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Project UK: Round 1

UK South West of England & Celtic Sea crustacean pot fishery

Year 6 report

**May 2023**

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# Introduction

## Introduction

**Project UK** includes 12 fisheries, through eight FIPs. These fisheries were selected by the supply chain because they bring commercial, economic, and cultural benefits to UK communities. As part of Project UK, these FIPs address 61 individual actions. These actions address multiple milestones across a five-year period, representing best practice in working towards an environmentally sustainable future.

The first round of FIPs[[1]](#footnote-2) to participate in Project UK (Channel scallop, monkfish, plaice & lemon sole, and crab & lobster) were launched in 2017. So far, these fisheries have made demonstrable progress against their Action Plans, focusing on developing and documenting robust stock management and mitigating environmental impacts.

With these five year FIPs ending in April 2022, there was a need to review their overall progress to date and agree on the next steps to be taken. In the case of this crab and lobster FIP, the stakeholders agreed to extend the FIP by one more year to April 2023 and a new Action Plan for Year 6 of the FIP prepared. This was based on a new assessment (see **Appendix A**) that not only looked at Performance Indicators (PIs) covered by the FIP actions but reviewed all 22 PIs in the current (version 2.1) MSC Fisheries Standard to determine what had changed since the pre-assessments were conducted in 2016.

The **Marine Stewardship Council** (MSC) has contracted **Poseidon Aquatic Resource Management Ltd to** provide technical advice to the FIPS and conduct annual benchmarking of progress against the action plans. This contract also covers this final review and action plan update.

## Structure of the report

This report consists of a **summary report**, a review of the status of PIs scoring less than 80 in terms of progress made and the likely current score under v2.01[[2]](#footnote-3) (**Section 2.1**) and the resultant benchmarking (**Section 2.2**). The 2022 re-assessment is provided in **Appendix A**.

An analysis to determine the likely implications of scoring the fishery under the new Fisheries Standard version 3[[3]](#footnote-4) has been conducted as a separate exercise.

# Annual Review and Benchmark (April 2023)

## Annual Review

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Fishery name:** UK South West England and Celtic Sea crustacean pot fishery: Brown crab (*Cancer* *pagurus*) and lobster (*Homarus gammarus*) | | | | | | **Start date:** March 2017 |
| **Fishery location:**  **Western Channel (VIIe) and Bristol Channel (VIIf) (brown crab & lobster) and part of Celtic Sea North (VIIg) (lobster only)** | | | **Fishing methods:**  Pots and traps | | | **Annual reviews:**  End Year 1: March 2018 Completed March 2018  End Year 2: March 2019 Completed March 2019  End Year 3: March 2020 Completed April 2020  End Year 4: March 2021 Completed April 2021  End Year 5: March 2022 Completed April 2022  End Year 6: March 2023 Completed April 2023 |
| **Project leaders:**  Project UK Fisheries Improvements – Stage 1 | | | | | | **Improvements recommended by:** |
| **Overview of the Action Plan:**  Potting for brown crab and lobster is mainly, but not exclusively, an inshore fishing activity undertaken throughout the SW of England. The pre-assessment considered that, whilst there are a number of management measures already in place, including the availability of stock status reference points, these do not form a coherent, integrated harvest strategy. The main P1 actions therefore seek to address this, and further develop adaptive management mechanisms that makes management more responsive to the status of the stock.  Whilst no PIs failed under the P2 assessment, many would likely attract conditions. The Action Plan addresses this through a review of alternative management measures to minimise UoA-related mortality of all non-target primary and secondary species caught by this fishery, as well as bolstering current monitoring and research to ensure there is sufficient information on which to base management changes. Although it is unlikely that this fishery will have a significant impact on ETPs, it is suggested that appropriate management measures need to be considered where necessary. This needs to be embedded in an on-going, risk-based ETP impact monitoring system.  The governance and fisheries-specific management under P3 scored well in the pre-assessment. The only action proposed is the wider discussion and agreement of management needs and objectives with trans-boundary management authorities e.g. across IFCAs and (in the case of lobster), with the French and Irish MAs. | | | | | | |
| Colour code in tables below: | Principle 1 | Principle 2 | | Principle 3 |  | |

**Summary Report (End Year 6)**

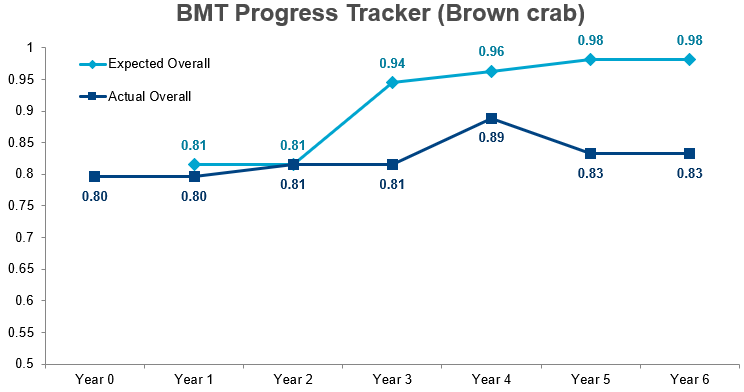
**Introduction**

Following its extension from five to six years, this report examines the progress and current status of the Fisheries Improvement Project (FIP) for the UK Western Channel and Celtic Sea crustacean pot fishery for brown crab and lobster (see previous page) on the sixth and final year. It builds on the re-scoring conducted in 2022 and is intended to provide the basis for deciding on how this fishery could be further prepared for assessment under the MSC Fisheries Standard, under either v2.01 (as a fishery in transition) or under v3. This report has been prepared by Tim Huntington of Poseidon.

Chart, bar chart

Description automatically generated**Main Findings**

**Principle 1**: The 2019 stock assessments found the two crab and one lobster stocks in reasonable condition and moderately exploited. A new stock assessment has been conducted but the results are not yet available to the public. The UK Crab and Lobster Management Group (CMG) has been developing a harvest strategy for English crab and shell fisheries but this does not yet provide any definitive strategic approach of how these fisheries will be managed. This will need to be addressed for both IFCA management areas as well as offshore waters before we can move onto formalising current harvest control rules (HCRs) and where necessary introducing adaptive management measures where needed. Until these two steps are completed the fishery cannot go into full assessment. This should be progressed ahead of, but in synergy with, national fisheries management planning efforts by the CMG, possibly as a regional pilot project.

**Principle 2**: The 2022 revised pre-assessment was precautionary in nature and showed that whilst some progress has been made (e.g. closing out Action 3 on secondary species management, two ETP (2.3.2 ETP management and 2.3.3 (ETP information) and one habitat (2.4.3 Habitat management) were reduced from ≥80 to 60-79 and therefore incurred two actions in the one year extension. Whilst some progress has been made e.g., in preparing risk assessments for ETP interactions and ghost fishing, these have not been sufficient to achieve SG 80 and P2 remains just below SG 80 on aggregate (79) and would therefore fail the fishery.

**Principle 3**: The fishery-specific management also incurred two new actions as a result of post-Brexit changes since the old pre-assessment. Whilst some progress has been made in developing a vision, general and nine fisheries-specific objectives for the English crab and lobster fisheries, these are not yet explicit within the management system. Overall P3 also scores 79 on aggregate and would therefore fail the fishery.

**Overall progress is disappointing**. This is mainly as a result of the need to harmonise with the UK level FMP and this SW fishery still has the chance to act as a lead in developing a regionally-specific fisheries management plan that meets the MSC Fishery Standard.

