different stock/Population
Cornish hake gill net	Y	
U.S. Northeastern Coast Longfin Inshore Squid and Northern Shortfin Squid Bottom Trawl Fishery	N	different stock/Population
PNG Fishing Industry Association's purse seine skipjack, yellowfin and bigeye tuna fishery	N	different stock/Population
FROM Nord North Sea and Eastern Channel pelagic trawl herring	Y	
South East Australia small pelagic fishery (commonwealth) mid-water trawl for blue mackerel, jack mackerel and redbait	N	different stock/Population
Ireland rope grown mussel	Y	

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South Australia sardine fishery	N	different stock/Population
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Table 22. Overlapping fisheries P2 scores for both harbour porpoise and common dolphin on PI2.3.1a where applicable.

Fishery name	Gear	Location	Certification status	Performance Indicators to harmonise	Score
Cornish hake gill net	Gill nets and entangling nets	ICES subarea 7	Certified (V2.01).	PI2.3.1a	80
FROM Nord North Sea and Eastern Channel pelagic trawl herring	pelagic trawl	ICES subarea 7 and 4	Certified (V2.01).	PI2.3.1a	80
Joint Demersal Fisheries in the North Sea	Multiple	ICES subarea 4	Certified (V2.01).	PI2.3.1a	80
Northern Ireland Pelagic Sustainability Group (NIPSG) Irish Sea herring	pelagic trawl	ICES subarea 7 and 6	Certified (V2.01).	PI2.3.1a	80
Schleswig-Holstein blue shell mussel	Mussel culture	ICES subarea 4	Certified (V2.01).	PI2.3.1a	80
SFSAG northern demersal fishery	trawl	ICES subarea 4 and 6a	Certified (V2.01).	PI2.3.1a	80
Netherlands blue shell mussel (translocation, bottom & cultured) fishery	Mussel culture	ICES subarea 4 and 6a	Certified (V2.01).	PI2.3.1a	80
FROM Nord North Sea and Eastern Channel pelagic trawl herring	Pelagic trawl	ICES subarea 4 and 6a	Certified (V2.01).	PI2.3.1a	80

Principle 3

Management of the fishery is principally the responsibility of the Marine Management Authority (MMO) and UK Government under the Fisheries Act. There are additional jurisdictional management measures from Cornwall IFCA (IFCA) and the Cornwall Sardine Management Authority. The stock is managed by ICES via CEFAS and there are no other fisheries certified on the stock. This combination of management structure is unique to the fishery and whilst there is some overlap with other fisheries in Table 22 - SFSAG northern demersal fishery and Cornish hake gill net there are none which can fully harmonised with under P3. This meets with MSC guidance in table PB1 FCP2.3. For SFSAG northern demersal fishery and Cornish hake gill net P3 areas of overlap (Fisheries Act) there is consistent scoring and rationales where possible meeting PB1.3.1.a. All PIs >80

Table 23. Overlapping fisheries

Supporting information	
Principle 1 None, there are no other MSC fisheries which target this stock. Principle 2 Table 21 and Table 22 shows the overlap with the fisheries relevant to this fishery the scoring elements concerned for harmonisation are harbour porpoise and common dolphin. There is overlap with Cornish hake on some VMEs but there are no known protection measures requiring harmonisation. Principle 3 - For SFSAG northern demersal fishery and Cornish hake gill net P3 areas of overlap (Fisheries Act) there is consistent scoring and rationales where possible meeting PB1.3.1.a. All PIs >80	
Was either FCP v2.2 Annex PB1.3.3.4 or PB1.3.4.5 applied when harmonising?	No
Date of harmonisation meeting	Principle 2 – March 2023 and email confirmation of no change November 2023
If applicable, describe the meeting outcome	
Harmonisation completed by assessment of published reports of relevant fisheries in Table 22	

6 Shark finning

There is no evidence of shark finning in this fishery, there are no reported shark catches from any source.

7 References (Bibliography)

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