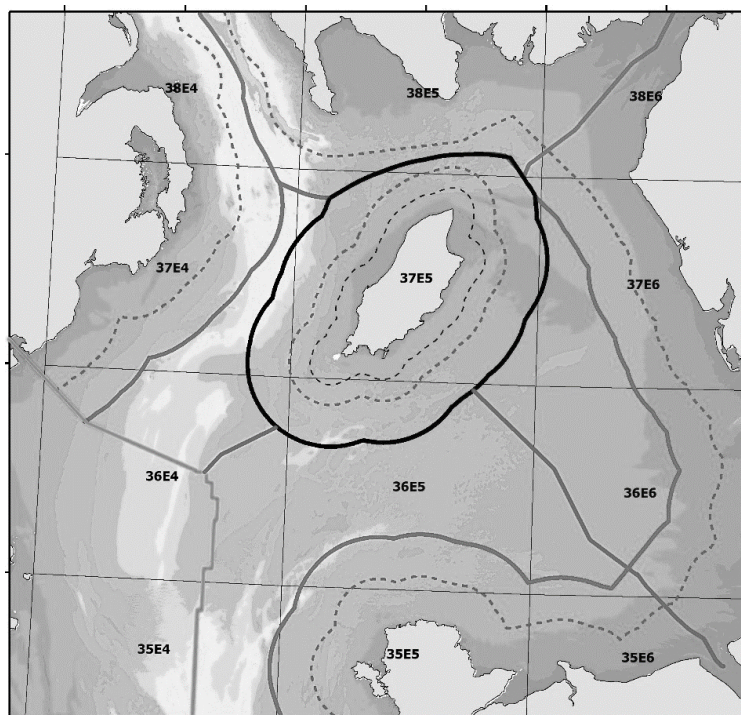


Joint Consultation on the Isle of Man King Scallop Fishery

Isle of Man Scallop Management Board and Department of Environment,
Food and Agriculture consultation on

A Long-Term Management Plan for the king scallop fishery within the Isle of Man territorial sea



Isle of Man Scallop Management Board

and the

Department of Environment, Food and Agriculture

Rheynn Chymmltaght, Bee as Eirynys-



**Isle of Man
Government**

Reiltys Ellan Vannin

Consultation Paper – July 2021

Part 1 Introduction to the Consultation

1. Overview

The king scallop (*Pecten maximus*) fishery in the northern Irish Sea (ICES Area VIIa, north of latitude 53° 30' N) has had significant economic importance for several decades. Between 2000 and 2020, king scallop landings by UK and Manx-registered vessels using dredges in this region totaled 59,447 tonnes, valued at £122.8 million at the first point of sale. The temporal trend in landings of king scallops originating in the northern Irish Sea are shown in Figure 1.

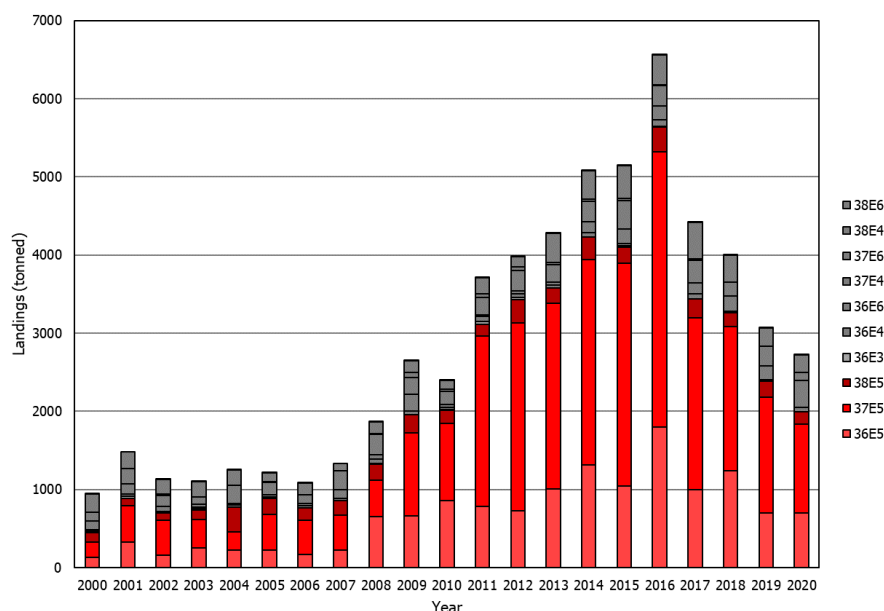


Figure 1. The annual landings of king scallops (*P. maximus*) by British (UK and Crown Dependency) vessels in the northern Irish Sea (north of latitude 53° 30', including ICEA Statistical Rectangles 36E3, 36E4, 36E5, 36E6, 37E4, 37E5, 37E6, 38E4, 38E5, 38E6). The ICES Statistical Rectangles typically associated with king scallop fishing grounds in the Isle of Man territorial sea are coloured in red.

ICES Statistical Rectangles 36E5, 37E5, and 38E5 (colored in red in Figure 1), centered on and around the Isle of Man territorial sea, were the reporting areas with the greatest volume of landings (Figure 1) equal to 46,474 t over the same period, which is equivalent to over 78% of total landings in the northern Irish Sea.

Additional reporting requirements for fishing activity within the Isle of Man territorial sea, introduced for management purposes in the 2016/17 fishing season, show that 10,177 t of scallops were landed by UK and Manx-registered fishing vessels over the four seasons 2016/17 – 2019/20. This is equivalent to 67% of total north Irish Sea landings over the same period. Note that throughout the Irish Sea, there is a closed season for scallop fishing from 01st June to 31st October each year.

These data are consistent with those reported by [Seafish \(2018\)](#), which indicated that throughout the UK Exclusive Economic Zone, 37E5 was the ICES Statistical Rectangle subject to the most fishing effort (in terms of days-at-sea; 'DAS') by revenue-dependent¹ British² scallop vessels over 10m, in both 2012 and 2016. Scallop directed DAS in this area is also showing an increasing trend. As such, the fundamental importance of the Isle of Man area to the UK and local scallop fleet requires that its management is both effective and strategic to ensure its long-term, sustainable productivity.

The king scallop is not listed as a 'quota-species' under the UK Fisheries Management Framework,

¹ Revenue-dependent scallop vessels are defined by Seafish (2018) as those vessels earning over 60% of fishing income from king scallops.

² British vessels include those that are registered and licensed in the UK and British Crown Dependencies

and was not previously managed under the European Union (EU) Common Fisheries Policy (CFP) quota-system. Further, the absence of a coordinated approach at UK-wide level has resulted in a disparity in management strategy, approaches, and measures that apply to scallop fishing depending upon the jurisdiction in which the activity takes place. This is evident in the northern Irish Sea, where a number of adjacent jurisdictions and maritime limits that intersect, and encompass a range of scallop fishing management strategies and specific scallop fishing management measures (Figure 2). The jurisdictions responsible for the management and monitoring of king scallops in the northern Irish Sea are:

- Isle of Man Government Department of Environment, Food and Agriculture (DEFA), within the Isle of Man territorial sea (12 NM);
- Marine Scotland (MS), within the Scottish Zone;
- the Northern Ireland Department of Agriculture, Environment and Rural Affairs (DAERA), within the Northern Irish Zone;
- Welsh Government (WG), within the Welsh Zone;
- the UK Government Department for Environment, Food and Rural Affairs (DEFRA) and Marine Management Organisation (MMO), within the UK EEZ and excluding those jurisdictions specified above, and;
- the North Western Inshore Fisheries Conservation Authority (NW IFCA), which manages sea fisheries resources within the 0-6 nautical mile zone between the Welsh Border in the Dee Estuary to the Scottish Border in the Solway Firth.

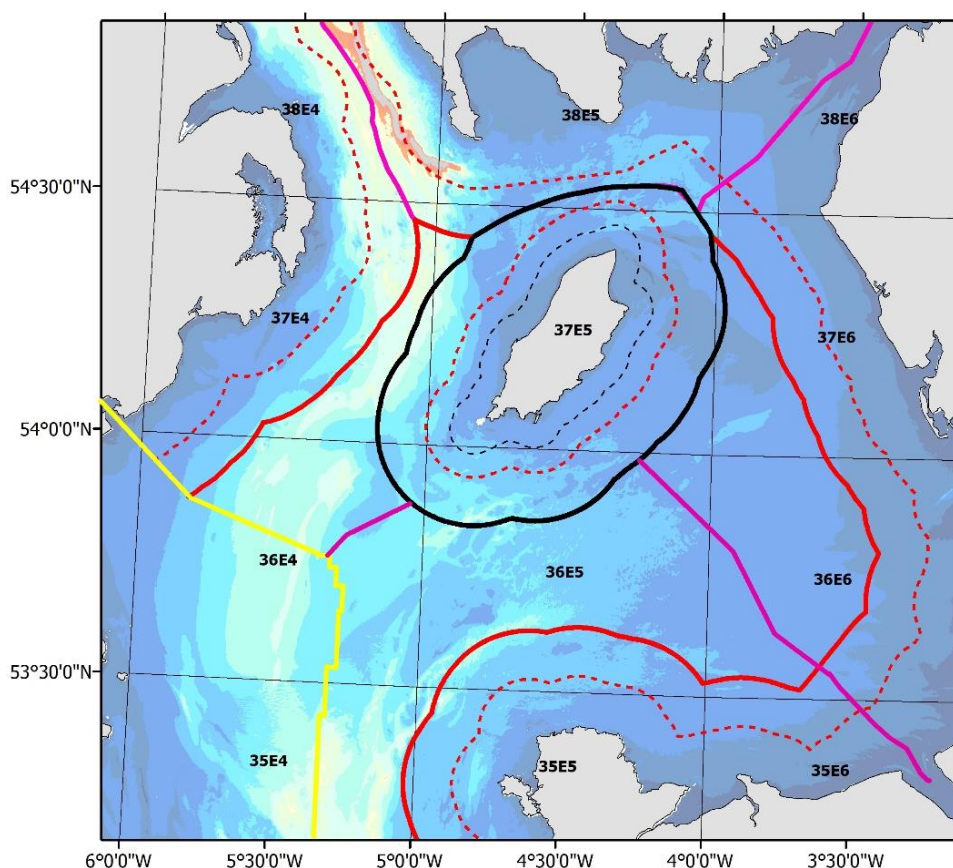


Figure 2. The north Irish Sea (ICES Area VIIa), showing the Territorial Seas of the United Kingdom (solid, red) and the Isle of Man (solid black), the 6 nautical mile fishery limits (dotted red line), the 3 nautical mile zone of the Isle of Man (dotted black line), the 'adjacent seas' boundaries between the UK Devolved Fishing Administrations (purple lines), and the UK Exclusive Economic Zone boundary with Union (EU) Waters (EEZ; yellow line). The black grid shows the ICES Statistical Rectangles (labelled). The map is overlaid on a bathymetry (depth) map. This map is a guide-only.

The multiple jurisdictions in the northern Irish Sea makes the regulation of sea fisheries, and scallops fisheries in particular, quite complex. This was noted in the Poseidon report

commissioned by the Scallop Industry Consultation Group (SICG) in 2018. The same report highlighted a range of issues that currently inhibit the sustainable management and economic viability of scallop fisheries around the British Isles, and recommended that “Long Term Management Plans (LTMPs) should be developed for the specific stock management areas identified. These plans should contain harvest strategies that are consistent with high level biological and socio-economic objectives and that should be set out in a UK-wide scallop strategy. Appropriate management tools are needed to deliver agreed harvest strategies and these should be determined by the management groups developing the LTMPs”.

In December 2020, the Isle of Man Scallop Management Board (SMB) submitted a Discussion Document on a Long Term Management Plan for the Isle of Man king scallop fishery to DEFA. This was followed by a SMB meeting in February 2021, where a series of High Level Objectives (HLOs) were agreed and endorsed by the Scallop Management Board (see section 1.7). The February 2021 SMB meeting also resulted in a recommendation from the Board that DEFA work with industry to develop a LTMP for the fishery based on the industry Discussion Document and the agreed HLOs, and that a public consultation on the LTMP is subsequently launched.

This industry-driven initiative to develop a LTMP resulted in a sub-group of the SMB, including industry representatives, Bangor University, and DEFA officers, working collaboratively to produce this **Joint Consultation**. During June 2021, the SMB convened in a series of ‘LTMP consultation workshops’ to consider the consultation documents in full, before then officially endorsing it and recommending that DEFA launch the public consultation.

This consultation is split into two parts and is accompanied by an Evidence-base:

Part 1 provides an in-depth technical description of developments over the past decade with respect to management of scallop fisheries in Manx and UK waters. Part 1 has been largely constructed by DEFA officers, and provides a 10-year historic context for the LTMP consultation (reading time: 45 mins).

Part 2 is the consultation itself, which contains questions relating to the LTMP ranging from high-level ‘in-principle’ questions to specific technical considerations. Part 2 was co-developed by the SMB sub-group, and is based largely on the industry Discussion Document and SMB endorsed HLOs (time to complete: 60 mins).

An **Evidence-base** is included for those parts of the consultation that present and/or propose specific outcomes that can be quantitatively assessed. The Evidence-base was produced by Bangor University.

An **Appendix** is attached to the consultation, which includes the most recent stock advice from Bangor University utilising fisheries-independent scientific and industry surveys, and fisheries-dependent data from previous season (for the 2020/21 fishing season).

1.1 Current Legal Framework Overview

Management of the fishery within the Isle of Man territorial sea is ultimately the responsibility of DEFA (‘the Department’) under section 5 of the [Isle of Man Fisheries Act \(2012\)](#) (‘the Act’).

Part 5 of the Act provides *vires* for the Department to regulate (section 36), and licence (section 37-38) commercial fishing activity in the Isle of Man territorial sea. In relation to Part 5, section 83 of the Act requires the Department to consult with stakeholders, scientific authorities and the UK Secretary of State before introducing any new regulations, and also to ensure that any agreements between the Isle of Man Government and the sea-fisheries administrations of the

UK are not contravened.

In addition to section 83 of the Act, the [Fisheries Management Agreement \(2012\)](#) ('FMA') between the fisheries administrations ('FAs') of the UK and the Isle of Man remains in effect. Whilst the FMAs primary purpose was to ensure that regulation of sea fisheries in the Isle of Man's territorial sea complied with the UK's previous obligations under the EU CFP, the agreement also sets out the system by which the Department introduces fisheries management measures in the extended territorial sea (3-12 NM, i.e. that area of the territorial sea outside of the dashed black line in Figure 2). It also sets out arrangements to ensure fair access of UK and Manx-registered vessels to each Administration's waters.

For example, prior to management measures being introduced in the extended territorial sea, part 9 of the FMA requires the Department to undertake prior-consultation with the UK FAs, before consulting more widely with industry and interested parties on new management measures, and also to ensure that new measures are justifiable, evidence-based, and non-discriminatory on the basis of nationality.

Under the legal framework described above, commercial fishing for king scallops within the Isle of Man territorial sea is prohibited to all commercial fishing vessels except those that hold both a valid UK Fishing Licence with a scallop entitlement, a general Isle of Man Sea Fisheries Licence, which has specific authorisation to fish for king scallops via a 'Species Specific Licence' (SSL). SSLs are issued under the [Species Specific Licence Policy](#), and authorise access for the inshore (0-3 NM) and wider territorial sea (3-12 NM) separately.

King scallop fishing activity is currently regulated directly by a number of pieces of Manx legislation³, including (but not limited to):

- [Sea Fisheries \(Vessel Monitoring System\) Regulations 2015](#)
Requires for an active VMS unit for all vessels
- [Sea Fisheries \(Closed and Restricted Areas\) Regulations 2015](#)
[Sea Fisheries \(Baie ny Carrickey Closed Area\) Regulations 2013](#)
[Sea Fisheries \(Ramsey Bay Closed Area\) Regulations 2010](#)
Prohibits or limits scallop fishing within specific geographical areas
- [Sea Fisheries \(Technical Measures\) Bye-laws 2000 \(as amended\)](#)
Specifies measures such as minimum landing size (MLS) and specifications for fishing gear
- [Sea Fisheries \(Consolidation\) Bye-laws 1984](#)
Implements the ICES Area VIIa closed season 01st June – 31st October, prohibits 'shucking' of scallop meat at sea, and prohibits retention of undersize scallops.
- [Manx Marine Nature Reserves Byelaws 2018 \(under the Wildlife Act 1990\)](#)
Specifies mobile gear fishing and scallops-taking restrictions within the permanent network of inshore marine protected areas in Manx waters.

In addition, king scallop fishing activity is also regulated by way of licence conditions association with the general Isle of Man Sea Fisheries Licence, which may be varied from time to time, and which specifies a range of harvest control rules (HCRs) in the licence conditions (section G), licence schedule (section H), and the licence annex (section I). In recent seasons, HCRs have included:

- Permanent closed areas within the 0-3 NM
- Temporary closed areas within the 3-12 NM

³ All licence-holders should be familiar with, and comply with all relevant Sea Fisheries legislation.

- Curfew (prohibition on fishing between 1800 – 0600)
- Mid-season temporal closures (2 weeks over Christmas)
- Daily Catch Limit (DCL)
- Total Allowable Catch (TAC)
- Limits on aggregate dredge width (a form of 'dredges-a-side' restriction)
- Requirements to report bycatch
- Requirements to report catch and effort data for scientific and fisheries management purposes
- Requirements to land biological/scientific samples if requested by the Department
- Prohibits access to the fishery to vessels in excess of 221 kW engine power, unless they are a 'qualifying vessel' (i.e. with Grandfather Rights 'GFRs' introduced in 2010).

1.2 Development of IOM King Scallop Fishery Management pre-2016

Management of the king scallop fishery within the Isle of Man territorial sea has developed over time, largely in a reactive manner in response to emerging situations (such as significant and/or periodic increases in fishing effort) that have presented challenges to the stock(s) and the fishery.

