



48th EIFCA Statutory Meeting

To Be Held at:

Assembly Room, Kings Lynn Town Hall, Saturday Market Place, Kings Lynn,
Norfolk, PE30 5DQ

Attendance by members of the public will be managed to account for COVID-19 safeguards. Anyone wishing to attend as spectators should contact Eastern IFCA on 01553 775321 or via e-mail: mail@eastern-ifca.gov.uk.

**Wednesday
8th June 2022**

1000 hours

Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Meeting: **48th Eastern IFCA Meeting**

Date: 8th June 2022

Time: 1000hrs

Venue: Assembly Room, Kings Lynn Town Hall, Saturday Market Place, Kings Lynn, Norfolk, PE30 5DQ

Revised Agenda

- 1 Election of the Chair – *Clerk*
- 2 Welcome - *Chair*
- 3 To accept apologies for absence - *Chair*
- 4 Election of the Vice-Chair of the Authority - *Chair*
- 5 Declaration of Members' interests – *Chair / Senior IFCO (Regulation)*

Action items

- 6 To receive and approve as a true record, minutes of the 47th Eastern IFCA Meeting, held on 9th March 2022 – *Chair (page 4)*
- 7 Matters arising (including actions from previous meeting) – *Clerk*
- 8 To receive a report to consider Health and Safety risks and mitigation – *Hd Operations (page 17)*
- 9 To receive a report on the meeting of the Finance and HR sub-committee held on 3rd May 2022 - *Hd Finance & HR (page 22)*
- 10 Wash Cockle Fishery – *CEO / Senior MSO (Research) (page 25)*
- 11 Whelk management in the Wash – *Senior IFCO (Regulation) (page 50)*
- 12 Inshore Vessel Monitoring System Emergency Byelaw – *Senior IFCO (Regulation) (page 66)*
- 13 Cromer Shoal Chalk Beds Marine Conservation Zone Update – *Senior MSO (Environment) / Marine Science Officer (page 89)*
- 14 Quarterly review of annual priorities and Risk Register – *CEO (page 96)*

Information items

- 15 Wash Fishery Order licence transfers – *Senior IFCO (Regulation) (page 119)*

- 16 CEO update (verbal) – *CEO*
- 17 Head of Operations update (*page 121*)
 - a. Marine Protection Quarterly report
 - b. Marine Science Quarterly report

Any other business

- 18 To consider any other items, which the Chairman is of the opinion are Matters of Urgency due to special circumstances, which must be specified in advance.

J. Gregory
Chief Executive Officer
27th May 2022

47th Eastern IFCA Meeting

A meeting of the Eastern IFCA took place on Wednesday 9th March at 1010 hours in the Assembly Rooms, King's Lynn Town Hall.

Members Present:

Cllr T FitzPatrick	(Chair)	Norfolk County Council
Mr S Bagley		MMO Appointee
Dr S Bolt		MMO Appointee
Mr I Howell		MMO Appointee
Cllr Chenery of Horsburgh		Norfolk County Council
Mr K Copeland		MMO Appointee
Mr J Davies		MMO Appointee
Mrs G Roberts		Natural England Representative
Mr J Rowley		MMO Representative
Cllr P Skinner		Lincolnshire County Council
Stephen Williamson		MMO Appointee

Eastern IFCA (EIFCA) Officers Present:

Jon Butler	Head of Operations
Imogen Cessford	Project Officer
Luke Godwin	Senior IFCO (Regulation)
Julian Gregory	Chief Executive Officer (CEO) & Clerk
Kristina Gurova	Project Officer
Ron Jessop	Senior Marine Science Officer
Stephen Thompson	Marine Science Officer

Minute Taker:

Jodi Hammond

The start of the meeting was slightly delayed due to the CEO being slightly delayed.

EIFCA22/01 Item 1: Welcome

The Chair welcomed members to the meeting.

EIFCA22/02 Item 2: Apologies for Absence

Apologies for Absence were received from Cllrs Adam (NCC), Back (SCC), Coupland (LCC) & Vigo Di Gallidoro (SCC), Dr I Hirst (EA Representative), Ms Davey, Mr Garnett, Mr Shaul and Ms Smith (MMO Appointees) and Mr Bakewell (Head of Finance & HR).

EIFCA22/03 Item 3: Declarations of Members Interest

Members were reminded pre-recorded Declarations of Interest had been noted, those affected would be able to comment on agenda items affected but not vote.

At this point the Chair advised members that having been a member of the Authority for almost 12 years this would be Dr Bolt's last meeting. Dr Bolt was thanked for his contribution to the Authority and presented with an engraved compass.

EIFCA22/04 Item 4: Minutes of the 46th EIFCA Meeting, held on 8th December 2021

**Members Resolved these were a true record of the meeting.
Proposed: Cllr Skinner
Seconded: Cllr Chenery of Horsbrough
All Agreed**

EIFCA22/05 Item 5: Matters Arising

There were no Matters Arising as all items requiring an update were included on the Agenda.

EIFCA22/06 Item 6: Health & Safety Risks and Mitigation

The Head of Operations advised there had been three incidents reported during the quarter:

- Man Over Board in port which was reported to the MAIB but there had been no comeback, when an officer caught his foot in a fender rope.
- Trip & Fall – an officer fell over a mooring line
- An officer became stuck in the mud whilst collecting EHO samples. Mud training had been carried out and a review of EHO sample collection was being carried out.

Following Covid the office was open Monday – Friday, most staff were following hybrid working arrangements and the Enforcement Team were still largely working from home, a paper to review this would be discussed at the next Finance & HR Meeting.

Risk matrix had been refreshed, behaviour of stakeholders to officers continues to be looked at and a new risk relating to working at heights has been added following a new officer having pointed out that climbing down ladders onto vessels 6-7m down could be an issue. A piece of work into how to go down the

ladders, and who is responsible for the condition of the ladders was being completed.

Members Agreed to note the content of the report.

EIFCA22/07 Item 7: Meeting of the Finance & HR Sub-Committee held on 1st February 2022

In the absence of the Head of Finance & HR the CEO presented members with the outcomes of the Finance & HR sub-committee. Whilst the paper was largely self-explanatory, members were advised the Head of Finance & HR had indicated his intention to retire in August 2022.

Members were also updated on the progress of the new vessel build. The financial elements had been finalised, there was a price increase as a result of engine changes, so now waiting for confirmation on the classification of the plans for the vessel, it was anticipated the build could begin in the next couple of months.

Members Agreed to note the report

EIFCA22/08 Item 8: Strategic Assessment and Business Plan 2022-27

Project Officer Gurova gave a brief overview focussing on the key highlights of these documents, both of which were available to view on the EIFCA website.

Members were advised the Strategic Assessment was an annual assessment of commercial fisheries in the District. It identified fisheries-related risks to stocks, the environment and industry viability and informed the organisational priorities as outlined in the Business Plan. The Business Plan was a rolling 5 year plan reviewed annually, providing the strategic framework within which EIFCA operated and described EIFCA's ability to deliver against their vision and priorities, whilst taking into account leadership arrangements, strength of the team, assets & equipment and financial management.

Following the presentation the CEO went through the priorities for 2022-2023. Like every other year there were too many priorities for the resources available but the more major priorities were identified as:

- Adaptive resource management for the Cromer Shoal MCZ
- Implementation of vessel management in the brown shrimp fishery

- Replacement of the WFO 1992 and the replacement of the Several Order

Georgie Roberts congratulated EIFCA on completion of the Red Risk areas which was a large piece of work to complete. The CEO advised that in the main the piece of work was almost complete but it should be remembered it was a joint effort and the working relationship with NE was excellent.

Mr Bowell advised he was pleased to note the inclusion of developing relationships with RSA in the list of future priorities.

Members Agreed to Note the content of the Strategic Assessment including the priorities for 2022-23.

Members Resolved to:

- **Approve the content of the Business Plan, including the priorities and plans for 2022-27**
- **Agree that the CEO would add the metrics to the Business Plan when agreed between Defra and the Association of IFCA's**

Proposed: Cllr Skinner

Seconded: Mr Davies

All Agreed

EIFCA22/09 Item 9: Wash Mussel Fishery

Senior MSO Jessop presented to members the outcome of the annual mussel surveys and the proposed management regulations based on the results.

Having worked through the survey results SMSO Jessop advised that stock levels were relatively high but there were high rates of mortality being reported both nationally and internationally thought to be due a range of environmental factors.

To open a mussel fishery there were a number of factors to take into account to meet the conservation objective targets. The Total stock needed to be above 12000 tonnes so the 13357 tonnes met that criteria. To have a harvestable fishery there needed to be a conservation target of 7,000 tonnes of adult stock, this has not been achieved since 2009, so a harvestable fishery would not be possible. For a seed fishery the management policy target of 5,000 tonnes would be met, allowing a fishery of 1357 tonnes however due to the condition of the fishery that level of stock being removed would not be sustainable, therefore the recommendation was that any seed

fishery be limited to 980 tonnes, with the suggestion that 900 tonnes could be pursued by dredging vessels.

To prevent any fishery having an impact on individual beds it would be necessary to ensure beds maintained a density of 25 tonnes/hectare, this meant some beds would not be viable.

Taking all factors into account there were potentially six beds that could be opened to the seed fishery, each of which would have an individual maximum TAC to maintain the integrity of the beds.

Senior IFCO Godwin then advised members of the proposed management measures for a mussel seed fishery and the need for regular reactive management. The key mitigation to approving the opening of a seed fishery was the CEO being delegated the ability in conjunction with the Chair and Vice-Chair to make a final decision on the opening of such a fishery if the outcome of the imminent cockle surveys suggest a mussel fishery would impact on the opening of a cockle fishery.

Welland Wall is a separate fishery which cannot be dredged, is very difficult to overfish and tends to self-manage itself. This bed is generally kept open most of the time, annual surveys tend to show consistent stock levels.

Mr Davies questioned the Die-Offs and whether it was certain size groups or everything that was affected. It was noted it was not all across the board, initially it was 2-3 year old mussels that appeared to be relatively healthy. Subsequently this pattern has followed, with the older mussels seeming to be surviving. The question was raised whether it was worth keeping a bed of similar density and size closed to use as a comparison site to assess natural die off, and stock growth. It was not felt there was time to carry out a controlled experiment, but members were advised that comparisons were made each year.

Mr Bagley suggested it might be worth keeping it closed this year to try and increase the stocks rather than keep taking seed stocks each year, maybe just open Skate Run and keep everywhere else closed. MSO Jessop advised pre 2010 attempts were made to build the stocks up but the die offs in 2010 have meant only irregular fisheries and very erratic stock levels. The current danger was that mortality was having a bigger impact than fisheries.

In terms of longer term fisheries SMO Jessop tended to look at annual stocks and trends overtime, beds were only opened for fisheries when they believed the beds could sustain them. Currently trying to give a fishing opportunity before the mussels die, making the most of available resources and working around the die-off.

Mr Davies questioned whether keeping the mussels closed would protect the cockle fishery, he felt a bigger TAC for cockles would be better financially for fishers. The CEO felt that the proposed

fishery was not likely to put the fishery at risk and the Authority was obligated to provide fishing opportunities, it would be an industry decision whether it was financially viable. Whilst he thought that the impact on the cockle fishery would be minimal, the proposed delegated authority would enable appropriate action to be taken if required.

Mr Williamson having heard all the information suggested only open for 80t handwork fishery and decide on the dredge fishery after the cockle surveys had been completed. The CEO did not believe evidence supported such a decision.

Having listened to discussion the Chair advised that to change the recommendations a proposal would be necessary.

Proposal to amend the first bullet point recommendation to Open a Handwork fishery of 80t for 2022 season. Pend decision on opening the Dredge relaying fishery of 900t until 2022 cockle survey results are known. Then amend the final recommendation to delegate the opening of the dredge fishery to the CEO in consultation with the Chair and Vice-Chair.

Proposed: Mr Davies

Seconded; Cllr Skinner

5 votes in favour

1 against

1 abstention – motion carried

The Chair felt this item had been well debated with the views of the industry being taken into account.

Members Resolved to:

Note

- **Note the findings of the 2021 Mussel surveys;**
- **Note the outputs of the consultation on proposed management measures with Wash Fishery Order License Holders;**
- **Agree in principle, pending formal advice from Natural England and consideration of responses to the consultation, to the following:**
 - **open a Handwork relaying fishery of 80t for 2022 season. Pend decision on opening the Dredge relaying fishery of 900t until 2022 cockle survey results are known;**
 - **to open the beds highlighted in the charts in appendix 1 to the 2022 relaying fishery, with the maximum exploitation rates for each bed as set out in table 2 in the report below;**

- that the dredge and hand-worked relaying fisheries will close on 31st August 2022 or when the respective quotas are exhausted, whichever is the sooner;
- to maintain the Welland Wall mussel fishery as open;
- the Licence conditions for the dredge and hand-work relaying fisheries and Welland Wall Mussel fishery at Appendices 2,3 and 4 respectively.

Proposed: Cllr Skinner

Seconded: Cllr Chenery of Horsbrugh

There were 2 abstentions all other able to vote were in favour – motion carried.

- **Agree to delegate to the CEO in consultation with the Chair and Vice-Chair, taking into account the outputs of consultation with the industry and formal advice from Natural England, the following:**
 - **open the handwork relaying fishery, and to consider the opening of the dredge fishery having taken account of the 2022 cockle surveys**
 - **to close the relaying and / or Welland Wall fisheries, or parts thereof, for reasons relating to a sustainable fishery, prevention of impacts on site integrity of the Wash MPAs or viability of Wash fisheries;**
 - **to introduce, vary or revoke licence conditions at appendices 2, 3 or 4 for reasons relating to a sustainable fishery, prevention of impacts on site integrity of the Wash MPAs or viability of Wash fisheries;**
 - **to close individual beds to the fishery if associated total allowable catch has been or is likely to be exhausted in accordance with the associated licence conditions at appendix 2 and 3.**

Proposed: Mr Davies

Seconded; Cllr Skinner

All Agreed

EIFCA22/10 Item 10: Wash Fisheries Economic Assessment presentation

Members were provided with a brief outline of the Economic Assessment of the Wash fisheries which had been carried out by MarFishEco to inform replacement of the Wash Fishery Order 1992, and specifically to inform decisions on how to manage access to the Wash cockle and mussel fisheries.

