Project UK: Scallop Action Plan

Version: 4.1

Date: 13 April 2022

Overview

Fishery name: UK North Sea, West of Scotland and Irish Sea King Scallop (*Pecten Maximus*)

Start date: 25 March 2019

Fishery location: ICES Divisions 4, 6a, 7a

UoA	Stock Area	ICES Division
1	West of Kintyre	6a
2	North West	6a
3	North East	4
4	East Coast	4
5	Clyde	6a
6	Orkney	4, 6a
7	North Sea South	4
8	Dogger Bank	4
9	Irish Sea	7a

Fishing methods:

Mechanical dredge

UoA vessels: all UK vessels

Annual reviews:

End Year 1: April 2020 Completed 14 April 2020
End Year 2: April 2021 Completed 19 May 2021
End Year 3: April 2022 **Completed 13 April 2022**
End Year 4: April 2023
End Year 5: April 2024

Project leaders: Project UK Fisheries Improvements – Round 2

Improvements recommended by: POSEIDON AQUATIC RESOURCE MANAGEMENT

Overview of the Action Plan:

This Action Plan has been undertaken as part of Project UK Round 2 and is applicable to UK vessels using mechanised dredge targeting king scallop in the North Sea, West of Scotland and Irish Sea. It has been informed by an MSC pre-assessment (completed in March 2019), quarterly steering group meetings and a review process at end of Year 1 and end of Year 2. Actions and milestones have been completed for the MSC performance Indicators (PIs) that fail to reach Scoring Guideposts (SG) 60 and/or 80. The Action Plan highlights an ambitious set of actions designed to raise the scores over a defined period to a point at which the fishery could enter MSC assessment. The focus of the action plan is outlined for each MSC Principle below.

Principle 1 (target stock):

- defining stock areas,
- defining appropriate reference points,
- development of a **Harvest Strategy**,
- development of **harvest control rules and tools** at stock level,
- undertake surveys for data poor stocks.

Principle 2 (ecosystem):

- understanding the catch composition,
- interactions with ETP species & additional management requirements in an **ETP Strategy**.
- assessment of commonly encountered and VME habitats impacts,
- development of a UK Scallop **Habitat Management Plan**
- introduction of vessel monitoring systems on all vessels to record the footprint of the fishery accurately / reliably.
- undertake an ecosystem Scale, Intensity, Consequence Analysis (SICA)

Principle 3 (management):

- development of a **Fisheries Management Plan**,
- documenting stakeholder roles and responsibilities,
- together with development of short- and long-term fishery objectives.

It should be noted that a separate FIP for the UK Channel (7d & 7e) king scallop fishery is being undertaken by Project UK Round 1.

Colour code in tables below: Principle 1 | Principle 2 | Principle 3

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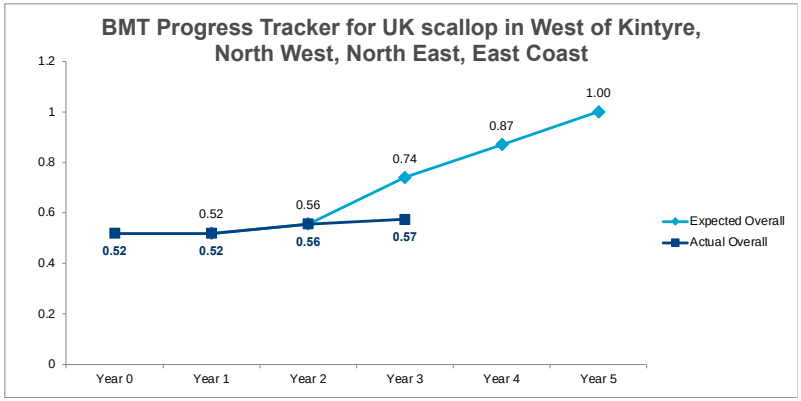
Annual Review (end of year 3)

This section summarises the annual review process at the end of year 3 in a five year Fisheries Improvement Project (FIP) for the UK North Sea, West of Scotland and Irish Sea king scallop dredge fishery. This section provides a review of the progress made in year 3 and the focus of actions for year 4.

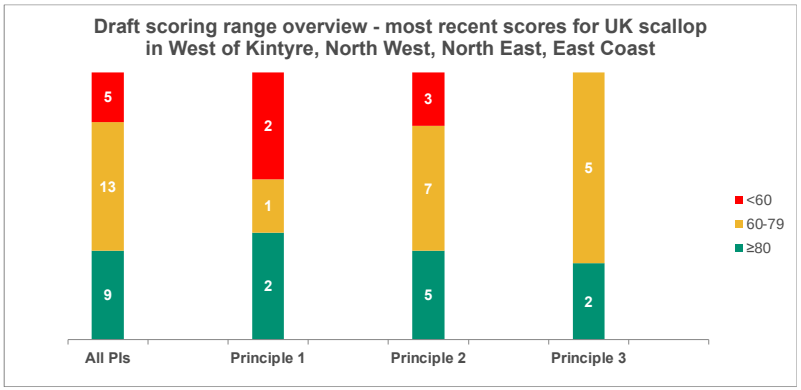
Main findings

Overall, the UK scallop FIP is currently behind target, with only one of the expected eleven score changes being achieved during this last annual period. At the end of year 3, five MSC PIs fail to reach SG60 and 13 are within the 60-79 category.



Substantial work has progressed within the FIP, however, a range of reports are not yet completed or available and therefore do not count towards the knowledge or evidence base for improving scores. The rate of progress has remained affected by a combination of Covid-19 pandemic and the Trade & Cooperation Agreement (TCA), including resource / capacity constraints that have stalled progress for identified actions. This is specifically related to undertaking scallop stock assessments (with most recent published in 2016), developing stock reference points, and publishing the scallop bycatch report. In addition, relevant to Principles 1 & 2, the reporting from the collaborative project by Heriot Watt and Bangor Universities testing new dredge design is expected later in 2022.

The scallop habitat PhD is currently half way through its three year timescale. Importantly, recent results from the PhD produced an initial relative benthic status (RBS) assessment of broadscale habitats, with mud, sand and gravel all scoring >0.8 in RBS. The rock habitat scores <0.8, but this is thought to be an anomaly due to the scale of VMS data available; in reality overlap of scallop dredge on rock features is expected to be unlikely. Overall, at the end of year 3, it is considered there is sufficient knowledge to assess that commonly encountered habitats meets SG60 for habitat outcome status and the score increases from **<60** to **60-79**. Further refinement of the modelling and calculations for commonly encountered habitats, as well as RBS calculations for VMEs are anticipated as the PhD progresses.



P3 actions in year 3 continued to focus on addressing Fisheries-Specific Management, through development of a FIP level Fisheries Management Plan (FMP). Drafting is underway with individual Steering Group members responsible for relevant sections of the FMP.

Recommended actions in year 4

For Principle 1 significant work remains on agreeing the most appropriate form of management (TAC, effort, spatial, etc), ensuring an inclusive approach that can be agreed by all stakeholders across this UoA, including inshore and remote fleets (e.g. Scottish islands), and ensuring that the form of management can be responsive to the status of the stocks.

Principle 2 will continue to be informed by ongoing gear trials and the habitat PhD. A bycatch report on total catch from scallop dredge surveys (using both scientific dredge and commercial dredge gear) is expected to be published in 2022. Principle 3 will focus on consulting on and progressing the FMP.

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A summary of the benchmarking tool for all UoAs is shown below, indicating the actual year 3 scores versus expected year 3 scores.

