Minutes: Irish Sea *Nephrops* management workshop

Meeting Date: 11th November 2021

Location: Teams

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| Attendees | Organisation |
| AH: Adam Holland | Sea Source |
| AM: Alan McCulla | Anglo-North Irish Fish Producers Organisation |
| BC: Ben Collier | Northern Ireland Gear Trials |
| CM: Cameron Moffat | Young’s Seafood |
| DW: Daniel Whittle | Whitby Seafoods |
| FN: Fiona Nimmo | Poseidon |
| GB: Giles Bartlett | Whitby Seafoods |
| JP: Jo Pollett | Marine Stewardship Council |
| MF: Mike Fitzpatrick | Verifact |
| ML: Mathieu Lundy | Agri-Food and Biosciences Institute |
| MS: Matt Spencer | Marine Stewardship Council |
| PM: Paul Medley | Independent consultant |
| RG: Roy Griffin | Department of Agriculture, Environment and Rural Affairs |

Purpose of the meeting

This call was an opportunity for the *Nephrops* catching sector in the Irish Sea to discuss how the harvest strategy requirements in the MSC Standard might be applied to stocks in Functional Units 14 and 15.

Agenda Item 1: Background to the workshop

A key action for the Project UK *Nephrops* FIP is to develop a harvest strategy that is responsive to the state of each stock; and to agree well-defined harvest control rules (HCRs). These must ensure the exploitation rate is reduced as the species Point of Recruitment Impairment (PRI) is approached and are expected to maintain stock fluctuating at level consistent with MSY.

The second annual review for the FIP showed the *Nephrops* fishery is scoring <60 for PI 1.2.1 harvest strategy and 60-79 for PI 1.2.2 HCRs. By the end of year three of the FIP action plan, there is an expected score change for both performance indicators, with harvest strategy increasing to SG60-79 and HCRs increasing to best practice level, SG80.

FN highlighted the agreed FIP actions for Year 3:

* **Harvest Strategy**
  + Establish Management Working Groups for UK regions each covering one or more Functional Unit.
  + Develop and formalise harvest strategy.
  + Continue to monitor effectiveness of harvest strategy. Agree and list rebuilding strategies.
* **Harvest control rules and tools**
  + Consider options for defining BLim and BMSY (or equivalent proxies).
  + Consider how exploitation rates should vary dependent on the estimate of stock status in relation to these reference points.

*Multi-Annuals Plans*

FN reviewed the content of the Multi-Annual Plans (MAPs) and provided the following summary:

* **Article 7: Western Waters MAP Conservation Reference points**
  + Requires that conservation reference points for *Nephrops* shall be requested from ICES for: MSY Btrigger and Blim
* **Article 8: requires that safeguards are taken as follows:**
  + If a Functional Unit stock falls below MSY Btrigger all appropriate remedial measures shall be adopted. In particular, fishing opportunities shall be fixed at levels below the upper range of FMSY.
  + If Functional Unit stock falls below Blim further remedial measures shall be taken which may include suspending the Functional Unit fishery and the adequate reduction of fishing opportunities.
  + The choice of measures shall be made taking into account the nature, seriousness, duration and repetition of the situation where the functional unit abundance is below Blim and/or MSY Btrigger.
* **Article 9: list typical conservation measures and technical measures:** 
  + such as: selectivity devices, use of fishing gear (immersion time, depth etc), prohibition or limitation in specific areas, for specific gears and at specific times, minimum conservation reference sizes and other characteristics linked to selectivity.

FN pointed out that there are still no Blim reference points for *Nephrops* in the Irish Sea Functional Units (Functional Units 14 and 15). The Project UK Steering Group had previously discussed the use of MSY Btrigger as a proxy for Blim in the absence of a formally defined Blim, as MSY Btrigger as this is typically the level of lowest observed abundance based on underwater television (UWTV) surveys.

Stocks in the Irish Sea meet SG80 for PI 1.1.1 (stock status) but there is still a need to define and agree on what would be appropriate management to implement if stock trigger points were reached.

Agenda Item 2: *Nephrops* Harvest Strategy Development Project

In 2019 the Steering Group commissioned Paul Medley (PM) to draft a report laying the groundwork for developing a harvest strategy for UK *Nephrops*. PM consulted with the FIP’s Steering Group, science bodies across the Devolved Administrations and industry to explore options for non-TAC functional unit management. Currently there are two key gaps with how *Nephrops* are managed in the North East Atlantic: that limit and target reference points are required for each Functional Unit, but there is presently no Blim; and the current strategy is not specific to the scale of the stocks (ICES area vs Functional Unit).