**Table 1: Action Plan**

| **Standard requirement** | **Lead & partners** | **Timescale / milestones** | **Progress / outcome** | **Revised milestone** |
| --- | --- | --- | --- | --- |
| **Action 1: Harvest strategy**  **Overview**  The current management measures and stock reference points need to be formulated into a coherent harvest strategy that include adaptive management measures where appropriate. This strategy would cover the UoA, thus spanning the inshore (<6 nm) IFCA managed areas and offshore areas under national management.  **Performance indicator**  1.2.1 Harvest strategy  **60 - 79**  Requirement at SG80:  SIa: The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80.  SIb: The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives | Action leads: Management Working Group (WG)  Industry as represented by Beshlie Pool  MSC & Seafish to work on finding funding if required  Partners: Industry, IFCAs (hereafter refers to Cornwall, Devon & Severn, Scilly Isles & Southern), Defra, MMO  Stakeholders: CMG  Resources: Fisheries management expertise | **1a**. Yr 6 (6 months): Draft harvest Strategy approved by Steering Group  **1b**. Yr 6 (7-12 months): Draft harvest Strategy approved by Steering Group | **Target ≥80**  See new Crab management plan options.  CMG meeting in Sept 2022.  **Actions**:   * Prepare draft Harvest Strategy for crab and lobster crustacean fisheries in the UoAs that is responsive to the state of the stocks and the elements of the harvest strategy work together towards achieving stock management objectives. Consult with CMG as required. This harvest strategy requires:   + Clear objectives for stock management e.g. related to stock reference points   + Procedures how these will be achieved e.g. probabilities / timelines.   + Management procedures that will allow these objectives to be reached if required e.g. individual / combinations of restricted licensing, pot limits, days at sea, quota, bag limits, MLS, closed areas, etc harmonised across all the UoA. See Excel ‘Crab management options’   + Details of monitoring systems to allow monitoring and evaluation of management procedure implementation. |  |
| **1a**. Yr 6 (6 months): Draft harvest Strategy approved by Steering Group  **1b**. Yr 6 (7-12 months): Draft harvest Strategy approved by Steering Group | **Progress (Yr 6, April 2023)**:   * An updated **stock assessment** has been conducted but a final internal Cefas review indicated “serious issues” (Ros McIntyre, pers. comm., 03 May 2023) and the results will not be available until at least July 2023. * A series of **Crab Management workshops** were held in March / April 2022. Technical measures, input and output controls were all considered within the workshops and there was a lot of agreement among attendees. Some of the suggested measures will need additional science and data collection before they can feasibly be implemented, there were some clear options which were ruled out by industry as unviable. * **Management measures** that were discussed at the workshops were categorised under fleet, effort and technical measures, each with multiple recommendations in each category. There were also recommendations for further science and research – for example, reviewing the accuracy of CPUE data, determining existing pressure in the fishery and appropriate pot limits, reviewing minimum landing sizes, reviewing life history traits for consideration of seasonal closures and further research into soft shell crab determination. There was general agreement on the importance enforcing the landing and selling of high-quality crab. * Any potential intervention or management measure will need to be consulted on and the potential implications considered. The workshop results need to be fed back to Defra and the CMG to inform future management decisions. * The **national Crab and Lobster FMP** will include the shared shellfish objectives, the species-specific objectives, and the scientific research plans which provide detail on the evidence needed to deliver the objectives. Examples of species-specific objectives are to establish methods to better assess stock status, and to address interactions with other fisheries. Other species’ such as velvet crab and spider crab are also being considered, with one objective to maintain a ‘watching brief’ on the sustainability status of these species. Stakeholder engagement has taken place on the FMP development in person and online, capturing 500 stakeholders from all stakeholder groups. * Four initial **management interventions** have been submitted to Defra alongside the first draft of the FMP. These include (see Seafish presentation, 07-11-22) which includes draft vision, general and fisheries specific objectives (see 3.2.1), plus some management measures eg:   + standardising minimum landing size (MLS) for lobster and crawfish,   + piloting MLS changes for brown crab,   + prohibiting landing of soft brown crab for bait   + improving information on recreational shellfish fishing. * The first draft of the **FMP** has been provided to Defra for review in February / March 2023, with formal consultation on the draft in expected to between April-June 2023, and publication expected in Autumn 2023.   **Status at end of Y6, April 2023 (Target ≥80, Actual 60 – 79)**:   * The shared content of the CMG FMP suggests progress is being made, but still falls short of a formal harvest strategy. Maybe consider developing SW UoA as a pilot project to the CMG?   **Latest documentation:**   * **Seafish presentation (2022).** FIP slides 7 November 2022 |  |
| **Action 2: Harvest control rules and tools**  **Overview**  Based on the harvest strategy developed in Action #1, further development and formalisation of harvest control rules for that are both adaptive and where appropriate, precautionary. This would span the IFCA areas and include offshore (>6 nm) areas of the UoA.  **Performance indicator**  1.2.2 Harvest control rules and tools  **60 - 79**  Requirement at SG80:  SIa: Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.  SIb: The HCRs are likely to be robust to the main uncertainties.  SIc. Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs. | Action leads: Management Working Group (WG)  Industry as represented by Beshlie Pool  MSC & Seafish to work on finding funding if required  Partners: Industry, IFCAs (hereafter refers to Cornwall, Devon & Severn, Scilly Isles & Southern), Defra, MMO  Stakeholders: WG CRAB  Resources: Fisheries management expertise | **2a**. Yr 6 (7-12 months): Cohesive framework of HCRs suitable to implement the agreed draft Harvest Strategy formalised for the different jurisdictional areas. | **Target ≥80**  **Actions**:   * For each management area (e.g. the four IFCAs) agree a harvest control rule framework that will implement the harvest strategy that will allow adaptive management actions that are response to stock status within the UoA (SIa). * Test the framework to ensure it is robust to current and potential uncertainties (SIb). * It is noted that SIc (Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs) may not be feasible within the timeline of the FIP.   **Progress**   * No further progress, as depends upon the wider CMG FMP / work.   **Status at end of Y6, April 2023 (Target ≥80, Actual 60 – 79)**:   * No further progress, as depends upon the wider CMG FMP / work.   **Actions**:   * As above. |  |
| **Action 3: Information and monitoring**  **Overview**  Relevant information is collected to support the harvest strategy. In particular there is a need to ensure there is sufficient understanding of potting effort throughout the UoA to enable controls, if necessary and applicable.  **Performance indicator**  1.2.3 Information and monitoring  **60 - 79**  Requirement at SG80:  SIb: Stock abundance and UoA removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule. | Action leads: Management Working Group (WG)  Industry as represented by Beshlie Pool  MSC & Seafish to work on finding funding if required  Partners: Industry, IFCAs (hereafter refers to Cornwall, Devon & Severn, Scilly Isles & Southern), Defra, MMO  Stakeholders: WG CRAB  Resources: Fisheries management expertise | **3a**. Yr 6: Potting effort system in place throughout the UoA sufficient to allow effort management regimes to be implemented if appropriate. | **Target ≥80**  Push through CMG? JP to follow up with MMO. Maybe Ros as some suggestions e.g. in terms of data needed for stock assessment.  Possible to have gear inventories for ALDFG.  **Actions**:   * Ensure that all potting effort can be monitored within the UoA to a sufficient level that spatial or temporal input controls can be applied in a measured way so that fishing mortality can be reduced as part of an adaptive management system. This must be robust, especially for larger (e.g. ≥14.99 m) vessels operating vivier fisheries.   **Progress (Yr 6, April 2023)**:   * Based on a Freedom of Information (FOI) request, MMO provided some data on effort and yield in the SW crab and lobster fisheries, The main results can be found in **Table 1** in **Appendix C** but the headlines are:   + 85% of vessels involved are <10 m   + 2/3 (64%) of the pots were hauled by <10 m vessels over short (<4 day) trips. 20% were hauled over longer (>4 days) trips by < 10 m vessels and15% by 10-14.99 m vessels over longer trips.   + Over half of the crab / lobster volume was landed by 10-14.99 m vessels. The other half of is evenly split between the <10 m & >15 m vessels.   + Around 58% of crab and lobster are caught by short-trip (<4 days) vessels and 42% by longer-trip (>4 days) vessels.   + If all vessels >10 m and >4 days trip length are viviers, only 4% of vessels and 2% of pots hauled are viviers.   + Average pots hauled per vessel class over 2021: <10 m 4,852; 10-14.99 m 6,555; >15 m 96. >15 m seems very low …..   **Status at end of Y6, April 2023 (Target ≥80, Actual 60 – 79)**:   * SG needs to consider whether this information is sufficient to support HCR implementation. Although this depends on the actual HCRs, this is unlikely to be the case, so fails to reach SG 80 |  |
| **Action 4: ETP management**  **Overview**  This is a static fishery with little bycatch. The catch profile estimates indicate that interaction with ETP species occurs in small numbers. Key risks are entanglement of marine mammals / marine turtles with ropes. The recommendation from CEFAS in terms of *''sinking the excess or otherwise reducing the amount of unused vertical line slack is no more than general best practice'*' is the most appropriate way to avoid entanglement in potting gear and the SW FIP is well placed to encourage further adoption of best practice gear setting techniques across the South West fleet.  **Performance indicator**  2.3.2 ETP management  **60 - 79**  Requirement at SG80:  SIb: There is a strategy in place that is expected to ensure the UoA does not hinder the recovery of ETP species.  SIc. There is an objective basis for confidence that the partial strategy/ strategy will work, based on information directly about the UoA and/or the species involved  SId. There is some evidence that the measures / strategy is being implemented successfully  SIe. There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species and they are implemented as appropriate. | Action lead: Beshlie Poole representing SD&CS  Partners: JNCC, IFCAs, Defra, CEFAS, Industry  Stakeholders: Natural England  Resource: Expertise to assess fisheries-related impacts on ETP populations, and to develop both alternative management measures to combat these and a long-term risk-monitoring program | **4a**. Yr 6: Strategy to management and mitigate entanglement of potting gear with marine megafauna in place and being implemented effectively. | **Target ≥80 (Y7)**  Now harmonised with NS. Beshley’s report on slack ropes. Review to see if there is a risk assessment e.g. likelihood / impact / mitigation options matrix.  **Actions to address SIb+c (months 1-6)**:   * Conduct a risk assessment of potting gear at different operational scales and locations to entangle megafauna and other ETPs. Evaluate different management and mitigation options form within and outside the UoA and prepare a brief, practical set of best practises to implement these in the UoA. * Prepare a formal strategy for inclusion in the FMP that includes the risk assessment and allows implementation of the resulting best practices.   **Actions to address SIe+f (months 7-12)**:   * Roll out best practices amongst different segments (vessel size / locations) and obtain operational feedback via surveys. * Agree a review program of the effectiveness of the best practices and update as necessary. Embed this programme into the FMP and ensure its implementation.   **Progress (Yr 6, April 2023)**:   * ETP risk analysis conducted (see **Table 2** In **Appendix C**). Low overall risk as well as the potential for viable mitigation approaches. * Abandoned, lost or discarded fishing gear (ALDFG) risk analysis conducted (see **Table 3** in **Appendix C**). Whilst there is low risk for habitat damage and megafauna entanglement, there is a medium risk of gear loss and subsequent ghost fishing. This can be relatively easily mitigated.   **Status at end of Y6, April 2023 (Actual 60 – 79, Actual 60 – 79)**:   * Risk assessments not added to the FMP * Need to ensure that ETP & ALDFG mitigation measures are routine across the UoAs (see M7-12 actions above).   **Status at end of Y6, April 2023 (Target ≥80, Actual tbd)**:   * No further progress, as depends upon the wider CMG FMP / work. |  |