Principle	Component	Performance Indicator	UoA 1 - 4 (Scotland: WoK, NW, NE, ECoast)		UoAs 5 - 6 Clyde & Orkney		UoAs 7 - 8 North Sea & Dogger Bank		UoA 9 Irish Sea	
			Actual Year 3	Expected Year 3	Actual Year 3	Expected Year 3	Actual Year 3	Expected Year 3	Actual Year 3	Expected Year 3
1	Outcome	1.1.1 Stock status	60-79	60-79	60-79	60-79	60-79	60-79	60-79	60-79
		1.1.2 Stock rebuilding	---	---	---	---	---	---	---	---
	Management	**1.2.1 Harvest Strategy**	<60	60-79	<60	60-79	<60	60-79	<60	60-79
		1.2.2 Harvest control rules and tools	<60	60-79	<60	60-79	<60	60-79	<60	60-79
		1.2.3 Information and monitoring	≥80	≥80	60-79	60-79	60-79	60-79	≥80	≥80
		1.2.4 Assessment of stock status	≥80	≥80	60-79	≥80	60-79	≥80	≥80	≥80
2	Primary species	2.1.1 Outcome	≥80	≥80	≥80	≥80	≥80	≥80	≥80	≥80
		2.1.2 Management	≥80	≥80	≥80	≥80	≥80	≥80	≥80	≥80
		2.1.3 Information	≥80	≥80	≥80	≥80	≥80	≥80	≥80	≥80
	Secondary species	**2.2.1 Outcome**	60-79	≥80	60-79	≥80	60-79	≥80	60-79	≥80
		2.2.2 Management	60-79	60-79	60-79	60-79	60-79	60-79	60-79	60-79
		2.2.3 Information	≥80	≥80	≥80	≥80	≥80	≥80	≥80	≥80
	ETP species	**2.3.1 Outcome**	<60	60-79	<60	60-79	<60	60-79	<60	60-79
		2.3.2 Management	<60	60-79	<60	60-79	<60	60-79	<60	60-79
		2.3.3 Information	60-79	≥80	60-79	≥80	60-79	≥80	60-79	≥80
	Habitats	2.4.1 Outcome	60-79	60-79	60-79	60-79	60-79	60-79	60-79	60-79
		2.4.2 Management	<60	60-79	<60	60-79	<60	60-79	<60	60-79
		2.4.3 Information	60-79	60-79	60-79	60-79	60-79	60-79	60-79	60-79
	Ecosystem	2.5.1 Outcome	60-79	60-79	60-79	60-79	60-79	60-79	60-79	60-79
		2.5.2 Management	60-79	60-79	60-79	60-79	60-79	60-79	60-79	60-79
		2.5.3 Information	≥80	≥80	≥80	≥80	≥80	≥80	≥80	≥80
3	Governance and Policy	3.1.1 Legal and customary framework	≥80	≥80	≥80	≥80	≥80	≥80	60-79	60-79
		3.1.2 Consultation, roles and responsibilities	60-79	60-79	60-79	60-79	60-79	60-79	60-79	60-79
		3.1.3 Long term objectives	≥80	≥80	≥80	≥80	≥80	≥80	≥80	≥80
	Fishery specific management system	3.2.1 Fishery specific objectives	60-79	60-79	60-79	60-79	60-79	60-79	60-79	60-79
		3.2.2 Decision making processes	60-79	≥80	60-79	≥80	60-79	≥80	60-79	≥80
		3.2.3 Compliance and enforcement	60-79	≥80	60-79	≥80	60-79	≥80	60-79	≥80
		3.2.4 Management performance evaluation	60-79	60-79	60-79	60-79	60-79	60-79	60-79	60-79

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Table 1: Action Plan

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
Action 1: Stock status **Overview** Development and implementation of reference points to allow assessment of stock status of scallop stocks in relation to PRI and MSY. **Performance indicator** 1.1.1 Stock status **60-79** Requirement at SG80: It is highly likely that the stock is above the PRI The stock is at or fluctuating around a level consistent with MSY.	Action lead: Scotland: MSS, other areas: TBC Partners: Cefas, AFBI, Bangor University (IoM/Wales) Resources: ICES Scallop WG	**1a.** Yr1 – Review and define appropriate stock boundaries, including review of VMS data and biological data. Consideration of extent of biologically meaningful data available and requirement for further data/survey to support stock definition.	**Complete** Current stock boundaries are reviewed annually by the ICES Scallop WG. Boundaries are based on spatial VMS data reviewed at time of stock assessment and biological data on growth. Areas used for assessment fully encompasses VMS data. Current boundaries are considered appropriate. Further work to support stock definition: being considered at ICES WG (see annual reports), a PhD student at Strathclyde University is undertaking a meta-population connectivity analysis based on oceanographic modelling, with Heriot Watt (MK) as co-supervisor. Irish Sea stock boundary has been defined (see action 5b). Documentation: ICES Scallop WG 2019 report Action: • MK to provide update on PhD student progress.	
		1b. Yr. 3-4 - Consideration of appropriate reference points based on: • stock surveys and TSA in Scotland where analytical stock assessment available. • fishery-independent surveys and yield-per-recruit modelling in English stocks, • AFBI and Isle of Man surveys in Irish Sea & Welsh surveys in Cardigan Bay.	**On target** ICES routinely establish reference points for stocks that have a stock assessment in place (typically for quota species). However, these are not applicable for scallops at the moment because most stocks do not have an assessment with sufficient information for reference points to be established [noting that 2019 surveys were undertaken, but stock assessments have not yet been generated from these surveys]. Some institutes have developed proxies which are reviewed by ICES. ICES WG Scallop have discussed reference points, and are considering how to address this further. MSS are aware of the requirement to undertake this work. Planned staff recruitment to support scallops assessment work has not occurred and responsibilities have been absorbed into existing roles. Establishing reference points for scallop stock areas assessed by Marine Scotland Science remain on their agenda, although conducting scallop stock assessments remain the priority. It is noted that an ICES workshop is planned for autumn/ winter 2021 to look at MSY reference points. This workshop will prioritise stocks that have an analytical assessment, followed by other stocks including scallop. Cefas stock assessment (Cefas, 2022) for scallops in the North Sea (4.b.S) and Dogger Bank (4.b.D) have not yet defined MSY candidates for HR_{MSY}. Action: • LB to provide any relevant details from the ICES MSY reference points workshop. • LB to raise the topic of adding reference points to the next WGScallop ToR in the next ICES WGScallop meeting.	V3.1: changed to Yr. 3-4

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
		1c. Yr3-4 – Consultation on proposed reference points with ICES Scallop Working Group.	This milestone is yet to be commenced.	V3.1: changed to Yr. 3-4
		1d. Yr4 – Agreement of reference points in all scallop fishing areas, where possible. Presentation to fisheries authorities.	This milestone is yet to be commenced.	V3.1 changed to Yr. 4
		1e. Yr4-5 – Assessment of stock status in relation to the newly-implemented reference points	This milestone is yet to be commenced.	V3.1 changed to Yr. 4-5
Action 2: Harvest strategy **Overview** Development of a harvest strategy which controls exploitation rate, incorporates reference points and an HCR and is responsive to the state of the stock. Ensure that there is a regular review of alternative measures for minimising mortality of unwanted catch. **Performance indicator** 1.2.1 Harvest strategy **<60** Requirement at SG80: The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80. The harvest strategy is achieving its objectives (although may not be fully tested). There is a regular review of alternative measures of minimising mortality of unwanted catch.	Action leads: Seafish [2a] Action leads: SICG (Macduff / SWFPA) [2b-2f]. Partners: MSS, Cefas, AFBI, Bangor University, NIFPO, ANIFPO, Manx Fish PO, WFA.	**2a**. Yr1 - Investigate approaches for assessing both the discard rate and the survival rate of discarded unwanted small scallops. [This milestone is aligned with 6e]	**This milestone is aligned with 6e. See progress reporting under 6e.**	V2.3 aligned with 6e
		2b. Yr1 – Consider options for controlling exploitation rate within the scallop fisheries.	**Complete** SICG management group have undertaken an assessment of interventions for the UK king scallop fishery. The draft report was circulated to industry for consultation prior to the final report being submitted to UK Government in Nov 2019. Current management can be summarised as follows per vessel length category: • Over 15m – effort restrictions in Channel and Western Waters • 10-15m – need scallop entitlement but no effort ceilings. • under 10m – no scallop entitlement needed There has been a growth in 10-15m fleet targeting scallops due to enacting latent entitlements. Seafish reported falling CPUE across the UK fishery. SICG proposed interventions options are summarised as follow: Intervention 1: stop expansion of industry • Freeze latent scallop entitlements (already done in Scotland and Isle of Man). • Cap effort in 10-15 and 10m vessels at current levels. This is considered the prerequisite to managing the fishery, as any measure would be ineffective if the fishery is still open to new entrants. Intervention 2: management options 1. TACs – catch controls. Consider hybrid to prevent consolidation within inshore e.g. inshore and offshore TAC, regional TACs (as in Norway). 2. Effort system – expand to all segments and all areas. Avoid displacement. 3. Harmonise technical conservation measures – dredge limitations, Scottish system tighter and more prescriptive. Deliberately reducing efficiency of vessels, makes sense in effort system as limited by time. But not for TAC, as reducing efficiency increases footprint of fishery. 4. Closed areas and closed seasons. SICG next steps: • Earliest possible implementation of fleet measures to stop expansion.	