Prior to 2010, the king scallop fishery was subject to the Sea Fisheries (Scallop Fishing) Bye-laws 1999 (as amended). These bye-laws imposed a curfew on fishing within the 0-3 NM zone (1800-0600) and the 3-12 NM zone (2100-0500), and imposed dredges-a-side restrictions in the 0-3 NM (corresponding to 5-a-side) and in the 3-12 mile zone (corresponding to 8-a-side). In addition, there were 4 areas closed to scallop fishing, all within the 0-3 NM zone.

During the 2007/2008 and 2008/2009 fishing seasons, the Isle of Man king scallop fishery was subject to unprecedented fishing effort, with notable increased participation of large nomadic visiting UK vessels, which was concentrated at the start of the fishing season (Figure 3) and resulted in significant declines in CPUE over a very short-period of time (Figure 4). The 'race-to-fish' phenomenon led to concerns within industry and the Department in relation to effective management of king scallop fishing in the Isle of Man territorial sea.

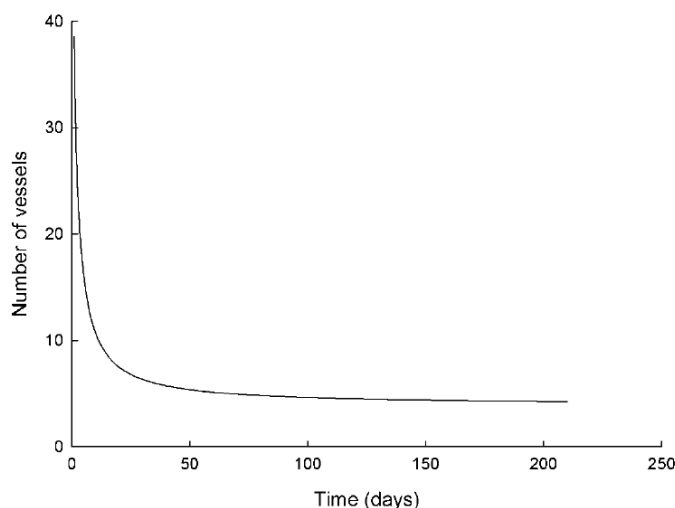


Figure 3. The number of UK (visiting) vessels participating in the 2008/2009 fishing season over time, where Day 0 is the 01st of November 2008. Taken from the 2010 DEFA consultation document 'Scallop and Queen Scallop Fisheries in the Isle of Man' (available upon request).

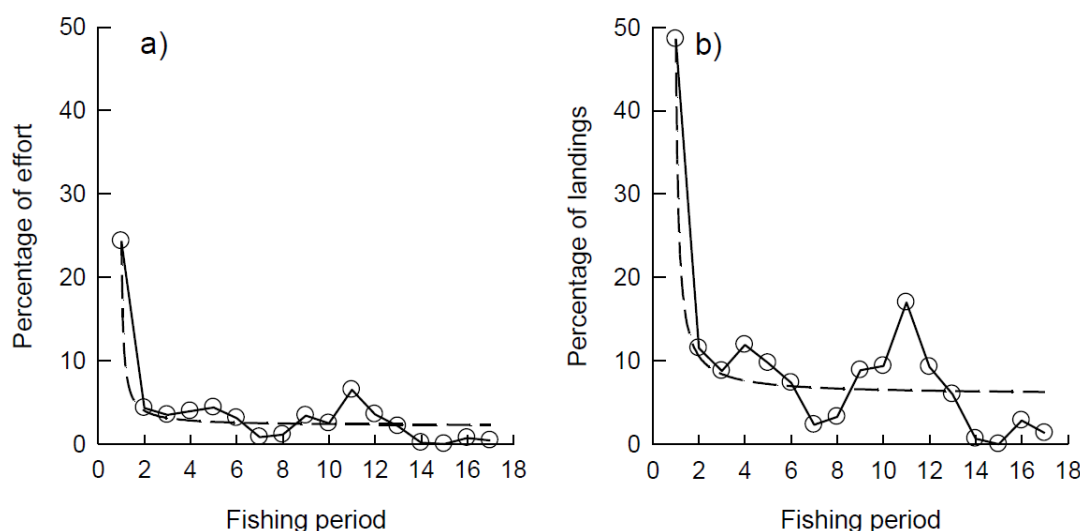


Figure 4. a) Percentage of fishing effort (area dredged) occurring where CPUE was ≥ 100 bags per km^2 dredged and b) the percentage of landings resulting from that fishing effort during each ten day fishing period from 1st November 2007 to 31st May 2008. Taken from the 2010 consultation document.

As a result of these two seasons, and their effects, the Department launched a consultation on a range of potential new management measures prior to the 2010/11 season, which included a number of specific proposals for the king scallop fishery:

- Introducing a cap on engine power, that would prohibit a vessel with an engine capacity in excess of 221 kW from participating in the fishery. The 221 kW value was adopted from similar measures applied to cap effort in other mobile gear demersal fisheries, and was a measure already in place for scallop fisheries in Welsh waters at the time, and is still in place in the Welsh 0-12 zone;
- to extend the curfew in the 3-12 NM zone from 2100-0500 to 2000-0600;
- to adjust the dredges-a-side restrictions in the 3-12 NM zone from 8 dredges-a-side to 7 dredges-a-side;
- to introduce a specific maximum tow bar length (to restrict dredges-a-side) of 5m within the 0-3 NM zone (corresponding to 5-a-side), and 7.6m or less within the 3-12 NM zone (corresponding to either 8-a-side or 7-a-side as above);
- to introduce a Daily Catch Limit (DCL) by way of licence condition, in order to prevent over-supply to the market, and over-exploitation, as experienced in 2007/08 and 2008/09;
- to replace scientific logbook reporting for scallop fishing activity within the 0-3 NM zone with a requirement to carry VMS equipment;
- to introduce a daily bag limit (DBL) for recreational divers of 18 scallops per day.

Following the consultation, the Department partially implemented the proposed management measures through the Sea Fisheries (Scallop Fishing) Bye-laws 2010, and reduced access to the fishery (described below).

Prior to this 2010 consultation, there were 226 vessels that could access the fishery in the 3-12 NM zone by holding a general Isle of Man Sea Fishing Licence and a UK Fishing Licence with a Scallop Entitlement⁴, of which, 145 had a permit to fish inside the 0-3 NM zone, and 80 had an engine capacity in excess of 221 kW.

⁴ the Department had not yet introduced a Species Specific Licence for king scallops, and access was therefore automatic to those vessels that had a general Isle of Man Sea Fishing Licence, subject to also have a Scallop Entitlement on the UK licence

Despite similar measures being in place in other jurisdictions in the northern Irish Sea jurisdictions and considerable support from a wide range of stakeholders, the Department received strong objections to the 221 kW proposal from both UK DAs and UK industry groups. Therefore, at the suggestion of UK DAs the 221 kW restriction was implemented together with a 'Grandfather Rights' (GFRs) clause, which allowed for continued access for vessels over-221 kW subject to demonstrating a track-record of at least 50 scallop fishing days during the 2008/2009 and 2009/2010 fishing seasons. Consequently, 23 vessels over-221 kW retained access to the fishery under GFRs, of which 6 continue to retain access today. As such, whilst future access to higher-rated vessels was controlled, overall effort was not reduced as much as anticipated and, in addition, no termination date was established for the GFRs other than GFRs expire upon the sale or transfer in ownership of the vessel.

The Department also extended the curfew in the 3-12 as proposed, despite similar opposition from specific sectors. The Department also introduced a reduction in the dredges-a-side restriction in the 3-12 that corresponds to the present 7-a-side limit. The Department did not implement specific maximum tow-bar lengths in the 2010 bye-laws because of the possible indirect effect on those vessels wishing to undertake fishing activity both inside (subject to 5-a-side) and outside (subject to 7-a-side) the 3 NM limit on the same day, which would necessitate vessels carrying and switching between tow-bars of different lengths.

Within the 2010 bye-laws, the Department did not include provisions to set temporary DCLs. At the time, the proposal was to consider temporary DCLs that would have allowed for a greater control of the 'race-to-fish', supply of scallops to the market and subsequent declines to market price during the initial periods of those seasons with particularly high landings-per-unit-effort (LPUE) resulting from strong recruitment. The decision to not include these provisions was due to strong objections from the same sectors that opposed the 221 kW limit and the extended curfew in the 3-12 NM zone.

It was a further six fishing seasons until the fishery was again reviewed (after the end of the 2015/16 fishing season) during which both landings (t) and effort (kW days) within ICES Statistical Rectangles 36E5, 37E5 and 38E5 increased significantly (Figure 5). The trigger for the review arose from the observation of continued increases in fishing effort, and a decline in landings (-9.2 %) between the 2014/15 and 2015/16 seasons following unprecedented landings in 2014/15 of 4,329 t. These data also show that LPUE (landings per kW DAS) had been declining since 2012/13 (Figure 5).

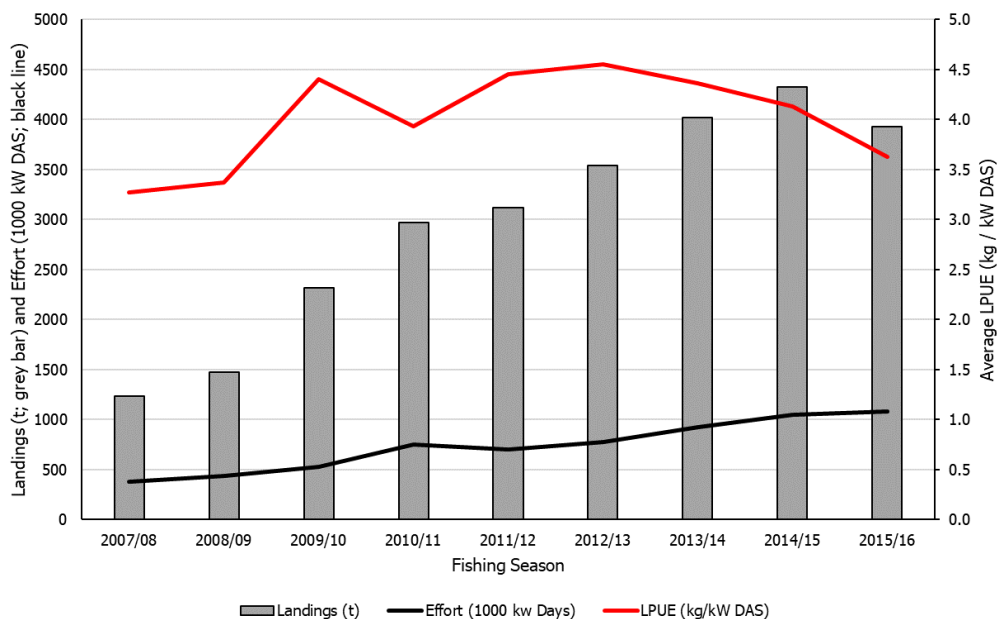


Figure 5. The landings (tonnes; grey bars), fishing effort (1000 kW DAS; black line), and LPUE (kg/kW DAS; red line) in ICES Statistical Rectangles 36E5, 37E5, and 38E5 by fishing season.

The increase in effort and decline in LPUE occurred despite an overall reduction in fleet capacity from 226 vessels prior to the 2010/11 season, to 156 vessels by the end of the 2015/16 season, in addition to extended curfews and reduced dredges-a-side within 3-12 NM.

With fishing effort continuing to increase since 2010 and LPUE decreasing since 2012 (Figure 5), and in response to catching and processing industry sector concerns around adequate effort management, the Department held a further [consultation](#) in 2016 on 'Proposals for Future Management of the Isle of Man King Scallop Fishery', with an accompanying [impact assessment](#) produced by the independent scientific advisors from Bangor University. The consultation was grounded in the aims and objectives set out in the [Future Fisheries Strategy](#) (2015), as approved by Tynwald.

The 2016 consultation outlined a number of additional proposals, including:

- capping or restricting the number of licences issued in respect of the fishery;
- establishing a management board (as already in place for the Queen scallop fishery);
- introducing new technical measures in relation to tow bar length, and
- introducing temporal measures in relation to restricted weekend fishing.

The consultation also sought to gauge 'in-principle' support for a range of other management tools, including Days at Sea (DAS) limits, TAC/quota, and spatial management in the 3-12 M zone.

The principal outcome of the consultation and subsequent implementation was the removal of licences from vessels that could not meet the following DAS track-record criteria, and accounted for the EU-wide Western Waters Effort Regime⁵ (WWER) on a pro-rata basis for vessels > 15 m in length, whereby:

During the king scallop fishing seasons 2011/12 to 2014/15 inclusive;

- Vessels <15 m (and not subject to WWER) were required to demonstrate **50** DAS fishing

⁵ Since 2004, the UK has had a statutory obligation to control fishing effort targeting certain species in the sea area known as the Western Waters. This places a cap on the maximum annual fishing effort that may be exerted on trips targeting scallops in ICES area VII by vessels 15 m or over in length based on historic levels (1998-2002 track record). This statutory obligation extends to the Isle of Man territorial sea due to the Fisheries Management Agreement.

for scallops in ICES Statistical Rectangles 36E5, 37E5, 38E5.

- Vessels >15 m (and subject to WWER) were required to demonstrate **26** DAS fishing for scallops in ICES Statistical Rectangles 36E5, 37E5, 38E5.

In addition, access to the 0-3 NM zone was based on a track-record methodology that incorporated VMS data and electronic log-book data over the period 2010–2016, applying combined criteria of; number of years fishing in 0-3 NM, number of days fishing in 0-3 M, fishery landings attributed to 0-3 NM and 'economic link' (proportion of landings to Manx ports versus non-Manx ports).

The requirement for a track record of 50 DAS and 26 DAS (for <15 m and >15 m vessels respectively) represented an overall participation rate of only 6% over the 4 fishing seasons. This resulted in the number of eligible and licensed vessels reducing from 154 vessels to 94 vessels in the 3-12 NM fishery, of which 42 also met the criteria for access to the 0-3 NM inshore area.

No action was taken on the introduction of a restriction on towbar length due to a lack of agreement on the specifications for such measures, nor on the introduction of a weekend ban. However, the Department made clear that it reserved the right to review this decision, should additional management measures be required. The preferences for a TAC and quota-based management system was noted within the consultation responses, along with the suggestion to remove GFRs from vessels with an engine power over 221kW. The curfew in the 0-3 NM (no fishing between 1800-0600) was also extended to the rest of the territorial sea.

Finally, the Department extended the remit of the pre-existing Queen Scallop Management Board, in recognition of the fact that the two fisheries overlap, interact and have a common group of stakeholders. This resulted in a combined Scallop Management Board (SMB), which facilitates industry input into Departmental decision-making in both scallop fisheries, and with representation from all sectors of the industry. The role and process of the SMB is further described in section 1.4.

In addition to the 2016 king scallop fishery review, the Department simultaneously launched a separate [consultation](#) on an inshore marine zoning plan for the 0-3 NM area of the territorial sea, which outlined a number of options relating to the designation of areas that would be closed to mobile gear fishing ('static gear & conservation zones'), as well as areas that would be subject to restricted/limited access ('inshore fisheries zones' (FZs)). As a result of this consultation, over 50% of the inshore zone was restricted to mobile gear fishing by inclusion into Isle of Man Sea Fisheries Licence Conditions. These Conservation Areas, and other marine protected areas were subject to a further consultation in 2017, and subsequently designated as Marine Nature Reserves (MNRs) with the Manx Marine Nature Reserves (Designation) Order 2018⁶, which formalised the framework of spatial management in the 0-3 NM zone (Figure 6).

The 2017 consultation also resulted in an Isle of Man Government policy document '*A management plan for the 0-3 NM zone of the Manx Territorial Sea*' (GD 2019/0098), which included policy approval for the inshore Fisheries Zones, i.e. those parts of the 0-3 NM not designated as MNRs, to be co-managed with industry. The co-management system (yet to be formally established) is to be based on multi-year Fishery Management Plans (FMPs) to be developed by industry for each individual FZ, subject to Departmental approval and oversight, and managed through an Association of industry stakeholders with 0-3 NM access. It is envisaged that the management framework for the inshore FZs will be parallel to, and harmonised with a long-term management plan (LTMP) for king scallop fishing throughout the Isle of Man territorial sea.

⁶ The only exception is the Ramsey Bay MNR, which allows for a limited and restricted fishery each December.

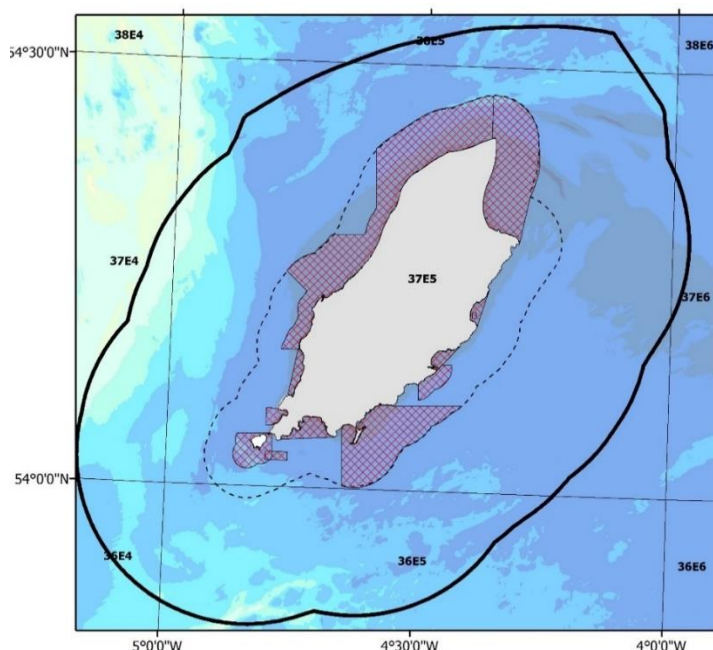


Figure 6. The Inshore Marine Nature Reserves (MNRs) of the Isle of Man, represented by red-hatched areas (see the Manx Marine Nature Reserves (Designation) Order 2018 for details). Mobile gear fishing is restricted in all MNRs.

The restrictions on king scallop fishing activity within the Isle of Man territorial sea prescribed in the Sea Fisheries (Scallop Fishing) Bye-laws 2010 and Manx Marine Nature Reserves (Designation) Order 2018 have been carried over into the conditions (Section G), schedule (Section H) and annex (section I) of the [Isle of Man Sea Fishing Licence](#).