| **Action 5: ETP information**  **Overview**  Natural England is developing a cetacean bycatch decision-making tool that has been included in the FMP. The Cefas Clean Catch program has developed a smartphone application that is in final development (see https://www.cleancatchuk.com/clean-catch-uk-launches-new-wildlife-bycatch-reporting-app/). The Southern IFCA have an interaction Y/N column in logbook – could be expanded to other IFCAs and MMO. A detailed ‘interaction log’ is being trialled by the Round 2 FIPs to ensure that encounters with ETPs and habitat features (inc. those included in the new Scottish Priority Marine Features listing). Whilst the necessary information gathering systems seem to be in place, or nearly in place and is already is adequate to assess the UoA related mortality and impact (thus meeting SG 80 of SIa), there is insufficient published trend data to support a strategy and thus fails to meet SG 80 for SIb.  **Performance indicator**  2.3.3 ETP information  **60 - 79**  Requirement at SG80:  SIb: Information is adequate to measure trends and support a strategy to manage impacts on ETP species. | Action lead: Beshlie Poole representing SD&CS  Partners: JNCC, IFCAs, Defra, CEFAS, Industry  Stakeholders: Natural England  Resource: Expertise to assess fisheries-related impacts on ETP populations, and to develop both alternative management measures to combat these and a long-term risk-monitoring program | **5a**. Yr 6: Information on the frequency, nature and outcome of interactions of potting gear with marine megafauna is available and adequate to measure trends and support a strategy to manage impacts on ETP species. | **Target ≥80**  Gaps analysis for reporting and publication.  **Actions to address SIb**:   * Review of different cetacean and other megafauna reporting programs conducted to determine reporting coverage and assess informational spatial / metier gaps. * Client body to propose a system that complies data on the frequency, nature and outcome of interactions of potting gear with marine megafauna from different sources and addresses any gaps. These data should be compiled on a regular basis and made readily available to any interested stakeholder.   **Progress (Yr 6, April 2023)**:   * Clean catch UK (CCUK) application being rebuilt by CEFAS.   **Status at end of Y6, April 2023 (Target ≥80, Actual 60 – 79)**:   * There does not seem to be a system to compile data on the frequency, nature and outcome of interactions of potting gear with marine megafauna from different sources. Needs to be discussed by the SG, as fails to meet SG 80. |  |
| **Action 6: Habitats information**  **Overview**  There are detailed habitat type distribution maps available for the Western Channel and Celtic Seas as well as habitat descriptor substrate types. The spatial distribution of all the relevant crab fishing vessels is not necessarily known, in particular for small vessels which are not required to carry VMS (<12m). Although iVMS is apparently due to be rolled out across the inshore fleet there is insufficient reliable information on the spatial extent of interaction and on the timing and location of use of the fishing gear to meet SG 80 for SIb.  **Performance indicator**  2.4.3 Habitat information  **60 - 79**  Requirement at SG80:  SIb: Information is adequate to allow for identification of the main impacts of the UoA on the main habitats, and there is reliable information on the spatial extent of interaction and on the timing and location of use of the fishing gear. | Action lead: Beshlie Poole representing SD&CS  Partners: JNCC, IFCAs, Defra, CEFAS, Industry  Stakeholders: Natural England  Resource: Expertise to assess fisheries-related impacts on habitats and to develop both alternative management measures to combat these and a long-term risk-monitoring program | **6a**. Yr 6: Spatial data made on the spatial extent of habitat interaction and on the timing and location of use of the fishing gear. | **Target ≥80**  Check roll-out of iVMS and availability of resulting data.  **Actions to address SIb**:   * As iVMS is rolled out over the UoA, adequate information is made available on the spatial extent of habitat interaction and on the timing and location of use of the fishing gear within the UoA.   **Progress (Yr 6, April 2023)**:   * Records of various dive surveys suggest that pot strings can cause some damage to emergent epifauna e.g., Pentapora[[4]](#footnote-5) colonies or pink sea fans (*Eunicella verrucosa*), esp. when hauled and they are dragged for a short distance across the seabed.   **Status at end of Y6, April 2023 (Target ≥80, Actual 60 – 79)**:   * Need to integrate ALDFG findings into FMP, inc. possible management measures. * Check progress of iVMS roll-out and access to aggregated data by the FIP. |  |
| **Action 7: Fishery specific objectives**  **Overview**  The Fisheries Act and Marine Strategy set environmental objectives that are consistent with achieving P2 outcomes. The (draft) JFS suggests that fishery-specific management for North Sea crab is currently framed by the Fisheries Act (SG60 is met), which explicitly states objectives that are consistent with achieving Principles 1 & 2. But short-term P1 objectives are currently lacking for this fishery and so SG80 is only partially met, so does not meet SG 80.  **Performance indicator**  3.2.1 Fishery-specific information  **60 - 79**  Requirement at SG80:  SIa: Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC’s Principles 1 and 2, are explicit within the fishery-specific management system. | Action lead: Management WG  Action partners: Defra, MMO, IFCAs, NWWAC  Resources: Facilitation of trans-boundary discussions and agreements | **7a**. Yr 6: Agreement of short-term management measures for the different jurisdictions within the UoA. | **Target ≥80**  **Actions to address SIb**:   * In tandem with Action 1 (development of a harvest strategy), agree short-term objectives for the fishery that will allow both stock and ecosystem objectives to be met. These objectives should be formally embedded into the FMP in Section 2.2.2.   **Progress (Yr 6, April 2023)**:   * The national Crab and Lobster FMP will include the shared shellfish objectives, the species-specific objectives, and the scientific research plans which provide detail on the evidence needed to deliver the objectives. Examples of species-specific objectives are to establish methods to better assess stock status, and to address interactions with other fisheries. Other species’ such as velvet crab and spider crab are also being considered, with one objective to maintain a ‘watching brief’ on the sustainability status of these species. Stakeholder engagement has taken place on the FMP development in person and online, capturing 500 stakeholders from all stakeholder groups. * A draft vision, general and nine fisheries-specific objectives have been provided for the English fisheries as the first draft of the **FMP** (provided to Defra for review in February / March 2023, with formal consultation on the draft in expected to between April-June 2023, and publication expected in Autumn 2023).   **Status at end of Y6, April 2023 (Target ≥80, Actual 60 – 79)**:   * The draft fisheries-specific objectives represent progress, but they are not yet “explicit within the management system” Therefore this does not yet reach SG 80. |  |
| **Action 8: Decision-making processes**  **Overview**  The decision-making processes to achieve fishery-specific objectives are not currently clear so SG 80 is not met for SIa. For IFCAs, the ability to introduce emergency byelaws shows that they can be responsive to serious and other important issues in a timely and adaptive manner. However, whilst the general fishery management arrangements do respond to serious issues identified for the fishery as a whole these are not responsive to ‘serious and other important issues’ so SG80 is not met for SIb.  Information is available through the Cefas stock assessment publication, IFCA reporting and MMO fisheries statistics. However, there is no evidence that explanations are provided for actions or a lack of action in relation to the fishery and so SG80 is not met for SId.  **Performance indicator**  3.2.2 Decision-making processes.  **60 - 79**  Requirement at SG80:  SIa: There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.  SIb: Decision-making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.  SId: Information on the fishery’s performance and management action is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring evaluation and review activity. | Action lead: Management WG  Action partners: Defra, MMO, IFCAs, NWWAC  Resources: Facilitation of trans-boundary discussions and agreements | **8a**. Yr 6: Decision-making processes agreed and embedded into the FMP. | **Target ≥80**  **Actions to address SIb:**   * **In tandem with Action 1 (development of a harvest strategy) and 2 (HCRs) agree the decision-making processes that will allow implementation of the harvest strategy and associated HCRs. These will need to be developed across the different jurisdictional areas within the UoA.** * **These decision-making processes will have to demonstrate that they respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions** * **A system is put in place so that Information on the fishery’s performance and management action is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring evaluation and review activity.** * **The above should be formally embedded into the FMP.**   **Progress (Yr 6, April 2023):**   * **Not yet embedded in the FMP. Will be difficult to do so until the HCRs are finalised and coordination mechanisms between regulators across different jurisdictions, as well as industry at different levels, are agreed.**   **Status at end of Y6, April 2023 (Target ≥80, Actual 60 – 79):**   * **Existing decision-making processes are sufficient to meet SG 60 (see 3.2.2 in Appendix A) but need to be considerably improved and updated to meet SG 80.** |  |
| **Action 9: Monitoring and management performance evaluation**  **Overview**  The IFCAs evaluate the effectiveness of measures as part of their management cycle. They are also subject to regular review by Defra and as required under the MCA Act (2009) which established the IFCAs, they are subject to occasional independent review, e.g. the Quality Assurance Review of IFCA byelaws (MRAG, 2018). SG80 is met for the IFCA UoAs, but not for the offshore UoA, so SG 80 is not met for SIb..  **Performance indicator**  3.2.4 Management performance evaluation  **60 - 79**  Requirement at SG80:  SIb: The fishery-specific management system is subject to regular internal and occasional external review. | Action lead: Management WG  Action partners: Defra, MMO, NWWAC  Resources: Access to MMO decision-makers. | **9a**. Yr 6: A regular and occasional external review process for MMO management of the crab and lobster fisheries in England are agreed. | **Target ≥80**  UK MMO FMP to ensure that management is evaluated.  **Actions to address SIb**:   * MMO to ensure that the crab and lobster FMP (inc. the UoA) is subject to regular internal and occasional external review.   **Progress (Yr 6, April 2023)**:   * None to our knowledge.   **Status at end of Y6, April 2023 (Target ≥80, Actual 60 – 79):**   * No progress has been made in improving management performance evaluation of the offshore comments of the UoA, so this remains below SG 80. |  |