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
			• Develop management measures and timetable for implementation. Documentation: CEFAS status reports, Poseidon report, Seafish CPUE & scallop workshop in Feb 19. Action: • SICG to provide SICG report on interventions (when approved).	
		2c. Yr2-3 – Consult with relevant authorities on options for controlling exploitation rate in the fisheries and/or other management measures for the scallop fishery.	**On target** The SICG interventions paper was submitted to UK Government in Nov 2019. Steering group discuss discontentment of the under 15m scallop fleet to the proposals outlined in 2b. There has not been any substantive change in management paper due to delays in feedback from the Devolved Administrations. Progress in 2020 has been affected by both the Covid pandemic and Brexit. At the Nov 2019 Steering Group meeting the SICG options paper was discussed, and a request was made to commission further research into the feasibility of the options. The Secretariat has been working with Steering Group members to draft a Terms of Reference and identify funding for this feasibility study to go ahead. Actions: • FB to update the group on upcoming SICG-Devolved Administrations management options meeting	V3.1: changed to Yr. 2-3
		2d. Yr. 2-3 – Consult with fisheries stakeholders including RIFGs and inshore fishermen on management measure options for the scallop fishery.	**On target** Based on 2b and 2c above, it is highlighted that RIFGs and inshore fishermen should be more actively engaged through the project. This is crucial to ensure information from the inshore fleet is appropriately reflected and all sectors are fully engaged in the project, which will support successful implementation of the FMP. It is also important to ensure the FMP aligns with current MS strategy and policy. Currently in Scotland, decision making is centralised in Marine Scotland. Scotland's Fisheries Management Strategy 2020-2030 was published in Dec 2020. It commits to working in partnership wherever possible, including through established co-management groups FMAC (Fisheries Management and Conservation Group) and IFMAC (Inshore Fisheries Management and Conservation Group), and RIFGs. It commits to strengthening the role of RFGs, which could be supported through strengthening inshore licence conditions. Scotland's Fisheries Management Strategy (FMS) 2020-2030 has a 12 point Action Plan focused on social, environmental and economic sustainability, specifically of relevance to this FIP are the following FMS Action Points: Of relevance to Principle 1 FIP Actions: • FMS Action Point 8: expand use of TAC's where relevant. • FMS Action Point 10: Catching Policy – stock management with responsive and proportionate technical and spatial measures.	V2.3 Milestone added

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
			Of relevance to Principle 2 FIP Actions: • FMS Action Point 9: Remote Electronic Monitoring (REM) and vessel tracking technology to improve MPA compliance. • FMS Action Point 11: Ecosystems based approach and protection for spawning and juvenile congregations. • FMS Action Point 12: Support net-zero targets and reduce vessel emissions and reduce marine litter. Of relevance to Principle 3 FIP Actions: • FMS Action Point 3: Polices around allocation of additional quota. • FMS Action Point 6: Strengthening the RIFG network. • FMS Action Point 7:Improve quota management arrangements. • FMS Action Point 9: REM and technology tracking to deliver compliance and improve knowledge. The secretariat has engaged with RIFGs to raise awareness of the FIP and understand local management plans relevant to scallops. Recent progress has been demonstrated by a representative from the West Coast RIFG joining Project UK Round 2 steering group meetings. Actions: • Engagement with RIFGs and Marine Scotland to continue.	
		2e. Yr. 2-4 – Development of the scallop harvest strategy as part of the UK Scallop Fisheries Management Plan (FMP).	**Progrerssing** This milestone has progressed as described in 2b and 2c above. Actions: • Secretariat to continue seeking funding options for this work.	V4.1 timescale updated
		2f. Yr3 – Agreement with fisheries administrations on the FMP for the scallop fisheries. Complete review of alternative measures for minimising mortality of unwanted catch.	The first part of this milestone is yet to be commenced. See update under 6e on alternative measures.	
		2g. Yr4 – Implementation of the management plan which includes a harvest strategy that is responsive to the state of the stock.	This milestone is yet to be commenced.	
		2h. Yr5 – Noting that the harvest strategy may not have been fully tested, provide evidence that the new harvest strategy is working and achieving its objectives.	This milestone is yet to be commenced.	
Action 3: HCR&T	Action leads:	**3a.** Yr2-4 – Consider options for reference points and associated HCRs.	**On target**	

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
Overview Development of a harvest control rule which takes into account uncertainty and provides evidence that the tools in use are effective in reducing exploitation rate if required. **Performance indicator** 1.2.2 Harvest control rules and tools **<60** <u>Requirement at SG80:</u> Well-defined HCRs are in place that ensure exploitation rate is reduced as PRI is approached and stock is expected to be consistent or above MSY. HCRs are likely to be robust to the main uncertainties. Available evidence indicates that tools in use are effective in achieving exploitation rates required under HCR.	SICG (Macduff / SWFPA) Partners: UK fisheries administrators (UK FAs), MSS, Cefas, AFBI, Bangor University		As per Milestone 1b, reference points have not yet been defined. These will be based on advice from MSS, Cefas and ICES Scallop WG. Reference points are very much on the agenda, but have not been agreed as yet. As per 2b and 2c, management approaches and measures are in the process of being discussed. It is noted that scallops in Scotland are not included in the list of proposed FMPs within the Joint Fisheries Statement (JFS) table. It is expected that the scallop FMP will be developed by the Scottish Scallop Sector Working Group (SSSWG), but this is unconfirmed. There will not be a single UK-wide scallop plan, as Scotland and Northern Ireland will develop their own regional plans. The Trade and Cooperation Agreements (TCA) requires multiyear strategies (known as "MYS"), with scallops being considered as a MYS candidate	V4.1 timescale updated V1.7: changed to Yr. 2-3
		3b. Yr2-4 - Consult with relevant authorities on proposals for HCRs.	As per 3a.	
		3c. Yr4 - Agreement on preferred option for HCR	This milestone is yet to be commenced.	
		3d. Yr4-5 – Implementation of HCR.	This milestone is yet to be commenced.	
		3e. Yr5 – Provide evidence that indicates the tools in use are appropriate and effective in achieving exploitation rates required by the HCR e.g. evidence that exploitation rate has been reduced if required.	This milestone is yet to be commenced.	
<u>Action 4: Information</u> **Overview** Implementation of annual stock surveys in Orkney, Clyde and English North Sea fisheries to provide information on stock structure and estimates of stock abundance. **Performance indicator** 1.2.3 Information and monitoring **60-79** (UoAs 5, 6, 7 & 8) <u>Requirement at SG80:</u>	Action leads: MSS, Cefas [4a-4d] Partners: SICG (Macduff / SWFPA) CFA, OFA, Bangor University, AFBI, Marine Institute	**4a.** Yr1 – Undertake gap analysis to identify possible information gaps across all stock assessment areas identified and conduct necessary research/information gathering as required.	**Complete** The ICES Scallop WG undertook a gap analysis for stock assessment areas in 2015. Summary tables were produced, and gaps identified for improved knowledge including biological sampling and survey design. This gap analysis is reviewed every three years to agree priorities for the WG. The current 3-yr period is from 2019 to 2021 and therefore a review of priorities is expected in 2022. MSS note a data gap in the work being undertaken on UK scallops is that the MSS surveys are undertaken in Scottish waters only, and this will not be representative of the entire fishing area for this FIP. Additionally, only a relatively small area is surveyed, which is often returned to, and MSS does not have data on habitat ground. It is noted Cefas are undertaking survey work for the English North Sea stock. In 2019 dredge efficiency was identified as a key area and a review paper on dredge efficiency has been undertaken. Documentation: ICES Scallop WG reports. Action:	