PM’s report determined that management by TAC or Days at Sea at Functional Unit level were not considered appropriate by industry. Instead, technical measures were identified as an alternative option to manage *Nephrops* at Functional Unit level when reference points indicate an approach towards the PRI.

The strength in adopting management by technical measures is that it allows fishermen to optimise their own activities, by choosing methods that suit them. However, this approach comes with weaknesses: the complexity of allocation depending on how effort is distributed, technical measures might not provide an adequate control on fishing mortality and may increase bycatch of different species, and lastly, the administrative cost in monitoring.

PM provided a toolbox with examples of the technical measures to consider:

1. Minimum landing size of fish
   1. Use of minimum conservation reference sizes, which for the Irish Sea was total length 70mm, carapace length 25mm and tail of 37mm
2. Use or design of gear
   1. Mesh size of net
   2. Mesh size of cod-end
   3. Remove lifting bag
   4. Use of single rig trawl gear only
3. Restricting fishing
   1. Limiting access dependent on engine power
   2. Limiting access dependent on vessel length
   3. Closing the fishery in certain areas of the Functional Unit on a temporary or permanent basis
   4. Closing the fishery in the Functional Unit

Agenda Item 3: current management measures in the Irish Sea

To provide background for discussing technical measures, GB presented the current management measures in the Irish Sea.

Overview:

* Two Functional Units in the Irish Sea: 14 and 15
* This management information has been provided by the Kingfisher marine protected area (MPA) mapping for fishermen project.
* Large areas in the Irish Sea with restrictions to trawling, including in the cod box. The cod box is an area in the Western Irish Sea that is closed from 14th February to the 30th April each year to protect spawning cod, and applies to any demersal trawl, seine or any towed net.

Technical measures in place for fisheries where catch of *Nephrops* exceeds 5% of a haul must use one of the gear options below:

* 70mm cod-end (single-rig) or 80mm for multi-rig or SELTRA panel.
* 70mm cod-end (single-rig) or 80mm for multi-rig and sorting grid with 35mm bar spacing or 80mm multi-rig and Cefas netgrid.
* 70mm cod-end (single-rig) or 80mm for multi-rig and flip-flap trawl that meets designed specification.
* 70mm cod-end (single-rig) or 80mm for multi-rig and a 300mm square mesh panel (for fishing vessels >12m) or 200mm square mesh panel for vessel <12m.
* Dual cod-end with uppermost cod-end constructed with T90 mesh of at least 90mm and fitted with a separation panel with a maximum mesh size of 300mm.

There are minimum conservation reference sizes for *Nephrops* in the Irish Sea, total length: 85mm, carapace length: 25mm and tails of 46mm. There are also de-minimis exemptions on undersized *Nephrops* which allows for discarding of 70mm-99mm *Nephrops* bottom trawled in Irish Sea covering *Nephrops* caught in a mesh-panel of 100mm or more.

By Functional Unit there are no specific mesh size requirements or specific landing obligations; but there are inshore management measures and spatial restrictions to trawling such as the cod box.

*Discussion:*

AM suggested GB speaks with BC for further information on the East Irish Sea restrictions that were not shown on GB’s maps. BC said there were also different gears being used in the Irish Sea that GB should include, such as the 270mm diamond mesh SELTRA panel. DW said that quota for *Nephrops* in the Irish Sea covers all of ICES Area 7, which includes seven functional units, only two of which are in the Project UK FIP. MF said he was keen to work on measures collaboratively and cautioned that while whiting stocks remain low it would be problematic as a bycatch species for both Irish and UK vessels.

Agenda Item 4: Harvest strategy process

*Step 1: setting up Regional Management Groups*

The first step in determining a harvest strategy that meets SG80 of the MSC Standard is to set up regional management working groups (MWGs). Each MWG has four key functions: to determine the geographic coverage of the harvest strategy (which had been decided as the Irish Sea for this meeting), to operate under a consensus approach, to identify roles for MWG members and to formalise the adoption of the agreed harvest strategy.

*Step 2: agreeing technical measures at Functional Unit level*

FN provided an example for the Farne Deeps Functional Unit. In this Functional Unit, when the current abundance (Bcurrent) falls below MSY Btrigger, then the harvest rate is reduced by 20% between consecutive years. The options that are available to fishermen to achieve this are shown below:

Table

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*Step 3: document current harvest strategy for each Functional Unit*

GB conducted a desk review of management measure in the Irish Sea, showing where measures are already in place and the reason for their implementation. Future work for the MWG in Step 3 would be to remain up to date on management activities and to make recommendations on management (if necessary) on an annual basis. GB and BC agreed to develop this technical measures data set further.