The initial recommendations from the report were that

- the current number of vessels and past TACs appeared to provide a good balance of sustainability and economic return.
- Whelk and shrimp should not be relied upon to take pressure of the cockle at any time
- Shrimp needs better understanding and effort management
- Increased understand of the cockle would help ensure maximum utilisation, more data would be better for sustainability and economic prosperity
- Cockle fishery in its current form is economically viable
- Any new licence conditions must take account of waiting lists, active fishers versus non-active, number of licences head and fishery compliance
- All licences should be actively fished or put back into a common pool
- A dredge fishery should be avoided
- Fishers should have licence stability to some extent

Following the presentation Mr Bagley was pleased to note EIFCA have the level of fishing right. Mr Davies felt the shrimp fishery also needed to be taken into account and the effect a lack of cockle fishing would have on the shrimp fishery as vessel owners need to make a living, he also expressed concern about growing costs and the need for a fishery all year round. Mr Williamson questioned when the information gathering had started, this was 2014 for the catch data. He also expressed concern that all the shrimp data required had not been available as it should be possible to get it from the MMO and it showed a very good baseline. The shrimp price and market is completely out of industry control, it is normally a stable market but there can be anomalies, e.g. Covid. Mr Williamson was also surprised there was thought to be a decline in whelk fisheries as there were fishers choosing to pursue whelk rather than other fisheries.

Members Agreed to Note the emerging findings of the Wash Economic Assessment presented by MarFishEco.

At this point there was a 6 minute break

EIFCA22/11 Item 11: Wash Cockle and Mussel Permit Byelaw 2021 Access Policies

Members were provided with a presentation of what was considered to be very close to the final draft of the Policies for access to the Wash fisheries prior to going out to consultation. There remained some concern around inclusivity in the fishery and whether the Authority would want to reconsider the re-distribution of licences. The CEO felt if the Authority were minded to consider that, it would be a discussion for another day.

The presentation by Project Officer Cessford gave an overall summary of the proposed policies, with key developments and considerations that had taken place since they were last before the Authority being highlighted.

The CEO made a point of explaining the issue of renting out would be addressed by ownership and the vessel owner proving they are the beneficial owner who gains profit and maintains the vessel.

Members were also advised that the proposed Permit Penalties had been discussed with solicitors and industry consultants and were considered to be both a deterrent but also proportionate. It was questioned whether the suspension applied to the skipper or the owner of the vessel, Senior IFCO Godwin advised that the permit would not be able to be used, so it applied to both.

Mr Williamson noted there was a reference to 61 permits and no dormant permits, this led him to question whether this meant the permits would be taken away from Brancaster fishermen. The CEO advised that this was not the case as they would still meet the criteria to hold a permit.

Mr Williamson then questioned whether the vessels 'Renting Out' would have permits refused. The CEO advised these vessels would not pass phase 1, they would then be eligible to apply to phase 2 when the points system would take effect, the likely outcome of this would be that the beneficial owner would get the permit.

Mr Davies queried the proposed training course for fishers who have fished all their lives, he questioned whether there was a cost and how often the course would run? It was advised the purpose of this was to ensure fishers are aware of the many MPAs within the Wash and they are aware of their responsibilities when fishing in the area, the intention is not to be onerous but to help mitigate when doing an HRA. It was not intended there would be a charge for what was likely to be a half day course for prequalified representatives. The CEO advised the course would

be available when required, there was no intention to put up hurdles.

Mr Bagley questioned whether the 61 permits could increase or decrease based on the years fishing availability. The CEO advised the number of permits would not change on a yearly basis but any changes could be considered in exceptional circumstances.

Proof of beneficial ownership was questioned, this was still being considered but it was suggested this could be Bills of Sales, bank accounts, business records and transactions, all of which should be easy for a genuine beneficial owner. As well as MCA certificates and MMO licence.

The limit of 8 permits was discussed and how it would be possible to get 8 permits, the CEO advised that taking into account equitable access to the fishery 8 would be a maximum, above that they would be excluded.

It was questioned whether this process would end up going to an Emergency Byelaw, the CEO did not believe there was any reason why it should. There was nothing in terms of legal QA by the MMO which would suggest this was likely. It would shortly go back to the MMO then to Defra, at which point it was in their hands. For clarity the CEO advised the Authority had done everything possible to get the byelaw in place in time.

At this point the CEO read the thoughts of Mr Garnett – who had sent his apologies

Members Resolved to

- **Note** the key decisions and rationale on the key areas;
- **Approve** the policies to manage access to the fisheries under the Wash Cockle and Mussel Byelaw 2021;
- **Agree** to delegate authority to the CEO to make changes to the wording of the policies which did not alter their intended effect, prior to formal consultation;
- **Direct** Officers to undertake formal consultation with stakeholders on the policies and report the results and any recommended changes at a subsequent Authority meeting.

Proposed: Cllr Chenery of Horsbrugh

Seconded: Dr Bolt

All Agreed

EIFCA22/12 Item 12: Wash Fishery Order 1992 Interim Policies

SIFCO Godwin advised there were already Policies in place that address the issuing of licences under the WFO including the

ability to change licence holders and vessels on a licence. With the formal consultation of the new policies it was proposed there be a moratorium on transferring licence of changing vessels named on licences. Prior to this being brought to the meeting the CEO, Chair and Vice-Chair had put this decision in place on 22.02.22, prior to this an application for the transfer of a licence within an established family business had been approved.

Members Resolved to:

- **Note the rationale for revising the Wash Fishery Order 1992 Interim Policies**
- **Agree to implement the revised Wash Fishery Order 1992 Interim Policies at Appendix 1 with immediate effect**

Proposed: Dr Bolt

Seconded: Cllr Chenery of Horsbrugh

All Agreed

EIFCA22/13 Item 13: Wash Fisheries Transition Sub-Committee

The CEO reminded members the idea had been raised at the last Authority meeting, the proposal was to have a sub-committee to deal with the issue of the allocation of WFO licences to the new permit system, with the sub-committee being the decision makers. The proposed membership did not include anyone with a DPI related to those fisheries.

Members Resoled to:

- **Agree to establish the Wash Fisheries Transition sub-Committee**
- **Appoint the members named in this paper to serve on the Wash Fisheries Transition sub-committee**

Proposed: Cllr Chenery of Horsbrugh

Seconded: Dr Bolt

All Agreed

EIFCA22/14 Item 14: Review of Constitution and Standing Orders

Members were reminded that annually the Constitution and Standing Orders are reviewed and their legality considered by NPLaw in the event of changes to legislation.

Minor administrative changes were proposed, including adding the Wash Fisheries Transition sub-committee to the scheme of delegations and a reflection of practice that the approval of MoAs of partnership authorities would fall into the remit of the CEO rather than the Authority. However national workstreams would be in consultation with the Chair and Vice-Chair.

Members Resolved to Agree to the proposed changes to the Constitution and Standing Orders.

Proposed: Dr Bolt

Seconded; Mr Davies

All Agreed

EIFCA22/15 Item 15 – Quarterly review of annual priorities and Risk Register

The CEO advised this paper was a standard update of progress against annual priorities.

There were two changes to the Risk Register.

The first being there was still no update to the replacement for New Burden Funding.

The second was the WFO Several Order Replacement is beginning to run out of time, in the event of it not being completed in time it is suggested for the first year or two of the new Several Order existing policies be maintained.

Members Agreed to note the content of the report.

EIFCA22/16 CEO Update

All the main issues had been incorporated in the meeting agenda.

The CEO advised the MMO had just completed a recruitment round for IFCA Authorities. EIFCA had three vacancies due to occur, Dr Bolt was moving on, but Mr Bagley had his membership extended for 18 months and Mr Garnett had his membership extended or 3 years. The other successful applicant, pending checks, is Mr Goldson.

EIFCA22/17 Item 17 – Operational Update

This paper was included as a matter or report any questions could be addressed to the Head of Operations.

The CEO highlighted to development of the Boston Power Incinerator. MSO Thompson gave a brief overview of the process to date and the responses made by EIFCA.

Mr Bagley advised that they had put in an objection to the plant, their biggest concern being pollution going into the water from washing down the site, ash from the chimneys, and the amount of constant dredging in the river which would release a lot of sediment which would get into the water column.

Members Agreed to Note the contents of the report.

At this point Dr Bolt left the meeting

EIFCA22/18 Item 18 – Recreational Sea Angling Strategy

Mr Bowell noted there was no mention of a Recreational Sea Angling Strategy within EIFCA. He has questioned why this was when Recreational Sea Anglers should also be taken into consideration by IFCAs. Whilst he was pleased to hear it mentioned in the Strategic Assessment, he would like to raise the issue for consideration.

The CEO advised there had previously been a Recreational Sea Angling Strategy which had withered on the vine. He was however interested to see what it would add in terms of value. It has been reflected in terms of future priorities, and EIFCA have been engaged in the work of the Angling Trust.

Mr Bowell advised that it was touched on in the Strategic Assessment that information from RSA is wanted, to do that you need to talk to them. He knew of clubs with fish catches going back 20 years, but no one has asked for it. He also advised there were species that could provide diversity to commercial fishers when times are difficult.

He felt it was important to engage with the whole of the District, whilst he understood cockle and mussel were important, he had yet to hear or anything south of Cromer. The CEO responded by advised that EIFCA was well engaged with the Suffolk Coastal Forum but unfortunately the requirement to prioritise work meant that the Wash fisheries tended to take priority of late.

EIFCA21/19 Item 19 - Any Other Business

There were no other matters for discussion

There being no other business the meeting closed at 1335 hours.

Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Action Item 8

48th Eastern Inshore Fisheries and Conservation Authority meeting

8th June 2022

Health and Safety update

Report by: Jon Butler, Head of Operations

Purpose of report

The purpose of this report is to update members on health and safety activity and incidents, risks and associated mitigation over the last reporting period

Recommendations

It is recommended that members:

- **Note** the contents of this report

Background

H&S law requires employers to assess and manage risks and so far as is reasonably practicable, ensure the health, safety and welfare of all its employees and others affected by workplace activities.

The Authority has a declared intent to promote and nurture an appropriate health and safety culture throughout the organisation.

Incidents

The table in *Appendix 1* summarises the incidents that have occurred since the last authority meeting:

There have been five incidents to report during this period

Risks/Mitigation

COVID-19 Absence due to COVID within the team remains low with only one officer testing positive since the last Authority meeting. LFT testing has been scaled back and officers are only asked to test if they are spending time on vessels or if they feel unwell. If an officer has COVID symptoms, respiratory illness or have a close family member who is COVID positive we are asking the officer to make managers aware, avoid contact with the wider staff team by working at home and not coming into the office or carrying out vessel patrols until they or the family member are symptom free and well.

As more officers increase the time spent working from the office, enhanced cleaning continues along with other measures such as gel points and restrictions in terms of the number of people working in some office spaces.

Appendix 1

Date	Nature of incident	Injury / damage occurred	Action Taken	RIDDOR MAIB Y/N	Investigation complete Y/N	Name of investigating Officer	Follow-up action required Y/N. If Y then what?
07/03/2022	Injury Person	Minor Injury Hand	First Aid	N	Y	Simon Lee	Repair to window stop on vessel
17/03/2022	Injury Person	Minor Injury Head	None required	N	Y	Lee Torrice	N
18/03/2022	Medivac	Officer checked at A&E	Officer took time off and advised to speak to GP	Y	Y	Lee Torrice	Y consideration being given to oxygen reader and defib
07/04/2022	Person/Contaminated waste	None	Repair to waste system	N	Y	Lee Torrice	Repair to float switch
22/04/2022	Injury Person	Minor Injury Head	First Aid	N	Y	Lee Torrice	N

Appendix 2

Eastern IFCA Health and Safety risks

Risk	Intervention	Residual Risk	Risk rating* (Current)	Risk rating* (Previous)
1. Whole Body Vibration	<ul style="list-style-type: none"> Risk awareness training to manage impacts. Health monitoring process to be developed. 	<ul style="list-style-type: none"> Personal injury from boat movement owing to lower resilience as a result of individual physiology 	Tolerate	Treat
2. Staff stress through exposure to unacceptable behaviour of stakeholders	<ul style="list-style-type: none"> Introduction of Unacceptable Behaviour policy Stakeholder engagement plan and activity delivered in pursuit of corporate communications strategy. Dialogue with Stakeholders to ensure appropriate tone of communications Conflict resolution training for “front line” Officers Introduction of Body worn Camera’s and Sky Guard Alarms. 	<ul style="list-style-type: none"> No change in behaviour of some stakeholders. Long term sickness caused by stakeholder hostility 	Treat	Tolerate
3. Damage to vehicles, trailers and/or equipment through inappropriate operation.	<ul style="list-style-type: none"> Formal trailer training for unqualified officers Refreshers for those with previous experience Periodic vehicle maintenance checks training In-house assessment for drivers using unfamiliar vehicles (crew transport, 4x4) 	<ul style="list-style-type: none"> Failure to adhere to training Mechanical failure of vehicle or trailer 	Tolerate	Treat
4. Physical fitness of personnel to undertake arduous duty	<ul style="list-style-type: none"> Staff briefing Management overview to ensure rostered duties are appropriate and achievable 	<ul style="list-style-type: none"> Individual health fragilities Individual lifestyle choice 	Tolerate	Tolerate

	<ul style="list-style-type: none"> Reasonable work adjustments Routine periodic medical assessment (ML5) 			
5. COVID 19	<ul style="list-style-type: none"> Information Guidance Staff Briefing Risk Assessments 	<ul style="list-style-type: none"> Developing understanding of COVID 19 and rapidly changing guidance 	Tolerate	N/A
6. Working at Height	<ul style="list-style-type: none"> Staff briefing Scoping of all quayside ladders Risk Assessment Training to be provided if required 	<ul style="list-style-type: none"> Failure of quayside ladders 	Treat	N/A

*

Risk Rating
High
Medium
Low

Risk Treatment	
Treat	Take positive action to mitigate risk
Tolerate	Acknowledge and actively monitor risk
Terminate	Risk no longer considered to be material to Eastern IFCA business
Transfer	Risk is outside Eastern IFCA ability to treat and is transferred to higher/external level

Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Action Item 9

48th Eastern Inshore Fisheries and Conservation Authority meeting

Report by: Andrew Bakewell – Head of Finance & HR

Meeting of the Finance & HR Sub-committee held on 3rd May 2022

Purpose of report

To inform members of the key outputs and decisions from the Finance & HR Sub-Committee meeting held on 3rd May.