## Benchmarking tool

Figure : BMT (Brown crab)

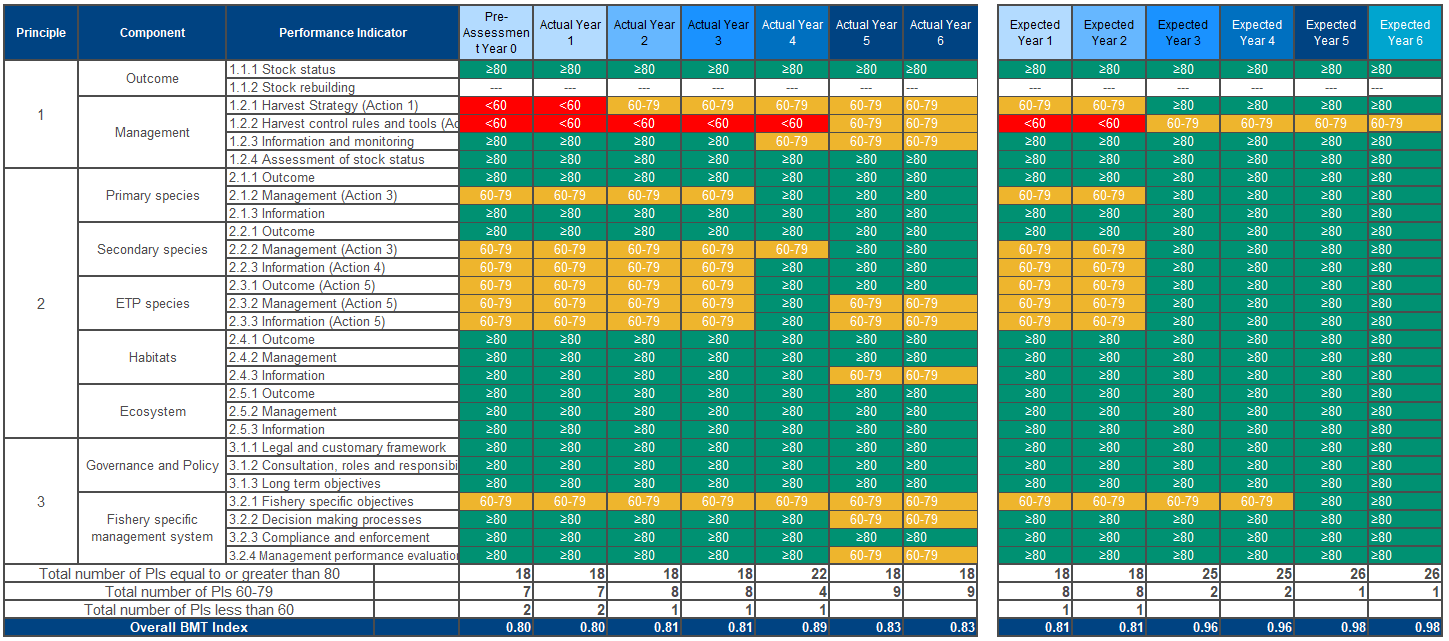
***Note: based on new pre-assessment scores and revised Action Plan targets***

Figure : BMT (Lobster)

Chart, treemap chart

Description automatically generated***Note: based on new pre-assessment scores and revised Action Plan targets***

Appendix : Revised pre-assessment (conducted April 2022)