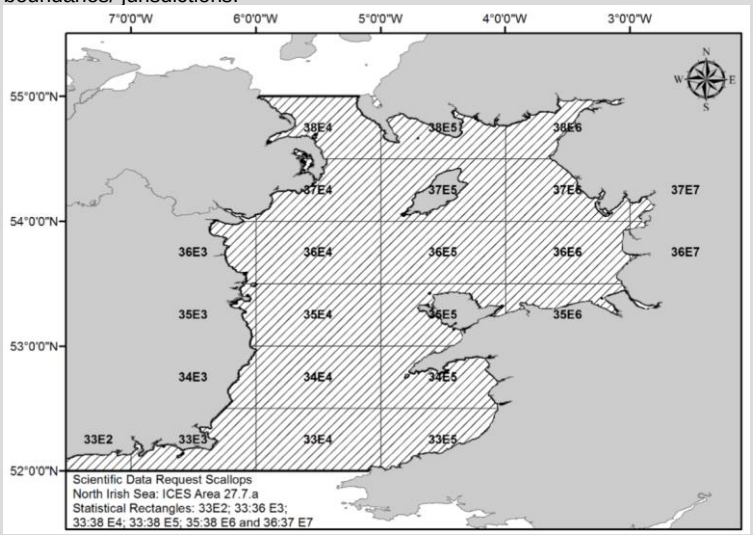
Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
Sufficient relevant information related to stock structure, stock productivity, fleet composition is available to support the harvest strategy. Stock abundance and UoA removals are regularly monitored at a level of accuracy and coverage consistent with the harvest **control rule**.			• Circulate technical review report on dredge efficiency (available 2020 or 2021)	
		4b. Yr1 - Consultation with relevant authorities (Marine Science Scotland and Cefas) in relation to extending annual stock surveys.	**On target** The year 1 task for these actions was around stock surveys and their feasibility of being annual. Marine Scotland Science completed the Shetland scallop survey this year (2020) but only managed one day of trialling the n-virodredge due to poor weather. No other Marine Scotland Science scallop survey have been able to go ahead this year – including East, West and Clyde scallop surveys (See ICES WG Scallop, 2020 for full table of disrupted scallop surveys) . AFBI conducted a survey in February 2020 in nine randomly sampled survey areas – three on the north coast of Northern Ireland and six in the Irish Sea. AFBI do not currently have a full stock assessment, so base their analysis on trends, which indicate a continued downward trend based on catch per unit effort (CPUE). There will be a section in the ICES scallop Working Group report with these survey results. AFBI started recording scallop damage this year (2020) with results indicating around 95% of scallops were 1 or 2 on their damage scale, implying no damage or a slightly chipped shell, which echoes similar findings across the UK. It is understood that if a scallop is only lightly damaged it has a high survivability. It is understood that damage rates to scallops on the seabed reflect what is seen in the catch. For example, if 5% of scallops are observed damage from the catch, there are a further 5% damaged scallops on the seabed. This is a 10% damage rate – 5% observed in trawl, 5% on seabed. <u>2021 surveys and stock assessment</u> **Scotland**: A scallop stock assessment is not expected until late 2021 or early 2022. Scallop stock advice is not formally required by ICES, so the surveys are frequently deprioritised. MSS completed three surveys with revised procedures, in 2021, including, Shetland, west coast and east coast. The Clyde survey was also planned for Oct 2021. In addition, Orkney Sustainable Fisheries (OSF) resumed observer trips on scallop vessels in August 2021. The primary objectives for the OSF scallop project are to determine the relative abundance of king scallop resources around Orkney, and to produce a heat map of fishing effort. The secondary objectives focus determining optimum tow durations and gear efficiency, and assessing the bycatch levels. **Northern Ireland:** The AFBI scallop survey went ahead in February 2021, with little substantive changes in results from the previous year. AFBI has started a new project “Enhanced Inshore” which will put more concentrated effort in to collecting data on inshore stocks including scallops. One of the ideas of this project is to start a scallop self-sampling scheme which sees scallop fishermen	

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone

			provide AFBI with a bag of unsorted catch, similar to the current Nephrops self-sampling scheme. This would provide samples of scallops from across the season and is due to be completed December 2022. AFBI has also started a new project looking and genetic connectivity across the Northern Ireland region. This work will cover both king and queen scallops and is also due to be completed December 2022.
			AFBI identified four scallop enhancement sites through public consultation, along with additional inshore MPAs. Whilst there are some issues with the MPAs, the enhancement sites seem to have stakeholder support. AFBI looked at possible enhancement strategies through a Seafish funded project and the report is available at https://www.afbini.gov.uk/publications/scallop-enhancement-report
			Part of this project will focus on using modelling to determine where larvae from the enhancement areas would settle and if this would benefit the fishing industry. Ichthyop modelling is being conducted to assess larval dispersal in the Irish Sea, and the results will be available in late 2021.
			England: Cefas successfully carried out a dredge survey in the central North Sea in September 2021 and a survey on the English inshore grounds in the North Sea is due to be completed in autumn 2021. It is confirmed that Cefas' stock assessment remit covers North Sea English waters. The central North Sea was sampled for the first time in 2021 and the long term ambition is not yet known.
			Wales: With the inclusion of Cardigan Bay within the scope of the FIP it may be appropriate for Natural Resources Wales (NRW) to engage with the Steering Group.
			
			Action:
			• Secretariat to:
			  • request Cefas' Dogger Bank survey report from CB
			  • collect more damage data from the Fishery Administration's science bodies
			• share the update from the Orkney Sustainable Fishery.
			• share link to the ICES workshop agendas.
			• share send the cruise reports from the summer MSS surveys with the Steering Group.
			• JP to speak to NRW about participating in Project UK	

		4c. Yr1 & Yr2 - Alternative options for stock assessment. Feasibility and resource assessment for implementing stock surveys.	**On target** MSS are exploring use of cameras on dredges and gear specifications. Orkney Sustainable Fisheries have established scallop research projects which aim to collect biological information on scallops around Orkney. This will provide regionally specific information that can be used to assess the sustainability of the fishery and aid stock definition.	

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
			The ICES WG Scallop 2020 report provides an update on recent/current stock assessment methods and explores other methodologies; including comparisons with fishery dependant indicators. Specifically it explored Norwegian examples and highlighted how sensitive reference point estimates are to assumptions made on key population dynamic parameters, including natural mortality and recruitment.	
		4d. Yr3 – Instigate annual stock surveys in Orkney, Clyde and Irish Sea (where relevant).	This milestone is yet to be commenced. Action: • recommended that a full review of stock assessments for all UoAs is undertaken at the end of Year 3, where stock assessments have been completed.	
Action 5: Assessment **Overview** For the Orkney, Clyde and English North Sea scallop fisheries, an appropriate method of stock assessment should be developed, and the method should take uncertainty into account. **Performance indicator** 1.2.4 Assessment of stock status 60-79 **(**UoAs 5, 6, 7 & 8) Requirement at SG80:	Action leads: MSS [5a] Bangor / IoM [5b] MSS/ Bangor/ IoM/ Cefas [5c-5e] Partners: CFA, OFA, Bangor University, AFBI, Marine Institute, SICG (Macduff / SWFPA) Resources: ICES Scallop WG	**5a.** Yr1 – Investigate feasibility of undertaking stock surveys in Orkney and Clyde. Consider appropriate stock boundaries.	**Complete** Orkney Sustainable Fisheries are going ahead with a scallop survey for Orkney and funding has been secured for next year (see action 5c). The Clyde survey has been completed by MSS, with industry (CFF) input related to information sharing on ground conditions and station positions (see action 5c).	
		5b. Yr1 – Investigate scope of collaborative survey being undertaken in Irish Sea by researchers in Ireland, Isle of Man and Wales. Undertake gap analysis of scope of all Irish Sea assessments.	**Complete** ICES WG Scallop 2020 report details their ToR (c): '*Collate all available data and attempt to conduct a stock assessment for the north east Irish Sea'*. A list of data sources was then collated from Northern Ireland (AFBI), Isle of Man (Bangor University), Wales (Bangor University), Ireland (Marine Institute) and Scotland (Marine Scotland). The ICES WG Scallop 2020 report has the most up-to-date synopsis. This ToR (c) will run for three years with the expected deliverable at the end of this period of a Stock Assessment for the North Irish Sea (i.e. 2023). The area included in the assessment is shown below (ICES area 7.a). The WG will agree the most appropriate scale of assessment including: single area, spatially structured assessments and fully separated sub-area assessments. The scale will be based on stock identification science, rather than fisheries management	

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
The assessment is appropriate for the stock and for the harvest control rule. The assessment takes uncertainty into account.			boundaries/ jurisdictions.  Documentation: ICES Scallop WG 2019 and 2020 reports	
		5c. Yr2-4 – Undertake initial stock survey in Orkney, Clyde and Irish Sea (subject to gap analysis).	**On target** Orkney and Clyde stock surveys have been completed – reporting not currently available for Orkney. Irish Sea stock assessment is part of ICES WG Scallop ToR and being progressed in a three-year time frame (2020-2023). Note that the stock areas/boundaries within the Irish Sea (7a) are being considered and expected to be further defined into distinct stock areas as knowledge grows. <u>Update for Northern Ireland:</u> AFBI carried out a scallop survey in the Irish Sea in Feb 2020. In the Irish Sea, AFBI have identified six survey "areas" from which stations are selected randomly on an annual basis. In 2020 the areas within the Irish Sea showed mixed results with four showing a reduction in the standardised CPUE and two showing an increase in CPUE. AFBI do not currently have a stock assessment but do examine trends in the stock. Following from the 2020 survey the Irish Sea continues to show a downward trend in CPUE. Actions: • Obtain Orkney scallop survey report	V2.3 hanged to Yr. 2-4 (Irish Sea survey timeframe)
		5d. Yrs3 & 4 – Continue stock surveys in Orkney, Clyde, English North Sea and Irish Sea (where relevant).	This milestone is yet to be commenced.	