Recommendations

Members are asked to:

- **Note** the content of the report.

F&HR 22/04 Minutes of the F&HR Meeting held on the 1st February 2022

- Signed as a true record

F&HR 22/05 Matters Arising

- CEO provided an update on progress with the new vessel indicating that the build start was imminent following a 16-week delay for reclassification necessitated by design changes and additional supply-chain issues. Quotes for a tender for the new vessel were being obtained. Some minor cost changes were anticipated beyond those already reported and factored in.
- Head of Finance advised that the 3 Funding Authorities were unable to provide either Payroll or Accounting support.

Finance Matters

Re minute F&HR 22/06 Quarter 4 Payments and Receipts

- Members were advised of the following exceptions:
 - Sebastian Terelinck had undergone its 500 hour service.
 - The 30% stage payment for TC replacement (c.£500k) had been processed
 - Additional income from the sale of FPV John Allen (£140k) had been received
 - Impact of fuel increases not included in the Budget as not anticipated when budget was completed, overspends would likely result.
 - Members requested a paper detailing spend on New Vessel to date including original estimate and forecast final cost.

Members Agreed to:

- **Note** the content of the report

Re minute F&HR 22/07 Quarter 4 Management Accounts

- The Head of Finance & HR advised of the following:
 - Final year end accounts would differ from the Management Accounts in respect of invoices received after year end, accruals and other adjustments.
 - A replacement for John Allen was being sourced, the specification would include appropriate pot-hauling capability.

Members Agreed to:

- **Note** the content of the report.

Re minute F&HR 22/08 Project Officer Post

- The CEO reminded members of the previous decision to recruit a Project Officer for a temporary two-year period.
 - In the intervening period the workload for the Project Team has continued to increase with little sign of any reduction.
 - Funding for the post was included in the Budget for the current year
 - Additional funding from Defra was being sought to fund specific project work.

Members resolved to:

- To transition the Temporary post to a Permanent role and increase the complement by one.

Re minute F&HR 22/09 Exclusion of the Public

Members Resolved that under Section 100(A) of the Local Government Act 1972, the public be excluded from the meeting for item 10 on the grounds that it involved the likely disclosure of exempt information as defined in Paragraph 1 of Schedule 12A of the Act

Re minute F&HR 22/10 HR Update

The Head of Finance and HR reported:

- Two resignations
- Three appointments (1 IFCO Lowestoft and 2 MSOs)
- Three vacancies (1 IFCO, 1 Project Officer and 1 MSO Grade 6)

Head of Operations reported ongoing recruitment difficulties for certain roles and hoped that a Hybrid working model (if the trial was successful would help).

- Home working was debated with the CEO pointing out the observed productivity increase and addressing some concerns.
- The Chair observed that reduced journeys would positively impact the Carbon Footprint.
- Tribunal date set for Jan. 16th to 19th 2023.
- Head of Finance and HR had postponed retirement until March 2023. Various options for the future discussed including potential job-share.

Members Agreed to note the content of the report

Re minute F&HR 22/11 Any Other Business

No items raised

Background Documents

Unconfirmed minutes of the Finance and HR sub-committee meeting held on the 3rd May 2022

Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Action Item 10

Eastern Inshore Fisheries and Conservation Authority Meeting

08 June 2022

Wash cockle fishery 2022

Report by: Ron Jessop (Senior Marine Science Officer – Research)

Purpose of Report

To report on the findings of the annual cockle survey and to propose that the cockle fishery will not open in 2022.

Recommendations

It is recommended that members:

- **Note** the contents of the 2022 Wash intertidal cockle survey report, describing the current low levels of cockle stock in the regulated fishery
- **Note** that the combined stocks of cockles and mussels within the regulated fishery have failed to achieve the SSSI Conservation Objective target regarding food availability for over-wintering oystercatchers.
- **Note** that having failed to achieve the SSSI Conservation Objective target, a Habitats Regulations Assessment for a proposed cockle fishery this year would have to conclude that the fishery was likely to cause a significant adverse effect to the site features and as such is unlikely to be approved.
- **Agree** that because the stocks have failed to achieve the SSSI Conservation Objective target and are in too low densities to support a viable fishery without threatening the juvenile stocks, the Wash cockle fishery should not open in 2022.
- **Agree** that the 2022 mussel re-laying dredge fishery is not opened

Background

Eastern IFCA manages the cockle fisheries within The Wash under the Wash Fishery Order 1992. Annual cockle surveys inform the development of management measures for the fishery in accordance with the Cockle Fishery Management Plan¹.

¹ https://www.eastern-ifca.gov.uk/wp-content/uploads/2021/03/2019_07_WFO_cockle_fishery_management_plan1.5_Final.pdf

Report

Annual cockle survey

Although one of the planned cockle survey trips over the Easter period needed to be cancelled after a key member of the team contracted COVID-19, the surveys were nevertheless completed within schedule. A full report detailing the results from the survey can be found at Appendix 1.

In summary, the surveys found that the cockle stocks were at one of their lowest levels seen during the period since 2000, only exceeding those found in 2004 and 2011. This is mainly due to two poor spatfalls in 2019 and 2020 providing insufficient recruitment to replace losses caused by ongoing “atypical” mortalities. This decline had been predicted following last year’s survey when the 2020 spatfall had been found to be small. As a result, two large areas covering some of the slow-growing beds were closed to the fishery last year in the hope sufficient cockles would survive within them to support a viable fishery this year. Unfortunately, even having taken this precaution, barring a few small patches, stocks throughout the regulated beds are only present in low densities and offer few viable fishing opportunities.

The survey found there had been a moderate spatfall last summer that should enable the stocks to partially recover, but this spatfall was not as large or as widespread as several of the “exceptional” settlements that have benefited the beds since 2004. Some fishermen have raised the possibility of having a late-summer fishery on these juvenile stocks where they have settled on fast-growing beds. Such fisheries have occurred in recent years when the juveniles appear vulnerable to loss from storms or ridging-out, but only when there have been sufficient juveniles elsewhere to safeguard the sustainability of future fisheries. This year the faster-growing areas that have supported late summer fisheries in the past, have not benefitted from an appreciable settlement. In most areas it will be at least 2023 or 2024 before this cohort is of fishable size.

Since first being observed in The Wash in 2008, die-offs attributed to “atypical” mortality have caused devastating losses to the cockle stocks. As it is predominantly larger cockles that are affected, the recourse has been to fish smaller cockles before they die. Initially, this meant that the fishery started targeting cockles that were two years old rather than three. However, in recent years, there has been a preference among some fishermen to fish the denser patches of one year old cockles rather than the thinned-out patches of two year olds. This has created a vicious cycle whereby thinning out the one year old stocks, even fewer are reaching two year old in fishable densities. Fishing down the age groups in this way reduces the potential spawning stock, threatening future recruitment and places an ever-greater reliance on the beds receiving those good spatfalls to support the following fishery. Analysis of the cohort survival rates going back to 2003, shows that for most beds the peak biomass of a cohort is two years after settlement, or three years in slower-growing areas. By targeting cockles that are one year old, therefore, they are being harvested at suboptimal biomass, effectively reducing the size and value of the fishery.

The 2022 cockle fishery

The Wash Cockle Fishery Management Plan includes a suite of management measures that aim to provide sustainability to the fishery and ensure the fishery will

not impact the conservation objectives of the relevant Marine Protected Areas (MPA) of The Wash. Measures aimed at providing sustainability include:

- Allocating a Total Allowable Catch (TAC) for the fishery (calculated as 1/3rd of the adult cockle stock (cockles $\geq 14\text{mm}$ width) biomass.
- Maintaining a total cockle stock biomass above 11,000 tonnes
- Maintaining a minimum spawning stock biomass (cockles $\geq 14\text{mm}$ width) above 3,000 tonnes

One of the main considerations for ensuring the fishery will not adversely impact the conservation objectives, is ensuring there are sufficient shellfish to feed the over-wintering bird populations. This is done using a “Bird Food Model” that was developed specifically for The Wash, which calculates the food required by the target number of oystercatchers.

Looking at these various thresholds, based on an adult cockle stock biomass of 8,226 tonnes, the TAC for the fishery would be 2,742 tonnes. As the current total stock is only 13,711 tonnes, however, a TAC of 2,742 tonnes would take the total stock below the 11,000 tonnes minimum threshold. Based on these figures, therefore, the TAC would need to be limited to 2,711 tonnes.

Although the sustainability measures would allow for a fishery of 2,711 tonnes, the Bird Food Model calculations shown in the survey report in Appendix 1 find the current stocks of cockles and mussels on the regulated beds fail to meet the target threshold required by the birds. (It should be noted, the stocks would have failed to achieve the target threshold, irrespective of whether the current 80 tonnes hand-worked mussel fishery was opened or not). As the current stocks do not meet the minimum Conservation Objective targets, a Habitats Regulations Assessment for a proposed 2022 cockle fishery would have to conclude that the fishery was likely to cause a significant adverse effect to the site features. As such, opening a cockle fishery this year would not be approved.

Liaison with Natural England

Recognising the socio-economic consequences of not opening the Wash cockle fishery during 2022, officers explored whether it could be possible to allow a small fishery by taking into account stocks on the private Le Strange estate on the eastern edge of The Wash. Officers also sought clarification from Natural England on the number of oystercatchers that needs to be taken account of in the Bird Food Model, since the number in the published conservation advice appeared to be lower than the number officers had recently been advised by NE to use. Natural England recognised the importance of the cockle fishery, but provided clear guidance that:

- It would be very difficult to prove “no adverse effect” on the designated Wash sites even if stocks on the Le Strange estate were included in the Bird Food Model calculations. This is because the Le Strange survey results would not be available until late-June/July, Le Strange stocks could theoretically be fully fished (outside of NE or Eastern IFCA control), and Eastern IFCA do not have access to the Le Strange stock data. Eastern IFCA would need to be confident of “no adverse effect” before authorising the Wash cockle fishery,

but the factors here would result in too much uncertainty to be able to confidently conclude “no adverse effect.”

- The conservation advice highlights the need to protect and enhance the condition of the supporting habitats for the species in the site, rather than just maintaining the capacity of the site to support the feature [in this case, oystercatcher] at some fixed target population size and no more. The oystercatcher abundance target is to “Restore the size of the non-breeding population at a level which is above 24,000 individuals, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.” The current mean peak count is 26,586 birds and this is the figure that should be used in this year’s bird food model calculations. As shown in the cockle survey report (Appendix 1), the current cockle and mussel stocks do not meet the target figure of 1,063t ash-free dry mass required to support 26,586 birds.

Having explored these two points, it is unfortunately apparent that even a small cockle fishery in 2022 would go against the conservation objectives and cannot therefore be authorised by the Authority.

Notwithstanding any potential that may or may not exist if the cockle stocks in the Le Strange fishery were to be taken into account it would still be recommended that the cockle fishery does not open in 2022. The reason for this is the failure of the stocks to achieve the SSSI conservation objective target for bird food requirements combined with the limited fishing opportunities that the current stock densities provide and that any fishery this year that targeted juvenile stocks would threaten the recovery of the fishery.

Mussel relaying fishery

In March 2022, the Authority agreed to open a hand-worked, relaying mussel fishery in The Wash with a quota of 80 tonnes. This fishery has been targeted and fishermen have commented on the good quality of the mussels. At the same meeting, the Authority decided to delay the opening of the proposed dredged, relaying mussel fishery in The Wash (quota 900 tonnes) pending the results of the cockle surveys. [The relaying mussel fishery quotas had been set based on available mussel and cockle stocks from the latest surveys at that time, i.e. the 2021 surveys, and were within stock and bird food thresholds.] It was considered that it might be favourable not to open the dredged mussel fishery if it meant a cockle fishery could go ahead (i.e. if combined cockle and mussel stocks would meet stock and Bird Food Model thresholds by including the 900 tonnes of mussel earmarked for the dredged, relaying fishery).

Officers have used the Bird Food Model to calculate the available “ash-free dry mass”, with and without the 900 tonnes of mussel, i.e. whether the dredged, relaying mussel fishery is opened or not. Unfortunately, even including the 900 tonnes of mussel (i.e. with no dredged, relaying mussel fishery), the available ash-free dry

mass only totals 1,005 tonnes compared with the 1,063 tonnes required to support the latest mean peak count of oystercatchers.

Scenario	Available ash-free dry mass (cockle and mussel) *	Required ash-free dry mass (cockle and mussel) for 26,586 birds)	Ash-free dry mass surplus/deficit
No cockle fishery. Dredge, relaying mussel fishery proceeds	953 tonnes	1,067 tonnes	-114 tonnes
No cockle fishery. Dredged, relaying mussel fishery does not proceed	1,005 tonnes	1,067 tonnes	-62 tonnes

*This figure is calculated from the biomass of cockles excluding the yr-0 class and the biomass of mussels over 25mm length, which are the size ranges targeted by oystercatchers. Ash-free dry mass is not the same as the mass of live cockles and mussels; it is calculated using conversion factors based on the average proportion of flesh compared with overall weight of live cockles and mussels.