1.3 IOM King Scallop Fishery Management 2016-present

Immediately following the review of the fishery in 2016, and despite the reduction in fleet capacity from 154 vessels to 94 vessels, fishing activity for king scallops within ICES Statistical Rectangle 37E5 was subject to intense and unprecedented fishing effort during November 2016, which resulted in record landings from a limited area. A total of 1,532 t was landed from within 37E5, predominantly from a small area northwest of the Isle of Man known as 'Targets' (TAR), which was more than a three-fold increase compared to the average tonnage landed during the same period over the preceding 9 years (~490 t, Figure 7). The catches were reportedly dominated by newly recruited scallops.

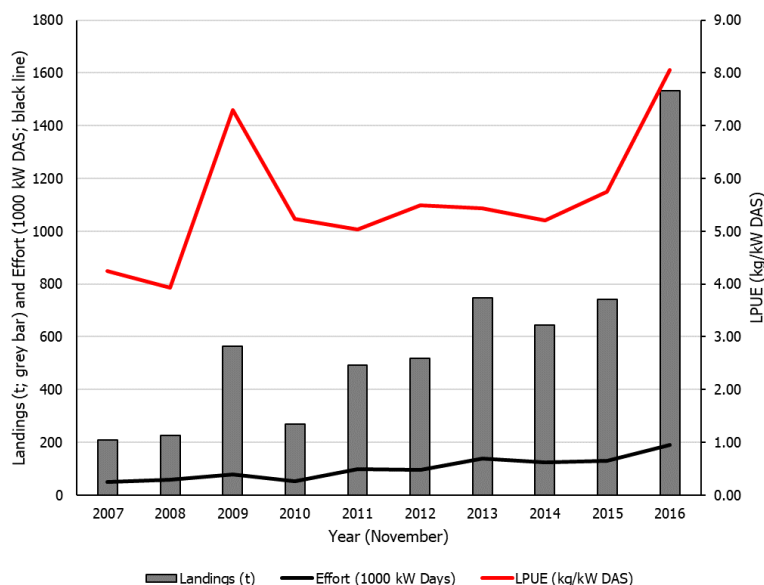


Figure 7. The landings (tonnes) and effort (1000 kW DAS) of king scallop fishing activity in ICES Statistical Rectangle 37E5 during the month of November 2007-2016.

Some vessels reported daily landings in excess of 8,000 kg, and average LPUE in November 2016, at over 8 kg / kW DAS, was even greater than that observed during the start of the 2009 fishing season. The concentration of intense fishing effort within a small geographical area (2 NM x 2 NM; Figure 8) led to industry concerns regarding the seabed and scallop stock impacts in that area being raised with the Department.



Figure 8. High LPUE (> 10 kg / kW DAS for some individual vessels) meant highly concentrated fishing effort on the Targets (TAR) fishing ground at the start of the 2016/17 fishing season, with over 100,000 kW Days exerted within the first 2 weeks of the season and landings of over 1,066 t.

Additional concerns raised by both catching and processing sectors in the UK and Isle of Man relating to over-supply of scallops and effects on market prices, indirect mortality of juvenile scallop populations resulting from bycatch, and the wider ecosystem integrity of the area, resulted in the Department introducing a temporary Daily Catch Limit of 1,400 kg with effect from 15th November. By this date, over 1,066 t had already been landed from within 37E5 resulting from over 100,000 kW DAS of fishing effort.

The DCL was implemented by way of licence condition, and remained in effect until 10th January 2017. It is now viewed by the SMB and the Department that the DCL should have been in place prior to the start of the fishing season on the 01st November 2016; however, despite scientific data indicating a significant increase in abundance at TAR and calls for pre-emptive management from industry, a 'pre-meditated' inclusion of a DCL within the Harvest Control Strategy was considered to be in breach of the FMA. Indeed, the Department was challenged for subsequently introducing the management measure following requests from industry to do so, and despite the clear rationale grounded in the precautionary approach, minimising bycatch and ecosystem-based management.

A DCL has remained in place for the Isle of Man king scallop fishery since the 2017/18 fishing season, and is adjusted both between and within seasons based on recommendations from the SMB having considered the best available scientific and socio-economic data. It is an essential component of the current management framework. The overall aim of the DCL is to indirectly manage fishing effort (by controlling landings) using a risk-based, precautionary approach based on the best available data. The overarching principles of the DCL are to:

- avoid complete economic depletion of fishing grounds;
- to ensure the TAC is not exceeded, and that fishing opportunities are available until the end of the season;
- maintain ecosystem integrity by controlling effort, and to

- ensure that the DCL acknowledges socio-economic requirements of the fleet, and market demand.

A breakdown of the DCL by season is presented below, noting Covid effects on Market demand and price since March of 2019/20 season.

Table 1. The Daily Catch Limit (DCL) set for the Isle of Man king scallop fishery 2016/17 – 2020/21

Season	DCL
2016/17	1,400 kg (15/11/16 – 10/01/17 only)
2017/18	1,050 kg (01/11/17 – 27/11/17) reducing to 700kg
2018/19	700 kg
2019/20	560 kg
2020/21	700 kg

Prior to the start of the 2017/18 fishing season, and ever since, Bangor University has undertaken an assessment of king scallop abundance data (based on a fisheries-independent survey dataset maintained since 1992), and provided a stock advice report to the Department and the SMB. The reports also detailed the ICES protocol for assessing Category 3 stocks⁷ and using this method, presents an index-adjusted total allowable catch (TAC) recommendation for the Isle of Man king scallop fishery. The reports have also provided results of progress towards a quantitative stock assessment for king scallops, and the preliminary results of both length- and age-based methods.

Following endorsement from the SMB, the Department approved a TAC for the 2017/18 fishery set at 3,203 t. There was an option to also include a precautionary buffer (reducing the TAC by 20%); however, because 2017/18 was the first season with a Category 3 (data-limited) TAC, an evidence-based decision on the precautionary buffer had to be considered against socio-economic considerations. The option for the precautionary buffer was therefore not applied. Although the TAC was set at 3,203 t, the total landings recorded within the Isle of Man territorial sea was 3,009 t (or 94% of total theoretical catch opportunities).

Subsequently, updated stock survey data collected in annual scientific surveys, re-assessments of the dataset by Bangor University, and following ICES data-limited approach guidelines, the TAC was agreed by the SMB for subsequent seasons which, with the exception of 2020/21, has been reduced by -20% annually. Covid-related effects in 2020/21 prevented annual surveys, and so TAC was retained at 2019/20 levels. The TAC set each year, and the landings recorded from the territorial sea, are presented below:

Table 2. The Total Allowable Catch (TAC), Landings, and % of TAC realised each season in the Isle of Man King scallop fishery

Season	TAC set	Landings	%	Notes
2016/17	No TAC	4,150 t	-	-
2017/18	3,203 t	3,009 t	94 %	-
2018/19	2,562 t	1,832 t	72 %	-
2019/20	2,049 t	1,186 t	58 %	Covid affected during 2020 Q2
2020/21	2,049 t	1,727 t	85 %	Covid & Brexit affected. No survey data.

In addition, spatial management of fishing activity, informed by annual scallop stock biomass data, both within the 0-3 NM and 3-12 NM, has been developed since the review in 2016 (Figure 9), and has been the product of close collaboration between fisheries scientists (Bangor University), the Department, and industry representatives via the SMB.

⁷ Stocks for which survey-based assessments or exploratory assessments indicate trends. Includes stocks for which survey, trends-based assessments, or other indices are available that provide reliable indications of trends in stock metrics, such as total mortality, recruitment, and biomass.

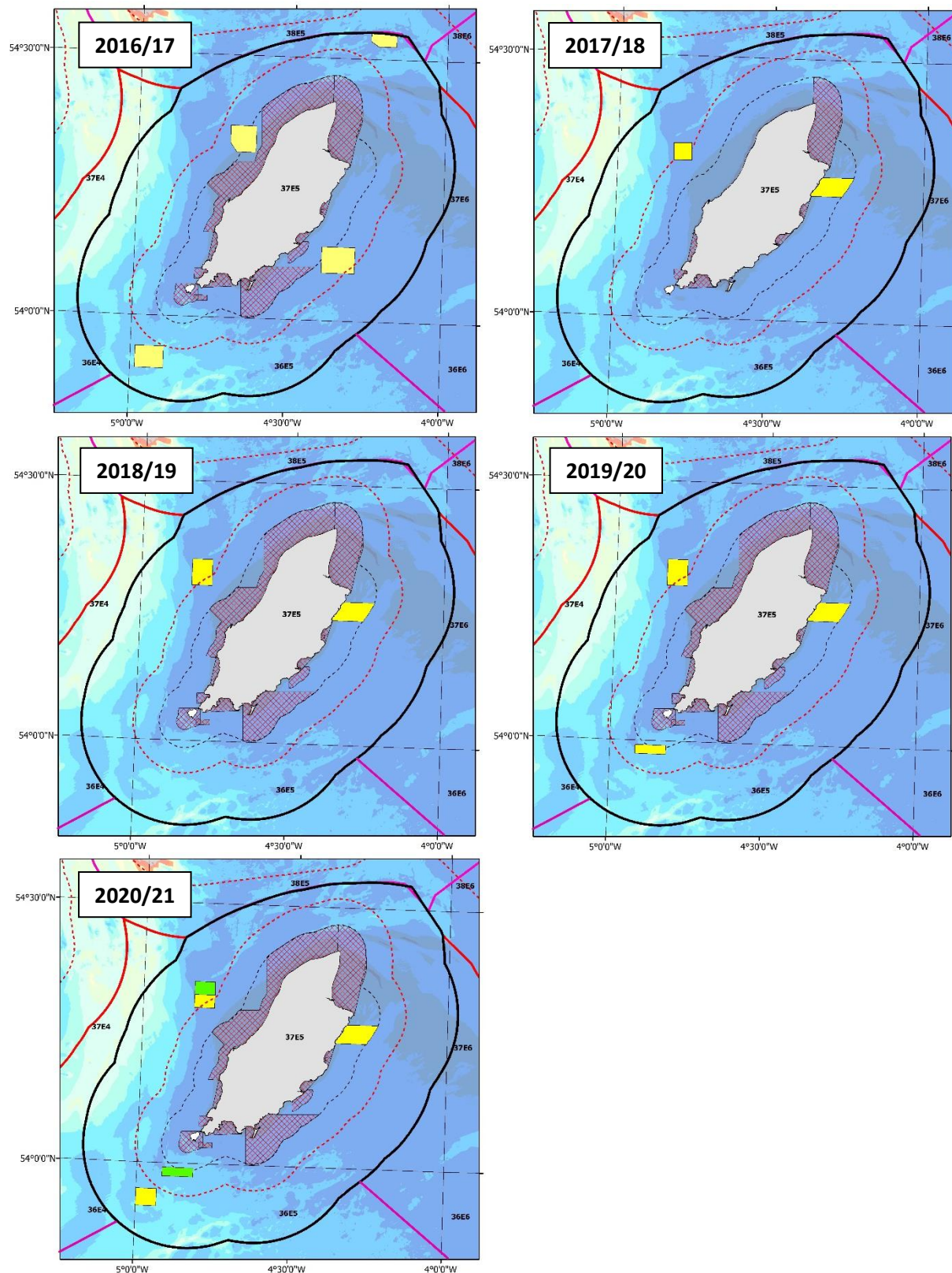


Figure 9. Spatial Management of the Isle of Man king scallop fishery 2016/17 – 2020/21 showing the inshore MNRs (hatched red), and closed (yellow) and restricted access (green) areas, informed by annual biomass survey data. Note: spatial management often changes as a season progresses, and the areas shown may not have been in effect throughout the entire fishing season.

Spatial management has been a useful tool for a number of purposes, including permanent protection of vulnerable or protected features (within the MNRs), protecting high-densities of juvenile scallops in temporary closures outside the 3 NM, and, more recently, effort management

in specific high-densities patches of post-recruits (restricted access areas)(Figure 9).

Most recently in the 2020/21 fishing season, the SMB has developed a new approach to spatial management in the Isle of Man territorial sea by implementing a DAS limit to specific 'Restricted Areas' (RAs; shaded green in Figure 9). Whilst the territorial sea is open to fishing 7 days per calendar week (except within MNRs and closed areas) vessels were limited to 1 day per week in the RAs, which were characterised by high densities of post-recruit scallops identified by the industry-led high-resolution survey, which has been invaluable in reshaping and facilitating the management framework for the fishery (see Appendix 1).

The objective of RAs has been to reduce the 'race-to-fish' phenomenon experienced in previous years, where high-densities are rapidly depleted in the initial weeks of a fishing season, resulting in loss of undersize scallops and significant benthic impact. This form of spatial management is considered to have been particularly important for these purposes at the start of the 2020/21 fishing season. The RA approach has been coupled with high-resolution monitoring of fisheries-dependent data in these areas, which track a number of near real-time performance indices such as standardised LPUE (kg per dredge per hour, standardised for tide and vessel power effects) (see Appendix 1).

These innovative spatial approaches, supported by high-resolution industry survey data, have been successful on a localised scale where high density populations have been found to be present, in terms of planning and monitoring the fishery. However, the overall scallop fishery continues to face challenges relating to overall fleet capacity and effort management.

Although an aspect of Days at Sea (effort input) management has been introduced to the Restricted Areas, and notwithstanding the WWER applied to vessels >15 m in length, access to the Isle of Man king scallop fishery by fishing vessels continues under a Binary Access Framework, i.e. fishing vessels either permitted full and equal access to the fishery, or they are permitted zero access. In other words, all licenced vessels are subject to the same input and output limit HCRs specified in the Isle of Man general Sea Fishing Licence (conditions and schedule), regardless of their economic dependence or track record. As a result, and depending on annual stock densities, it remains a challenge to effectively manage fleet capacity and fishing effort throughout the territorial sea, relying on a reactive, rather than as strategic approach facilitated through a Long-Term Management Plan.

At present, the number of vessels that are eligible for a licence to fish for king scallops in the Isle of Man 3-12 NM is 83 (including 72 vessels with active licences, 5 licences currently 'on hold' with DEFA, and 6 licences that are yet to be renewed for the 21/22 licencing period). Of those eligible vessels ('the current fleet') 36 have access to the inshore 0-3 NM area. The decline in vessel numbers (fleet capacity) since the 2016 review has been the result of 'natural wastage', whereby vessels leave the fishery and are not replaced by owners within the permitted scope of the Species Specific Licencing Policy. The trend in vessel numbers with access, and the number of vessels participating in the fishery, is shown in Figure 10. The overall fleet structure of the currently licenced vessels is shown in Figure 11.

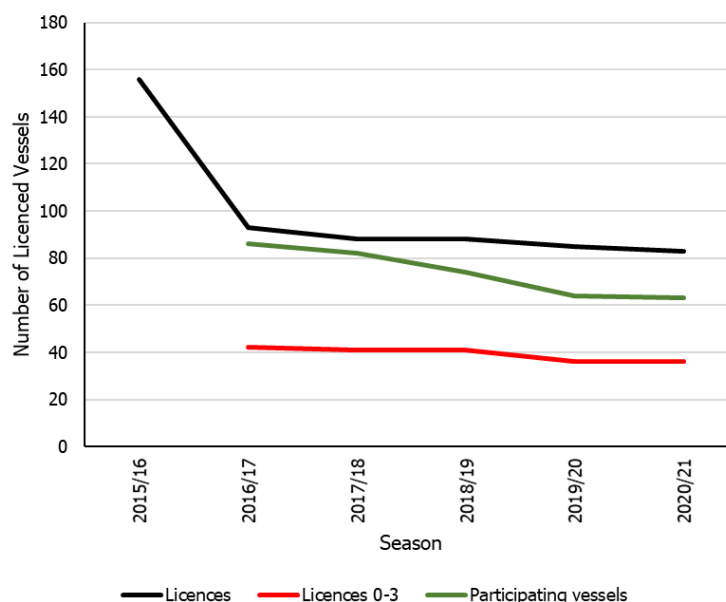


Figure 10. The number of vessels with access to the Isle of Man king scallop fishery 3-12 NM (black line), 0-3 (red line), and the number of vessels participating in the fishery since 2016/17 (green line).

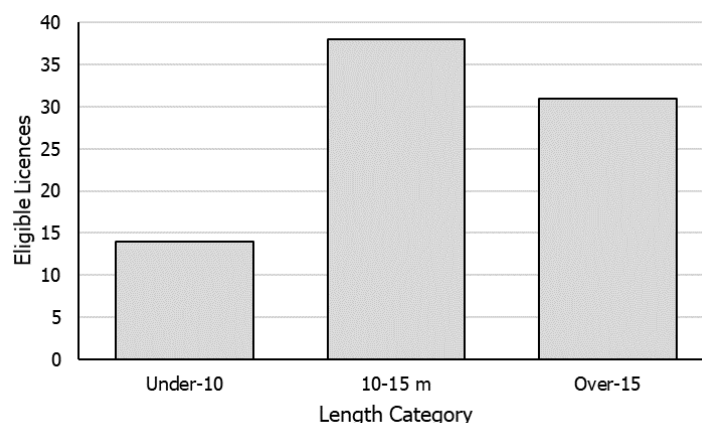


Figure 11. The number of vessels eligible for a licence to fish for king scallops in the Isle of Man territorial sea (3-12 NM) by Length Overall category (Last updated June 2021).

When viewing access against fishing effort (Figure 12, blue and black lines respectively), it is clear that the numbers of vessels that are licenced to access the fishery under the current Binary Access Framework does not correlate with the fishing effort spent in the fishery each season. For example, a 59% decline in the number of vessels between 2010 and 2017 corresponds with a 313% increase in kW DAS. Instead, fishing effort in recent seasons has declined following a substantial drop in LPUE following the 2016/17 season to levels not observed since 2005/06 (-39%) whilst overall vessel numbers has declined by just 8% (Figure 12).