**Summary of Performance Indicator level scores**

**Principle 1**

| **Performance Indicator** | **Draft scoring range** | **Data deficient?** | **Issue** | **SG60** | **SG80** |
| --- | --- | --- | --- | --- | --- |
| **1.1.1 – Stock status [brown crab]** | **≥80** | No | a | ✓ | ✓ |
| b | - | ✓ |
| Rationale:   |  |  | | --- | --- | | **Parameter** | **Brown crab** | | **Date and results of last stock assessment** | Western Channel (2019): **Stock size high** (around the target level required to achieve MSY for female). E**xploitation rate moderate** (around target level required to achieve MSY for females).  Celtic Sea (2019): **Stock size below MSY level** but above minimum reference point limit for females.  **Exploitation rate moderate** (close to target level generating MSY). Essentially fishing mortality is stable & SSB decreasing, but close to target. Only data for females (male landings very low). | | **Stock reference points** | MSY proxy reference point: 35% of virgin spawner per recruit (SpR)  Limit reference point: 15% of virgin spawner per recruit | | **Key uncertainties in the stock assessment** | Understanding of growth and mortality rates; representativeness and spatial distribution of landings data; assumptions within assessment model- population at equilibrium and spatial coverage of population is constant. It is believed that pot numbers are increasing, and the fishery is moving further offshore, but that cannot be accounted for in the model. The results from the assessment are useful but should be used with caution. | | **Sufficiency of information on the stock / stock removals to support the stock assessment?** | Yes. For crab the assessment units are the Western channel which covers ICES divisions VIIe, VIIh, VIIIa and VIId west of 1°W (East of the Isle of Wight to Mounts Bay), and the Celtic Sea covers ICES divisions VIIf and VIIg (Mounts Bay to Cardigan Bay), although Welsh data are not included. Insufficient data were available to run an assessment on male crabs in the Celtic Sea, as it is predominantly a female fishery. |   A new assessment model for brown crab is being developed by CEFAS (Roslyn MacIntyre CEFAS, pers. comm.) | | | | | |
| **1.1.1 – Stock status [Lobster]** | **≥80** | No | a | ✓ | ✓ |
| b | - | ✓ |
| Rationale:   |  |  | | --- | --- | | **Parameter** | **European lobster** | | **Date and results of last stock assessment** | Southwest (2019): **Stock size above minimum reference point limit but**  **below MSY target** for males and females.  **Exploitation rate is moderate**, above rates consistent with MSY but below maximum reference point limit for males and females. | | **Stock reference points** | MSY proxy reference point: 35% of virgin spawner per recruit (SpR)  Limit reference point: 15% of virgin spawner per recruit | | **Key uncertainties in the stock assessment** | Understanding of growth and mortality rates; representativeness and spatial distribution of landings data; assumptions within assessment model- population at equilibrium and spatial coverage of population is constant. It is believed that pot numbers are increasing, and the fishery is moving further offshore, but that cannot be accounted for in the model. The results from the assessment are useful but should be used with caution. | | **Sufficiency of information on the stock / stock removals to support the stock assessment?** | Yes. Note that with lobster the stock unit is for SW which covers Lyme Bay to the Bristol Channel. |   A new assessment model for lobster is being developed by CEFAS (Roslyn MacIntyre CEFAS, pers. comm.) | | | | | |
| **1.1.2 – Stock rebuilding** | **NA** | No | a | NA | NA |
| b | NA | NA |
| Rationale: | | | | | |
| **1.2.1 – Harvest Strategy** | **60 – 79** | No | a | ✓ | ✕ |
| b | ✓ | ✕ |
| c | ✓ | - |
| d | - | - |
| e | N/A | N/A |
| f | N/A | N/A |
| Rationale: There is currently a wide range of management measures across the different IFCAs (< 6 nm) and in offshore waters (>6 nm to the median line / EEZ limit) that together provide an informal harvest strategy. Together these are expected to achieve the stock management objectives for both species (see PI 1.1.1) and so reach SG 60 for SIa. However these are not adaptive to the state of the two stocks and thus fails to reach SG 80. Given the past stability of fishing mortality this is likely to meet SG 60 of SIb, but the fall in CPUE, and the lack of adaptive management suggests this will not meet SG 80.  The existence of intermittent stock assessments suggest that this meets SG 60 of SIc.  Given that under-size / unmarketable crabs and lobsters are returned to the sea alive, SIf is not scored. | | | | | |
| **1.2.2 – Harvest control rules and tools** | **60 – 79** | No | a | ✓ | ✕ |
| b | - | ✕ |
| c | ✓ | ✕ |
| Rationale: As noted above, there is not a responsive harvest control rule in place in term of reduction of fishing effort or TAC implementation. When scoring at the SG60 level there is now also scope within the standard to consider and give credit where HCRs may be ‘available’. This is applicable in cases such as this where, there is no evidence of recruitment impairment or the stock. In this case, although there is no defined HCR, the fact that HCRs are effectively used in other crab fisheries (e.g. SSMO Shetland Shellfish Management Organisation, see: www.ssmo.co.uk) is an evidence that also for the present stock HCRs are expected to reduce the exploitation rate should the stocks show a depleted status, meeting SG 60. However, it is clear that the HCRs are not available in some written form that has been agreed by the management agency, ideally with stakeholders, and clearly state what actions will be taken at what specific trigger reference point levels. Therefore, SG 80 is not met.  Although there is no defined HCR, the fact that HCRs are effectively used in other crab fisheries, means that there is the availability of tools to effectively control the rate of exploitation. There is some evidence, that such tools used or available to implement HCRs are appropriate and effective in controlling exploitation. The evidence are the stability of fishing mortalities by sex in line with the limit reference point, meeting SG60. However, there is no evidence indicating that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs and SG80 is not met. | | | | | |
| **1.2.3 – Information and monitoring** | **60 – 79** | No | a | ✓ | ✓ |
| b | ✓ | ✕ |
| c | ✓ | ✓ |
| Rationale: There is sufficient information on the stock structure, stock productivity and fleet composition to meet SG 80 (SIa).  Cornwall IFCA collecting detailed potting data (effort / soak times). D&S have a good idea from <12 m shellfish returns but is some gaps. Southern IFCA Southern IFCA do not hold this data but will begin to collection data in future (new byelaw). Current MMO monitoring e.g. e-logbooks, sales notes and ERS can quantify data but is not compiled and thus there is no ability to quantify effort. Catch app now mandatory for smaller vessels from March 2022 but no. of pots is reported (with copies to MMO, Cefas & the IFCA) but is not enforced. Need to prepare section for FMP with effort monitoring approaches by area / metier, with gaps analysis. Whilst stock abundance and UoA removals are monitored, thus meeting SG 60 on SIb. there is insufficient monitoring of actual effort, esp. in waters >6 nm and for the larger (>14.99 m vivier) vessels to meet SG 80. There is good information on all other fishery removals from the stock (e.g. via landings data, so SIc meets SG 80. | | | | | |
| **1.2.4 – Assessment of stock status** | **≥80** | No | a | - | ✓ |
| b | ✓ | ✓ |
| c | ✓ | ✓ |
| d | - | - |
| e | - | ✓ |
| Rationale: The 2019 stock assessments for both crab and lobster are appropriate for the stock and for the harvest control rules in place, and thus this meets SG 80 for SIa. These estimate stock status relative to reference points that are appropriate to the stock, thus meeting SG 80 for SIb and the assessment takes uncertainty into account, thus meeting SG 80 in SIc. The assessment is published on the Cefas website and is subject to peer review, meeting SG 80 in Sie. | | | | | |