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
		5e. Yr5 - Continue stock surveys in Orkney, Clyde, English North Sea and Irish Sea (where relevant), and all other UoAs, and use TSA or other appropriate model to undertake stock assessments.	This milestone is yet to be commenced.	
Action 6: Secondary species **Overview** Information on the nature and scale of effect of this fishery on secondary species needs to be assessed. Some quantitative data should be available. Based on this, appropriate management measures need to be developed. **Performance indicators** 2.2.1: **60-79** 2.2.2: **60-79** (increased from **<60** in Y2) 2.2.3: **≥ 80** (increased from **60-79** in Y2) Requirement at SG80: 2.2.1. Outcome status: Main secondary species are highly likely to be above biologically based limits, or if below there is evidence of recover or a demonstrably effective partial strategy. 2.2.2. Management: A partial strategy is in place for the UoA that is expected to maintain or not hinder rebuilding of main secondary species at/to levels which are highly likely to be within biologically based limits or to ensure that the UoA does not hinder their recovery.	Action leads: Seafish [6a-6c] To be decided in Yr. 2 [6d-6f] Partners: SICG (Macduff / SWFPA), SFF, Gear Innovation and Technology Advisory Group **(**GITAG) MS, Defra Cefas Stakeholders: Poseidon (support)	**6a.** Yr. 1-2 – Review existing data available to inform catch profile of scallop dredgers including landings, discard data and observer coverage.	**Completed** Seafish have assembled information on survival of secondary species and will incorporate into review of alternative measures. The NMPi has data on scallop catch rate. Recognise need for more transparency on data collating. Bycatch was previously on the ICES Scallop WG terms of reference, but has been removed for the next three years due to priority being focused on stock assessments. Marine Scotland Science's (MSS) scallop dredge survey uses scientific gear on one side and commercial dredges on the other, so comparison between scientific and commercial gear types/methods can be made (both are 6 dredge per side). **The catch data from 2009 - 2019 scallop surveys provides quantitative data on the proportion of catch.** Marine Scotland Science's (MSS) scallop dredge survey show indications of presence, absence and diversity of bycatch species. The data collected would not be defined as total catch data as the scientific survey gear is only designed to catch scallops, it is not representative of the catch from commercial dredges. MSS continues to work on a bycatch paper and progress has been made recently on writing up the report. MSS is working on gathering weight data and that, for most species, length-weight keys are already available. The steering group members agree to share information on weight-length keys where available. It is noted to collect comprehensive total catch data, it would be necessary to have observers on board vessels; there are no current proposals to have observers on board. Update for Northern Ireland: AFBI are currently working up bycatch data based on scallop survey work and hope to publish this as a report. Due to this, it is not possible to release AFBI bycatch records. However, information on a particular species may be feasible to provide if required. **Subject to reviewing the MSS Bycatch Report, the steering group will consider how to address collection of total catch data.** Action: • Obtain scientific papers completed on scallop bycatch in Irish Sea (AFBI) and Channel (Cefas)	V2.3: changed to Yr. 1-2

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
SG80: regular review and implemented as appropriate. 2.2.3. Information: Information is adequate to support a partial strategy to manage main secondary species.			• Obtain data from bycatch in IoM • LB to circulate scallop bycatch report when available. • CM and FN to discuss AFBI bycatch data further to provide quantitative information on secondary species bycatch	
		6b. Yr. 1-2 - Undertake gap analysis on data to determine if the appropriate level of detail is available to provide reliable total catch statistics, including unwanted catch and unobserved mortality.	**Completed** The MSS bycatch report provides quantitative data on total catch from scientific dredge and commercial dredge gear. Action: • Review collective data, based on this consider formal request to ICES WG to prioritise bycatch.	V2.3: changed to Yr. 1-2
		6c. Yr. 1-3 - Based on gap analysis undertake necessary data / information gathering exercises e.g. observer coverage, underwater video analysis of unobserved mortality where considered necessary.	**On target** MSS highlight importance of industry participation in gathering catch composition data. Work undertaken by Bangor for Channel scallop FIP included cameras on vessels, which could be replicated to collect more information on catch composition for this FIP. MSS do not have the resources for such work. Industry steering group members to discuss with their members to be involved in such a study. Noted that when all available info has been documented, there is potential to ask the ICES scallop Working Group to review any remaining knowledge gaps. LB noted that there are formal processes if the group wants to make a request of the ICES scallop Working Group to focus on bycatch. The ICES scallops working group terms of reference are fixed for the next three years. Action: • BS to circulate Channel camera trial paper to the Steering Group when it is available • CP and FB to approach their members about potential involvement in a bycatch CCTV project, and to table as an agenda item for the next SICG meeting • LB to send ICES research request form to secretariat	V2.3: changed to Yr. 1-3
		6d. Yr. 2-3 – Based on these investigations, establish accurate main secondary elements of the UoA (and primary elements, should they arise).	**On target** The Marine Scotland Science bycatch report has collated and analysed total catch data from scientific surveys, using both scientific dredge gear and commercial dredge gear. This report will allow accurate determination of main and minor species. A draft scallop bycatch paper was completed in September 2021, with feedback required from Marine Scotland Policy colleagues before sharing with the Steering Group. The paper analyses bycatch species encountered from 2009 -	V3.1 changed to Yr2-3 due to Covid.

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
			2019, including catch composition by quantity and weight, and some information on the damage index. Action: • LB to share the bycatch paper once comments from the MSS policy colleagues have been addressed.	
		6e. Yr. 2 – Establish a protocol / process for undertaking a regular review of alternative measures to minimise unwanted catch. Undertake review and document effectiveness and practicality of alternative measures. [This milestone is aligned with 2a]	**Complete** It is noted that the key points to an alternative measures document are: • identifying if there are better ways to catch the target stock • whether the alternative measure will negatively impact other species, or the safety of the crew • whether the alternative measure is cost-prohibitive to fishers; and, • whether it is feasible and legal to implement these changes Seafish have completed an alternative measures paper to review alternative scallop dredge gear and management measures and document their effectiveness at minimising mortality. This is relevant for both target species (P1) and secondary species. This review includes consideration of the following dredge gear types: ECODREDGE, n-virodredge, Oban dredge, Hydrodredge, Skid dredge and ring size. It is noted that the skid dredge is a significant alternative gear option for reducing habitat interaction; but is currently prohibited from use due to a ban on attachments to dredge gears. The review has been completed and compiled into a comprehensive report. The Steering Group agree to continue discussing ongoing work into alternative measures on a regular basis. Current ongoing work includes: • ICES WG Scallop review of catch efficiency estimates of scallop fishery towed gear around the globe; • Low Impact Scallop Innovation Gear (LISIG) being undertaken by Heriot Watt and Bangor Universities (Fishing Innovation Fund) Documentation: Seafish presentations and report Action: • Circulate ICES WG Scallop technical review report on dredge efficiency (expected in 2021) • Circulate Seafish review of alternative measures	
		6f. Yr. 3 – Development of possible management approaches to reduce impacts on secondary species.	This milestone is yet to be commenced.	
		6g. Yr. 4 – Implement management as appropriate.	This milestone is yet to be commenced.	

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
Action 7: ETP species **Overview** Information on the nature and scale of impacts on ETPs needs to be assessed. Based on this, appropriate management measures need to be developed. This needs to be embedded in an on-going, risk-based ETP impact monitoring system. **Performance indicators** 2.3.1: **<60** 2.3.2: **<60** 2.3.3: **60-79** Requirement at SG80: 2.3.1. Outcome status: Known direct effects of the UoA are highly likely to not hinder recovery of ETP species. 2.3.2. Management: There is a strategy in place, with objective basis for confidence that it will work and regular review of potential effectiveness and practicality of alternative measures to minimise mortality 2.3.3. Information: Some quantitative information is adequate to assess UoA related mortality of ETP species	Action leads: LINK Partners: SNH MSS, WWF, Natural England, DERA, JNCC, SICG (Macduff / SWFPA) Stakeholders: Poseidon (support)	**7a.** Yr. 1 – Define and agree ETP list.	**Complete** Through the Environment sub-group, WWF have reviewed the ETP list in the pre-assessment, added to this list and reviewed with SNH LINK JNCC and other stakeholders to ensure a comprehensive list of ETP species. SNH have added detail on which species the scallop dredge fishery is likely to interact with. In relation to the designation of Priority Marine Features (PMFs) as a vulnerable marine ecosystem (VME), or individual ETP species, NatureScot confirmed that organisms such as sea fan and sponge communities are included in the PMF list as habitat biotopes, and so it is recommended they are assessed as habitat VMEs in the MSC Standard [and to have the same approach for sea-pens and borrowing megafauna in the Nephrops fishery].	
		7b. Yr. 1-2 - GIS-based risk assessment. Listing of potential ETPs interacting with UoAs, and then mapping of ETP distribution overlap with UoA dredging effort.	**Complete** The group agree that for data and information, the most reliable species distribution lists and survey/scientific data should be sought through SNH and JNCC. These datasets include third party records (e.g. from divers), where appropriate. Masters student completed report on GIS-based risk assessment, focused on aerial overlap and encounterability. The report was a useful platform for future work to build on but there were concerns around the results and conclusions. The following points summarise Steering Group feedback on the ETP Masters project: Data: • The Steering Group felt some key datasets were not included, and admitted some may have been hard to access • VMS was for >12m vessels only, with information of vessels <12m absent from study • Some members made remarks on the point data; that a lack of ETP point data records did not mean that there were in fact no ETP species in those areas Methodology: • Habitat suitability needs to account for full spatial distribution of ETP species • Scale of aerial overlap was considered too broad • No discussion undertaken with catching sector ETP list: • ETP list did not adequately consider data deficient and/or low risk species • Atlantic sturgeon very unlikely to be caught. In terms of next steps, the group agreed that further sources of data should be collated to inform any follow up research.	V1.7 updated to Yr1-2 (due to timing of Masters)