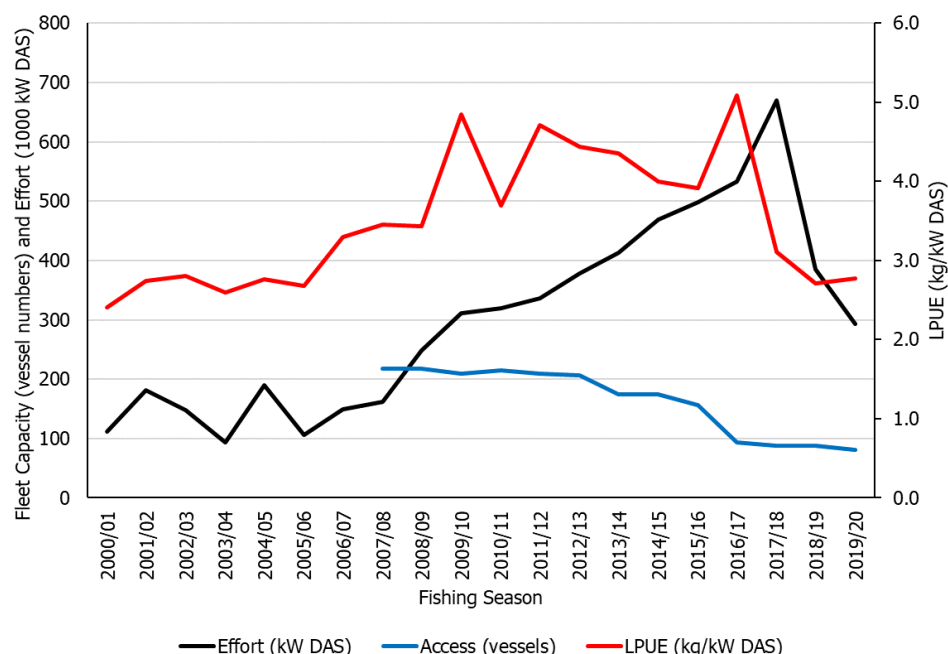


Figure 12. Access (in terms of vessel numbers) to fish for king scallops in the Isle of Man territorial sea, and effort (kW Days-at-sea) and LPUE (kg/kW DAS) from fishing activity in 36E5, 37E5, 38E5.

In summary, despite removing latent effort in 2016, subsequent reductions in vessel numbers since the last review, and efforts to bring about effective effort management through innovative spatial approaches, an effective and evidence-based approach to overall effort management is absent from the existing management framework. Latency, in terms of vessel numbers, and also under-utilised access (DAS) among partially active vessels, persists.

The extent of 'over-capacity' in the licenced fleet under current access arrangements, as discussed in section 1.6, is considered by the SMB, Bangor University, and the Department, to be greater than the stock may sustainably provide for both biologically and economically in the long-term.

1.4 The Scallop Management Board (SMB)

The Queen Scallop Management Board was established in 2010 to advise the Department specifically on the management of the Queen Scallop fishery, during the period of Marine Stewardship Council certification. As noted previously, the role of this co-management forum was extended to include the king scallop fishery following the 2016 consultation on that fishery.

The SMB constitution, which outlines specific Terms of Reference, and requirements relating to Membership and Representation, Chairmanship, Meetings, Decision-making, and Administration, was signed by the Minister for the Department of Environment, Food and Agriculture in 2017. The constitution, together with the Terms of Reference, minutes of recent meetings, and an overview document of the role and responsibilities of the SMB can be found [here](#).

1.5 UK Perspectives (An overview of relevant public consultations and reviews)

1.5.1 DEFRA – Consultation on the Evidence Base for a proposed new English Scallop Order (2011)

Following the introduction of dredges-a-side limits in Scottish waters⁸, and the resulting

⁸ The Prohibition of Fishing for Scallops (Scotland) Order 2003

displacement of effort, in particular from large 'nomadic' vessels that historically operated throughout Scotland and England, DEFRA consulted on the introduction of new measures in a revised 'Anglo-Scottish approach'⁹. The principal aim of harmonisation was to align dredges-a-side restrictions in England and Scotland, but also noted the importance of avoiding boom-bust scenarios for scallop stocks important to small inshore vessels, ensuring the sustainability and viability of the small scale scallop fleet, and avoiding gear conflict with other sea fisheries such as static-gears.

The dredges-a-side limits in place at the time are shown below in black, and the subsequent changes in red. Note that within the English 0-6 NM zone regional Sea Fisheries Committees (SFCs), replaced by Inshore Fisheries & Conservation Authorities (IFCAs) in April 2011, applied individual dredges-a-side limits in certain areas through bye-laws, although the default limit remained 8 dredges-a-side. For example, Cornwall IFCA has retained the 6 dredges-a-side limit specified within the Cornwall Sea Fisheries District Methods of Fishing (Dredges) Bye-law 2011.

Table 3. The Dredges-a-side limits in effect in different jurisdictional areas throughout the United Kingdom and the Isle of Man.

	Dredges-a-side limit				
	0-1	1-3	3-6	6-12	12+
England	8 or SFC (IFCA)	8 or SFC (IFCA)	8 or SFC (IFCA)	NO LIMIT (8)	NO LIMIT
Scotland	8	8	8	10 (8)	14
Wales	NO FISHING	3	4	7	NO LIMIT
Northern Ireland	6	6	6	6	NO LIMIT
IoM	5	5	7	7	NA

The consultation led to [the Scallop Fishing \(England\) Order 2012](#), which remains in effect today. The outcome of the consultation was a new dredges-a-side limit in the English 6-12 NM area of 8 dredges-a-side (note that in Scotland the equivalent restriction was 10 dredges-a-side), in addition to other technical specifications relating to gear.

1.5.2 Scottish Government – Consultation on the Proposed Introduction of New Statutory Scallop Fishing Management Measures (2012)

Following the Scallop Fishing (England) Order 2012, the Scottish Government consulted similarly on a joint Anglo-Scottish approach relating to technical measures, reflecting the dredges-a-side restrictions in English waters. This included a question on whether to lift the 14 dredges-a-side limit outside the 12 NM, and also a phased increase in MLS from 100 mm to 110 mm.

1.5.3 Scottish Government – Consultation on New Controls in the Scottish King Scallop Fishery (2014)

Following the 2012 consultation, the Scottish Government commissioned Poseidon consultants to undertake a review of the fishery, which was published in 2014 ([A Review](#)

⁹ Marine Scotland and Defra have committed to working together on scallop management with the overall aim of harmonizing technical measures, with consistency between the English and Scottish scallop orders. The consultation acknowledged the different approaches adopted in Northern Ireland and Wales, but suggested some scope to work with Wales and Northern Ireland in the offshore areas (outside 12nm limit).

[of the Scottish Scallop Fishery](#)). The report looked at technical, economic and environmental aspects of the fishery. The 2014 report proposed a series of recommendation, including:

1. Scallop stock management units informed by science
2. VMS and logbook data for all vessels
3. Multi-stakeholder workshops (co-management)
4. Ensure scalloping is aligned with MPA objectives
5. Protection of biogenic reefs
6. Assessment of 'eco-dredges'
7. Management plans for Scottish scallop fisheries
8. Cap effort and remove latency
9. Increase MLS to 105 mm
10. Spatial management of scallop beds within 0-6 NM
11. Introduce tow-bar length limits
12. A curfew for fishing inside 0-6 NM

Between the 2012 consultation and the 2014 Poseidon report, no new management measures had been introduced for the scallop fishery in Scotland, and the dredges-a-side restrictions had remained unchanged in Scottish waters with the notable exception of those waters managed by the Shetland Shellfish Management Organisation (SSMO). In that case, a 5 dredges-a-side limit, overnight curfew, increased MLS, closed areas, and limited entry were introduced within 0-6 NM of the Shetland Isles.

The Poseidon report also highlighted a trend towards growing effort in the fishery and concerns over spawning stock biomass, and the 2014 consultation proposed the introduction of national measures to manage increasing fishing effort and increase spawning stock biomass. The consultation document also showed that the advice to Scottish Government for the Irish Sea in particular was "no increase in effort".

The 2014 consultation focused on four recommendations from the Poseidon report, including:

1. Increasing the MLS
2. Introducing restrictions on dredges-a-side
3. Changes to licencing policy to avoid 'up-sizing' in vessel length
4. Placing restrictions on the time that vessels can spend at sea

In 2015 an [Outcome Report](#) was published by Scottish Government, which outlined new measures that were later introduced, including:

1. Increased MLS to 105 mm
2. A standard bar-length restriction out to 12 NM that limits vessels to 8 dredges-a-side (a -20% reduction on maximum dredges-a-side in the 6-12 NM).
3. Suspension of scallop entitlements on Scottish vessels that haven't participated in the fishery for 6 years
4. Changes to licencing rules that restrict the ability to increase power of replacement vessels.

There was no proposal to introduce any restrictions on the time that vessels could spend at sea. However, it was recommended that measures to limit effort in the fishery were explored with the other UK Fisheries Administrations to help to minimise displacement and ensure business flexibility is maintained. The proposed changes were implemented through [the Regulation of Scallop Fishing \(Scotland\) Order 2017](#).

1.5.4 North Eastern IFCA – Future Management of Scallop Dredging within the North Eastern

IFCA District (2015)

In February 2015, the North Eastern Inshore Fisheries & Conservation Authority (NEIFCA) put in place an emergency bye-law to prohibit scallop dredge fishing within the jurisdiction¹⁰. This emergency closure was taken to control a rapidly expanding fishery along the North Yorkshire coast, which was not previously subject to such intense levels of fishing effort. Later that year, NEIFCA consulted on a proposed bye-law that introduced:

- a restricted permit scheme
- a fee of £500 per permit
- logbook requirements
- prohibited vessels over 15 m, and over 300 kW
- mandatory AIS (vessel location and identification)
- 1900-0700 curfew
- Closed season (1st May – 1st October)
- 5 dredges-a-side limit, and a 5 m tow-bar
- Ability to suspend permits

NEIFCA implemented the [bye-law](#) with the proposed measures as above, with the exception that access is only permitted to vessels under 12 m and under 221 kW, unless a vessel can demonstrate a track-record of fishing for scallops prior to December 2013, and has a length overall less than 18.3 m and engine power less than 400 kW.

1.5.5 Welsh Government – Scallop Fishing in Cardigan Bay, New Management Measures (2015)

The Welsh Government consulted on a flexible permit scheme for the Cardigan Bay area (3-12 NM) in 2015, which was previously designated as a Special Area of Conservation (SAC), primarily for the protection of bottlenose dolphins. The consultation included specific consideration of several conditions relating to a flexible scallop permit, including:

- Effort control (DAS / dredge-hours per season)
- Technical measures (vessel/engine size, dredge specifications)
- A Total Allowable Catch
- Temporal restrictions (closed seasons)
- Rotational open areas (temporary closures)
- Increased MLS
- Dynamic management (licence condition variation)
- VMS / gear-in gear-out technology
- Scientific data collection
- Evidence gathering requirement

Despite strong objections from stakeholders to the proposal on the grounds of perceived risk to the features of the SAC, Welsh Government considered it appropriate to proceed with the development of new legislation relating to a flexible permitted fishery and non-statutory advisory board. Welsh Government's progress towards these objectives has since been delayed due to competing priorities, such as the UK's withdrawal from the EU.

1.5.6 The UK Scallop Fishery – Current Trends, Future Management Options and Recommendations (Poseidon Report) (2018)

¹⁰ The English 0-6 NM, between the River Tyne and the south bank of the Humber Estuary

Subsequent to the 2014 Scottish Poseidon Report, the Scallop Industry Consultation Group (SICG) commissioned Poseidon to undertake a review of the UK king scallop sector in [2018](#), with the overall objectives of:

- Providing an overview of performance trends throughout the UK and Isle of Man fisheries,
- Exploring issues including;
 - stock assessments
 - latent capacity
 - sectoral representation
 - harmonisation of management
 - Brexit
 - Gear conflicts
 - Environmental footprint
 - Ethical fishing
- To undertake a SWOT¹¹ analysis of the UK scallop sector, and
- Provide recommendations to the SICG.

The report represents the first comprehensive UK-wide review of the scallop fishery. The executive summary is summarised below, with the key points relevant to this consultation highlighted in bold.

1. The period 2010-2018 has seen significant growth in the number of scallop vessels, particularly in the 10-15 m category, that are not capped in overall effort by the WWER.
2. There is a continuing decline in LPUE overall and in all the main fishing areas. The economic impact of this decline was masked by high prices.
3. Latent capacity has the potential to increase active fleet capacity by 60% in terms of kW.
4. Environmental management and offshore MPAs have resulted in displacement.
5. Effective management is needed at individual management area level, and UK-wide strategy level.
6. Scallop stock boundaries need to be determined, and reference points developed.
- 7. Long term management plans (LTMPs) should be developed for individual management areas, and include harvest strategies that are consistent with high level biological and socio-economic objectives.**
- 8. Appropriate management tools are needed to deliver against LTMPs.**
- 9. The WWER is not fit for purpose as it does not relate stock status and overall effort.**
- 10. A short-term and transitional arrangement, which would be an initial improvement, would be an area-based effort regime applied to all vessels that is responsive to stocks, which would remove latent capacity and/or curtail risks associated with fleet activation in stock areas already under pressure.**
- 11. Opportunities for the simplification and harmonisation of technical regulations should be taken across UK devolved administrations.**

With regard to point number 11; although not explicitly mentioned, it is considered that opportunities to harmonise also exist for the Isle of Man.

Within the report, the opportunity to reduce and remove latent entitlements with

¹¹ Strength, Weaknesses, Opportunities, Threats

routine review was also emphasised, and it was recommended that the Isle of Man restrictive licencing regime should be maintained.

Industry-led and industry-prioritised science funding, particularly relating to stock delineation and assessment, was also considered within the report, and a mandatory levy system (similar to the existing Seafish levy) was included as one of a suite of funding recommendations.

1.5.7 UK Scallop Management Conference 2019 – informing the future of sustainable management

In February 2019, the Fishmongers' Company in partnership with Macduff Shellfish (Scotland) Ltd, with support from Seafish, held a two-day series of presentations and workshops with the objective of advancing thinking and dialogue around the future management of UK scallop fisheries, and to better inform stakeholders about management tools and strategies that could be applied. During the conference, live-polling identified a near-unanimity in seeing 'urgent' need to reform management of UK scallop fishing.

A range of concerns were highlighted through polling data, including access to markets; access to fishing grounds; profitability, and effort displacement due to other marine users. Above all, an overriding concern about 'sustainability of stock' was highlighted.

Delegates to the conference provided a definition of a well-functioning, sustainable scallop fishery as one having the following features:

- Healthy and stable stocks
- Viable catch rates (enough to pay crew, pay for fuel, and save up to pay for vessel maintenance and replacement)
- High levels of safety and wellbeing for crews
- Good access to markets, and good prices
- Certainty around future opportunities, to allow for business planning
- A stable number of profitable vessels

1.5.8 CEFAS – Management Options for UK Crab and Scallop fisheries in Western Waters (Defra-funded)

A report by CEFAS, published in December 2020, identified and reviewed possible management approaches for UK scallop fisheries currently subject to the WWER.

The report acknowledged the unique position of the north Irish Sea with respect to management of king scallop fisheries in that it is more closely studied due to the established Manx collaboration between Bangor University and the fishing industry, facilitated to a large extent by the fisheries science contract with DEFA.

The report highlighted that scallops are found in discrete beds, which need to be managed separately. This aligns with the recommendations of the Poseidon 2018 report, which recommends that long-term management plans (LTMPs) should be developed for individual management areas. The CEFAS report drew upon case studies of scallop fisheries throughout the world, and concluded that the main management approach is to estimate biomass from dredge/camera surveys and set a biomass-linked TAC, alongside spatial/seasonal closures. Within the Isle of Man management unit, these management tools are already in place, albeit currently adopting a data-limited

approach to setting TAC.

Effort management was also highlighted as an important component of the overall recommended management framework. A range of options were presented relating to management of fleet capacity, including a total overall allocation of DAS for the entire British fleet (similar to WWER but for all size-class of vessels) to individual annual allocations per vessel for specific management units.

1.5.9 Scallop Industry Consultation Group (SICG) Recommendations to UK DAs

SICG submitted a document to the UK Fisheries Administrations in late 2019, which comprised a list of nine initial ideas and proposals for the future scallop fisheries, industry and environment. The initial ideas were the product of the work of the SICG Fisheries Management Working Group. The list was later divided into short-term and longer-term measures designed to help form the basis of a future sustainable Fisheries Management Plan for UK Scallops (King and Queen) in 2020.

The SICG provided the following principles in their short- and long-term proposals:

- Maintain a collaborative approach between UK Fisheries Administrations, scientists, industry and representative groups when developing/ introducing new management.
- Consider opportunities for harmonisation of measures where appropriate.
- A clear understanding by co-managers of the economic impacts on industry of proposed measures on a fishery by fishery basis.
- A clear understanding by all concerned of the perceived benefits and criteria for success of proposed measures.
- Consideration of the risks of displacement, in time and space, for all sizes of the fleet and ensure sufficient mitigation measures are applied where necessary.

The intention is for short-term proposals to use existing tools to make a start in improving stock protection until new measures and longer-term approaches are developed. Such short-term improvements are therefore considered temporary until UK fisheries managers are able to give full consideration to the efficacy of longer-term proposals changes. Short-term measures included:

- Introduction of an updated, fit for purpose, effort regime for all vessels to replace the WWER, and ensure that effort is not increased whilst stock assessments are conducted,
- Formally introduce a seasonal Channel (7d) scallop fishery closure for all vessels
- Address latent capacity by suspending unused scallop entitlements using a similar approach to the Scottish Government following the 2014 consultation.

Long-term proposals included:

- Extension of the WWER to cover all sea areas and all vessels
- Introduction of stock-based fishing limits utilising one, or a combination of the following:
 - Replace the current WW regime with alternative effort-based management
 - Replace effort with a Total Allowable Catch (TAC) system
- Temporary closures
- Simplification and harmonisation of technical measures
- Management of 'shared' stocks of king scallops that cross into external (EU) waters

- Improving the quality and quantity of scientific data.