**Principle 2**

| **Performance Indicator** | **Draft scoring range** | **Data deficient?** | **Issue** | **SG60** | **SG80** |
| --- | --- | --- | --- | --- | --- |
| **2.1.1 – Primary Outcome** | **≥80** | Yes | a | ✓ | ✓ |
| b | - | - |
| Rationale: A recent FIP-funded study (Spencer et al, 2021) has provided greater certainty of the catch composition, inc. bait use, of crab and lobster-directed pots. The only primary main species (other than crab / lobster in the respective UoAs) is mackerel, which is used as bait.  Mackerel (*Scomber scombrus*) is fished in ICES subareas 1–8 and 14. Fishing pressure on the stock is below FMSY, Fpa, and Flim and spawning-stock size is above MSY Btrigger, Bpa, and Blim (ICES, 2001). The advised catch for 2022 is 7% lower than the advice for 2021 because of the continued decline in stock size, though this was partly offset by the upward revision of the perception of stock size. In 2021, there has been an upwards revision of SSB and a downwards revision of fishing mortality in recent years.  Based on these data (see figure overleaf), despite a recent downward trend in SSB, there is a high degree of certainty that mackerel are above PRI and are fluctuating around a level consistent with MSY and so reaches SG 100.  Chart, histogram  Description automatically generated | | | | | |
| **2.1.2 – Primary Management** | **≥80** | No | a | ✓ | ✓ |
| b | ✓ | ✓ |
| c | - | ✓ |
| d | N/A | N/A |
| e | ✓ | ✓ |
| Rationale: ICES Scientific advice uses an analytical assessment to advise on a long-term management strategy, which is agreed by some, but not all, of the parties exploiting the stock. Not all the catches from this stock are managed under the Coastal States’ international management arrangements, and there is a risk that this could result in catches higher than advised by science. Therefore, an agreement covering the management of the whole of the stock’s catches is needed. However this stock is likely to meet SG 80 for all SIs under this PI. | | | | | |
| **2.1.3 – Primary Information** | **≥80** | No | a | ✓ | ✓ |
| b | - | - |
| c | ✓ | ✓ |
| Rationale: An age-based analytical model (SAM) that uses catches in the model and in the ICES forecast. Catch data, tagging data and RFID tagging data (2014–2020), and three survey indices: SSB index from the triennial egg survey 1992–2019), abundance indices from the IBTS survey (combined Q1 and Q4; age 0, 1998–2020), and from the IESSNS survey ages 3–11, 2010, 2012–2021). Catches prior to 2000 are given a very low weight in the assessment. Natural mortality (= 0.15 for all ages and years) is based on tagging studies from the early 1980s. Discarding is known to take place (0.9% of the total catch in weight in 2020) but is only quantified for part of the fisheries; the proportion of the landings covered cannot be calculated. Partial discard estimates are included in the assessment and overall discarding in recent years is assumed negligible. SG 80 is likely to be be met for all SIs. | | | | | |
| **2.2.1 – Secondary Outcome** | **≥80** | Yes | a | ✓ | ✓ |
| b | ✓ | ✓ |
| Rationale: Spencer *et al* (2021) re-examined the catch composition of these fisheries and produced a definitive list of primary / secondary, main and minor species. Five likely secondary species (1 main & 3 minor) were identified (all bait species) and a productivity – susceptibility analysis (PSA) was conducted:   |  |  |  |  | | --- | --- | --- | --- | | **Species** | **Category** | **PSA score** | | | Red gurnard *Aspitrigla cuculus* | Main | Low | ≥80 | | Nursehound *Scyliorhinus stellaris* | Minor | Med | 60-79 | | Lesser spotted catshark *Scyliorhinus canicula* | Minor | Low | ≥80 | | Starry smooth-hound *Mustelus asterias* | Minor | Med | 60-79 |   The FIP noted that lesser spotted catshark *Scyliorhinus canicula* is becoming more common on other fisheries in the UoA and must be landed under the Landing Obligation. It was also noted that a separate PSA scored this species > 80 (Ribeiro Santos, 2019). Ribeiro Santos also scored red gurnard > 80. Based this, it is considered SIa (for red gurnard) & SIb (for other minor species) is likely to meet SG 80. | | | | | |
| **2.2.2 – Secondary Management** | **≥80** | No | a | ✓ | ✓ |
| b | ✓ | ✓ |
| c | - | ✓ |
| Rationale: there are no secondary spies caught directly by the fishery. All are bait species that are unwanted bycatch from other fisheries that have to be landed due to the Landings Obligation. The FIP stakeholders are of the opinion that bait requirements for this fishery are not driving effort or otherwise increasing bycatch levels in these other fisheries, and therefore meet SG 80 for all SIs in this PI. | | | | | |
| **2.2.3 – Secondary Information** | **≥80** | No | a | ✓ | ✓ |
| b | - | - |
| c | ✓ | ✓ |
| Rationale: PSA’s have been conducted for all secondary main species, both by Ribeiro Santos (2019) and the current project team. These PSAs included the use of quantitative information to assess both productivity and susceptibility scores. As such this should meet SG 80 for SIa. Given these are bait species and are not driving effort or otherwise increasing bycatch levels in these other fisheries, and therefore meet SG 80 for SIc. | | | | | |
| **2.3.1 – ETP Outcome** | **≥80** | No | a | N/A | N/A |
| b | ✓ | ✓ |
| c | - | ✓ |
| Rationale: This is a static fishery, traps/pots, with little bycatch. Available catch profile estimates indicate that interaction with ETP species occurs, albeit in small numbers. These will be discarded alive with a high likelihood of post-discard survival. The key risks are associated with entanglement of marine mammals and possibly marine turtles with ropes. However there is no indication that this is impact ETP populations, directly or indirectly. | | | | | |
| **2.3.2 – ETP Management** | **60 – 79** | No | a | N/A | N/A |
| b | ✓ | ✕ |
| c | ✓ | ✕ |
| d | - | ✕ |
| e | ✓ | ✕ |
| Rationale: This is a static fishery, traps/pots, with little bycatch. Available catch profile estimates indicate that interaction with ETP species occurs, albeit in small numbers. The key risks are associated with entanglement of marine mammals and possibly marine turtles with ropes. The recommendation from CEFAS in terms of *''sinking the excess or otherwise reducing the amount of unused vertical line slack is no more than general best practice''* is currently the most appropriate way to avoid entanglement of marine mammals and sharks in potting gear and the SW FIP is well placed to encourage further adoption of best practice gear setting techniques across the South West fleet. ONE POSSIBLE ACTION WOULD BE TO FORMALISE BEST PRACTICE TO AVOID EXCESSIVE SLACK ROPE AND TO AVOID ENTANGLEMENT, ESP. GIVEN THE FORTHCOMING SI ON FISHING GEAR MANAGEMENT TO AVOID ENTANGLEMENT AND ALDFG. | | | | | |
| **2.3.3 – ETP Information** | **60 – 79** | No | a | ✓ | ✓ |
| b | ✓ | ✕ |
| Rationale: Natural England is developing a cetacean bycatch decision-making tool that has been included in the FMP. The Cefas Clean Catch program has developed a smartphone application that is in final development (see <https://www.cleancatchuk.com/clean-catch-uk-launches-new-wildlife-bycatch-reporting-app/>). The Southern IFCA have an interaction Y/N column in logbook – could be expanded to other IFCAs and MMO. A detailed ‘interaction log’ is being trialled by the Round 2 FIPs to ensure that encounters with ETPs and habitat features (inc. those included in the new Scottish Priority Marine Features listing). Whilst the necessary information gathering systems seem to be in place, or nearly in place and is already is adequate to assess the UoA related mortality and impact (thus meeting SG 80 of SIa), there is insufficient published trend data to support a strategy and thus fails to meet SG 80 for SIb. | | | | | |
| **2.4.1 – Habitats Outcome** | **≥80** | No | a | ✓ | ✓ |
| b | ✓ | ✓ |
| c | ✓ | - |
| Rationale: The commonly encountered habitat for the pots/ trap fishery is that favoured by the target species. Brown crab is found on all coasts around the UK from the intertidal zone down to 100m. They inhabit rocky ground, particularly under boulders, mixed coarse ground and muddy sand offshore. There are a number of protected areas in the UoA and fishing activities should be spatially managed within those protected areas. The spatial distribution of all the relevant crab fishing vessels is not necessarily known, in particular for small vessels which are not required to carry VMS (<12m). iVMS is apparently due to be rolled out across the inshore fleet. All SIs meet SG 80. | | | | | |
| **2.4.2 – Habitats Management** | **≥80** | No | a | ✓ | ✓ |
| b | ✓ | ✓ |
| c | - | ✓ |
| d | ✓ | ✓ |
| Rationale: Whilst there has been some concern over the chalk beds in the southern North Sea and Eastern Channel, they are less prevalent in the Western Channel and Celtic Seas. All SIs meet SG 80. | | | | | |
| **2.4.3 – Habitats Information** | **60-79** | No | a | ✓ | ✓ |
| b | ✓ | X |
| c | ✓ | ✓ |
| Rationale: There are detailed habitat type distribution maps available for the Western Channel and Celtic Seas as well as habitat descriptor substrate types. The spatial distribution of all the relevant crab fishing vessels is not necessarily known, in particular for small vessels which are not required to carry VMS (<12m). Although iVMS is apparently due to be rolled out across the inshore fleet there is insufficient reliable information on the spatial extent of interaction and on the timing and location of use of the fishing gear to meet SG 80 for SIb. Adequate information continues to be collected to detect any increase in risk to the main habitats, so this meets SG 80 for SIc. | | | | | |
| **2.5.1 – Ecosystems Outcome** | **≥80** | No | a | ✓ | ✓ |
| Rationale: Trap gear is static and has been shown to have relatively limited impact on benthic habitat. The target species is not a key low trophic species and its removal is managed through fisheries technical measures such as minimum size and byelaws such as temporary closure. There are relatively small amounts of bycatch, due to the type of fishing gear; few ETP interactions have been recorded in the bycatch. The crab fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be serious or irreversible harm | | | | | |
| **2.5.2 – Ecosystems Management** | **≥80** | No | a | ✓ | ✓ |
| b | ✓ | ✓ |
| c | - | ✓ |
| Rationale: Given the nature of the gear and its impacts on the ecosystem, this meets all SIs at SG 80. | | | | | |
| **2.5.3 – Ecosystems Information** | **≥80** | No | a | ✓ | ✓ |
| b | ✓ | ✓ |
| c | - | ✓ |
| d | - | ✓ |
| e | - | ✓ |
| Rationale: Given the nature of the gear and its impacts on the ecosystem, this meets all SIs at SG 80. | | | | | |