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone

			Actions
			• Secretariat:
			  • To arrange meetings with IFGs and Marine Scotland
			  • to follow up with SFSAG to find out if their skate and ray guide can be shared with the group
			• FN to:
			  • share ETP presentation with Steering Group
			  • contact MMO around sharing Lara Leonard's MMO VMS data
			  • share ETP list with Steering Group
			• Secretariat to:
			  • speak with MF and Mike Kaiser about possibility of MF taking on habitat suitability analysis to support ETP actions
			  • review MSC Shetland scallop fishery's ETP recording protocol as an example
			• Steering Group to:
			  • review updated ETP list for any species or legislation that may have been missed and send any additions to Secretariat
			  • provide list of fishers who would be willing to do an ETP questionnaire	

		7c. Yr. 2 - Development of fishery dependant recording protocol, to record, analyse and monitor ETP interactions and outcomes (e.g. returned alive).	**Complete** An ETP Interaction Log has been developed in excel format. This is to be trialled as per action 7f. Potential to develop this into an App or use existing App recently launched e.g. Clean Catch App.	
		7d. Yr. 3-4 – Development of possible management approaches for reducing ETP interactions and impacts, if necessary.	**On target** This action will be informed by 7b.	V3.1 updated to 3-4
		7e. Yr. 2 – Establish a protocol / process for undertaking a regular review of alternative measures to minimise UoA related ETP mortality. Undertake review and document effectiveness and practicality of alternative measures.	**Complete** See 6e	
		7f. Yr. 3 - Implementation of recording protocol and pilot projects for ETP management approaches.	**On target** Steering Group members are seeking industry volunteers to trial the ETP recording protocol. The Heriot Watt and Bangor University scallop dredge gear trial taking place in June 2021 will also trial the reporting protocol. Additional support is required for developing identification guides for ETP species. It is noted that the ICES (2021) report on bycatch of protected, endangered, and threatened species (PETS) presents bycatch monitoring from 2017 to 2020. In	

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
			the Greater North Sea, interaction is reported within the set net fisheries and (to a lesser extent) demersal bottom trawl; no interactions between dredge and marine mammals or birds were recorded. Action: • NatureScot have agreed to assist in input to identification guide. • BL to ask Jess Sparks about any availability of Seafish budget to support the ETP wheelhouse guide development • JM to provide skipper feedback on the use of BATMap in the Western Isles pilot scheme to the Secretariat. • Steering Group members to let the Secretariat know if they would like to volunteer for Clean Catch trial. • MF to: ○ share details of the Heriot-Watt PhD using AI to analyse bycatch from conveyor belts with RW. ○ share the two 2021 Masters student reports on fishing gear interaction with specific ETP species. ○ share details of her PhD research with BL to add to the alternative measures report. • MS to arrange a wheelhouse sub-group meeting to finish the guide by April 2022, and to contact Steering Group members with the outstanding images and content needed. • BL to supplement the Alternative Measures Report with information on gear interaction with ETP species, gear penetration of the seabed, and the extent of knowledge on seabed recovery.	
		7g. Yr. 4 - Mainstreaming of ETP management approaches and introduction of a risk-monitoring system.	This milestone is yet to be commenced.	
Action 8: Habitats **Overview** The scale of impact on commonly encountered habitats needs to be assessed to determine the risk of serious harm resulting from UoA operation across the entire fleet and the entire range of the habitats. The spatial scale, intensity and impact on commonly encountered and VMEs, needs	Action leads: LINK, SNH, MS Heriot Watt Uni Partners: Seafish Bangor Uni WWF, Global Fishing Watch	**8a.** Yr. 1-2 - Review of existing fishery footprint analysis combined with commonly encountered habitats mapping and VMEs, including Scottish PMF habitats and MPA and SAC habitat features.	**Complete** A 3-year PhD (2020-2022) is underway titled: Understanding the consequences of scallop dredging in relation to seabed habitat types, conservation features and other industry sectors. Amalgamated VMS data has been analysed for >12m vessels. Access to >12m fleet VMS data from Marine Scotland is possible at trip level (i.e. requiring in-person visit to Aberdeen offices – delayed due to Covid). The <12m fleet mapping will be done using social science techniques. Covid-19 dependent, this work should start in Spring 2021 and will improve mapping already undertaken within the PhD. The PhD has undertaken a review paper on examples of scallop fishery management worldwide, with a focus on management of seabed habitat impacts. Mapping has been produced to present the best available scientific data, including scallop dredge fishing intensity for vessels >12m in length;	V1.7 updated Yr. to 1-2 due to PhD appointment in Jan 2020.

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
to be quantified within the UoA. Based on this, appropriate management approaches need to be developed. This needs to be embedded in an on-going, risk-based habitat impact monitoring system. **Performance indicator** 2.4.1: **<60** 2.4.2: **<60** 2.4.3: **60-79** <u>Requirement at SG80:</u> 2.4.1. Outcome status: The UoA is highly unlikely to reduce structure and function of commonly encountered habitats to a point where there would be serious harm. 2.4.2. Management: There is a partial strategy in place to achieve Habitat Outcome 80 level. There is some quantitative evidence that management is being implemented and UoA complies with VME related management. 2.4.3. Information: There is reliable information on the spatial extent of interaction and timing and location of use of fishing gear. Adequate information continues to be collected to detect any increase in risk to main habitats.	JNCC		mapping for commonly encountered habitats; PMF habitats; and scallop fishery restrictions.	
		8b. Yr. 1-3 – Provide a summary of scallop management measures within MPAs, SACs and any other designated sites.	**Progressing** A summary of management restrictions to scallop dredge gear has been provided as part of the ongoing PhD. Additional points to note include: • MMO currently have a consultation on proposed management measures which would prohibit bottom contact gears within the Dogger Bank SAC. • Whilst Scottish Environment LINK sit on the steering group, it is noted that Marine Conservation Society's (MCS) position is to seek a whole site approach to SACs and MPAs in regard to bottom contact gears and benthic habitats. Seafish are undertaking a MPA and fishing restrictions mapping project to provide consolidated and simplified data on the UK's MPA network and prohibited and permissible fishing operations in each area. This can be viewed on board vessels on plotters by importing positional data from the Kingfisher resource. As part of the PhD, a desk-based review of current management measures for global scallop fisheries has been undertaken. The report is currently under review, prior to being disseminated to the FIP. **There remains a need to ensure this action is fully documented to understand habitat management measures applicable for scallop dredging specific to MPA features (VMEs). This documentation should be available from the Kingfisher mapping project.**	V3.1 updated Yr. to 1-3 due to PhD appointment in Jan 2020.
		8c. Yr2-4 – Assessment of scallop dredge impact on habitats, including analysis via Bangor University habitat assessment tool.	**Progressing** This action is being addressed through the PhD work by Mairi Fenton (MF). To date, species distribution models for VMEs susceptible to damage from towed bottom-contact fishing gear have been developed. Including focus on sea fan and sponge communities and horse mussel beds. Conceptual PMF distribution maps were modelled based on the species' life histories; potential community shifts under different climate change scenarios have also been explored and applied to PMFs. The next phase of the PhD project will use the Bangor habitat impact tool to analyse Relative Benthic Status. When predicted distribution of commonly encountered habitats and VMEs are available, the relative benthic status of the seabed in terms of overlap with the scallop fishery will be analysed. This research will include coverage of habitat suitability for ETP species, with the aim of reporting in December 2021.	V2.5 updated to Yr. to 2-3 to allow for VME/pmf analysis.