It is therefore recommended that the dredged, relaying mussel fishery is not opened, because even with no cockle fishery, it would reduce the prey available to oystercatchers below the Bird Food Model threshold.

Communication with industry

WFO licence holders and skippers were written to on 19th May forewarning them that there is unlikely to be a cockle fishery this year.

Financial Implications

Whilst there is a significant financial implication for industry none is identified for the Authority.

Legal Implications

None identified

Conclusion

A combination of poor recruitment and high natural mortalities have resulted in a low cockle stock biomass on the regulated beds, while a combination of mortalities and previous years' fishing effort have reduced cockle densities in all but small localised patches. The combined cockle and mussel stocks are not sufficient to achieve the SSSI conservation objective target for bird food requirements. There has been a moderate spatfall in 2021 which should facilitate some recovery, but these juvenile cockles should not be fished this year. It is recommended that the 2022 cockle fishery remains closed, preventing disturbance to the juvenile stocks and allowing

the recovery to occur. It is also recommended that the re-laying dredge mussel fishery is not opened in 2022.

Appendices

Appendix 1 – Wash cockle survey summary 2021

Background Documents

Eastern IFCA Cockle Fishery Management Plan

Papers and minutes of the 47th eastern IFCA meeting held on 9th March 2022

Appendix 1 - Wash intertidal cockle survey report - -2022

The 2022 Wash intertidal cockle surveys were conducted between March 17th and April 30th, consistent with previous surveys. During the course of the surveys 1,043 stations were sampled from a total of 23 survey areas. Figure 1 shows the extent of the stations surveyed.

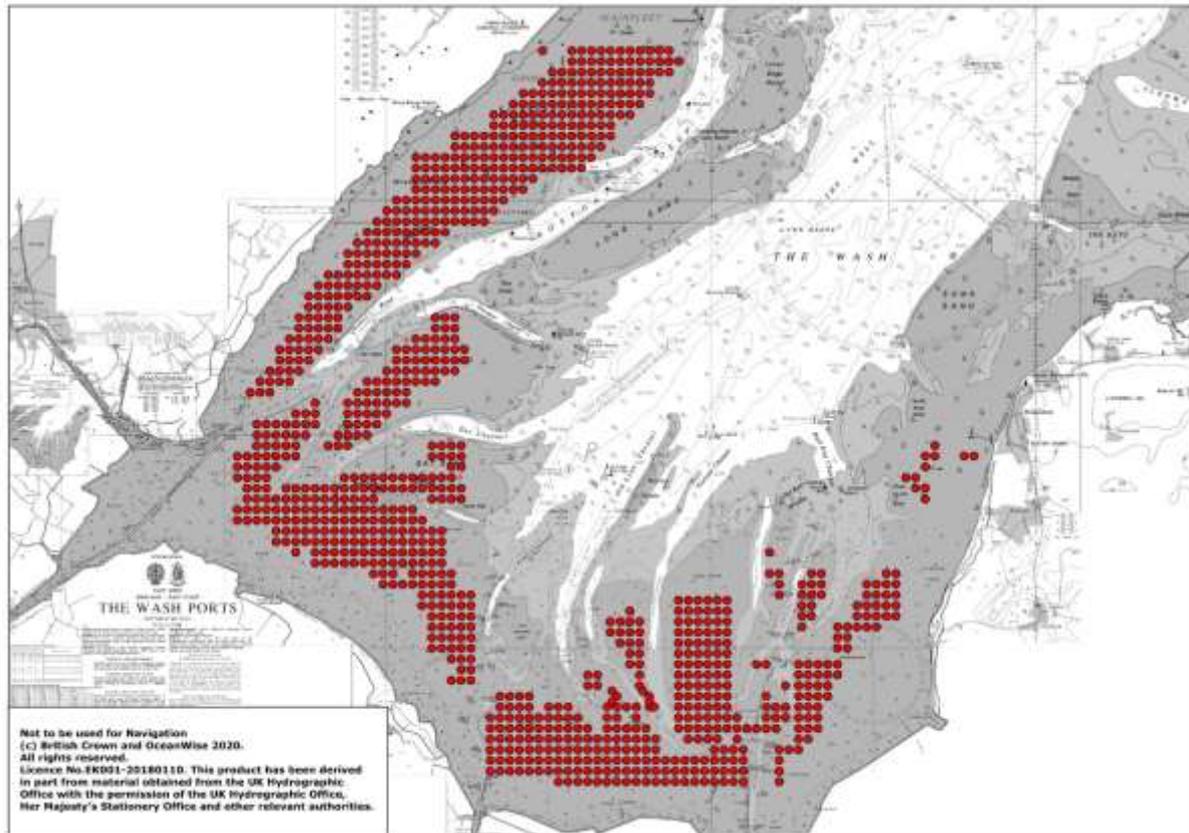


Figure 1 – Chart showing stations sampled during the 2022 Wash cockle surveys

The stock composition at the time of the 2021 survey had indicated cockle stocks were declining and would likely result in poor stock levels in 2022. Anecdotal reports from fishermen struggling to achieve daily quotas during the 2021 fishery supported the survey evidence that apart from a few small patches at the start of the season, cockle densities were low. The results from the 2022 surveys, below, confirm there has been a continued decline in stocks from the 15,848 tonnes of adult cockles and 20,153 tonnes total stock calculated to be present in 2021.

Summary of 2022 cockle stocks

Total Adult Stock (≥ 14 mm width)	8,226 tonnes
Total Juvenile Stock (< 14 mm width)	5,485 tonnes
Total Stock (all sizes)	13,711 tonnes

Table 1 provides details about the stocks found on each bed, while figures 2 and 3 show the distribution of the adult stocks (cockles ≥ 14 mm width) and juvenile stocks (cockles < 14 mm width). Further charts in figures 4-7 show the distributions of the cockles from the Year-0, Year-1, Year-2 and Year 3 age cohorts.

Table 1 - Summary of cockle stocks on the Wash intertidal beds – April 2022

SAND	Adult ($\geq 14\text{mm}$)				Juvenile ($< 14\text{mm}$)				Total Biomass (t)	% Adult
	Area (ha)	Mean Density (no/m ²)	Mean Weight (t/ha)	Biomass (t)	Area (ha)	Mean Density (no/m ²)	Mean Weight (t/ha)	Biomass (t)		
Black Buoy	124	80.00	37.32	464	199	843.75	27.17	541	1005	46
Blackguard	0	0.00	0.00	0	0	0.00	0.00	0	0	0!
Breast	672	33.30	15.77	1059	858	218.99	14.66	1258	2317	46
Butterwick	211	22.94	14.36	304	249	335.00	9.70	241	545	56
Butterwick EXT	124	33.00	15.34	191	162	350.00	10.91	176	367	52
Daseley's	286	18.70	10.47	300	572	103.26	3.88	222	522	57
Friskney	311	17.60	15.17	472	187	24.00	2.46	46	518	91
Friskney EXT	124	14.00	10.53	131	124	17.00	1.58	20	151	87
Gat	174	46.42	33.48	583	62	72.00	10.57	66	649	90
Herring Hill	124	14.00	4.45	55	199	88.13	8.56	170	225	24
Holbeach	622	33.00	18.72	1165	878	118.89	7.62	664	1829	64
IWMK	299	77.50	31.48	940	286	287.39	20.22	578	1518	62
Mare Tail	249	62.50	29.74	740	411	399.39	18.17	746	1486	50
Outer Ferrier	25	15.00	18.69	46	25	75.00	1.56	4	50	92
Pandora	37	13.33	5.83	22	25	10.00	1.47	4	26	85
Peter Black	50	10.00	4.10	20	37	10.00	2.03	8	28	71
Roger	336	23.70	17.06	573	187	121.33	10.35	193	766	75
South Ferrier	112	22.22	12.67	142	199	63.13	2.52	50	192	74
Styleman's	25	15.00	8.78	22	25	20.00	1.66	4	26	85
Thief	112	20.00	14.83	166	137	184.55	21.29	291	457	36
Whiting Shoal	12	20.00	25.53	32	37	23.33	3.99	15	47	68
Wrangle	448	23.33	17.30	775	398	70.31	4.50	179	954	81
Wrangle EXT	37	10.00	6.36	24	5	15.00	1.85	9	33	73
Total	4,514			8,226	5,262			5,485	13,711	60

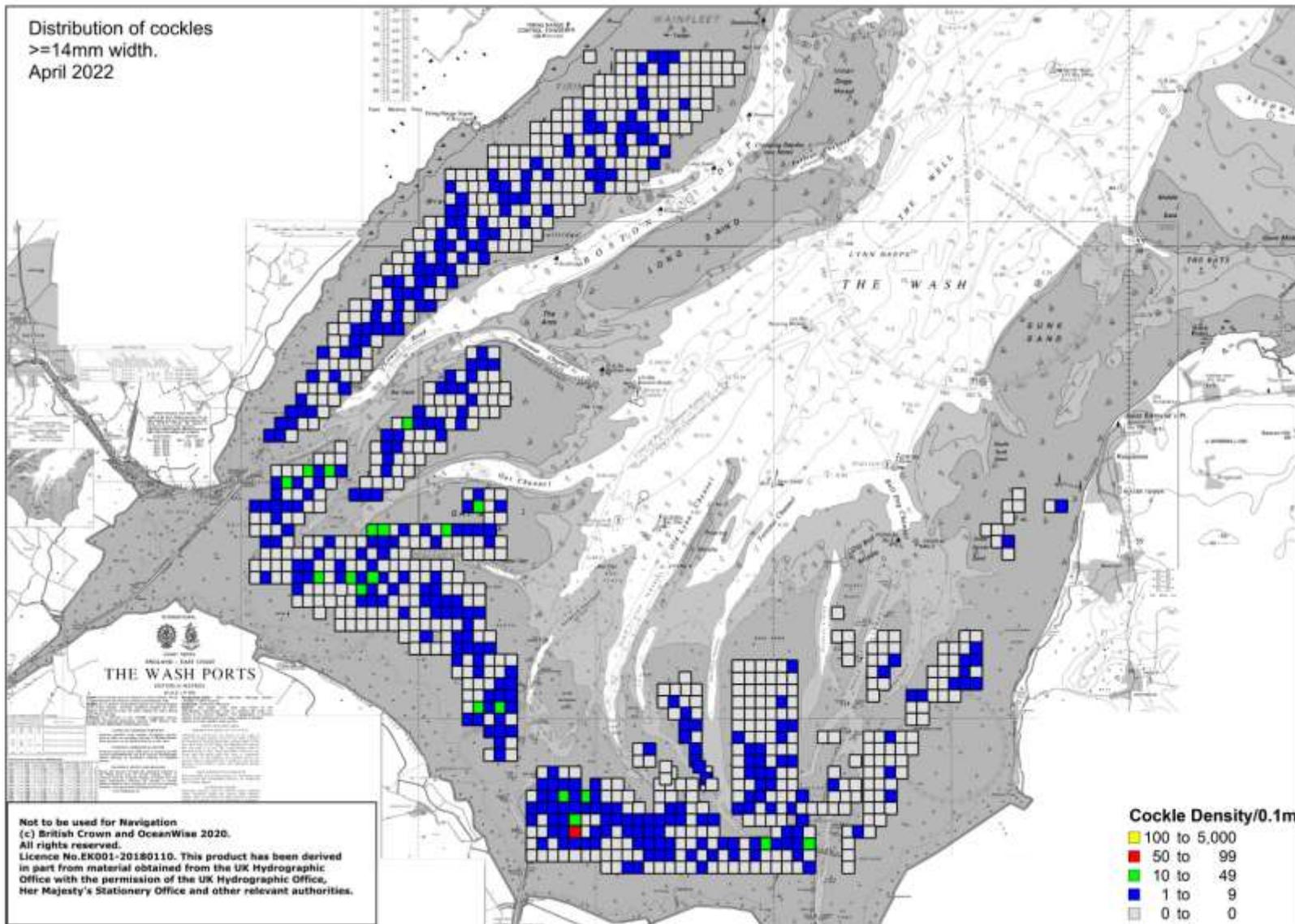


Figure 2 – Chart showing the distribution of adult cockles (≥14mm width) at the time of the 2022 spring surveys