*Step 4: develop new sources of information for MWG*

FN said the MWG had the potential to develop more fishery dependant data to help inform management, such as catch per unit effort (CPUE) information and landing composition. This would allow information to be gathered more rapidly and better inform the MWG of any interventions required.

*Discussion:*

Although effort-based management at a Functional Unit level was ruled out in the report, AM pointed out that regulation of engine power was still included in the toolbox as a technical measure which he felt was a the same as effort-based management. FN said engine restrictions were included in the report based on IFCA approaches to managing MPAs. AM said he would remove that technical measure as he felt it was likely to cause confusion if engine restrictions were kept as an option while stating management by effort had been ruled out.

DW welcomed the discussion and said the term ‘effort’ might be misinterpreted: if stock indicators in a given Functional Unit show signs of overfishing then the actual effort of fishing on going will have to be reduced one way or another. Measuring effort is a complex process and DW suggested swept area of fishing activity might be a more useful metric.

Agenda Item 5: Feedback on the proposed harvest strategy process

Four questions were provided during the meeting to support the discussion:

*1. We need to agree specific objectives for the group to ensure we are all working towards the same goals. What would you like these objectives to be? E.g.:*

* *Agree reference points*
* *Agree Functional Unit specific remedial measures*
* *Review fishery performance*

AH said that it was key to get reference points addressed for each Functional Unit in the Irish Sea. In the absence of having Blim AH wondered whether the MWG could agree that Btrigger be used as its proxy. FN said that following this approach would be more precautionary than developing a separate level for Blim. , and means that if the proxy for Blim is reached it will trigger a suspension to the fishery. This would mean that suspension might be enacted sooner than if there is a separate level for Blim.

ML thought the use of Btrigger as a Blim was reactionary and might not be needed. As the stocks in the Irish Sea had been strong for such a long timeseries, determining a Blim was tricky as it may never have occurred during any surveying and it continued to maintain a healthy biomass. Previous Steering Group meetings have made it clear that Blim will be based on the lowest seen abundance in UWTV surveys. ML said *Nephrops* in Functional Units 14 and 15 are likely to have a high MSY Btrigger and so its use as a limit reference point might receive some pushback from industry. ML said the group had to be pragmatic and explicitly state the reference points - or indicators – that would be used for management and focus MWG efforts on determining them.

ML said *Nephrops* stock indicators were complex, with reduced abundance creating increased biomass at an individual *Nephrops* level. DW asked ML to explain the relationship between abundance and biomass for *Nephrops*. ML said *Nephrops* are very territorial, so if there are fewer individuals in an area, they have more resources available to them to grow larger. ML gave the example of Porcupine Bank having the lowest densities but largest *Nephrops*, whereas the Irish Sea tends to have smaller *Nephrops* but lots of them.

ML suggested reference points could also be developed based on removals. Management tends to be based on fishing mortality, using f and aiming for fMSY, as harvest is something fisheries managers can directly control. Biomass reference points are out of fishery manager control due to recruitment and multi-species interactions, and ML gave the example of whiting where fishing pressure has been greatly reduced but the stock is not rebounding as expected.

DW said the MAPs require conservation reference points to be requested from ICES *s* and he reiterated to ML the need for this to happen. With regard to requesting more information on reference points, ML said a request to ICES would have to go through Defra, not AFBI or Cefas.

FN reminded the group that these measures would be implemented only under scenarios where stock indictors show the stock is approaching the Point of Recruitment Impairment (PRI). If the stock remains strong then none of the technical measures would need to be implemented.

*2. What are your main concerns, if any, with the current management measures for Nephrops in the Irish Sea, and is there anything you would like to see done differently? E.g.:*

* *Bycatch*
* *Cumulative impacts*
* *Lack of real-time data*

AM said blue-carbon was a topic of concern. The *Nephrops* habitat of burrowed-mud has been identified as a large carbon sink, so AM had concerns about what that means for the future of the fishery. DW said there was still uncertainty over the impact trawling had on carbon sequestration in the ocean but said it was good to be aware of.

*3. Do you have any suggestions for alternative approaches to management of Nephrops in the Irish Sea, or specific technical measures that could be introduced if a Functional Unit falls below a pre agreed limit reference point?*

BC said that the Irish Sea was limited with what technical measures could be used due to the small size of *Nephrops*. Moving to larger mesh sizes in the cod end would result in the Irish Sea *Nephrops* fishery no longer being viable. DW said that industry has indicated effort and TAC management would not be acceptable, which leaves technical measures as the alternative option to protect stocks when indicators are showing a decline in biomass. Technical measures would disincentivise fleets from entering a Functional Unit, due to restrictions, and thus would help improve the stock of the Functional Unit.