**Principle 3**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Performance Indicator** | **Draft scoring range** | **Data deficient?** | **Issue** | **SG60** | **SG80** |
| **3.1.1 – Legal and customary framework** | **≥80** | No | a | ✓ | ✓ |
| b | ✓ | ✓ |
| c | ✓ | ✓ |
| Rationale: The UK has exited the EU with resulting amendments to UK legislation, but retains a robust framework in relation to P1, mainly based on the Marine & Coastal Access Act (2009) and the Fisheries Act (2020), and in relation to P2 through several pieces of legislation that where necessary have been updated to reflect the UK’s new position as an independent coastal state. Co-operative roles with the EU are defined in the Trade & Cooperation Agreement and are now established with the Partnership Council and Specialised Committees becoming operational (first meeting in July 2021 set out how the SCF would be organised and operate; second meeting in October 2021 set out a work plan and procedures). This illustrates organised and effective cooperation between devolved administrations for UK stocks – SG80 is met for SIa. In English waters the MMO is the main fisheries management authority established under the Marine and Coastal Access Act (2009) which also sets out an independent appeals mechanism in relation to MMO licensing decisions. The MMO also operates a transparent complaints procedure for complaints against itself or IFCAs. For English inshore waters within 6 nautical miles, Inshore Fisheries and Conservation Authorities (IFCAs) make bylaws, which are also subject to a transparent dispute resolution mechanism with right to appeal. SG80 is met for SIb. The UK Fisheries Act (2020) allows SIc to be met at SG 80. | | | | | |
| **3.1.2 – Consultation, roles and responsibilities** | **≥80** | No | a | ✓ | ✓ |
| b | ✓ | ✓ |
| c | - | ✓ |
| Rationale: Defra sets fisheries policy for UK and English waters with the MMO & IFCAs implementing that policy as management authorities. Scientific advice is provided by Cefas on various fisheries matters; by the Joint Nature Conservancy Council (JNCC) for UK offshore waters and by Natural England as statutory consultee on wildlife and habitat conservation matters including protected sites & species. Meets SG8 for SIa. Scientific advice and international collaboration on fisheries science continues with the UK’s MoU signed with ICES (UK was always an independent member of ICES) in which Cefas, England’s scientific advisory body on fisheries, remains an active participant. Changes to legislation and the development of fishery management plans are subject to UK government consultation processes which provides opportunity for interested parties to be involved Consultation on Joint Fisheries Statements and Fisheries Management Plans, so meets SG 80 for SIb. As described above and evidenced by the ongoing JFS consultation, interested and affected parties are invited to respond to legislative changes, which are then reviewed and considered by the authorities before it can be finalised. SG80 is met for SIc. | | | | | |
| **3.1.3 – Long term objectives** | **≥80** | No | a | ✓ | ✓ |
| Rationale: The Fisheries Act 2020 has MSY and precautionary objectives in line with the MSC criteria. The JFS (draft currently out for consultation) sets out the fishery policy authorities interpretation of the eight objectives set out in the Act and how they will deliver them. SIa is met at SG 80. | | | | | |
| **3.2.1 – Fishery specific objectives** | **60 – 79** | No | a | ✓ | ✕ |
| Rationale: The Fisheries Act and Marine Strategy set environmental objectives that are consistent with achieving P2 outcomes. The (draft) JFS suggests that fishery-specific management for Channel crab is currently framed by the Fisheries Act (SG60 is met), which explicitly states objectives that are consistent with achieving Principles 1 & 2. But short-term P1 objectives are currently lacking for this fishery and so SG80 is only partially met, so does not meet SG 80. | | | | | |
| **3.2.2 – Decision making processes** | **60 – 79** | No | a | ✓ | ✕ |
| b | ✓ | ✕ |
| c | - | ✓ |
| d | ✓ | ✕ |
| e | ✓ | ✓ |
| Rationale: The decision-making processes to achieve fishery-specific objectives are not currently clear (the draft JFS suggests it will ‘prioritise the development of management approaches domestically’, but there may also be involvement of the UK/EU Specialised Committee on Fisheries), so SG 80 is not met for SIa. For IFCAs, the ability to introduce emergency byelaws shows that they can be responsive to serious and other important issues in a timely and adaptive manner. However, whilst the general fishery management arrangements do respond to serious issues identified for the fishery as a whole these are not responsive to ‘serious and other important issues’ so SG80 is not met for SIb. The UK Fisheries Act is precautionary, so meets SG 80 for SIc. Information is available through the Cefas stock assessment publication, IFCA reporting and MMO fisheries statistics, which are available on their respective websites. However, there is no evidence that explanations are provided for actions or a lack of action in relation to the fishery and so SG80 is not met for SId. There is no evidence that the fishery or management system is subject to any legal challenges so SG80 is met for SIe. | | | | | |
| **3.2.3 – Compliance and enforcement** | **≥80** | No | a | ✓ | ✓ |
| b | ✓ | ✓ |
| c | ✓ | ✓ |
| d | - | ✓ |
| Rationale: The MMO recently revised and updated its Compliance and Enforcement Strategy (MMO, 2020), which sets out its approach to monitoring and enforcement via a risk-based enforcement process. The IFCAs also operate a risk-based enforcement system. SG80 is met for SIa.  Section 19 of the Fisheries Act (UK Government, 2020) gives the powers to fisheries authorities to apply penalties (including disqualification of holding a license) and fines to those committing offences under the Act. Due legal process is followed to ensure sanctions are consistently applied. SG 80 is met for SIb.  There is some evidence available from the MMO (submission of logbooks, sales notes with corroboration through VMS & inspection) and IFCAs to demonstrate compliance with the management system and the provision of information important to the effective management of the fishery. SG 80 is met for SIc. There has been no evidence provided or identified of systematic non-compliance within these fisheries, so SG80 is met for Sid. | | | | | |
| **3.2.4 – Management performance evaluation** | **60 – 79** | No | a | ✓ | ✓ |
| b | ✓ | ✕ |
| Rationale: Defra and the IFCAs evaluate key parts of the management system on an ongoing basis, such as effort controls and enforcement measures. SG80 is met for SIa.  The IFCAs evaluate the effectiveness of measures as part of their management cycle. They are also subject to regular review by Defra and as required under the MCA Act (2009) which established the IFCAs, they are subject to occasional independent review, e.g. the Quality Assurance Review of IFCA byelaws (MRAG, 2018). SG80 is met for the IFCA UoAs, but not for the offshore UoA, so SG 80 is not met for SIb. | | | | | |

Appendix : References

**Caslake (2019).** Alternative management & gear measures, P2 Reducing Bycatch. 7 pp + appendices

**Cefas (2020a).** Edible crab (*Cancer pagurus*). Cefas Stock Status Report 2019 18 pp.

**Cefas (2020b).** Lobster (*Homarus gammarus*). Cefas Stock Status Report 2019 18 pp.

**Defra (2022).** Consultation on the draft Joint Fisheries Statement. 82 pp.

**ICES (2021)**. Mackerel (*Scomber scombrus*) in subareas 1-8 and 14 and division 9.a (the Northeast Atlantic and adjacent waters). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, mac.27.nea. <https://doi.org/10.17895/ices.advice.7789>.