1.5.10 UK Fisheries Act (2020)

In November 2020, the UK Government passed into law the Fisheries Act (2020). Although the Fisheries Act (2020) acknowledges 'reserved matters' for which the UK DAs retain control, it provides a framework for fisheries management for after the UK is no longer bound by the EU CFP. The Act underpins the UK's management of fisheries as an independent coastal state, when the UK Government will be ultimately responsible for managing fishing activity within the UK EEZ.

The Fisheries Act (2020) begins by setting 8 high-level objectives, which are:

- the Sustainability Objective, where
 - (a) fish and aquaculture activities are
 - (i) environmentally sustainable in the long term, and
 - (ii) managed so as to achieve economic, social and employment benefits and contribute to the availability of food supplies, and
 - (b) the fishing capacity of fleets is such that fleets are economically viable but do not overexploit marine stocks.
- the Precautionary Objective, where
 - (a) the precautionary approach to fisheries management is applied, and
 - (b) exploitation of marine stocks restores and maintains populations of harvested species above biomass levels capable of producing maximum sustainable yield.
- the Ecosystem Objective,
 - (a) fish and aquaculture activities are managed using an ecosystem-based approach so as to ensure that their negative impacts on marine ecosystems are minimised and, where possible, reversed, and
 - (b) incidental catches of sensitive species are minimised and, where possible, eliminated.
- the Scientific Evidence Objective,
 - (a) scientific data relevant to the management of fish and aquaculture activities is collected,
 - (b) where appropriate, the fisheries policy authorities work together on the collection of, and share, such scientific data, and
 - (c) the management of fish and aquaculture activities is based on the best available scientific advice.
- the Bycatch Objective, where
 - (a) the catching of fish that are below minimum conservation reference size, and other bycatch, is avoided or reduced,
 - (b) catches are recorded and accounted for, and
 - (c) bycatch that is fish is landed, but only where this is appropriate and (in particular) does not create an incentive to catch fish that are below minimum conservation reference size.
- the Equal Access Objective, where
the access of UK fishing boats to any area within British fishery limits is not

affected by:

- (a) the location of the fishing boat's home port, or
 - (b) any other connection of the fishing boat, or any of its owners, to any place in the United Kingdom.
- the National Benefit Objective, where fishing activities of UK fishing boats bring social or economic benefits to the United Kingdom or any part of the United Kingdom.
 - And the Climate Change Objective, where
 - (a) the adverse effect of fish and aquaculture activities on climate change is minimised, and
 - (b) fish and aquaculture activities adapt to climate change.

1.6 Scallop Management Board Bioeconomic modelling

In December 2020, members of the SMB provided a discussion document ('Development of a Long Term Management Plan') for initial consideration by the Department, and for subsequent meetings of the SMB to consider. The discussion document outlined an industry perspective of recent trends and outlook for the king scallop fishery within the Isle of Man territorial sea, within the context of the wider UK situation, citing the Poseidon 2018 report (see section 1.5.6 above).

The industry document also presented a preliminary bioeconomic model of the Manx scallop fishery, which assessed the current Binary Access Framework in the Isle of Man fishery and its implications when considered against fishing opportunities (TAC) and minimum income requirements (market price of scallops, yield, and DCLs). The analysis took into consideration variation between three sectors of the fleet (under 10 m, 10-15 m, and over-15 m vessels) in terms of minimum income requirements, and the current fleet structure with access to the Isle of Man fishery, and later incorporated empirically validated DAS (participation rates) achieved by the average 'full-time vessel'. For the purposes of defining typical participation of full-time vessels, an analysis was carried out looking at the average DAS per week achieved among those vessels that have participated in the fishery at least once in each month throughout a fishing season.

A vessel was considered to be operating in the Isle of Man king scallop fishery (a 30-week fishing with a 2-week break over the Christmas period) on a full-time basis as follows:

Table 4. The average Days-at-sea per week achieved by vessels participating in the Isle of Man king scallop fishery on a full-time basis.

	Av. Days at Sea (DAS) for full-time vessels (FTVs)		
	per week	per season	participation rate¹²
Under-10 m	2.9	81	40.5%
10-15 m	3.0	84	42.0%
Over-15 m	3.1	87	43.5%

¹² A fishing season typically includes 200-202 potential fishing days, depending upon the timing and duration of the Christmas closure.

It is acknowledged that the WWER, which caps DAS on a quarterly basis for vessels over-15 m targeting scallops, is already a form of input control for this sector of the fleet; however, WWER allocation for those periods that cover the Manx scallop fishery in recent years (2017/18, 2018/19, 2019/20) is greater than the full-time participation rate of over-15 m vessels used above (565 WWER DAS allocation in total compared to 261 DAS for a FTV over-15 m).

Even when the WWER quarterly allocations are adjusted on a pro-rata basis (as was done in the 2016 consultation), the total number of days available in the fishing seasons 2017/18 – 2019/20 (inclusive) equals 437 DAS, which allow for an overall participation rate of 72.5% (or an average of 5 DAS each week in the Manx fishing season).

The SMB therefore considers the WWER to have no overall limiting effect on participation for vessels over-15 m in the Isle of Man king scallop fishery. This reflects the conclusion of the Poseidon 2018 report with respect to the WWER having no overall limiting effect on fishing effort throughout the UK.

The general minimum income requirements used by the SMB within the bioeconomic model for FTVs is as follows:

Table 5. The minimum income requirements for full-time-vessels participating in the 7 month Isle of Man king scallop fishery.

	Minimum Income per FTV		
	per season	Av per week	Av per DAS
Under-10 m	£90,000	£3,214	£1,108
10-15 m	£135,000	£4,821	£1,607
Over-15 m	£180,000	£6,429	£2,073

The minimum income requirement figures shown above are similar (but slightly less) than the average UK-wide fishing income for these sectors of the fleet provided within the [Seafish - Economics of the UK Fishing Fleet 2019](#) database, which showed daily fishing income of:

- £1,702 for UK scallop vessels under-15 m, and
- £2,934 for UK scallop vessels over-15 m.

The bioeconomic analysis also incorporated a yield value of 18%, and an average market price of £10 per kg (the average price during the 2019/20 and 2020/21 seasons, and considered a reasonable first-sale-price for the short-to-medium term in the context of covid-19 and Brexit effects on market dynamics), which resulted in the following target catch rates for the Manx king scallop fishery for long-term vessel economic viability;

Table 6. The target catch rates required to achieve minimum income requirements (see table 5) under current market dynamic assumptions.

	Target Catch Rates per FTV		
	per DAS (kg)	per-week (kg)	Per season (t)
Under-10 m	616	1,786	50
10-15 m	893	2,697	75
Over-15 m	1,152	3,571	100

It is acknowledged that the bioeconomic model does not currently capture the sensitivity of target incomes to cost variables of scallop fishing (e.g. price of fuel). The current model is based upon a *ceteris paribus* assumption with regard to cost; however, it is the ambition of the Isle of Man Scallop Management Board to further develop this model to

take account of potential effects of costs (e.g. fuel price) on economically viable fleet capacity by seeking expert input, as well as incorporating potential improvements to market demand (and therefore price) post-covid and following stabilisation of Brexit-impacts to trade.

This analysis highlighted that under the current Binary Access Framework, with all 83 vessels eligible for a king scallops licence (3-12 NM)¹³ capable of participating in the fishery on a **full-time basis, a TAC of 6,650 t would be required** to provide for the target catches and minimum income requirements. This would require a quota uplift of 4,601 tonnes (+225% increase on the TAC set for 2020/21).

For context, the highest recorded landings from 36E5, 37E5, and 38E5 of 5,714 t in 2016 were followed by substantial declines in stock abundance indices, landings and landing-per-unit-effort (LPUE), pointing towards the widely held understanding that those exploitation rates were unsustainable. Even these historically high landings would only have been able to support 71 profitable FTVs under this bioeconomic model.

Using the same model, the fishing opportunities in the Isle of Man territorial sea set for the 2019/20 and 2020/21 seasons (a 2,049 t TAC) would allow economically viable fishing for only 26 full-time vessel equivalents (FTVEs) over a total of 2,236 DAS with target catch rates being achieved. This represents an equivalent reduction in fleet capacity of approximately 69% compared to the current 83 potential FTVEs. It is also important to note that the data-limited approach to setting the TAC (described in section 1.3) has not been having an overall limiting effect on the fishery, i.e. TAC uptake in 2019/20 was only 58%, and 85% in 2020/21. The actual landings realised in 2020/21 (1,727 t) would allow for economically viable full-time fishing for just 22 FTVs, despite 64 unique vessels attending the fishery (albeit not on a full-time basis).

A hypothetical maximum TAC of 3,000 t, considered by SMB, Bangor University, and the Department to be a longer-term possibility following sustained stock recovery and strategic management based on long-term fishery dynamics, would allow for a fleet capacity of 37 FTVEs, i.e. a reduction in fleet capacity of 55% compared to current levels.

In conclusion, the bioeconomic model developed by the SMB demonstrates there is over-capacity within the currently licenced fleet, with the access arrangements as they exist, relative to current fishing opportunities and - critically – as they exist relative to any realistic expectation of future fishing opportunities within sustainable limits. The SMB and the Department consider it important that the fishing capacity of the fleet is such that it is economically viable but does not overexploit scallop stocks.

The SMBs efforts to control and manage over-capacity and fishing effort in the Manx fishery by reducing DCLs renders the majority of vessels uneconomic in the longer term (a 700 kg DCL allows for potential economically viable fishing for under-10 m vessels only at £10 kg⁻¹, but requires that stock abundance is at a level that allows vessels to meet the DCL each day), and is likely to result in displacement of some vessels.

The SMB has also highlighted that any potential dividends (i.e. an increased DCL) following stock recovery and/or enhanced management of the fishery would be quickly exhausted due to the scale of current fleet capacity, and particularly among those vessels that have not been active in the fishery during recent seasons with a limited DCL

¹³ It's important to note that the bioeconomic model is pinned to the current fleet structure, and that the number of FTVs that can be supported a certain TAC will vary depending on fleet composition.

aimed at promoting stock recovery. From a multi-decadal perspective, this phenomenon has occurred several times in the Isle of Man territorial sea, where recruitment pulses and subsequent 'super-abundances' are rapidly depleted during the first weeks of the fishery due to the absolute capacity of the licenced fleet (e.g. 2008/2009 fishery, TAR November 2016) and the inadequate effort controls currently in place.

Reducing DCLs, and/or maintaining them at low 'un-economic' levels in order to manage fishing capacity and effort is not strategic, and is considered by the SMB to be implemented to the greatest extent possible without undermining the economics of the scallop catching sector completely. The SMB Discussion Document warns that:

"The Manx Territorial Sea King Scallop fishery may therefore, in its present form, become a low-level non-profit making fishery, dependant on annual recruitment. This helps neither the boat owners, the stock nor the marine environment."

Instead, the SMB and the Department are jointly considering a fundamental re-evaluation of how capacity and effort is managed in order to move towards a sustainable, strategic and economically viable scallop fishery in Manx waters using an approach that seeks to minimise displacement effects on vessels that may be revenue-dependent on the fishery either on a full-time basis, or indeed on a part-time basis.

Following the SMB bioeconomic analysis and conclusions described above, the SMB Discussion Document states:

The key to a successful, sustainable and profitable fishery is to ensure that the current effort and future potential effort, both in terms of the number of licenced boats and the overall landings, is at an appropriate level.

The recovery [of the scallop stock] depends not only on an evidence-based management regime and proactive management but also on applying the appropriate levels of effort to the available resource.

There is therefore an urgent requirement to:

1. Consider options for an access framework, which has the aim of curtailing fleet capacity to reflect profitable fishing opportunities resulting from catch limits.
2. Develop a Long Term Management Plan (LTMP) for the king scallop fishery, so that the harvest strategy is strategic and consistent with high level biological and socio-economic objectives.
3. Consider other immediate management measures (technical, spatial, etc.) that are aligned with the overall LTMP objectives, and in particular where those management measures offer opportunities for harmonisation across jurisdictions.

It is also acknowledged that there is an important requirement to consider how new entrants into the fishery could be managed as access framework and effort management controls are considered. Whilst some of the access arrangement proposals considered in this consultation do provide scope for consideration of new entrants, it is felt that in the short-term at least, stock recovery and effort management of the existing fleet are to be prioritised over new entrants to the fishery; however, it is understood by the SMB and the Department that recruitment of new skippers into the fleet will need to be considered within the Long-term Management Plan at some point in the future, and increasingly so as skippers (and their vessels) retire from the scallop fishery.

	Bioeconomic modelling of IoM SCE Fishery Fleet Capacity	under-10 m	10-15 m	over-15 m	
Income and Yield	Target Revenue for FTVs <small>from 28 week SCE fishery (full-time)</small>	£ 90,000	£ 135,000	£ 180,000	
	Target Revenue for FTVs <small>per week SCE fishery</small>	£ 3,214	£ 4,821	£ 6,429	
	Sale Price ^{£/kg}	£ 10.00	£ 10.00	£ 10.00	
	SCE yield %	18%	18%	18%	
Landings, DCL and DAS	Average DAS for FTVs per week <small>data: 2017/18 per vessel</small>	2.9	3	3.1	
	Season Length <small>Weeks, accounting for 2-week Christmas closure</small>	28	28	28	
	Total Landings <small>season (t) per vessel</small>	50.0	75.0	100.0	
	Weekly Landings <small>(kg) per vessel</small>	1,786	2,679	3,571	
	Weekly Landings <small>(35 kg bags) per vessel</small>	51	77	102	
	Target DCL <small>(35 kg bags) per vessel</small>	18	26	33	
	Target DCL <small>(kg) per vessel</small>	616	893	1,152	
2020/21 Fleet	Fleet structure <small>2020/2021 Numbers</small>	14	38	31	
	Fleet structure <small>2020/2021 %</small>	17%	46%	37%	
Current Fleet Requirements	Required Landings for 2020/21 fleet capacity to operate profitably full-time ^t by LOA category	700	2,850	3,100	6650 tonnes
	Full-time fleet DAS for 2020/21 by LOA category	1,137	3,192	2,691	7020 days
2020/21 Catching Opportunities - Fleet Over-capacity	Catches by LOA group ^t (2020/21)	216	878	955	2049 tonnes
	Economically Viable DAS to catch TAC	350	984	829	2163 days
	Economically Viable DAS per Vessel	25	26	27	
	% Over-capacity of existing Fleet vs Economically Viable Catching Opportunities (TAC F20)	69%			
Change Required for Economic FTVs	Profitable Fleet TAC shortfall ^t by LOA category	- 484	- 1,972	- 2,145	-4601 tonnes
	Profitable Fleet DAS deficit ^{by LOA category}	- 787	- 2,208	- 1,862	-4857 days
	Profitable Fleet Size (Full-time Vessel Equivalents, FTVs)	4	12	10	26 vessels
	Fleet reduction required (Full-time Vessel Equivalents, FTVs)	-10	-26	-21	-57 vessels
Fixed Target Income Input					
Variable Market / Yield Inputs					
Fixed FTV DAS / Season Length Inputs					
Variable Catching Opportunities Set (TAC)					

Figure 13. The Scallop Management Board bioeconomic model of the Isle of Man king scallop fishery under the current Binary Access Framework. Vessel licences that are currently 'on hold' with the Department are assigned to the length categories of the most recently licenced vessels association with that licence.

1.7 Our approach to a Joint Consultation on a LTMP

The SMB's initiative in developing a bioeconomic model, and outlining the overall aim and approach to developing a LTMP for the king scallop fishery is a significant development in industry leadership. An initial discussion document presented to the Department in December 2020 has led to this consultation being co-developed through a collaborative and iterative process.

As mentioned in Section 1.0, in February 2021 the SMB met to review the industry Discussion Document (submitted to the Department in December 2020), and focused on establishing a set of socio-economic and biological high-level objectives (HLOs). The SMB subsequently approved the following HLOs for the king scallop fishery LTMP.

Objective 1. Restore and maintain good stock status and achieve long-term stability

Objective 2. A Harvest Control Strategy (HCS) in pursuit and continuation of the above primary objective, which:

Objective 2.1 sets biologically sustainable limits on fishing activity, informed by robust/best available scientific stock data linked to biological reference points (limit and target reference points).

Objective 2.2 manages vessel numbers, access, and effort so that fleet capacity is economically viable within the limits set (in 2.1), and with consideration of environmental, economic, and monitoring-control surveillance (MCS) requirements.

Objective 2.3 utilises harvest control rules (HCRs) with defined limits that are effective, responsive, and enforceable.

Objective 2.4 safeguards against poor recruitment.

Objective 2.5 incorporates spatial management.

Objective 3. An environmentally-considered fishery, following an ecosystem-based approach.

Objective 4. A high-quality seafood product, produced sustainably, that delivers market access and maximises stakeholder economic return.

Objective 5. A high level of safety and wellbeing for those people working in the industry.

Objective 6. An energy efficient fishery

Objective 7. The fishery (and stock) is considered in relation to marine spatial planning, marine developments, and wider fisheries management.

The DEFA Minister has supported the consultation process, presented as a joint initiative. The consultation document, and the proposals contained within it, has received endorsement from the Isle of Man Scallop Management Board.

Stakeholders will observe that a significant proportion of this consultation is gauging support and agreements for 'in-principle' considerations relating to the SMBs and The

Department's combined vision, development, and implementation of a LTMP for the king scallop fishery. The Evidence-base produced by Bangor University relates exclusively to the specific management recommendations that can be quantitatively evaluated. Nonetheless, Bangor University has provided the following statement with respect to the wider principles discussed within this consultation:

Over the past 5 years scientific data collection in the Isle of Man king scallop fishery has increasingly relied on a cooperative approach between industry, DEFA and Bangor scientists. Together we have increased the temporal and spatial resolution at which both fisheries dependent and fisheries independent data is collected and developed an almost real-time approach to analysing and monitoring fisheries dependent data during the season for management purposes. With these foundations now in place, a long-term management plan (LTMP) for the Isle of Man king scallop fishery is the essential next step. Our goal is to adopt a management approach which helps secure a sustainable and profitable fishery for the future that minimises environmental impact. A long-term approach to fisheries management based on a documented, formalised, long-term plan underpinned by science will minimise the need for short-term reactionary measures and provide better security for the stock and industry.