BC agreed with DW but said there needed to be considerations made for the smaller vessels in the Northern Irish fleet. Larger vessels are nomadic and could venture out to other Functional Units but smaller vessels would be impacted by the introduction of technical measures. CM added that it is difficult to agree on technical measures when the stock is so strong, but management measures still needed to be in place. JP reiterated that these measures would only be implemented if stock indicators showed there was a need. If stock indicators remained above trigger points, which for the Irish Sea is likely to be the case due to a long history of good biomass, then these technical measures would not be introduced.

GB said the harvest strategy was needed to get the fishery to a level where it meets the MSC Standard, and with this certification the overall market for *Nephrops* could be strengthened, which will benefit the fishermen.

*4. Do you have any suggestions on defining pre agreed reference points?*

ML suggested a reference point subgroup be formed to address developing a Blim, consisting of himself, Carlos Mesquita (Marine Scotland Science) and Ewen Bell (Cefas) and others who might be interested, such as the Marine Institute in Ireland.

MF highlighted the need to have a coordinated approach over reference points for the UK and Republic of Ireland, as there is overlap in the fishing activity in the Irish Sea Functional Units. DW agreed and said that French and Spanish vessels also hold quota in the Irish Sea. DW asked whether they would need to contribute to any management discussions. MF said that the predominant fleets in the Irish Sea will be Irish and UK vessels but FN reminded the group that Principle 3 needs to account for the whole of the Unit of Assessment and so will also apply to French and Spanish vessels.

FN asked whether there had been any discussions of joint certification across nations for *Nephrops*, which MF said he did not think there had.

Next steps:

FN outlined the likely next steps for the MWG:

* Determining a process for agreement and implementation of technical measures
* Consultation with wider stakeholders on measures and impacts
* Demonstrating success of technical measures introduced

BC said that demonstrating the success of a technical measure will require gear trials, which can be expensive. PM suggested a literature review and consultation of experts might be adequate. Using the example of the Farne Deeps Functional Unit, the measures were quite vague as to what an expected impact might be.

PM said expert opinion is not precluded by the MSC Standard but the MWG would have to provide a strong rationale for the measure being introduced, explaining why it is the most appropriate option, and have a monitoring programme in place. For example, ‘we are doing this because ABC, which means the fishery should meet objective X and our evaluation strategy is Y’. PM thought once the framework was agreed by all stakeholders it should be adequate to meet the MSC Standard, and concluded by saying modelling alone would be unlikely to pass.

DW said the harvest pressure on the fishery is driven by economics, and BC added the recent increase in the price of diesel has demonstrated this. DW suggested arranging workshops or visiting ports in Northern Ireland to determine the technical measures through discussions with fishermen. BC said fishermen often ask him about price increase to *Nephrops* if it is MSC certified, and he expected this to be the first question they will ask. MF agreed that any workshop with fishermen will need to explain the technical measure and link it to the economics. MF has explained to Irish fishermen that the MSC process is about securing market access more than it is about getting a higher price for the product.

*Actions:*

1. GB and BC to discuss management measures documented in the Irish Sea.
2. Secretariat to support development of reference points subgroup with Cefas, AFBI, Marine Scotland Science and the Marine Institute Ireland.
3. Secretariat to work with the MWG on the design and implementation of workshops with fishermen to develop and deliver technical measures for the Irish Sea.
4. Secretariat to contact PM about modelling the impacts of differing technical measures at a Functional Unit level

Any Other Business

AH agreed to Chair the future Irish Sea MWG meetings.

MF was speaking with the Marine Institute, and he would enquire whether they were interested in joining the reference point subgroup calls. The Secretariat and ML spoke about modelling potential technical measures impacts on *Nephrops* stocks and agreed to follow up after the call.

Meeting Closes

12.00

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| **Actions Arising** | **Responsibility** |
| GB and BC to discuss management measures documented in the Irish Sea. | **Giles Bartlett, Ben Collier** |
| Secretariat to support development of reference points subgroup with Cefas, AFBI, Marine Scotland Science and the Marine Institute Ireland. | **Secretariat** |
| Secretariat to work with the MWG on the design and implementation of workshops with fishermen to develop and deliver technical measures for the Irish Sea. | **Secretariat** |
| Secretariat to contact PM about modelling the impacts of differing technical measures at a Functional Unit level | **Secretariat, Paul Medley** |