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
			A low impact scallop gear trial (LISG) has been undertaken including field work in the Moray Firth. It is also noted that the SFSAG may have some information or data related to benthic interaction of existing certified fisheries, and availability of data or information related to this will be checked. In relation to habitat data, ICES issue formal data calls for VME data on an annual basis, improving the quality and spatial and temporal coverage of regional VME datasets (ICES 2021). Action: • Secretariat to update Marine Scotland on PMF distribution modelling and mapping by MF. • JM to share the Scottish Fisheries Sustainable Accreditation Group (SFSAG) benthic interaction report with the Secretariat. • MF to update on the scallop fishery habitat management measures report at the next Steering Group meeting. • RW to share slides on the BH3 model with the Secretariat for distribution to the Steering Group. • Secretariat to provide MSc with the Alternative Measures report. • MSc to share the slides with sign off from the funder when the project is complete, with an accompanying animation video. Expected by the end of march. • MSc to check whether there are photos of the seabed after the skid dredge has been towed and share with BC. • Secretariat to engage with MMO to find out who will have access to iVMS data once it has been rolled out.	
		8d. Yr. 2-4 -Development of a UK Scallop Habitat Management Plan including development of possible management approaches for reducing habitat interactions and impacts.	**Progressing** This milestone is linked with 8b. Documentation on current habitat management measures for commonly encountered habitats is necessary, as well as potential further management considerations based on the findings of the PhD	V2.5 updated to Yr. to 2-4 to allow for above changes.
		8e. Yr1-3 - Introduction of inshore-VMS (i-VMS), or equivalent, on all vessels <12m in length.	**On target** This action is being delivered through Marine Scotland commitment for Remote Electronic Monitoring for scallop fleets and through the inshore modernisation programme. Further details in action 14a.	
		8f. Yr. 4 – Update footprint of fishery when i-VMS is available.	This milestone is yet to be commenced.	

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
		8g. Yr. 4 - Implementation of habitat management approaches, where required. Recording and analysis of all scallop dredge VMS data.	This milestone is yet to be commenced.	
		8h. Yr. 5 - GIS reporting on extent and intensity of fishing for all vessel lengths. Mainstreaming of habitat management approaches and introduce of the risk-monitoring system into the fishery via the FMP.	This milestone is yet to be commenced.	
Action 9: Ecosystem **Overview** Information on the nature and scale of impacts on key elements underlying ecosystem structure and function needs to be assessed. Based on this, appropriate management measures need to be developed. In the medium term (3-5 years) this will be informed by Actions 7 and 8. In the short-term there is opportunity to conduct a Scale Intensity Consequence Analysis (SICA) analysis. **Performance indicator** 2.5.1: **60-79** 2.5.2: **60-79** Requirement at SG80: 2.5.1. Outcome status: The UoA is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm. 2.5.2. Management: There is a partial strategy in place, if necessary, which takes into account available information and is expected to restrain impacts of the UoA on the ecosystem. There is some	Action leads: Seafish Partners: LINK, SNH, WWF Stakeholders: Poseidon (lead SICA)	**9a.** Yr. 1-2 - Constitute expert group and conduct SICA analysis of main ecosystems and ecosystem services impacted by scallop dredging across the UoAs under assessment.	**Complete** It is noted that many of the information requirements will come from other P2 actions. Noted that an ICES WG on benthic impacts may be useful source of information. A SICA workshop with an expert group on scallop dredge ecosystem impacts was held through a virtual, interactive workshop. The findings will inform action 9b.	
		9b. Yr. 3 - Identify and recommend further research and management actions that reduce disruption to the ecosystem and ecosystem services to acceptable levels. This may be aligned with actions 2, 7 and 8.	This milestone is yet to be commenced. This milestone will be informed by the SICA workshop reporting. Actions • Steering Group to review FN's SICA report and provide feedback. • Secretariat to obtain more details on the blue carbon PhD from Mike Kaiser and share with the Steering Group. • The Secretariat to include an item on the potential historic distribution PMFs and the fishery footprint at the next Environmental sub-group meeting. • Steering Group members to contact the Secretariat if they object to additional members of ScotLINK to attend the Environmental sub-group meeting with CD.	
		9c. Yr. 4-5 - Implement management measures as appropriate.	**On target** This action is not being addressed until Year 4-5	

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
objective basis for confidence that these measures/partial strategy will work.				
Action 10: Legal framework **Overview** Develop organised and effective cooperation with other parties, associated with Irish Sea shared stocks to deliver management outcomes consistent with MSC Principles 1 and 2. **Performance indicator** 3.1.1 Legal and /or customary framework 60-79 (UoA 9)	Action leads: Management sub-group Partners: DERA, DAFM, Marine Institute, IoM board	**10a.** Yr1-3 – Identify relevant stakeholders for Irish Sea defined stock units.	**On target** This is better understood based on Steering Group membership, noted recent ICES Scallop WG was held in IoM. The identification of relevant stakeholders in the Irish Sea UoA, who are involved with the legal framework is currently being considered through the ICES process for designating stock areas. This will be documented within Section 3 of the FMP. There is a requirement for evidence of organised cooperation with other parties over shared Irish Sea stocks. This highlights the importance of having Northern Irish and Irish input into the legal framework. Actions • AH to support Northern Irish and Irish input into the legal framework action of the FIP and CP and MS to follow up with AH around what is required.	Timeline updated v2.5
		10b. Yr3 – Review legal framework when UK is an independent coastal state	**On target** A general review of Principle 3 scoring for Project UK FIPs has been undertaken by Poseidon. The UK Fisheries Act 2020 provides a broadly robust legal framework. However, there remains uncertainty in relation to fishing opportunities for shared stocks, specifically relevant to the Irish Sea stock. As such "organised and effective cooperation with other parties" is not proven.	Timeline updated v2.5
		10c. Y3-4 – If review identifies as necessary, develop co-operative management arrangements with other states for shared scallop stocks	This milestone is yet to be commenced.	Timeline updated v2.5
		10d. Yr. 4 – Agree co-operative arrangements with other states on scallop stocks	This milestone is yet to be commenced.	
		10e. Yr. 5 – Effective co-operative arrangements are in place for shared scallop stocks	This milestone is yet to be commenced.	
Action 11: Roles & responsibilities **Overview** **Performance indicator**	Action leads: SICG (Macduff / SWFPA) Partners:	**11a.** Yr. 1-3 - Identify relevant stakeholders for each defined stock unit (as defined under 1.1.1) and identify existing consultation processes.	**On target** Roles and responsibilities remain to be fully documented. This will be documented within Section 3 of the FMP.	Timeline updated v2.5
		11b. Yr. 3 – Review and define roles and responsibilities when UK is an independent coastal state.	**On target** See 10b.	Timeline updated v2.5

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
3.1.2 Consultation roles and responsibilities 60-79 Requirement at SG80: For each UoA: Responsibilities are explicitly defined, roles understood. Consultation processes are in place that involve all interested and affected parties Consultation regularly seeks & accepts information	Subject to SICG sign-off and feedback on UK Scallop Management Plan and objectives UK FAs	**11c.** Yr3 – Develop effective (in reviewing/considering information received) and inclusive consultation processes	This milestone is yet to be commenced.	
		11d. Yr4 – Collate evidence that consultation processes are inclusive and effective.	This milestone is yet to be commenced.	
Action 12: Fishery specific objectives **Overview** Short and Long-term objectives to meet P1 outcomes need to be explicit in the management system **Performance indicator** 3.2.1 Fishery-specific objectives 60-79	Action leads: SICG (Macduff / SWFPA) Partners: UK FAs (expected to be Action lead on formal consultation)	**12a.** Yr2-3 – Develop a suite of appropriate short and long-term objectives for P1 (and well-defined P2 objectives).	**On target** The UK Fisheries Act (2020) (23 Nov 2020) sets out fisheries objectives as follows — (a) the sustainability objective, (b) the precautionary objective, (c) the ecosystem objective, (d) the scientific evidence objective, (e) the bycatch objective, (f) the equal access objective, (g) the national benefit objective, and (h) the climate change objective. The UK Fishery Administrations are responsible for formulating Joint Fishery Statements, which will be published 2 years after the Bill was passed (i.e. Nov 2022). The timing for implementation and structure of Fisheries Management Plans being delivered under the UK Fisheries Act is unclear. The FMP section 2 includes Goals and Objectives, where short and long term objectives for the UK scallop fishery will be defined. Action • Secretariat to provide examples of short and long term objectives in certified MSC fisheries.	Timeline updated v2.5