The Isle of Man's approach to establishment of a long-term fisheries management plan driven by industry and supported by scientists and Government should ultimately provide a successful basis for cooperative and sustainable long-term management of this fishery into the future.

It is envisaged that any LTMP resulting from this consultation will later require adjustment and amendment in order to maintain progress towards the industry-set HLOs (above). As such, this consultation represents a starting point for a long-term strategy, with recommendations for immediate management options. It is neither exhaustive nor prescriptive in terms of what management initiatives may be suitable for the fishery in pursuit of the LTMP HLOs in the future, which may be the subject of further consultation.

1.8 Summary

The king scallop fishery in Manx waters is economically critical to the local industry, and important to many businesses in the wider UK scallop industry. However, sustainable management of this resource remains challenging despite reductions in fleet capacity, innovative approaches to spatial management, and an increased level of scientific assessment, monitoring and co-management. At this time, the SMB, the Department and Bangor University consider the main barrier to an economically successful and sustainable fishery to be an absence of adequate effort controls.

The industry, through the Scallop Management Board, has demonstrated initiative and leadership in their call for a Long Term Management Plan for this fishery, which should facilitate a more strategic approach to how the resource is managed with the overall aim of delivering high-level socioeconomic and biological objectives.

The Department and the SMB are seeking stakeholder views on a LTMP for the Manx king scallop fishery and a range of short-to-medium-term management options that are aligned to the LTMP and its HLOs.

2. Joint Consultation – what we are consulting on

The Scallop Management Board and the Department are jointly asking a range of questions, ranging from high-level in-principle questions, through to specific management measures. The areas under consideration are:

- **Perception of - and vision for - the Isle of Man King Scallop Fishery**
 - Recent Trends
 - Future Outlook
 - High-Level Objectives
- **Co-management and Future-proofing LTMP**
 - The role of the Scallop Management Board
 - Evaluation and Review periods
 - Future Stakeholder input and Consultations
- **Access and fleet capacity**
 - Perspective on current Fleet Capacity
 - Addressing Latent Effort
 - Fleet Capacity Management & Access Framework Options
 - Grandfather Rights (GFRs)
- **Technical Measures**
 - Dredges-a-side Restrictions
 - Belly-ring size
 - Teeth and tooth-spacing specifications
 - Remote Electronic Monitoring
 - Other
- **Additional Considerations**
 - Industry-led survey and research funding
 - Dive-caught Scallop Fishery

Part II – The Consultation

Section A –Details

Please complete the following consultation response form and return to the below address:

Joint Consultation on the Isle of Man King Scallop Fishery

Department of Environment, Food & Agriculture

Environment Directorate

Thie Slieau Whallian

Foxdale Road, St John's

Isle of Man

IM4 3AS

Full Name:

Response Type:

(Individual or organisation)

Stakeholder group:

(e.g. fisher, eNGO, ...)

Organisation Name:

Summary of individuals represented:

(Please provide information to outline individuals and groups who are represented by this response)

Do you, or someone within your organisation, hold an active Isle of Man Species Specific Licence for King Scallops (access 3-12 NM in Manx waters)?

Yes ☐

No ☐

Do you, or someone within your organisation, hold an active Isle of Man Species Specific Licence for King Scallops (access 0-3 NM in Manx waters)?

Yes ☐

No ☐

Section B: Perception of - and vision for - the Isle of Man King Scallop Fishery

Following concerns raised by the SMB through the industry Discussion Document on a Long Term Management Plan in 2020 – we are seeking your views on the current state of scallop stock(s) and the fishery in IoM waters. Please read Part I of this consultation for context in relation to these questions.

What is your perception of the overall trend in the state of scallop stock(s) in Isle of Man territorial waters since the fishery was reviewed in 2016?

- Declining rapidly ☐
- Declining slowly ☐
- Stable ☐
- Improving slowly ☐
- Improving rapidly ☐

Comments:

What is your perception of the current state of scallop stock(s) in Isle of Man territorial waters?

- Very poor ☐
- Poor ☐
- Moderate ☐
- Good ☐
- Very good ☐

Comments:

Would you characterise the Isle of Man king scallop fishery as recruit-dependent? i.e. that the success of the fishery is largely dependent upon recruitment of a single age-class from one year to the next, despite scallops having a possible 10+ year life-span.

- Yes ☐
- No ☐

Comments:

What is your perception of the overall long-term outlook on the state of scallop stock(s) in Isle of Man territorial waters based on the current management strategy and existing management framework (i.e. without any significant changes to how scallop fishing is managed)?

- Very poor ☐
- Poor ☐
- Moderate ☐
- Good ☐
- Very good ☐

Comments:

What is your perception of the short-term economic viability of the scallop fishery in Isle of Man territorial waters based on the current management strategy and existing management framework (i.e. without any significant changes to how scallop fishing is managed)?

- Very poor ☐
- Poor ☐
- Moderate ☐
- Good ☐
- Very good ☐

Comments:

What is your perception of the long-term economic viability of the scallop fishery in Isle of Man territorial waters based on the current management strategy and existing management framework (i.e. without any significant changes to how scallop fishing is managed)?

- Very poor ☐
Poor ☐
Moderate ☐
Good ☐
Very good ☐

Comments:

For those stakeholders that also fish for scallops elsewhere, do you consider the general situation (taking into account how scallop fishing is managed, and the status of stocks) to be better within the Isle of Man territorial sea, compared to UK waters?

- Yes, the situation is better in the Isle of Man territorial sea ☐
No, it is the same or worse than outside ☐

Comments:

The Scallop Management Board (SMB) has recommended that a LTMP be developed to achieve the following high-level objectives (HLOs). Please indicate which of them you support in principle. See Part I of this Consultation for more information on the role and function of the SMB.

Do you agree that there is a need for a long-term management plan (LTMP) to improve the state of stock(s) and deliver sustainable economic benefits in the Isle of Man scallop fishery?

- Yes ☐
No ☐
Why? [optional]

In principle, do you support the development and implementation of a LTMP for the Isle of Man scallop fishery?

- Yes ☐
No ☐
Why? [optional]

In February 2021, the SMB met to discuss the industry 2020 Discussion Document, and endorsed the following High-Level Socioeconomic and Biological Objectives for the Manx scallop fishery. The SMB Considers Objectives 1-5 as 'High Priority' and Objectives 6-7 as 'Secondary Priorities'.

Objective 1: Restore and maintain good stock status and achieve long-term stability

- I support Objective 1 in principle ☐
I do not support Objective 1 ☐

Objective 2. A Harvest Control Strategy (HCS) in pursuit and continuation of the above primary objective, which:

Objective 2.1 sets biologically sustainable limits on fishing activity, informed by robust/best available scientific stock data linked to biological reference points (limit and target reference points).

- I support Objective 2.1 in principle ☐
I do not support Objective 2.1 ☐

Objective 2.2 manages vessel numbers, access, and effort so that fleet capacity is economically viable within the limits set (in 2i), and with consideration of environmental, economic, and monitoring-control surveillance (MCS) requirements.

I support Objective 2.2 in principle ☐
I do not support Objective 2.2 ☐

Objective 2.3 utilises harvest control rules (HCRs) with defined limits that are effective, responsive, and enforceable.

I support Objective 2.3 in principle ☐
I do not support Objective 2.3 ☐

Objective 2.4 safeguards against poor recruitment.

I support Objective 2.4 in principle ☐
I do not support Objective 2.4 ☐

Objective 2.5 incorporates spatial management.

I support Objective 2.5 in principle ☐
I do not support Objective 2.5 ☐

Objective 3. An environmentally-considered fishery, following an ecosystem-based approach.

I support Objective 3 in principle ☐
I do not support Objective 3 ☐

Objective 4. A high-quality seafood product, produced sustainably, that delivers market access and maximises stakeholder economic return.

I support Objective 4 in principle ☐
I do not support Objective 4 ☐

Objective 5. A high level of safety and wellbeing for those people working in the industry.

I support Objective 5 in principle ☐
I do not support Objective 5 ☐

Objective 6. An energy efficient fishery

I support Objective 6 in principle ☐
I do not support Objective 6 ☐

Objective 7. The fishery (and stock) is considered in relation to marine spatial planning, marine developments, and wider fisheries management.

I support Objective 7 in principle ☐
I do not support Objective 7 ☐

If you do not support any of the principles set out above, please explain your thinking.

[]

The SMB has highlighted objectives 1-5 as high-priority, and objectives 6-7 as secondary priorities. Do you agree with the SMBs prioritisation?

Yes ☐
No ☐

Why? [optional]

Do you have any other ideas, or suggestions, to include in the High Level Objectives for the fishery?

[]

Section C: Co-management and the LTMP

Do you agree that a LTMP for the Isle of Man scallop fishery would be best implemented, and managed through a co-management system? A co-management system would include industry (catching and processing), fisheries managers, and fisheries scientists, working together to make decisions within a clear governance structure.

Yes ☐
No ☐
Why? [optional]

Do you agree that the [Isle of Man Scallop Management Board](#) is a suitable co-management forum to develop and progress a LTMP? Please see Part 1 – section 1.4 for an overview of the role of the SMB.

Yes ☐
No ☐
Comments: [optional]

With a view to improving the performance in delivering the overall aims of the Isle of Man Scallop Management Board, do you have any recommendations?

Comments: [optional]

Do you agree that the current Isle of Man Scallop Management Board management recommendations process is an effective method of delivering a LTMP? i.e. where the SMB arrives at a consensus on management decisions, and the Chair of the SMB passes the recommendation to the Department for consideration and implementation, as appropriate.

Yes ☐
No ☐
Comments [optional]

Do you agree that progress towards the LTMP should be evaluated by the Isle of Man Scallop Management Board on an annual basis? The Scallop Management Board considers an end-of-season review and evaluation to be important for monitoring progress towards the LTMP.

Yes ☐
No ☐
Why? [optional]

Do you agree that the fundamental LTMP strategy should be reviewed by the Isle of Man Scallop Management Board on a multi-annual basis (to be decided)? E.g. a 3- or 5-year review.

Yes ☐
No ☐
Why? [optional]

How often do you think the LTMP should be reviewed? The SMB considers a 5-year review would be appropriate.

Every ☐ years

Do you agree that for the purpose of gathering stakeholder opinions relating to proposed Management Framework Adjustments for the Isle of Man scallop fishery (either before the

start of a season or during a season), the Isle of Man Scallop Management Board may include the use of survey tools (e.g. online SurveyMonkey/GoogleForms) to collect stakeholder perspectives on specific measures? A Management Framework Adjustment is a change to an existing management measure (e.g. DCL).

Yes ☐

No ☐

Why? [*Optional*]

Section D: Access and Fleet Capacity

The Scallop Management Board highlighted a number of immediate challenges and barriers to achieving a sustainable long-term scallop fishery in the Isle of Man territorial waters.

Bioeconomic Perspective on Fleet Capacity

Initial consideration of the need, and the aim of a LTMP by the SMB highlighted that *"the key to a successful, sustainable and profitable fishery is to ensure that the current effort and future potential effort, both in terms of the number of licenced boats and the overall landings, is at an appropriate level"*.

At present, the Isle of Man scallop fishery access framework is binary; in other words, if a vessel is licenced to fish for scallops within the Isle of Man territorial sea then it may do so to the same extent as every other licenced vessel in the fleet, and conversely, if a vessel is not licenced to fish for scallops within the Isle of Man territorial sea then it has zero access to the fishery.

Under this binary approach to access, all vessels may *potentially* operate as full-time vessels (FTVs), and as discussed in Part I – Section 1.7 of this consultation, the Scallop Management Board bioeconomic model estimates that catching opportunities (TAC) would need to be approximately 3-times that set for the 2020/21 Season (under the assumptions of the model relating to price, and yield, etc.) in order to achieve economically viable fishing (Objective 2.2) if all vessels were to operate as FTVs, which is greater than any realistic expectation of a future TAC set within biologically sustainable limits (Objective 2.1).

The SMB highlighted that under this current binary access framework, any increases in fishing opportunities that allows for improved economically viability of fishing (e.g. an increase in the DCL following a recovery in stock biomass and an uplift in TAC) will be quickly exploited by the significant unutilised capacity of the fleet under the current access framework, and *"as a result, there will be little change [in stock levels] and boats will soon, once again, fish at close to uneconomic levels"*. It is important that the fishing capacity of fleets is such that they are economically viable yet do not overexploit marine stocks; overexploitation has been characteristic of the 'boom and bust' episodes previously witnessed in the Isle of Man scallop fishery.

Therefore, the Isle of Man Scallop Management Board has concluded that there is effectively an over-capacity in the Isle of Man scallop fishery fleet within the context of the current access framework, which will continue to prevent economically viable fishing within the limits set (failing Objective 2.2 of the LTMP), undermine stock recovery (failing Objective 1), and therefore prevent progress towards achieving the long-term objectives of the LTMP. It is the SMBs principal concern that under the current access framework, any progress towards Objective 1 of the LTMP (i.e. stock recovery) would either be i) quickly depleted given the significant unutilised fishing capacity within the licenced fleet (failing Objective 1), or else ii) only be maintained by setting catch limits at necessarily low and uneconomic levels for the long-term (i.e. failing Objective 2.2).

In seeking to address this issue, the SMB has advised DEFA to consult on a number of options that enables progress towards achieving objectives 1 and 2.2 by regulating the capacity of the fleet that is licenced to fish in the Isle of Man scallop fishery. The SMB, together with the Department, is therefore seeking to address over-capacity by reviewing latency within the fishery, and also managing the number of full-time licences vessels using a track-record criteria, and/or considering an alternative access framework that allows for 'tiered access levels' that may accommodate full-time, part-time, or limited access within a flexible effort regime, for example incorporating days-at-sea (DAS). An outline of such a tiered approach is described later in this document.

By combining industry data on typical minimum income requirements across different vessel categories, together (based upon average yield and price of scallops landed from within Manx territorial waters in recent seasons) the industry representatives of the Scallop Management Board have produced a simple bioeconomic model of the Isle of Man scallop fishery (available in Part I – Section 1.6).

The bioeconomic model calculates the daily landings necessary to achieve economically viable fishing for the typical under-10 m, 10-15 m, and over-15 m vessel. Using average days-at-sea (DAS) data for 'full-

time' vessels¹⁴ during the 2017/18 and 2018/19 fishing seasons, the SMB has estimated the total seasonal landings required for a 'full-time vessel equivalent' (FTVE) in different vessel-length categories.

In the bioeconomic model, the theoretical Full-Time Vessel is defined as the average number of DAS per week for a vessel that participates for the duration of the Manx season by size-category, where under-10 m, 10-15 m, and over-15 m vessels are considered to be targeting the fishery 'full-time' if they achieve an average of 2.9, 3.0, and 3.1 DAS a week throughout the 28-week Isle of Man scallop fishery. Details of the SMBs methodology and analysis can be found in Part 1 – Section 1.6.

The data presented in the Scallop Management Board bioeconomic model shows that if the vessels currently eligible to participate in the 3-12 NM (83 licenced vessels) wished to prosecute the fishery on a full-time basis, as is presently permitted under the current access framework ('binary' – in/out access framework, see below), a TAC of 6,650 t (over an estimated 7,020 DAS at target catch rates) would be required for those vessels to achieve the minimum income required for economically viable fishing. For context, the unprecedented landings from 36E5, 37E5, and 38E5 achieved in 2016 was 5,714 t, following which substantial declines in stock biomass, landings and landing-per-unit-effort (LPUE) were observed. The level of stock biomass required to support a 6,650 t fishery in Isle of Man territorial waters is considered unrealistic.

The same modelling shows that the 2020/21 FY Total-Allowable-Catch (TAC) of 2,049 t would generate enough revenue to support full-time economically viable fishing for only 26 FTVEs over an estimated 2,163 DAS. Similarly, the long-term historical landings (~3,000 t) would generate enough revenue to support full-time economically viable fishing for only 37 FTVEs over 3,167 DAS.

Of course it is unlikely that all 83 vessels will, or may wish to participate on a full-time basis for the duration of an entire fishing season; however, this does demonstrate the degree of latent effort that still exists within the fishery in the absence of appropriate effort (input) controls.

To summarise, the scale of the potential catching capacity of the current fleet – under the current access framework (i.e. no effective limit on DAS) – precludes the possibility of achieving the long-term socio-economic or biological High Level Objectives set out by industry.

Perspective on Fleet Capacity

Do you agree that the current fleet capacity (83 licences), under the current access and management framework, i.e. without further input controls, is too great to allow for stock recovery, and economically viable scallop fishery for all of those vessels in the short-term?

Yes ☐
No ☐
Why? [Optional]

Do you agree that the current fleet capacity (83 licences), under the current access and management framework, i.e. without further input controls, is too great to allow for stock recovery, and economically viable scallop fishery for all of those vessels in the long-term?

Yes ☐
No ☐
Why? [Optional]

Do you agree that the current fleet capacity (83 licences), under the current access and management framework, i.e. without further input controls, is too great to achieve the Scallop Management Board's agreed long-term objectives?

Yes ☐

¹⁴ 'full-time' vessels have been defined as those vessels that have >10% participation in the fishery, and have fished on at least one day in each month within the fishing season.

No ☐
Why? [*Optional*]

Do you agree in principle that the current fleet capacity should be regulated at a level that allows for economically viable fishing for all participating vessels within the biologically sustainable limits, thereby allowing for progress towards the Scallop Management Board's Objective 1 and Objective 2.2?

Yes ☐
No ☐
Why? [*Optional*]

Latent Effort

In the first instance, the Scallop Management Board has recommended that the Department remove latent licences from the fishery, in order to reduce potential catching capacity of the fleet, by applying a track-record criteria.

In principle, do you support removing latency within the Isle of Man scallop fishery by re-issuing licences to vessels with an appropriate track-record (to be decided) within a specified reference period (to be decided)?