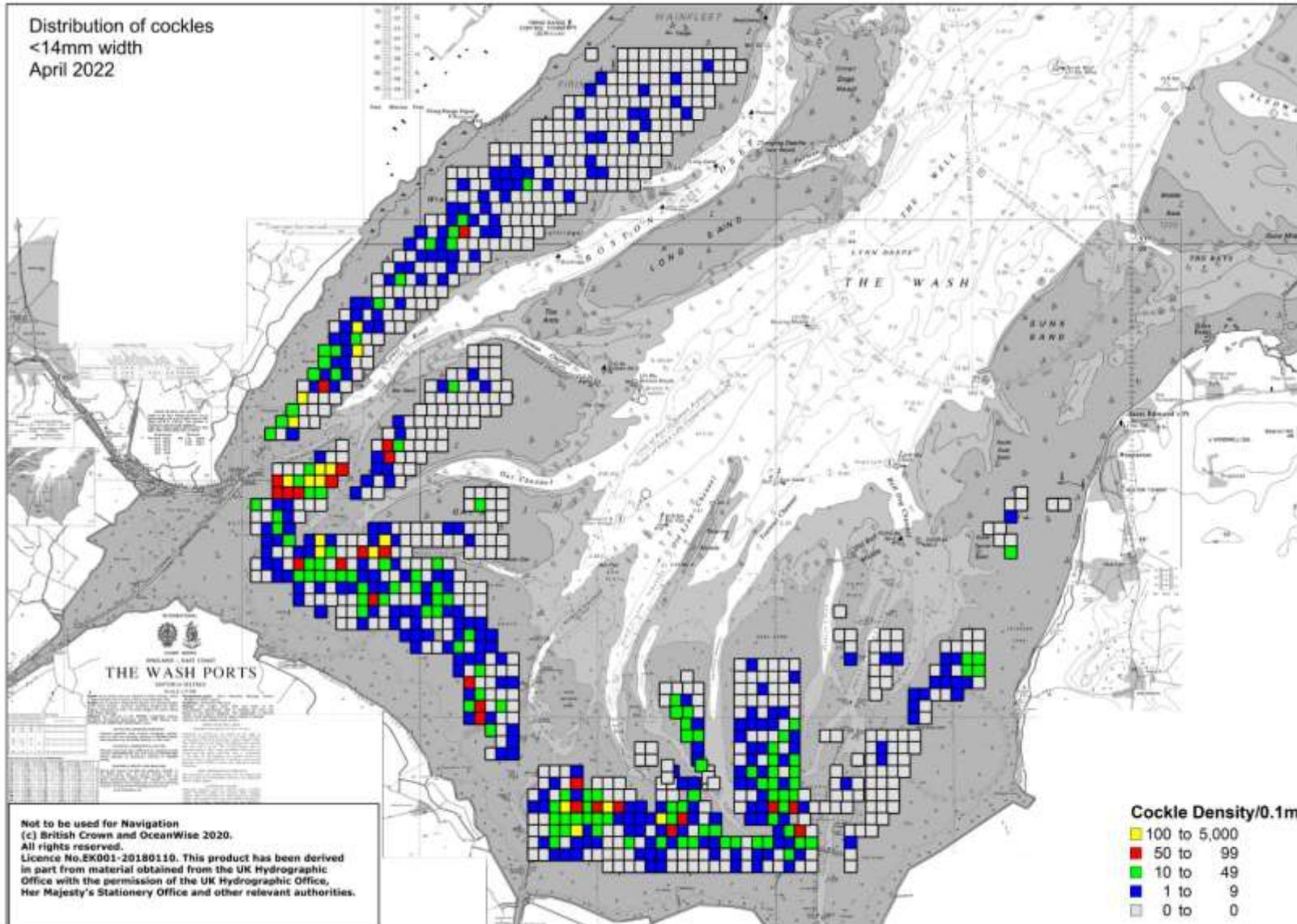


Figure 3 – Chart showing the distribution of juvenile cockles (<14mm width) at the time of the 2022 spring surveys

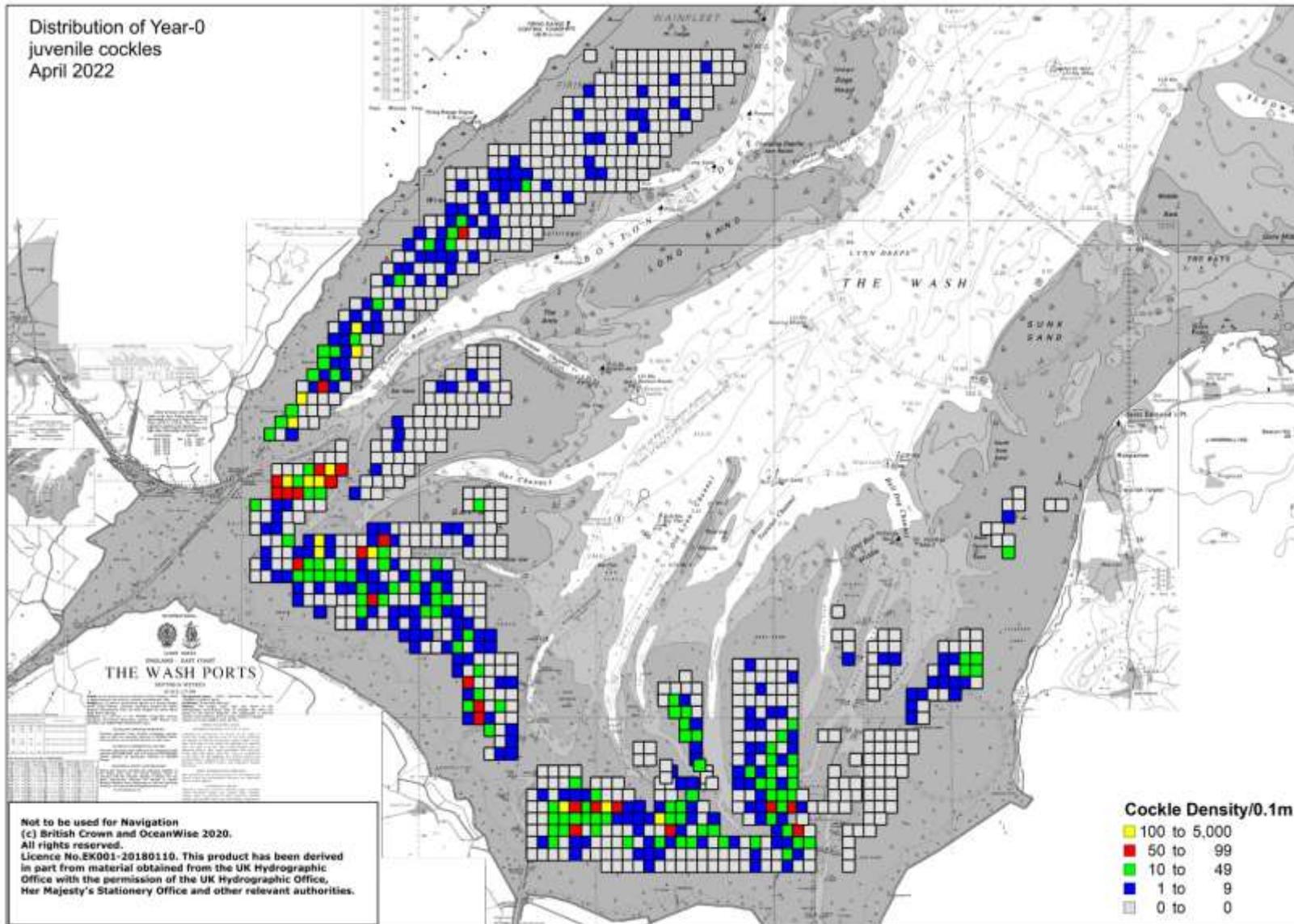


Figure 4 – Chart showing the distribution of Year-0 (2021 year-class) cockles at the time of the 2021 spring surveys

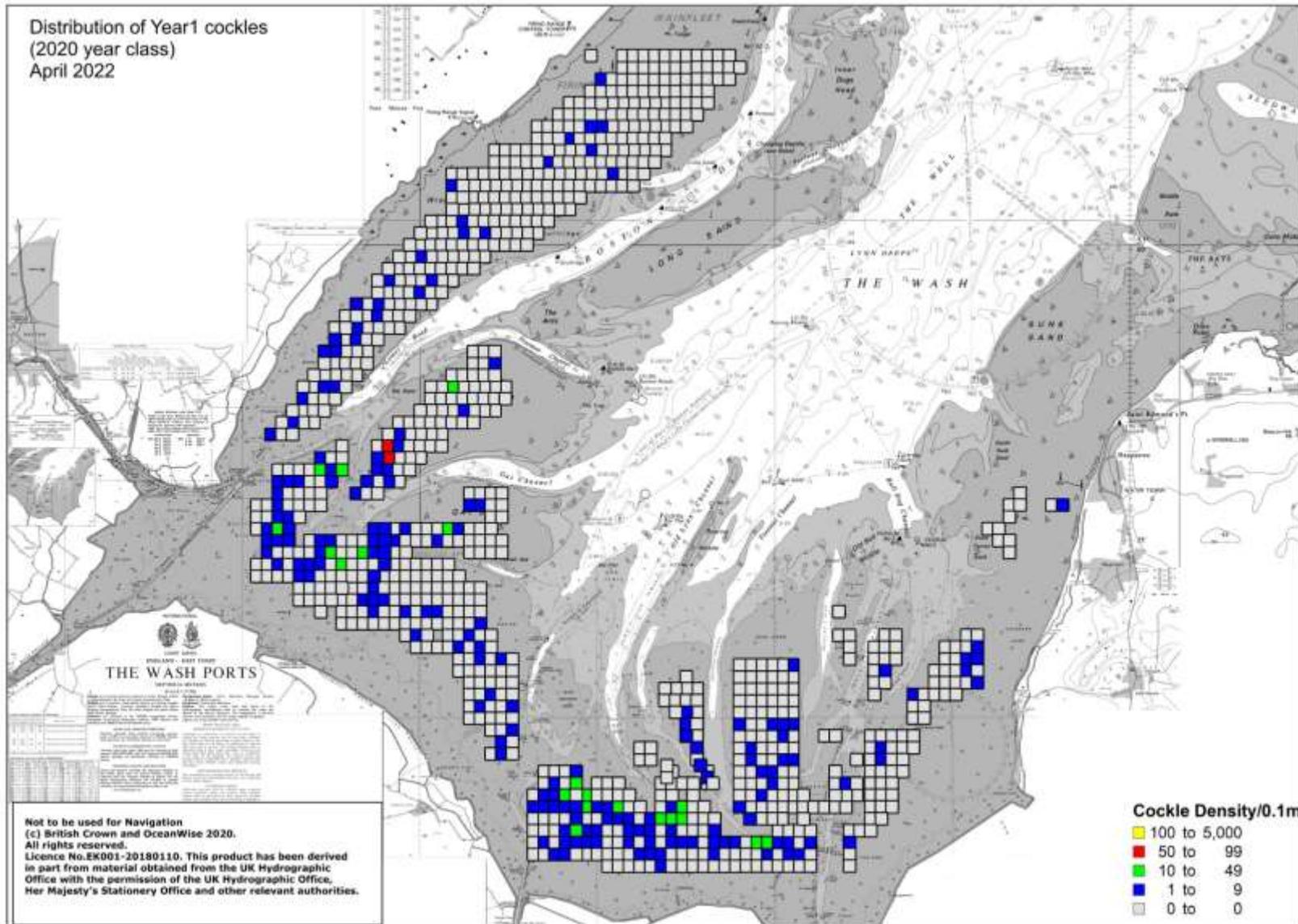


Figure 5 – Chart showing the distribution of Year-1 (2020 year-class) cockles at the time of the 2021 spring surveys

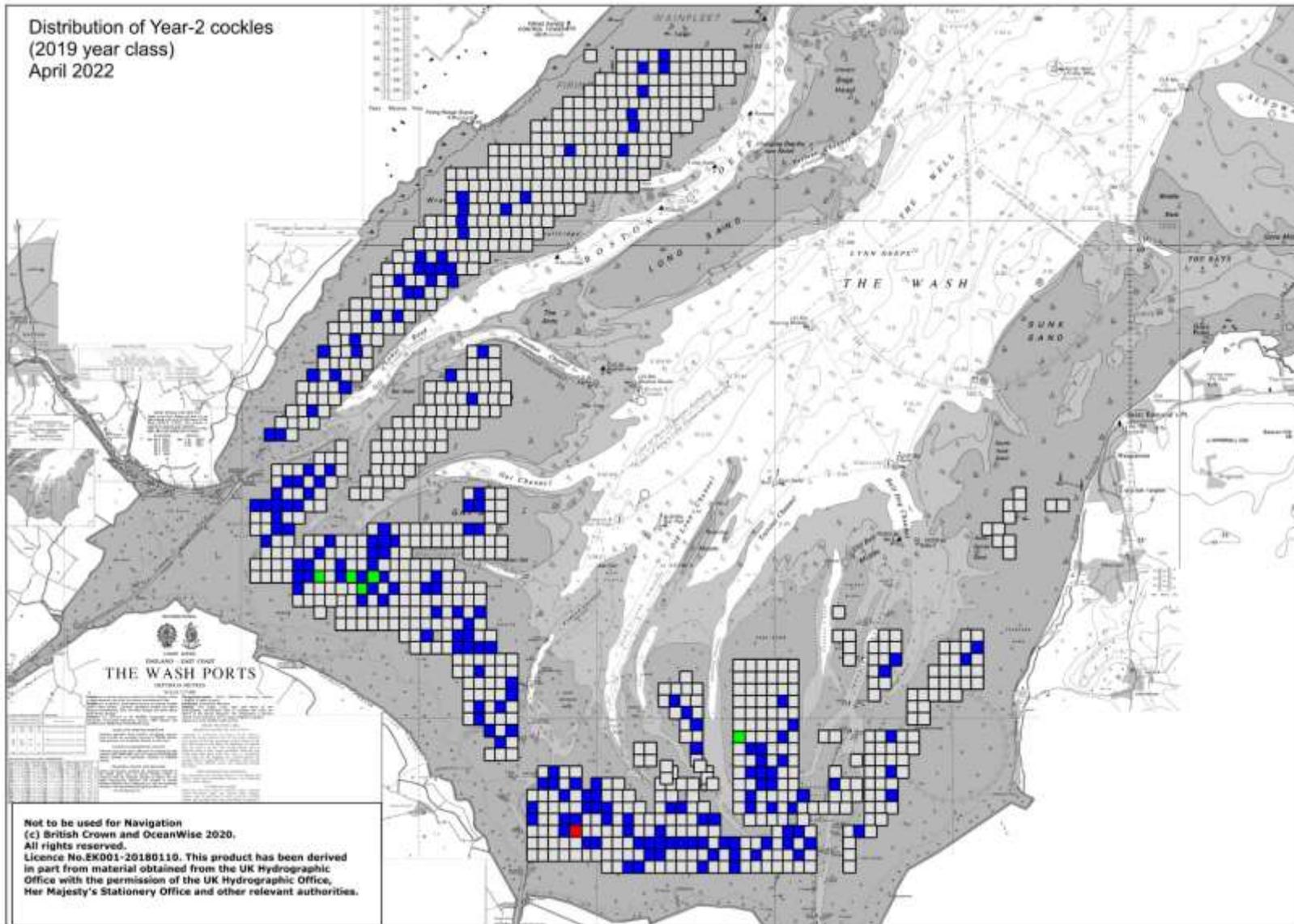


Figure 6 – Chart showing the distribution of Year-2 (2019 year-class) cockles at the time of the 2021 spring surveys