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
		12b. Yr3 – Management groups associated with each UoA agree on the short and long-term management objectives.	This milestone is yet to be commenced.	
		12c. Yr3 – Management plans are developed that explicitly state the short- and long-term objectives for each UoA	This milestone is yet to be commenced.	
		12d. Yr4 - Management plans are in place that explicitly state the short- and long-term objectives for each UoA	This milestone is yet to be commenced.	
Action 13: Decision making processes **Overview** Decision-making processes are established for each UoA that: Respond to serious and other important issues Apply the precautionary approach Share information on the performance of the fishery **Performance indicator** 3.2.2 Decision-making processes 60-79	Action leads: Steering Group Partners: Sub-groups for specific UoAs UK FAs	**13a.** Yr1-3 – Propose the establishment of management groups that are appropriate for each UoA [management groups are expected to comprise a range of stakeholders including industry, management and scientists]. This milestone is also relevant to Action 15	**Complete** There is a commitment to work with industry to establish appropriate management systems. CP provided three examples of appropriate co-management measures: 1. SFSAG closure of the Fladen Ground for North Sea Cod. Measures were implemented to protect key areas and species such as sea pens. This was a self-imposed restriction using geo-fencing and is monitored by Marine Scotland. 2. Scottish Government Fleet Modernisation: a commitment to modernise the fleet by provide proportionate technology installed on vessels. Priority has been given to the scallop fleet. 3. Geofencing in the Isle of Man. Vessels have a 15 minute ping frequency which changes to a two minute ping if the vessel enters a geo-fenced area. Illegal to be travelling at fishing speed in a closed area. This management integrates fishery and conservation areas. The Steering group continue to discuss establishing regional management groups which be formalised in Section 3 of the FMP. Discussion continues on the appropriate scale for this. They could be assigned by Fishery Administration areas (England, Scotland, Wales Northern Ireland); however, the SICG has been considering regional management areas covering the whole of North Sea (English and Scottish waters), West of Scotland as a separate Scottish regional group, and Irish Sea. The importance of discussion with and full inclusion of the Regional IFGs within the FIP is highlighted. Marine Scotland recently published Scotland's Fisheries Management Strategy - 2020 to 2030 (here). Currently, while rIFGs discuss local/regional management measures, the do not have legislative power to define and implement management measures and instead can make recommendations to Marine Scotland for policy to be enacted. **The Regional Management Groups will be delivered through the Scallop Industry Consultation Group (SICG) and the Scottish Scallop Sector Working Group (SSSWG).**	Timeline updated v2.5
		13b. Yr3-4 –Decision-making processes are agreed.	**On target** **Management groups**	Timeline updated v2.5

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
			During a meeting of the Scottish Scallop Sector Working Group (SSSWG) Jim Watson, of Marine Scotland, made clear that any changes to management in Scottish waters would be discussed through the SSSWG forum. The intention of the new SICG co-management group is to cover all Devolved Administrations; this group would be a small sub-set of the SICG, with no more than 10 industry groups and 10 members from the various Devolved Administrations. The way in which the SICG and SSSWG will work together was yet to be determined. A Terms of Reference is being developed. Actions • CP to ask Peter Duncan for information on the outcome of the IoM consultation to share with the Secretariat. • CP and JH to provide more information on how the SSSWG and SICG management group will work together before the next Steering Group meeting.	
		13c. Yr3-5 – Decision-making processes are shown to be implemented.	This milestone is yet to be commenced.	Timeline updated v2.5
		13d. Yr4 – Evidence of information on fishery performance of the UoA being available.	This milestone is yet to be commenced.	Timeline updated v2.5
Action 14 **Overview** A monitoring, control and surveillance system has been implemented in the fishery and has demonstrated an ability to enforce relevant management measures, strategies and/or rules. **Performance indicator** 3.2.3 Compliance and enforcement 60-79	Action leads: Steering Group Partners: UK FAs, SICG (Macduff / SWFPA), MS, MMO Stakeholders: LINK, WWF, SNH	**14a.** Yr. 1-3 – Work with the industry to establish an appropriate system for monitoring within MPAs and other closed areas for all vessels.	**On target** **It is noted that the timeline for Action 14 is reliant on Devolved Administration timelines for iVMS implementation.** **Scotland:** Scotland's Fisheries Management Strategy 2020-2030 commits to Remote Electronic Monitoring (REM) and vessel tracking technology to improve MPA compliance. The Strategy specifically highlights delivery of this for the scallop fleet. The Scottish inshore fleet is undergoing modernisation to equip commercial vessels with appropriate and proportionate vessel monitoring and tracking systems. This is part of the Fisheries Management Strategy, which sets out the policy initiatives to protect the environment and support a strong and sustainable fishery. Over 30% of Scottish dredge vessels are currently equipped with monitoring systems. **Northern Ireland:** iVMS is limited to Strangford Lough. However, consultation is planned for late 2021 to discuss iVMS implementation. This technology is likely to be introduced via licence conditions, rather than legislation. A summary of the timeline for iVMS implementation is provided below.	Timeline updated v2.5

<table>
<tr><th>Standard requirement</th><th>Lead & partners</th><th>Timescale / milestones</th><th>Progress / outcome</th><th>Revised milestone</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><th>Management Body</th><th>Start date</th><th>Fleet component</th><th>Note</th></tr>
<tr><td>MMO</td><td>15/02/2022</td><td>10m to 11.99m</td><td>Concluded by end of 2022</td></tr>
<tr><td>MMO</td><td>16/03/2022</td><td>8m to 9.99m</td><td></td></tr>
<tr><td>MMO</td><td>18/05/2022</td><td>6m to 7.99m</td><td></td></tr>
<tr><td>MMO</td><td>17/08/2022</td><td>Below 6m</td><td></td></tr>
<tr><td>Natural Resources Wales/ Welsh Government</td><td>Expected mid – February 2022</td><td>U12m in Welsh waters</td><td>Introduction of Welsh iVMS statutory instrument to occur in 2022</td></tr>
<tr><td>Marine Scotland</td><td>Due-2022</td><td>Varies across the fleets. Scallop sector nearing completion</td><td>New Scottish Nationalist Party and Scottish Greens formation might have amended timeline</td></tr>
<tr><td>DAERA</td><td>Due-2022</td><td>All vessels u12m</td><td>End of 2022. Unknown whether it will be a licence condition</td></tr>
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</td><td></td></tr>
<tr><td></td><td></td><td>14b. Yr. 2-4 – Consult with Fisheries Control Agencies and wider stakeholders on proposed monitoring system.</td><td>On target
This is being delivered through the Scotland’s Fisheries Management Strategy commitments for REM and tracking technology and associated consultation processes for implementation.</td><td></td></tr>
<tr><td></td><td></td><td>14c. Yr. 2-4 – Implement monitoring system.</td><td>On target
Legislation will be introduced in late 2021 to make monitoring systems mandatory. Voluntary installations are ongoing but have seen some delays due to Covid.</td><td></td></tr>
<tr><td><u>Action 15: Monitoring</u>

Overview
The fishery-specific management system is subject to regular internal and occasional external review.

Performance indicator
3.2.4 Monitoring and management performance evaluation
60-79</td><td>Action leads:
Steering Group
Partners:
Sub-groups for specific UoAs
UK FAs</td><td>15a. Yr2-4 – Management groups (SICG and SSSWG) agree on performance evaluation procedures involving regular internal and occasional external review.</td><td>On target
SICG and SSSWG need to agree performance evaluation procedures with a focus on internal review.
Actions
• The Secretariat to follow up with Marine Scotland and DAERA for more information on their process and priorities for drafting FMPs.
• CP to send FN the SICG/ SSSWG ways of working Terms of Reference.
• The Secretariat will include links shared in this meeting with the Steering Group in the meeting minutes.</td><td>Timeline updated v2.5</td></tr>
<tr><td></td><td></td><td>15b. Yr4 – Management groups (SICG and SSSWG) undertake performance evaluation.</td><td>This milestone is yet to be commenced.</td><td>Timeline updated in v3.3</td></tr>
</table>

Standard requirement	Lead & partners	Timescale / milestones	Progress / outcome	Revised milestone
		15c. Yr4 – Reporting on internal performance evaluation available.	This milestone is yet to be commenced.	
		15d. Yr5 – External review is undertaken	This milestone is yet to be commenced.	
Cross - cutting	Action lead: MacDuff Partners: Steering Group	**Development of Fishery Management Plan**	It is agreed by the steering group that MacDuff will coordinate the development of the FMP. It is noted that the national shellfish fishery management plan (FMP) is likely to be prioritised by Defra, and the FIP FMP could provide a good working example for the scallop section. In terms of timelines, the Defra shellfish FMP is likely to go out to consultation in the summer of 2022. Defra sought calls for evidence, which ended in August 2021, Overall Defra received 20 responses to their latent capacity call for evidence and 18 responses for management of the <15m fleet. The steering group agree that the Project UK Round 1 and Round 2 scallop FIPs should develop separate FMPs, with transferrable learning from the Scallop Channel FMP brought into the UK Scallop FMP. Macduff (CP) agreed to act as gatekeeper for the FMP, with steering group members responsible for drafting specific section related to their expertise. **Agreed authors to draft each section:** Section 1: Identification and description of the fishery. Input from each region is required Section 2: Goals and objectives. Defra (CB) Section 3: Fisheries management structure. CP and BL. Section 4: Harvest strategy and harvest control rules. CP and JPo. Section 5: Ecosystem management strategies: Environmental sub-group, Defra, and Fisheries Administrations dependant on outcome of ESG contact. Section 6: Stock assessment, fishery monitoring and research: Cefas (EB) for England; Marine Scotland Science (LB) for Scotland; TBC for Northern Ireland. Section 7: Compliance and monitoring. Poseidon Section 8: Fishery performance evaluation. MS and Fisheries Administrations Section 9: Resources required to implement the plan. CP and BL Action • CP and MS to arrange FMP calls with relevant Steering group members.	