Yes ☐
No ☐
Why? [*Optional*]

The Scallop Management Board has recommended two criteria by which eligibility might be determined:

1. A track-record of at least 54 days fishing for king scallops within the Isle of Man territorial sea during the reference period beginning 01/11/2017 and ending 31/03/2020. This equates to an overall participation rate of 10% of the total number of potential fishing days in the reference period (total = 542 days).
2. To account for variability between seasons and potential discontinuity and disruption among licences and vessels, a track record of at least 27 days fishing for king scallops within the Isle of Man territorial sea during the same reference period where all of those days-at-sea were within a single fishing season (01st Nov – 31st May) (i.e. half of the overall requirement above, demonstrated in a single season).

In the 2016 review of the Isle of Man king scallop fishery, the Department incorporated an adjustment calculation for over-15 m vessels subject to the WWER using pro-rata methodology. However, as noted in Part 1 – Section 1.7 of this consultation, the SMB considers that the WWER has no overall limiting effect on the ability of an over-15 m vessel to participate on a full-time basis in the fishery, a conclusion shared by various analyses of the wider UK fishery (see section 1.5).

Overall, the total WWER DAS allocation during the above reference period was 530 days (not pro-rata adjusted, i.e. the total number of DAS allocated for all Quarters that include the reference period). This is 98% of the total number of potential fishing days in the reference period (542 days). Furthermore, the total number of viable fishing days (i.e. days where it is judged that weather did not prohibit access to all licenced vessels) was 10% less than the WWER allocation, at 476 days.

Even when adjusted on a pro-rata basis, i.e. acknowledging that the Manx king scallop season is 7 months long and WWER allocates days on a quarterly basis and some of the WWER days may be spent fishing in Western Waters outside the Manx season, the number of WWER DAS equals 413 (87%) of total viable days, and is not considered limiting in terms of vessels being able to participate on an active (i.e. not latent) nor even 'full-time' basis, particularly since *marginal* weather conditions typically experienced

through the winter fishery are less likely to inhibit operations on an over-15 m vessel compared to an under-10 m or 10-15 m vessel.

It is therefore concluded by the Isle of Man Scallop Management Board that the WWER allocation was more than sufficient for over-15 m vessels to participate to the same extent as the rest of the fleet.

The rationale for the reference period is that the 2017/18 season was the first season that began with the full complement of Harvest Control Rules in place (i.e. an agreed TAC and DCL for the Manx fishing season) and therefore better represents the current and future management framework. The reference period also excludes Q2 of 2020 and the entire 2020/21 fishing season due to the effect of the coronavirus pandemic.

The Isle of Man Scallop Management Board has also recommended that when considering eligibility, track-records shall be 'inherited' where an Isle of Man King scallop licence has changed ownership, and that licences currently 'on hold' by the Department shall be considered against the same eligibility criteria.

Finally, it is acknowledged that there will be a process for considering **appeals (including pipeline cases)** on a case-by-case basis. The Isle of Man Scallop Management Board will assist the Department in developing a points-based system of considering appeals, in order to maintain an objective approach to considering individual cases in an anonymous way.

Do you support removing Species Specific Licences for king scallops from the Isle of Man Sea Fishing Licence where a licence-holder does not meet the above criteria recommended by the Isle of Man Scallop Management Board?

Yes ☐
No ☐
Why? [Optional]

If not, do you have an alternative proposal for either the track-record requirement, or reference period?

Yes ☐
No ☐

If yes, please outline what you think an appropriate track record and reference period should be.

Fleet Capacity Management & Access Framework Options

Once latency is addressed, it is necessary to consider the remaining fleet capacity and how *to manage vessel numbers, access, and effort so that fleet capacity is economically viable within the limits set* if the industry HLOs (2.1 and 2.2 in particular) are to be achieved.

Broadly speaking, there are two options; Option 1) maintain the current binary (in/out) full-access framework and manage fleet capacity by regulating vessel numbers, or Option 2) consider alternative access frameworks, such as a DAS regime, which allows for varying 'tiered' levels of access across eligible vessels using a track-record approach. The SMB has recommended option 2, however the Department are also consulting on option 1 (below). It is possible that stakeholders can support both options in principle as a means to regulating fleet capacity.

Option 1: Once latency is removed, and should the fleet capacity (i.e. number of vessels) still be greater than the long-term average landings could support, do you support reducing vessel numbers further without changing the access framework? i.e. Option 1, not introducing further input controls in order to manage fleet capacity, but managing fleet capacity by regulating the number of eligible vessels and maintaining a binary in/out licencing framework.

Yes ☐
No ☐
Why? [Optional]

If yes, which Track-Record criteria should then be used to determine vessel eligibility within the same reference period; 01/11/2017 – 31/03/2020? You can select more than 1.

- | | |
|------------------------------------|--------------------------|
| Total Landings | <input type="checkbox"/> |
| Average Landings per season | <input type="checkbox"/> |
| Average Landings per calendar week | <input type="checkbox"/> |
| Total DAS | <input type="checkbox"/> |
| Average DAS per season | <input type="checkbox"/> |
| Average DAS per calendar week | <input type="checkbox"/> |
| Other | <input type="checkbox"/> |

If 'Other', please describe a fishery-related metric []

A concept proposed by the Scallop Management Board is to explore an alternative access framework for the Isle of Man scallop fishery based on a DAS regime, which allows greater vessel numbers to participate in the fishery by varying the extent to which each individual vessel, or 'groups' of vessels, can access the fishery; i.e. introducing 'input' DAS controls through a tiered system.

The concept puts forward that the Isle of Man scallop fishery access framework moves away from a binary (in or out) model, and towards a flexible DAS model that allows for a range of adjustable access arrangements using a 'tiered' approach based on an appropriate track-record.

DAS allocations for eligible vessels, or groups of vessels categorised into 'access Tiers', could be adjusted from season-to-season, and within seasons, in order to maintain progress towards delivering the Scallop Management Boards long-term objectives; i.e. ensuring that overall fishing capacity reflects total fishing opportunities, and that fishing effort is managed in a way that considers biological and socio-economic high-level objectives set out by industry.

The benefit of an alternative framework is that fleet capacity can be regulated and managed without a corresponding necessary reduction in vessel numbers, which would be required under the current access framework (and is consulted on by DEFA above).

For example, after latency is removed from the fishery (see above), the remaining eligible vessels may be grouped into four categories based on an appropriate track-record methodology (e.g. DAS). Eligible vessels that have the strongest track-record in the reference period would retain the same, or similar, access to the fishery as is currently permitted under the current access framework (i.e. full-time access). Other Tiers would allow for access on a reduced basis reflecting the strength of the Track Record of the licenced vessel.

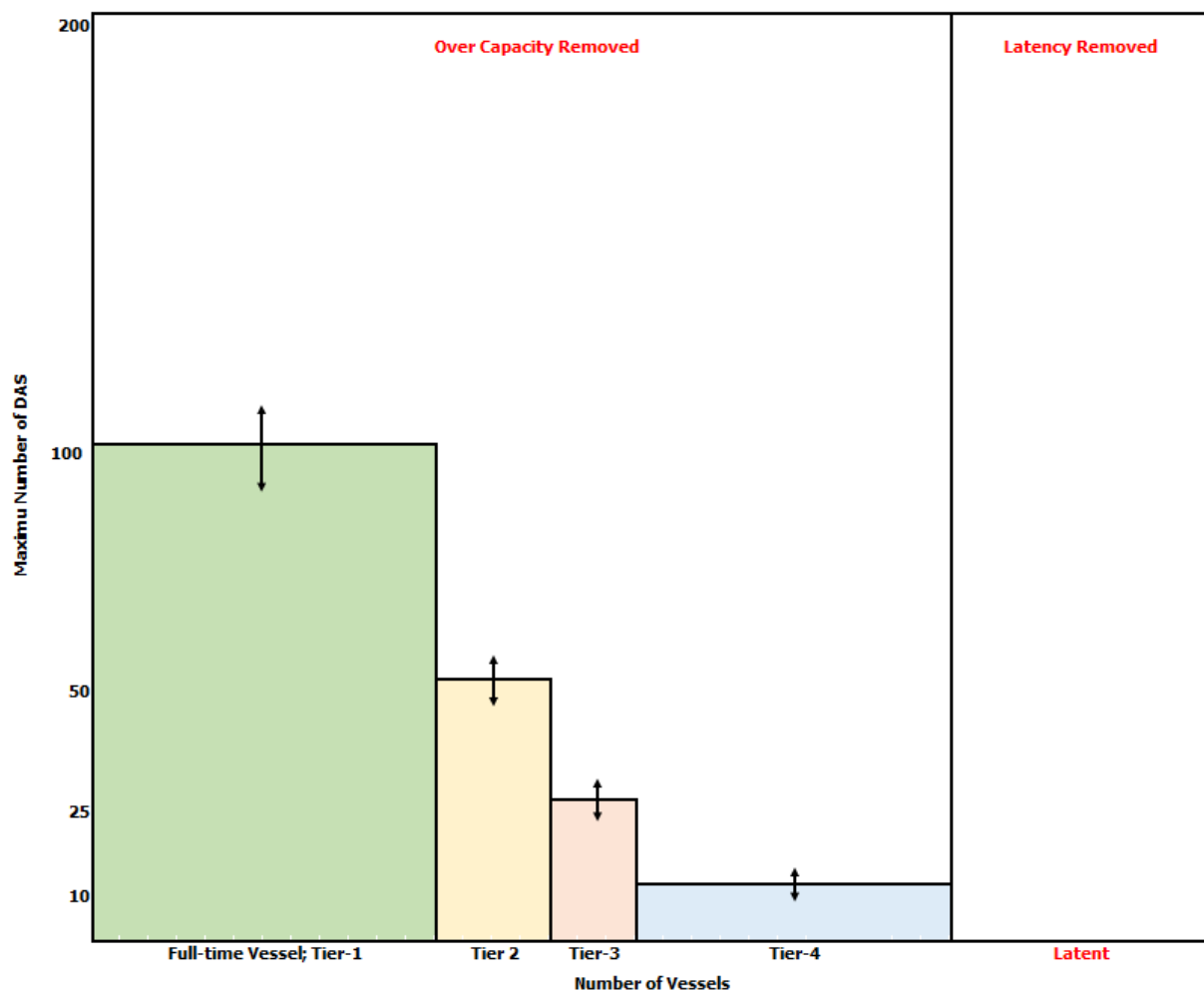
To illustrate the above example using a **hypothetical scenario** where the TAC is equal to the long-term average landings of 3,000 t (~£5.4 m), which according to the Scallop Management Board bioeconomic model allows for approximately 37 Full-time Vessel Equivalents (FTVEs) – or ~3,167 DAS at an *economically viable* DCL - an alternative access framework may for example include 60 vessels grouped into four Tiers:

- Tier-1: Full-access, 100 DAS per vessel; 24 vessels
- Tier-2: 50% access, 50 DAS per vessel; 8 vessels
- Tier-3: 25% access, 25 DAS per vessel; 6 vessels
- Tier-4: 10% access, 10 DAS per vessel; 22 vessels

To be clear: The total number of eligible vessels, the number of Tiers to which vessels are assigned, and DAS allocations to each Tier would be considered after the conclusion of this consultation, and may be adjusted from time-to-time incorporating further bioeconomic modelling, taking into account the current and future state of king scallop stocks, and progress towards the LTMP HLOs. For example, DAS allocations may be adjusted between seasons, and within seasons, in a similar way to how WWER allocations are adjusted under recommendation from the UK Scallop Industry Consultation Group.

It is envisaged that DAS allocations, and any adjustments, would be implemented via individual licence condition variations of the Isle of Man Fishing Licence. These types of adjustments are already implemented by the Isle of Man on behalf of the UK for UK Fishing Licences issued to Manx vessels, and similar adjustments have been implemented within the Isle of Man Fishing Licence in recent seasons for the Queen Scallop fishery (e.g. adjusting the weekly catch limit).

The figure below illustrates the above theoretical example of how fleet capacity may be managed under a Tiered access framework. It shows the currently licenced fleet capacity (83 vessels with full access, the total area of the outside box), the removal of latency (on the right) and the number of vessels, DAS allocation, and overall capacity under the new access framework (the coloured boxes). The height of the box represents the number of DAS allocated to a vessel within each Tier-group, and the width of the box represents the number of vessels within each Tier-group. The area of each coloured box therefore represents the fishing capacity for each Tier-group. The white space behind the coloured boxes represents the scale of over-capacity in the currently licenced fleet (under the existing access framework) that would be removed. It is envisaged that this model would be dynamic and flexible (represented by the black arrows), responding to fisheries-independent survey data and TAC limits set each year, and also to real-time fisheries-dependent data on DAS uptake within each season.



Option 2: In principle, do you agree that a Tier-based access framework for the Isle of Man scallop fishery, which makes provision for adjustable input controls, could be an effective mechanism for regulating fleet capacity?

Yes ☐
 No ☐
 Why? [Optional]

In principle, do you agree that a Tier-based Days-at-sea access framework for the Isle of Man scallop fishery could be an effective mechanism for regulating fleet capacity?

Yes ☐
No ☐
Why? [*Optional*]

If you do not agree with a Tier-based days-at-sea access framework, do you have any other suggestions on what might be an effective input control mechanism? E.g. dredge-hours limits.

Please describe []

In principle, do you support the development of a Tiered access framework that allocates and adjusts DAS for the Isle of Man king scallop fishery in line with Bioeconomic modelling and Long-term High Level Objectives?

Yes ☐
No ☐
Why? [*Optional*]

If yes, do you think the Isle of Man Scallop Management Board and the Department should develop and implement a tier-based access framework, and replace the current binary access framework in the Isle of Man scallop fishery? This would happen after the conclusion of this consultation, after the new fleet capacity is understood and can be modelled against bioeconomic conditions, taking into account the need to progress towards the LTMP HLOs.

Yes ☐
No ☐
Why? [*Optional*]

It is acknowledged that a Tiered access framework may need to build in some flexibility for licences to move between Tiers. It is also acknowledged that the movement between Tiers may also provide opportunity for New Entrants at some point in the future. How might this be done? As explained in Part 1, the Isle of Man Scallop Management Board and the Department consider new entrants into the fishery as an important aspect of sustainability, although the short- to medium-term priority must be to effectively management and regulate effort for those businesses already dependent upon the fishery.

Please explain [*Optional*]

In developing a new access framework that effectively controls and manages fishing capacity, it is important to ensure the methodology used to determine access is objective, transparent, fair, and must not discriminate by reason of nationality.

The Scallop Management Board considers a three-step approach to be the most sensible way forward with implementing a new access framework:

Step 1: Following the conclusion of this consultation, the total number of eligible vessels remaining in the fleet (and the overall fleet structure) may change, and will therefore need to be re-evaluated (in the bioeconomic model) in order to move to step 2.

Step 2: Once fleet structure is finalised, the SMB will develop an appropriate track-record methodology that assigns eligible vessels to the new Tiered access model. The track record methodology cannot be determined at this stage until the removal of latency is fully determined, and the resulting fleet structure is certain; however, the Scallop Management Board considers DAS (historic participation in the fishery) to

be the most appropriate metric for determining the access level of eligible vessels, using the same reference period beginning 01/11/2017 and ending 31/03/2020. The number of DAS required within the reference period to qualify for each Tier is yet to be determined, as is the number of Tiers. The number of access-Tiers would reflect the statistical distribution of historic participation among the fleet, and the thresholds for the qualifying criteria would be empirically-driven based on that same data. In this consultation, the SMB and the Department are consulting on the approach 'in-principle'.

Step 3: Once the track-record methodology is empirically evaluated, the proposed number of access Tiers and qualifying criteria would be recommended by the Isle of Man Scallop Management Board for approval by the Department (in line with current procedure). Subject to approval, the Isle of Man Scallop Management Board will undertake further bioeconomic modelling and make subsequent recommendations relating to DAS allocations for each Tier for the upcoming season.

In principle, do you support the proposal to develop and implement a methodology that allocates DAS to individual Isle of Man Species Specific Licences for king scallops within a tiered regime, according to a track-record of participation (days-at-sea within the Manx scallop fishery) within the reference period; 01/11/2017-31/03/2020? The number of DAS required in the reference-period for any access-Tier would be determined following this consultation at a time when overall fleet structure is able to be re-assessed.

Yes ☐
 No ☐
 Why? []

If no, which fishing track-record metric should be used to determine access levels among eligible vessels, and which fishing years/seasons should be included as the reference period in track-record analysis? Tick multiple if you think more than a single FY should be included in the track-record reference period.

Total Landings	<input type="checkbox"/>	2016/17	<input type="checkbox"/>
Average Landings per season	<input type="checkbox"/>	2017/18	<input type="checkbox"/>
Average Landings per week	<input type="checkbox"/>	2018/19	<input type="checkbox"/>
Total DAS	<input type="checkbox"/>	2019/20	<input type="checkbox"/>
Average DAS per season	<input type="checkbox"/>	2020/21	<input type="checkbox"/>
Average DAS per week	<input type="checkbox"/>		
Other	<input type="checkbox"/>		

Other: please state _____

Introducing a sunset clause on Grandfather Rights (GFRs) granted under the Scallop Fishing Bye-laws (2010)

Bye-law 5(7) of the Sea Fisheries (Scallop Fishing) Bye-laws 2010 restricted access to the Isle of Man scallop fishery to vessels <221 kW, but also made provision for 'qualifying vessels' with engines in excess of 221 kW by introducing what are now referred to as 'Grandfather Rights (GFRs)'. If such vessels could demonstrate having fished for scallops (or queen scallops) in the Manx Territorial Sea for more than 50 days between 01st November 2008 and 31st May 2010, access to the scallop fishery was permitted by way of GFRs.

Currently, GFRs are only extinguished when the licenced vessel is either sold or transferred. The majority of vessels that were initially permitted access to the fishery under GFRs have either retired from the fishery (and the licence returned to the Department) or have had their engine de-rated to comply with the 221 kW restriction. However, a small proportion of the current fleet (6 vessels) continue to maintain access the fishery with vessels powered by engines exceeding 221 kW. The question becomes particularly pertinent given that the Daily Catch Limits will continue to be a fundamental management tool for the Isle

of Man king scallop fishery into the future, which may challenge the economic model typically associated with that class of vessel.