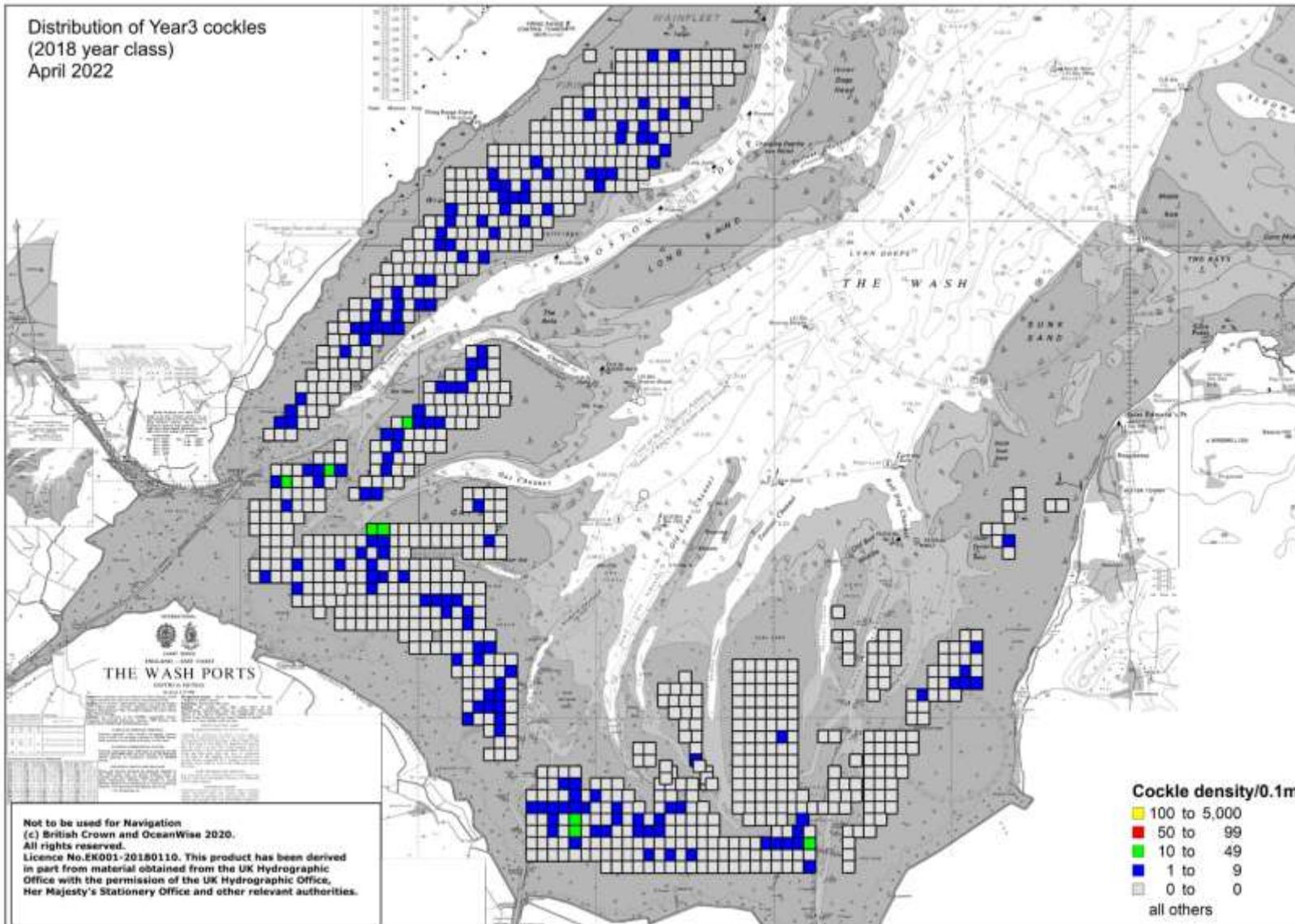


Figure 7 – Chart showing the distribution of Year-3 (2018 year-class) cockles at the time of the 2021 spring surveys

Cockle distribution

Compared to most years, the cockle densities shown in the charts above are low. In figure 2, which shows the distribution of adult (≥ 14 mm width) cockles, there is only one station where their densities exceed $500/\text{m}^2$ (coloured red on the charts). As this tends to be the minimum density for a hand-worked fishery to achieve a 2-tonne daily quota, opportunities for a fishery based on this size-range of cockles is limited.

In recent years, due to “atypical” mortality killing disproportionate numbers of larger cockles, there has been a tendency for the fishery to target smaller cockles before they die, particularly if the targeted patches also contain some large cockles. Figure 3 shows there are several high-density patches of <14 mm width juvenile cockles present on the beds. However, the similarity between figure 3 and figure 4, which shows the distribution of Year-0 cockles, highlights that numerically, the population of <14 mm width cockles shown in figure 3 is dominated by Year-0 cockles. Having only settled last summer, the Year-0 cohort are currently only 5-9 mm in width and won't spawn until 2023 at the earliest. Where their densities exceed $1,000/\text{m}^2$ (areas coloured yellow in figure 4) it is policy in the Wash Cockle Fishery Management Plan to protect them with spatial closures, but even outside of these areas, Year-0 cockles should not be targeted by the fishery (see section below, “Natural Mortality and Recruitment”).

Figures 5 and 6 show the distributions of Year-1 and Year-2 cockles. Individuals from these two cohorts could be of a fishable size this year, particularly the Year-2 stocks. However, having originated from poor settlements in 2019 and 2020, their densities are sparse, particularly as some were targeted during the 2021 fishery. There is a patch of Year-1 cockles on the Tofts that exceed $500/\text{m}^2$, but they are not present in a fast-growing area and are currently only 7-10 mm in size. The only place where the surveys found Year-2 stocks exceed densities of $500/\text{m}^2$ is a small patch on the Inner Westmark Knock. Here, they have reached a size of 13-15 mm width and their densities are boosted with additional Year-1 and Year-3 cockles (plus Year-0 spat). However, while the cockle density in this area does appear fishable, and the survey sample indicated the area could support up to 400 tonnes of cockles, in reality it is likely to support fewer because a foot survey found the patch does not cover the full 12.44 hectares represented by the sample station and the cockle distribution in the area was found to be patchy.

Figure 7 shows the distribution of Year-3 cockles that are the survivors from the last large settlement in 2018. This cohort supported a late summer fishery on Friskney and the Gat in 2019, and were the main cohort targeted during the 2020 and 2021 fisheries. They have also been vulnerable to atypical mortality during those years, but while significant losses have been seen, the survey data and mid-season bed inspections have found mortality rates to be lower than seen in previous cohorts. While this cohort is now sparsely distributed, due to the individual cockle sizes, they are still the largest of the cohorts in terms of biomass, contributing 3,922 tonnes towards the overall stock biomass (see figure 8).

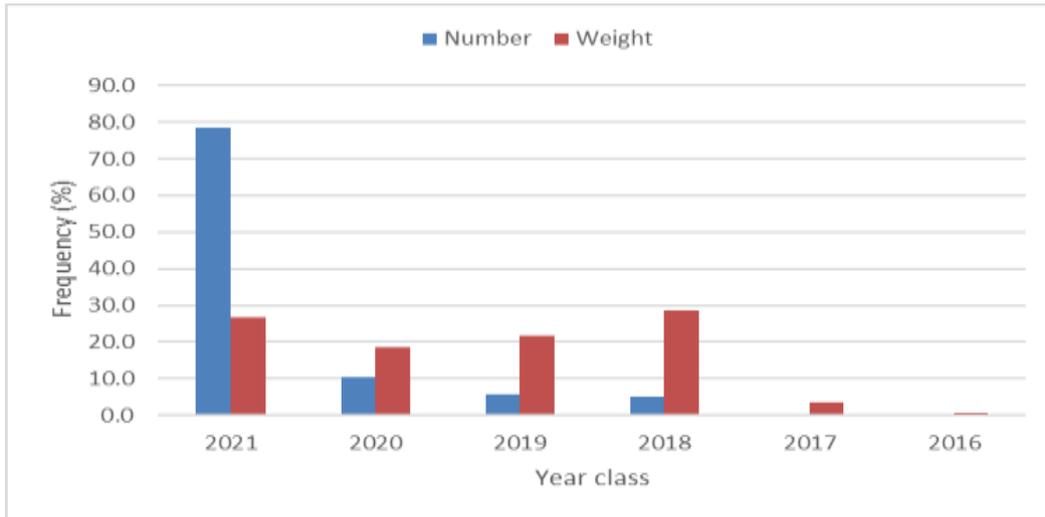


Figure 8 – Graph showing the proportionate sizes of each year-class cohort in terms of numbers (blue) and weight (red)

The stock summary table and charts above show the cockle stocks to be low this year. For comparison, figure 9 shows the biomass of adult and juvenile cockles present during the annual surveys from 2000 onwards. From this graph it can be seen that during this period, the stocks have only been lower in 2004 and 2011.

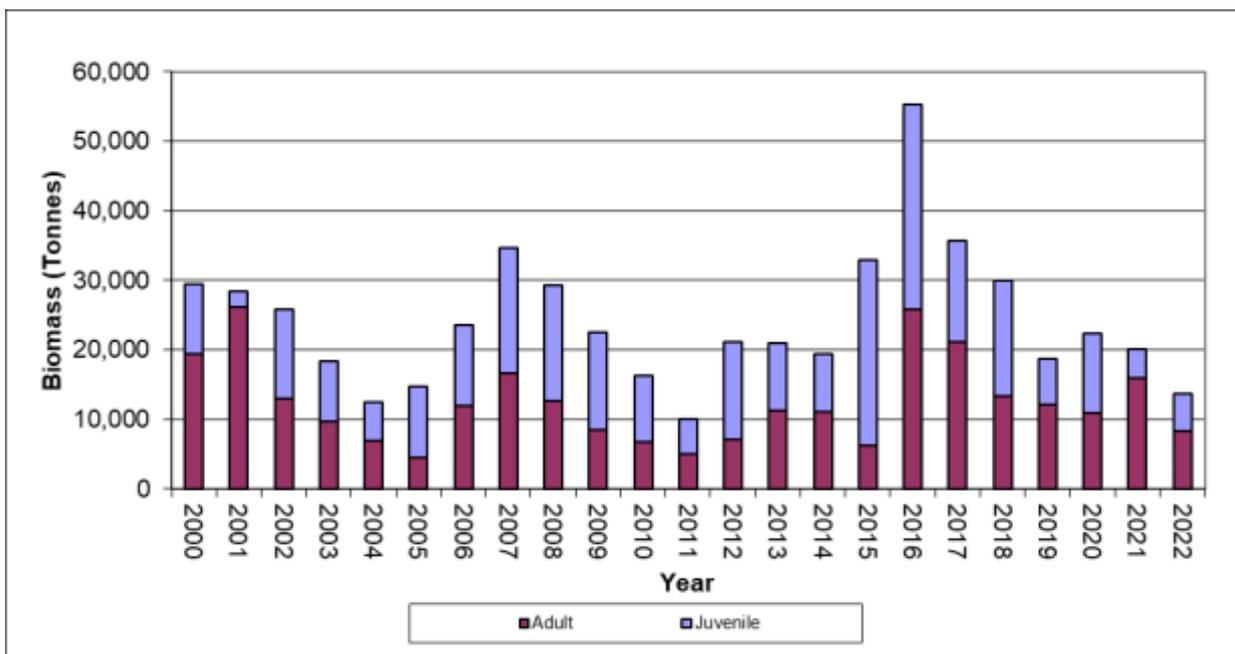


Figure 9 - Adult and juvenile cockle stock levels between 2000 and 2022 on the regulated beds

Due to the tendency for cockle numbers to be biased in favour of younger/smaller individuals, density charts showing cockle numbers (as seen in figures 2-7) do not always reflect the better fishing opportunities. Usually, cockle densities showing biomass are better indicators of where the best fishing opportunities are situated. Figures 10 and 11 show the cockle distributions in 2021 and 2022 in terms of biomass of total stock (excluding Year-0's).