**Met Office (2020).** Past Weather Events. 2016 & 2017. Available at https://www.metoffice.gov.uk/weather/learn-about/past-uk-weather-events Accessed 12/06/2020.

**Poole, B. (2019).** Avoidance of and mitigation against negative interactions between crab and lobster pot fishing gear and endangered, threatened and protected species in South Western Waters. South Devon & Channel Shellfishermen Ltd. Report C4788 14 pp

**Pearson, E. (2017).** A collaborative study to develop and facilitate a fisher-directed stock assessment of *Cancer pagurus* in the inshore potting area, South Devon. thesis data.

**Spencer, M (2021).** Crab and lobster FIP: Productivity, Susceptibility Analysis (PSA). 2 pp

**Spencer, M., G. Caslake & T. Huntington (2021).** Crab and Lobster FIP: Catch composition, bait use and Endangered, Threatened and Protected species review. Report to Project UK.

**Voller (2018).** Bycatch in the UK Common Lobster (*Homarus gammarus*) & Brown Crab (*Cancer pagurus*) Potting Industry and the difficulties in the assessment of bycatch with current data

**Wynne (2018).** Task 3 - interactions between Endangered Threatened or Protected species (ETP) and crab/lobster static fishing gear. Prepared by CEFAS. 9 pp + appendices

Appendix : Additional tables and figures

Table : SW crab and lobster effort in 2021

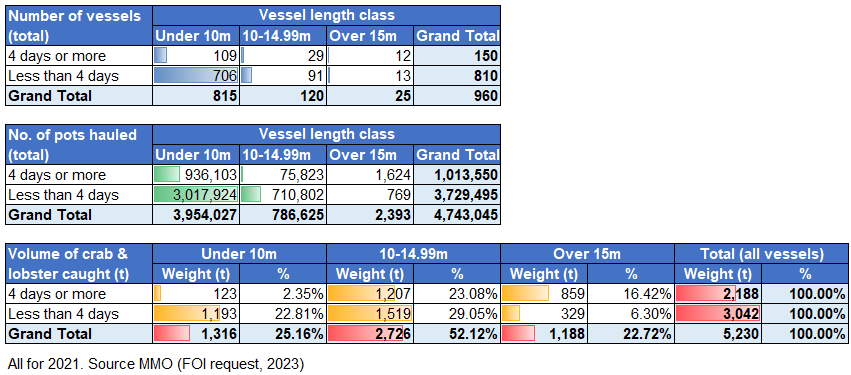


Table : ETP interactions risk management framework for crab and lobster fisheries in SW England

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Risk description** | **Risk assessment (description & score[[5]](#footnote-6))** | | | **Mitigation approaches** | |
| **Possible impacts** | **Likelihood** | **Overall risk** | **Prevention** | **Recovery** |
| Entanglement in crab / lobster vertical lines | Entanglement around the fins, bodies, etc of megafauna. May result in temporary stress, tissue damage or death (overall medium ++ impact) | Low (+) likelihood, as the UoA has low levels of reported cetacean and marine reptile interactions due to low numbers of these species in the UoA. | Low overall risk (+) as very few interactions have been reported / recorded. | * Sinking the excess or otherwise reducing the amount of unused vertical line slack. * Avoiding setting gear in areas where megafauna have recently been sighted. | * Standard Operating Practice for reporting entablements to the Maritime & Coastguard Agency * Routine reporting of strandings to CSIP |
| By-catch and subsequent mortality of ETP Species | By catch of giant goby may result in damage or mortality | Low as the majority of crab pots will allow gobies to swim freely through netting or escape gaps fitted. | Low – Gobies live in shallow water <10m with the majority of potting activity in deeper water.  Small species size will allow for easy escape prior to or during hauling. | * Use of escape gaps and/or larger netting mesh size on pots. * Use of bucket type entrances will aid escape of small fish species such as gobies. | * Operation of best practice as outlined in Cefas report C4788. |

**Data sources:**

1. Poole, B. (2019). Avoidance of and mitigation against negative interactions between crab and lobster pot fishing gear and endangered, threatened and protected species in South Western Waters. South Devon & Channel Shellfishermen Ltd. Report C4788 14 pp
2. Spencer, M., G. Caslake & T. Huntington (2021). Crab and Lobster FIP: Catch composition, bait use and Endangered, Threatened and Protected species review. Report to Project UK.

Table : Abandoned, lost or discarded fishing gear (ALDFG) risk management framework for crab and lobster fisheries in SW England

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Risk description** | **Risk assessment (description & score[[6]](#footnote-7))** | | | **Mitigation approaches** | | |
| **Possible impacts** | **Likelihood** | **Overall risk** | **Prevention** | **Mitigation** | **Recovery** |
| **ALDFG resulting in ‘ghost fishing’** | Continued unseen mortality, exacerbated by ‘re-baiting’ of pot by ALDFG pots. Low (+) impact on population status. | Medium (++) likelihood. Metal / plastic pots deteriorate of a long period, but netting is susceptible to breach over the medium term. | Medium (++) risk, although relatively easily mitigated. | * Clear marking of gear * Communication to prevent gear conflict. * Lower soak-times / pot numbers in high-risk areas. | * Use of escape gaps * Biodegradable hatches allow larger species to escape should the surface buoy be lost. | * Recording and reporting ALDFG * Supporting gear recovery by 3rd parties. |
| **ALDFG leads to habitat damage** | Large numbers of lost pots in concentrated areas can lead to changed or altered local habitats. Low (+) impact. | Low (+) as pot strings are relatively easily recovered. (the longer the string the easier the recovery) | Low (+) risk | As above. | * Recovery of pot strings after loss / abandonment. | * As above |
| **Entanglement of ALDFG with megafauna** | ALDFG gear entangling large marine mammals | Low as end ropes and back lines are generally lying flat on the seabed if lost or abandoned. | Low | * Improved marking of gear (buoy & vessel ID) * Correct rigging of gear with leaded & unleaded end ropes * Provision of disposal / recycling facilities ashore for End-of-life gear. | * Retrieval of lost and abandoned gear where possible. | * Supporting gear recovery by 3rd parties. |

**Data sources:**

1. Poole, B. (2019). Avoidance of and mitigation against negative interactions between crab and lobster pot fishing gear and endangered, threatened and protected species in South Western Waters. South Devon & Channel Shellfishermen Ltd. Report C4788 14 pp
2. Spencer, M., G. Caslake & T. Huntington (2021). Crab and Lobster FIP: Catch composition, bait use and Endangered, Threatened and Protected species review. Report to Project UK.
3. Brown, J, G. Macfadyen, T. Huntington, J. Magnus and J. Tumilty (2005). Ghost Fishing by Lost Fishing Gear. Final Report to DG Fisheries and Maritime Affairs of the European Commission. Fish/2004/20. Institute for European Environmental Policy / Poseidon joint report.



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1. Following the success of Round 1, the UK scallop and Nephrops FIPs were launched in 2019. Each includes three fishery areas around the UK (North Sea, West of Scotland, and Irish Sea), and so operate on a larger scale than Round 1 FIPs. [↑](#footnote-ref-2)
2. Dated 31 August 2018 [↑](#footnote-ref-3)
3. Dated 16 October 2022 [↑](#footnote-ref-4)
4. A common large, erect bryozoan that grows on bedrock or large boulders in current swept areas, often surrounded by gravel and scoured by coarse sand (see <https://www.marlin.ac.uk/species/detail/1389>) [↑](#footnote-ref-5)
5. Scoring +++ High, ++ Medium, + Low - Negligible [↑](#footnote-ref-6)
6. Scoring +++ High, ++ Medium, + Low - Negligible [↑](#footnote-ref-7)