Despite no specification of a 'sunset clause' (fixed end date) in the Sea Fisheries (Scallop Fishing) Byelaws (2010), GFRs were not intended to be granted in perpetuity in the Isle of Man scallop fishery. Removing GFRs could be achieved by introducing a sunset clause on existing GFRs, thereby requiring all vessels to be under-221 kW by a specific date. Importantly, this is a separate issue to individual eligibility, and owners of eligible vessels over-221 kW will have an opportunity to arrange for a replacement vessel under-221 kW (in line with current species specific policy).

Do you support the termination of Grandfather Rights for vessels over-221 kW in the Isle of Man king scallop fishery, allowing those eligible vessels currently operating under Grandfather rights to be replaced before a specific date?

Yes ☐
No ☐
Why? [*Optional*]

If yes, from the start of which fishing season (01st November) should Grandfather Rights be terminated?

2021/22 ☐
2022/23 ☐
2023/24 ☐
Other:

Section E: Technical Measures

The UK Scallop Industry Consultation Group (Working Group) has recently presented a paper on future management of the UK Scallop Fisheries, informed by the Poseidon 2018 report, which has been presented to the UK Devolved Administrations. One of the recommendations adopted from the Poseidon report is to harmonise, where possible, the technical regulations for inshore scallop fisheries.

The term 'inshore' is often ambiguous; however, the Scottish Government's 2019 Discussion Paper 'Future of Fisheries Management in Scotland' defines inshore fisheries as those where fishing activity takes place exclusively within the 12 NM. This view is shared by the Isle of Man Scallop Management Board and the Department, which regard the king scallop fishery within the Isle of Man territorial sea as an inshore fishery, and as such would benefit from a harmonised approach with adjacent inshore fisheries where appropriate.

Dredges-a-side Restrictions

Dredge numbers are already limited within the Isle of Man king scallop fishery by specifying the aggregate dredge width that a vessel may operate; this translates to a restriction of 7 dredges-a-side in the 3-12 NM and 5 dredges-a-side in the 0-3 NM zones.

As Part 1 (section 1.5) of this consultation shows, the number of dredges-a-side varies between jurisdictions in the northern Irish Sea. The Welsh approach has been to increase the number of dredges-a-side as activity moves beyond each fisheries limit (1, 3, 6 NM), making for a complex arrangement; Scotland and England allow vessels to operate more dredges-a-side than elsewhere within inshore grounds and have adopted an Anglo-Scottish approach since 2011; Northern Ireland have a single rule that extends from the shoreline out to the 12 NM limit of 6 dredges-a-side. Other jurisdictions also specify a maximum tow bar length, and specific numbers of dredges that may be towed by a vessel (either in total, or separately from the port and starboard tow bars). These specifications are considered to enable more robust enforcement of dredges-a-side limits, in contrast to aggregate dredge width alone.

The Isle of Man Scallop Management Board has recommended that the dredges-a-side limit within the 3-12 NM zone should be reduced to 6 dredges-a-side, and to amend the technical specifications so that regulations are harmonised with those in Northern Ireland (i.e. including a maximum tow bar length, and maximum number of dredges).

With regard to the 0-3 NM zone, there are both potential benefits (harmonisation, catching efficiency, reduced in-direct displacement of activity, reduced CO₂ emissions per kg) and disadvantages (enforcement differentiation, benthic impact and swept area considerations) to increasing the current dredges-a-side restriction from 5 to 6 dredges-a-side. These are to be considered in detail by the co-management Association of stakeholders with access to the 0-3 NM zone once it is formed (see Part I – Section 2). However, for the purpose of information gathering in this consultation, the Department is also seeking stakeholder views on dredges-a-side limits in the 0-3 NM zone.

In principle, do you support the use of maximum tow bar length restrictions, for the purpose of limiting the number of dredges-a-side, within the Isle of Man territorial sea? (Select one)

Yes ☐

No ☐

Why? [*Optional*]

In principle, do you support the specification of the number of dredges on each tow bar (port and starboard), for the purpose of limiting the number of dredges-a-side, within the Isle of Man territorial sea?

Yes ☐
No ☐
Why? [Optional]

The Scallop Management Board has recommended that the dredges-a-side restrictions in effect in the extended territorial sea (3-12 NM zone) should be reduced from 7-a-side to 6-a-side, and incorporate a maximum tow-bar length.

Do you support the introduction and/or amendment of measures that would prohibit a vessel from operating more than 6 standard scallop dredges-a-side in the extended Territorial Sea (3-12 NM zone), as recommended by the Scallop Management Board? (Select one) Note: at present, the only existing measure relating to dredges-a-side specifies an aggregate dredge width, but may include the introduction of new measures such as maximum tow-bar length. A standard scallop dredge is 76.2 cm (2.5 ft) wide.

Yes ☐
No ☐
Why? [Optional]

What is the maximum length of tow bar that should be specified to prohibit a vessel from using more than 6 standard scallop dredges-a-side? Note that in Northern Ireland, a limit of 5.5 m is specified in the Conservation of Scallops Regulations (Northern Ireland) 2008.

____ m / ft

In principle, do you support including provisions for vessels to carry fishing equipment onboard that are not permitted for use within the Territorial sea, subject to certain requirements? E.g. a requirement to ensure equipment that is not permitted, such as tow-bars over a specific length, is "securely lashed and stowed and may not readily be used".

Yes ☐
No ☐
Why? [Optional]

What are your views on the number of standard scallop dredges that may be used by vessels fishing in the Isle of Man 0-3 NM zone? Note: at present, a maximum aggregate dredge-width of 7.62 m (5 dredges-a-side) is specified for scallop dredge fishing in the 0-3 NM zone.

No change: current aggregate width should be retained ☐
It should be specified at a maximum of 5 dredges-a-side, with no tow bar specification ☐
It should be harmonised with the 3-12 at 6 dredges-a-side ☐
The number of dredges-a-side should be reduced to []
Why do you say this? [...]

Belly-ring Size

The standard belly-ring size throughout much of the British Isles is either 75 mm or 85 mm internal diameter. In the Isle of Man king scallop fishery, the current minimum internal diameter of scallop dredge belly-rings is 75 mm, although the actual diameter of the typical dredge used is not routinely recorded. The same 75 mm specification is also specified within the Northern Ireland 12 NM zone. There is no specification of belly ring size in Wales, Scotland, or England; however, typical dredges (75 cm breadth) must not be used in those jurisdictions if the number of belly rings in each row suspended from the belly

bar exceeds 7 (in Wales), 8 (in England) or 6 (in Scotland). In the Channel Islands, internal diameter is specified to 85 mm.

An increased belly-ring minimum internal diameter selects for a larger size scallops, and allows for undersized scallops and bycatch to pass through the fishing gear. A comprehensive overview of king scallop dredge design was produced by Bangor University for Seafish, and is available [here](#).

The ECODREDGE CT98-4465 project (available [here](#)), which was partly based on empirical data collected in Manx waters in 1998, found that belly ring sizes of 85mm internal diameter would be optimal for areas where the MLS is 100mm. This is below the current MLS in Manx waters, where 75 mm bell-rings are still permitted.

The same project investigated larger ring sizes (88 and 92mm) for an MLS of 110 mm, however it was reported to be difficult to achieve full selectivity at MLS for these ring sizes. Nonetheless, this suggests that a ring-size of at least 85 mm would be optimum for the Isle of Man fishery where MLS = 110 mm, and that there could be scope to investigate further increases subject to gear trials demonstrating sufficiently optimised selectivity.

Notwithstanding the aim to harmonise technical regulation and specifications in inshore scallop dredge fisheries, we are seeking stakeholder views on belly-ring size specifications for the Isle of Man fishery, so that a co-ordinated approach in the wider northern Irish Sea may be better informed in the future.

In principle, do you support the continued use of a minimum internal diameter specification of scallop dredge belly-rings within the Isle of Man territorial sea? (Select one)

Yes ☐
No ☐
Why? [*Optional*]

What is the internal diameter of bell-rings that you typically use to fish for scallops in the Isle of Man territorial sea?

75 mm ☐
85 mm ☐
92 mm ☐
Not applicable ☐
Other []

Based on the information available at this time, would you support an increase in the minimum internal diameter specified for scallop dredge belly-rings within the Isle of Man territorial sea? (Select one)

No ☐
Yes – 85 mm ☐
Yes – 92 mm ☐
Yes – Other ☐
Why? [*Optional*]

Teeth numbers and Tooth-spacing

The maximum number of teeth that may be attached to scallop dredges by vessels fishing in the northern Irish Sea also varies by jurisdiction. In the Isle of Man and in Northern Ireland, the maximum number of teeth per dredge is 9. However, in Welsh and English waters in the region, the maximum number of teeth is specified at a max. of 8 per dredge. For vessels working in Scottish waters using dredges less than 80 cm breadth, the maximum number of teeth per dredge depends on the type of teeth that are in use,

where the maximum is 7 (where teeth are less than 12 mm) or 6 (where teeth measure more than 12 mm).

It is acknowledged that a specific proposal relating to changing the maximum number of teeth, and tooth spacing, should be supported by a quantitative impact assessment that compares advantages (relating to selectivity) and disadvantages (relating to catchability and cost of changing equipment) of various gear set-ups. The ECODREDGE CT98-4465 project that evaluated dredge design in relation to technical conservation measures (cited in the previous question and available [here](#)) suggests that teeth numbers is not as efficient at selecting a certain sized scallop compared to belly-rings, and can depend on the ground-type and weather conditions. However, the report does highlight that where teeth do function as selective devices, 9 teeth/700mm bar and 8 teeth/700mm bar correspond to optimum selectivity for 100 mm and 110 mm MLS respectively.

This suggests that 8 teeth per dredge may be optimum for reducing bycatch of undersized scallops in the Isle of Man fishery, where MLS = 110 mm.

For the purpose of information gathering, we are seeking to collect information on the typical dredge-type used within Manx waters (this information is not routinely captured) and whether stakeholders have any views on specifications relating to the number of teeth and tooth-spacing on dredges, which may be later used to inform a wider northern Irish Sea approach.

How many teeth are on each tooth-bar that you typically fish on king scallop dredges within the Isle of Man territorial sea?

[]
Not applicable ☐

Based upon the information available at this time, do you support a reduction in the number of teeth per dredge to 8? The information available at this time is limited to previous studies outside the Irish Sea.

Yes ☐
No ☐
Why? []

In principle, do you think there should be a standard dredge technical specification for the northern Irish Sea region? i.e. harmonisation of dredge design across the region, optimised for an MLS of 110 mm.

Yes ☐
No ☐
Why? []

Do you have any views on any other Technical Measures relating to scallop dredge fishing in the Isle of Man territorial sea? E.g. minimum mesh size, minimum landing size, etc.

Remote Electronic Monitoring

In October 2020, the Scottish Government published their "Future Fisheries Management: policy intent paper", which outlined a strategic framework upon which fisheries will be managed in Scottish waters.

One of the themes within the policy paper was "delivering confidence and accountability", and it was expressed by the Scottish Government that they consider Remote Electronic Monitoring (REM) to offer a

valuable opportunity in delivering the confidence and accountability that is needed for a world-class fisheries management system, provided it is introduced in a proportionate way and is applied on an equivalence basis to vessels fishing within Scottish waters. REM includes VMS (already required for all vessels participating in the Manx scallop fishery), and onboard cameras.

The Scottish Government has been gradually introducing requirements for REM for scallop vessels working in Scottish waters, initially through a voluntary programme, which will become mandatory through legislation.

REM has clear enforcement and monitoring benefits, particularly in fisheries where Daily Catch Limits (DCLs), curfews, and spatial restrictions are in place, such as the Isle of Man king scallop fishery.

In principle, do you support the use of REM (Remote Electronic Monitoring with onboard cameras) in the Isle of Man Scallop Fishery for all vessels?

Yes ☐

No ☐

Why? []

How do you think such equipment should be funded?

Please explain []

Section F: Additional Considerations relating to the LTMP

Industry-led survey and research funding

The Isle of Man Scallop Management Board high-level Objective 2.1 aims to set biologically sustainable limits on fishing activity, informed by robust/best available scientific stock data linked to biological reference points (limit and target reference points).

Sustainable and appropriate stock management depends on the quality of the available stock data. Prior to 2019, this was provided by Bangor University from their annual surveys, which was a continuation of the Port Erin Marine Laboratory (Liverpool University) dataset. Industry expressed concern over the number (and spread) of sites sampled during the scientific surveys and so, in conjunction with Bangor University, an industry survey protocol was designed to complement the long-term indices provided by Bangor University by targeting more sites (higher resolution) and sampling both the juvenile and adult populations of King and Queen Scallops using a stratified random sampling approach.

The industry survey covers all of the main fishing areas within the Territorial Sea. The use of adult and juvenile survey gear provides information on the age-size structure of the population and in particular on the level of future recruitment. This allows high density juvenile beds to be identified and protected from fishing. Over the past three years, the importance of this additional dataset has been demonstrated, particularly for evidence-based spatial management that has helped to ensure pre-recruits reached harvestable size without being exposed to significant fishing mortality. The industry survey also provides data for the spatial and temporal management of fishing effort. These data are deemed to be essential in order to meet the High Level Objectives of the Long Term Management Plan, particularly with respect to maintaining the best-available scientific data.

For the past three years the Industry Survey has been co-funded by the Manx Fish Producers Organisation (MFPO) and the Department. From 2022, it will be the responsibility of industry stakeholders to fund their own survey. Critically, the MFPO only represents a subset of the entire fleet that ultimately benefit from the improved evidence base that enables better management. The two scallop surveys complement each other; the Bangor survey looks at long-term trends at a low-resolution, and the industry survey provides the data for specific management approaches of the individual fishing grounds (to see the utility of the high-resolution survey, please refer to the Appendix).

As the Industry Survey develops a longer-term dataset, it may be possible to manage the fishery based on this survey alone; however, the value of a multi-decadal database on scallop populations within the Isle of Man territorial sea cannot be overstated. Furthermore, the current funding model for the high-resolution survey is not sustainable, and a long-term solution is needed. This also reflects the wider UK situation, where the trend is for the UK fishing industry to fund their own science and not to rely exclusively on government funding for fisheries science advice.

The Isle of Man Scallop Management Board and the Department has previously considered various funding options for the industry-led survey, which are self-sustaining through subscription or levy system, or through the scallop resource itself.

Do you agree that the recent management of the Isle of Man scallop fishery has benefited from additional industry-led surveys, which have had design and analysis support from Bangor University?

Yes ☐
No ☐
Why? [*Optional*]

Do you agree that funding future industry-led surveys will be important for the development, evaluation and delivery of the Isle of Man scallop LTMP?

Yes ☐
No ☐

Why? [Optional]

Do you agree that revenue should be raised from the fishery in order to fund industry-led research proposals?

Yes ☐

No ☐

Why? [Optional]

Do you agree that revenue should be raised on a user-pays principle? I.e. those who benefit most from the fishery also contribute the most to the industry research fund.

Yes ☐

No ☐

Why? [Optional]

Do you have any proposals on how this revenue should be raised?

Set-aside quota for Research (RSA) fished by a chartered vessel

Days-at-sea charge system (paid in advance of the season, and refunded if not used)

Subscription to an Association

Processor-led levy

Other []

Do you support the establishment of an Isle of Man Fishing Industry Research Council (FIRC) to take responsibility for the administration and delivery of a funding scheme? The target revenue for the FIRC would be recommended by the Isle of Man Scallop Management Board.

Yes ☐

No ☐

Why? [Optional]

Dive-caught Scallop Fishery

There is currently no commercial dive-caught scallop activity within the Isle of Man Territorial Sea, and further there are specific limits and restrictions on recreational diving for scallops within certain MNRs. However, the Department has received information that there is demand for this specific scallop product both locally, in the UK, and elsewhere. The typical price-at-first-sale achieved for dive-caught scallops is 50% greater than that of dredge-caught scallops.

Note: any dive-caught fishery would necessarily have to be prosecuted by a commercially registered and licenced fishing vessel, with both a UK Fishing Licence (with scallop entitlement if over-10 m) and a Species Specific Licence for king scallops in the 0-3 NM, although a separate Isle of Man Licence for Dive-caught scallops could be introduced. Furthermore, a dive-caught scallop fishery could only be prosecuted by individuals with appropriate commercial diving qualifications and Marine & Coastguard Agency (or equivalent) requirements.

There are areas within the 0-3 NM zone that contain sensitive habitat features, and are currently closed to mobile gear fishing for scallops. However, the scallop populations in these areas may be sustainably harvested using low-impact methods, under a similar framework to that which currently manages the scallop dredge fishery (e.g. daily bag limits, restrictive licencing, TAC, etc.). It is envisaged that any dive fishery operating within the 0-3 NM would necessarily be incorporated as part of the 0-3 NM Association, discussed in part 1.2. Notwithstanding the existing non-monetary fishery benefits of those scallop

populations (i.e. as undisturbed brood-stock), there is scope to deliver sustainable economic benefits to an increased number of industry stakeholders and the wider economy.

Do you agree that a dive-caught scallop fishery within Isle of Man territorial sea should be developed?

Yes ☐
No ☐
Why? [Optional]

In principle, do you agree that the Department and the Scallop Management Board should work to develop and integrate a dive-caught scallop fishery as a component of the king scallop LTMP?

Yes ☐
No ☐
Why? [Optional]

If yes, what do you consider to be important in establishing and managing a dive-caught fishery? E.g. a diver-member on the Isle of Man Scallop Management Board.

Please explain [...]

In your view, how would the development of a dive-caught fishery interact with the established scallop fishery, and the Scallop Management Board?

Please explain [...]

It is anticipated that any new fishery for king scallops (incl. dive caught) would be subject to similar regulation and management approaches to existing scallop fisheries. Do you have any specific ideas relating to the management and licensing of a dive-caught fishery in the Isle of Man territorial sea?

Please explain [...]

Any other comments

Do you have any other comments or suggestions relating to Long-term Management Plan and immediate management options for the Isle of Man king scallop fishery?