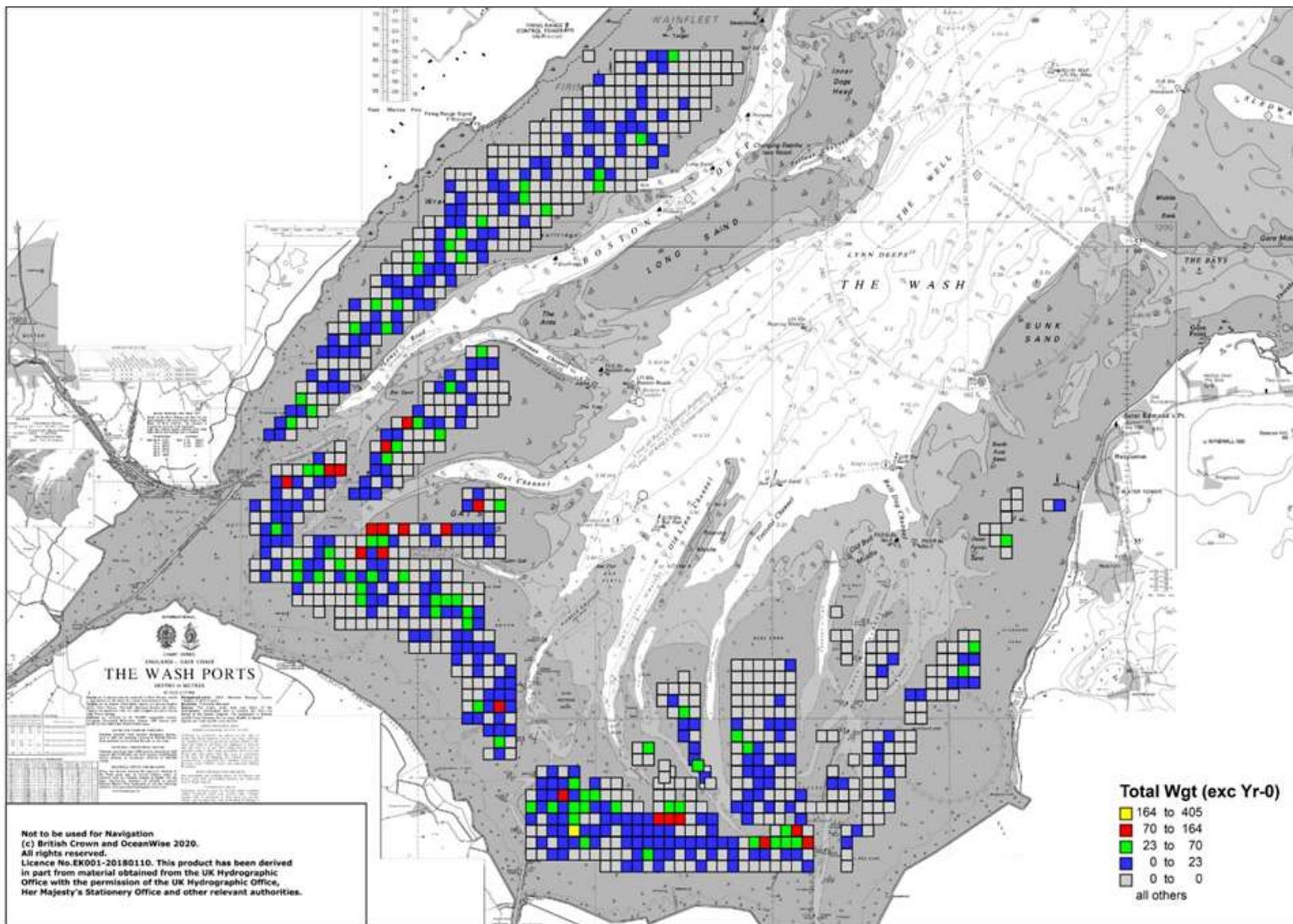


Figure 11 – Chart showing the total weight (g/0.1m²) of cockles at each station at the time of the 2022 spring surveys

By comparing the above two charts, it can be seen that the overall cockle densities this year are poorer than last year. In particular, the areas of higher density cockles on the Dills, Tofts, Hook Hill and Inner Westmark Knock in figure 10, that supported the majority of the 2021 fishery have been thinned out. Only small patches of cockles now remain in fishable densities and are unlikely to support anything more than a very small-scale fishery.

Natural Mortality and Recruitment

Since 2008, high proportions of cockles have died annually from what has been termed “atypical mortality”. These mortalities tend to occur during the summer months and primarily affect cockles that have reached a size of about 13-14mm width. On the majority of beds, the peak mortality occurs two years after the cockles have settled, but on the beds where cockle growth is slower, mortalities tend to be spread out over the second and third years. On the faster-growing areas, mortality rates among the vulnerable sized cockles have been seen to exceed 90% of their biomass some years and in most cases exceeds 50%.

Faced with such high natural losses, the fishery can only remain viable if there are regular settlements of new recruits. Fortunately, since 2004 widespread settlements have occurred more regularly in The Wash than during the previous decades, when recruitment tended to be erratic. Figure 12, which plots the numbers of Year-0 cockles found in the survey samples since 2003, shows a fairly regular pattern of good spatfalls occurring every second or third year. These regular settlements have helped to offset natural and fishery losses, producing the recoveries seen in figure 9 and have even resulted in one of the largest cockle stocks on record in 2016. However, because the cockles are particularly vulnerable to “atypical” mortality from their second year, such recoveries are inevitably short-lived, requiring further settlements to maintain sustainability. When these do not occur, or are too small to replace the losses, the stocks quickly decline.

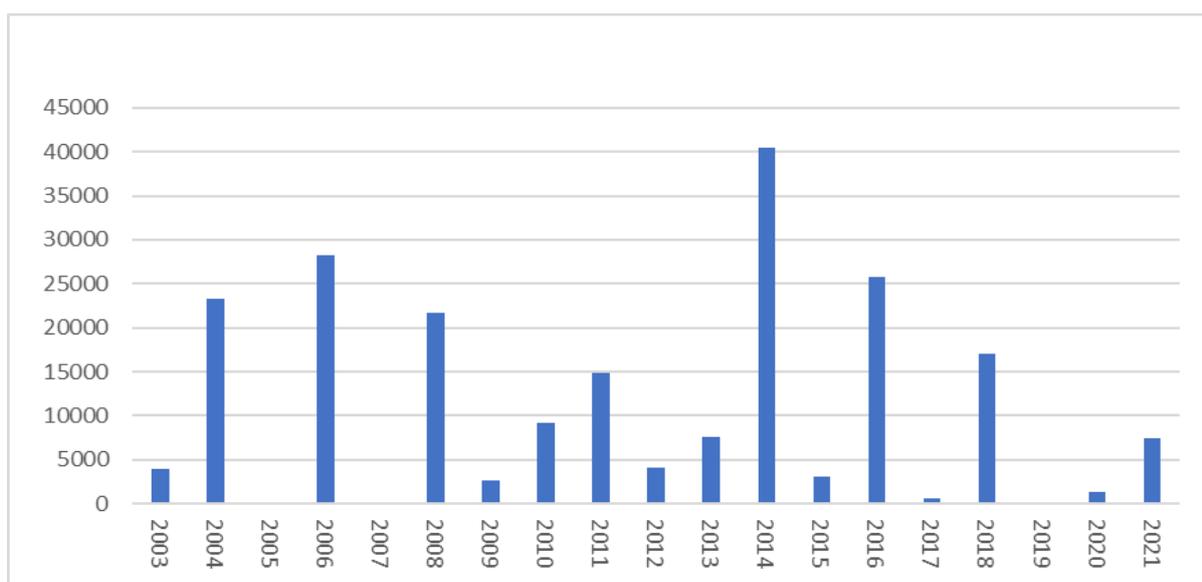


Figure 12 – Graph showing the relative size of annual spatfalls on the regulated beds since 2003

Two years of poor settlements in 2019 and 2020 have been insufficient to replace losses that have occurred during that period, resulting in the stocks rapidly declining to the current low levels. The 2022 survey found there had been a moderate settlement in 2021, but as can be seen in figure 12, it is small compared to some of the peak settlements seen between 2004-2008 and 2014-2018. Further, rather than having a widespread coverage across the intertidal beds, the settlement distribution seen in figure 4 shows the higher density patches are limited to areas of the Butterwick, Dills, Mare Tail and Inner Westmark Knock sands.

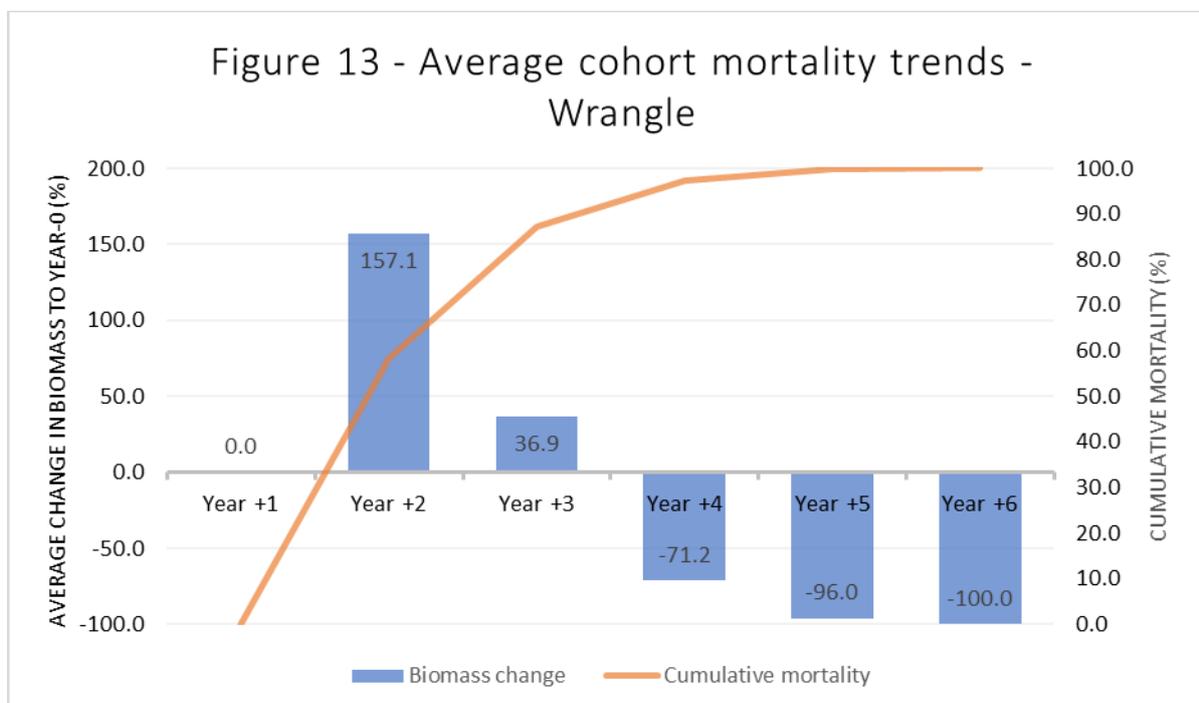
On occasions in previous years, when there has been good settlement on fast-growing beds situated in vulnerable areas, where the risk of loss is high, cockles from the previous year's settlement have been opened to the fishery in late summer as they become Year-1's and they have reached a size of approximately 12-13 mm width. In recent years, such fisheries have been opened at Friskney and the Gat, in areas vulnerable to winter storms, and on the Roger where a dense area of juvenile cockles were vulnerable to ridging out. Such fisheries are only considered, however, when there are high densities of juveniles elsewhere to safeguard the sustainability of the fishery. Unfortunately, for fishermen hoping for such an opportunity this year, these faster-growing sands have not benefitted from an appreciable settlement. Further, while last summer's recruitment settled in good densities on several of the beds, its distribution is not considered widespread, nor as seen in figure 12, particularly large. Considering the usual growth rates in the areas it has settled, it will be at least 2023 or possibly 2024 before the majority of this cohort is of fishable size. Due to the current low levels of stock on the intertidal beds, it is important that in the interim, this cohort is protected.

Consequences of fishing “down the age groups”

Prior to the high mortalities associated with “atypical” mortality that began in The Wash in 2008, fishermen tended to target cockles that had reached 14mm width and many had a preference for cockles that had attained 16mm width. Because “atypical” mortality tends to predominantly affect larger cockles, stocks of younger cockles have been targeted in recent years before they die. Initially, this meant fishermen changed from targeting predominantly 3-year old cockles to 2-year olds. Over the course of a few years, however, the thinning of 2-year old stocks has led to some fishermen starting to target even smaller 1-year old stocks. Originally, the absence of market demand for small cockles limited this behaviour but recently markets for small cockles have developed, providing a financial incentive for landing juvenile stocks. Although it has been recognised that cockle stocks have previously recovered from some very low stock levels, fishing juvenile stocks presents issues. Firstly, fishing cockles before they have spawned reduces the spawning potential of the population, potentially reducing the size of future settlements. Secondly, by thinning the stocks at increasingly younger ages/sizes, reduces the densities they would otherwise achieve the following year. This practice then creates a vicious cycle in which faced with reduced stock densities resulting from previous fisheries, fishermen resort to targeting even younger stocks. This situation has now reached the stage where some fishermen have questioned the potential for a late-summer fishery this year targeting last summer's settlement. As mentioned above, such fisheries have occasionally been opened in the

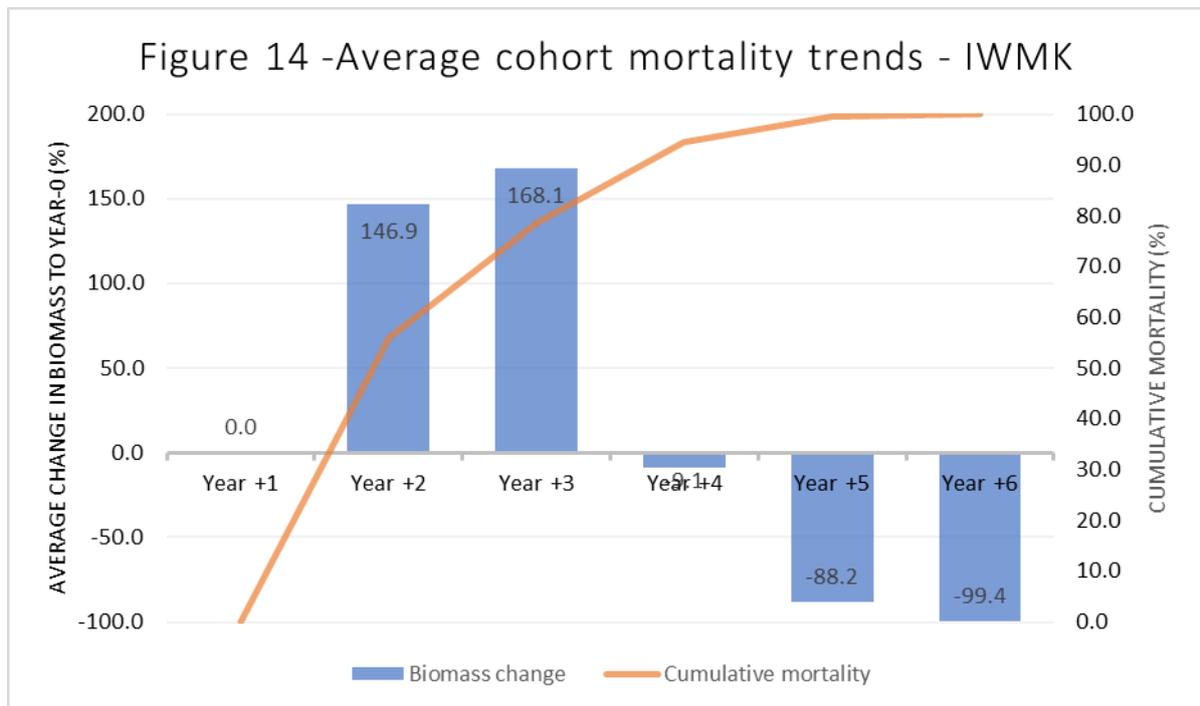
past, but only on beds considered vulnerable to imminent loss, and even then, only if there are significant densities of juveniles elsewhere to ensure sustainability. Fishing those juveniles this year would have a detrimental impact on the recovery of the fishery, reducing the potential densities of next year's Year-1 stocks and placing an even greater reliance on targeting Year-0 stocks in the future. Having a fishery dependant on targeting Year-0 juveniles would inevitably result in more fishery closures, either because there hadn't been a settlement, or because the overall biomass of the stock was no longer able to reach Conservation Objective targets. The reduced spawning stock could also result in smaller, more erratic settlements in the future. While the size of the stock biomass is heavily influenced by natural recruitment and mortality, the potential impacts on future recruitment from fishing juvenile stocks should not be underestimated.

Analysis was conducted of the survey data from 2003 onwards to look specifically at annual survival rates of each year-class cohort. In the graphs below, the orange lines show mortalities in terms of cockle numbers. These lines are invariably steep, reflecting the very high mortality rates encountered among small cockles. Unlike cockle numbers, however, which will always be highest before any losses are incurred, data plotting stock biomass follow a different pattern because individual cockles gain weight as they grow. In these graphs the blue columns show cockle biomass relative to their biomass at the time of their first survey following settlement. As such, any data above the 0.0 line means there is greater biomass than at the time of the first survey and anything below that line means the biomass is lower than that first survey. These graphs have been developed for each bed and several show a similar pattern to the one in figure 13, depicting the situation at Wrangle, in which the peak biomass for any particular cohort is distinctly 2 years after the settlement.

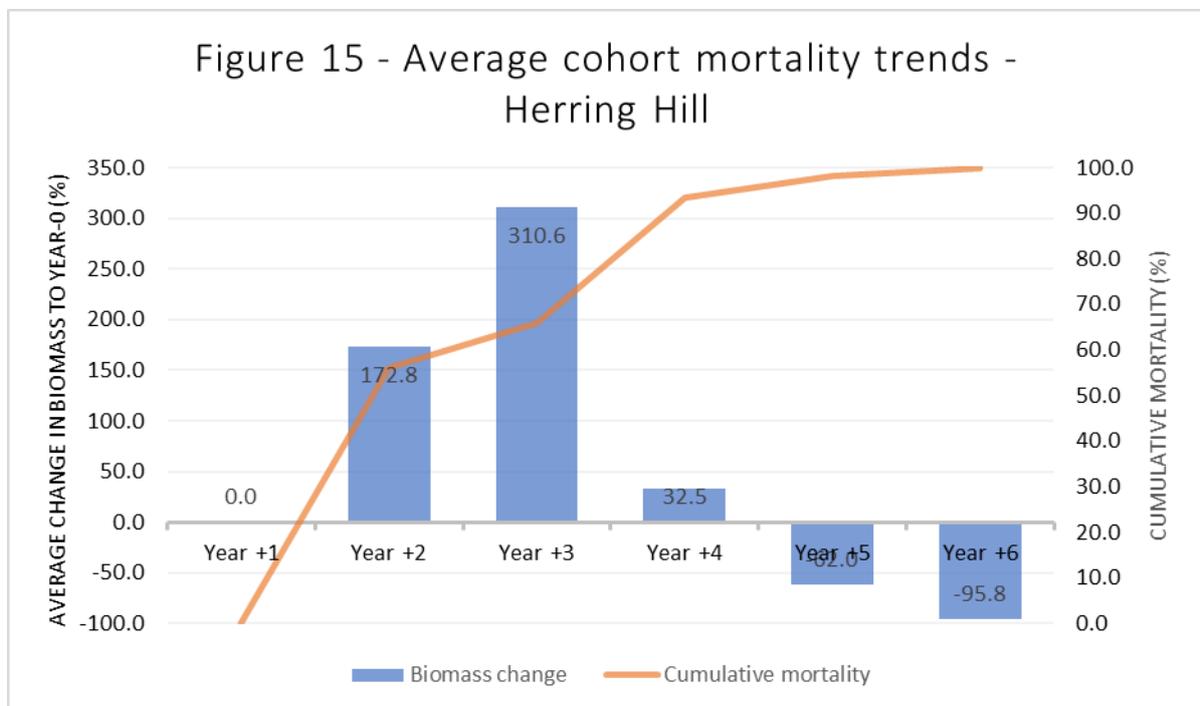


Other beds, including the Roger/Toft, the Gat and Holbeach have patterns similar to the graph for IWMK in figure 14, where the peak biomass is spread over the second

and third years. (Note - In the case of the Gat and Roger/Toft, this is likely to be due to those beds supporting discrete patches of faster growing and slower growing areas within the same bed).



On some of the higher elevated beds, such as Herring Hill, where cockle growth is slow, the peak biomass is distinctly in the third year as seen in figure 15.



What these graphs highlight is that by now fishing Year-1 cockles, those doing so are not only targeting cockles that could survive for another year, but they are also fishing them at a suboptimal biomass; effectively reducing the size and value of the fishery.

These data show that, ideally, the 2021 juveniles should not be targeted until 2023 on the faster-growing areas or until 2024 on the slower-growing areas.

Cockle stock sustainability targets

Since its introduction in 1998, the Total Allowable Catch (TAC) for the fishery has been calculated as a third of the adult cockle stock (cockles ≥ 14 mm width). Based on the 8,226 tonnes of adult cockles present this year, this would produce a maximum TAC of 2,742 tonnes. However, the cockle fishery management plan details a number of minimum thresholds that the stocks must exceed before a fishery can be opened. These include maintaining a total cockle stock biomass above 11,000 tonnes and a minimum spawning stock biomass (cockles ≥ 14 mm width) above 3,000 tonnes. As the current total stock is only 13,711 tonnes, a TAC of 2,742 tonnes would take the total stock below the 11,000 tonnes minimum threshold. Based on these figures, therefore, the TAC would need to be limited to 2,711 tonnes.

Conservation Objective targets

The Wash is an important site for over-wintering bird populations. When determining the TAC for the Wash cockle fishery, therefore, consideration must also be given to maintaining shellfish stocks above a minimum SSSI Conservation Objective target threshold required to support those overwintering populations. This is done using a “Bird Food Model” that was developed specifically for The Wash in 2004 and was reviewed last year. Because the overwintering birds prey on both cockles and mussels, the model considers both of these stocks in its calculations and uses the oystercatcher population as an indicator for the wider bird population. In its calculations, the model uses the following values:

- **Target number of oystercatchers overwintering in the site.**

Natural England provides advice on the target number of overwintering oystercatchers each year following bird surveys. The current advice is:

Restore the size of the non-breeding population at a level which is above 24,000 individuals, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.

This advice means the target is to support a minimum of 24,000 oystercatchers, but if their population exceeds that number, the target is to avoid deterioration from the current level. Based on a five-year mean, the current number of oystercatchers is 26,586, so that is the number used in the current calculations.

- **Shellfish stocks.**

The most current survey data from the regulated beds are used to inform the model of cockle and mussel stocks. In this case these are the 2021 autumn mussel surveys and the 2022 spring cockle surveys. Because oystercatchers only prey on shellfish above a certain size, the figures that are used from these surveys are:

- Total biomass of cockles excluding Year-0 stocks = 10,027 tonnes

- Total biomass of mussels $\geq 25\text{mm}$ length = 12,137 tonnes (after 80 tonne hand-worked relaying fishery)

- **Ash Free Dry Mass (AFDM)**

The model uses Ash Free Dry Mass for determining the food requirements of the birds.

- Bird mortality studies conducted by the British Trust for Ornithology (BTO) calculate the shellfish requirement of individual oystercatchers is 40kg AFDM.
- 1kg of live mussels = 0.058kg AFDM
- 1kg of live cockles = 0.030kg AFDM

2022 Bird Food Model Calculations

- Bird food AFDM requirement = 26,586 oystercatchers x 40kg = 1,063 tonnes AFDM
- Mussel AFDM contribution = 12,137 tonnes x 0.058 = 704 tonnes AFDM
- Cockle AFDM contribution = 10,027 tonnes x 0.030 = 301 tonnes AFDM
- Total shellfish AFDM = 704 tonnes + 301 tonnes = 1,005 tonnes AFDM

The above figures used by the model indicate the regulated cockle and mussel beds in The Wash do not support the number of birds estimated to be present in the site. Based on the number of oystercatchers and the biomass of mussels currently present, the cockles would need to contribute a minimum of 359 tonnes AFDM to meet the minimum threshold. This is equivalent to 11,967 tonnes live weight of cockles (excluding Year-0's). There is, therefore, currently a shortfall of 1,940 tonnes of cockles. As the current stocks do not meet the minimum Conservation Objective targets, a Habitats Regulations Assessment for a proposed fishery would have to conclude that the fishery was likely to cause a significant adverse effect to the site features. As such, **opening a cockle fishery this year would not be approved**. It should be noted, the stocks would have failed to achieve the target threshold, irrespective of whether the 80 tonnes hand-worked mussel fishery was opened or not.

Considering cockles in Le Strange Estate and/or the Several fishery for inclusion within the Bird Food Model

The Wash SSSI covers the whole of The Wash, not just the regulated cockle and mussel beds. Usually there are sufficient stocks within the regulated beds to operate the cockle and mussel fisheries without even needing to consider the additional stocks within the several fishery and the Le Strange Estate. As the birds do not recognise these anthropogenic boundaries when feeding, however, officers have raised the question with Natural England as to whether these stocks can be included in the bird food model when stocks within the regulated fishery alone are insufficient to meet the required targets.

There are a number of challenges with doing so. Foremost, officers are currently uncertain whether stocks from the several or Le Strange Estate fisheries were incorporated into informing the bird food model. If they weren't, and only regulated

stocks were used to derive the 40kg AFDM food requirement, adding these additional stocks to the calculations now would artificially inflate the stock figures in the calculations. This would lead to an underestimation of what the birds actually require, for their food requirement would be 40kg AFDM plus whatever they usually derive from outside of the regulated beds. This question has been raised with the developer of the bird food model.

There are then additional concerns regarding the management of these additional stocks. To be effective in preventing large-scale bird mortalities, the management regime needs to ensure there are sufficient stocks remaining at the end of the fisheries to ensure there is sufficient food available over winter for the over-wintering bird populations. The regulations in place on the regulated beds are sufficient to manage those stocks within the bounds of natural fluctuations. The situation is different for the several fishery and Le Strange Estate fishery, however. As the stocks within those areas are privately owned, legally, there is nothing stopping the owners totally fishing them out. As such, there is a danger that if their stocks were used in the bird food model calculations to facilitate a fishery within the regulated fishery, subsequent removal of those stocks from the private fisheries could lead to high bird mortalities. This is something that needs to be avoided at all costs. The Wash is already a heavily designated site that comes under close scrutiny from conservation NGOs. Should the management of the regulated fishery result in high bird mortalities, as were seen in the late 1990s, the consequences for future fisheries could be severe.

Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Action Item 11

Eastern Inshore Fisheries and Conservation Authority Meeting

08 June 2022

Whelk management in The Wash

Report by: Luke Godwin (Senior IFCA – Regulation)

Purpose of Report

To report on the risks to the sustainability of the whelk fishery in The Wash and propose management measures to address this risk.

Recommendations

It is recommended that members:

- **Note** the contents of the report
- **Agree** in principle to introduce management measures set out in the report, subject to consultation with fishery stakeholders and further consideration of the impacts on them
- **Direct** officers to undertake a consultation in accordance with Schedule 1 of the Whelk Permit Byelaw 2016
- **Agree** to delegate authority to the CEO in consultation with the Chair and Vice-Chair to amend the proposed measures and / or to determine whether to introduce them taking into account the consultation responses

Background

Whelk fisheries are managed in the Eastern IFCA district through the Whelk Permit Byelaw 2016. The byelaw enables the Authority to issue, vary or revoke permit conditions which can be used to manage the fishery.

The key management measures in place to manage the whelk fishery are a limitation on the number of pots per vessel (500 pots) and a minimum landing size (of 55mm). There is no limit on the number of permits issued or restrictions on the amount of access to any particular whelk fishing area.

Report

The Wash represents an important whelk fishery within the district, with the highest annual level of effort for any area in the district.

Typically, whelk fishing effort reduces during the summer months (June, July, August, and September), as most whelk fishermen participate in the annual cockle

fishery. Given that the cockle fishery is unlikely to open this year, fishing effort is anticipated to increase compared to previous years as fishermen seek alternative fishing opportunities.

Risk to the whelk fishery

Initial findings from the whelk stock assessment (to be finalised and published in full later in the year) indicate that fishing effort and fishing mortality is too high in The Wash. The findings are set out in Appendix 1, but in summary:

- Landings per unit effort (LPUE) are used to indicate whelk stock health. A decline in LPUE since 2019 indicates that the fishery is potentially over-fished.
- LPUE appears to be relatively stable between 2016 to 2018 (a slight decrease is detected but not thought to be significant).
- Annual landings of whelk from The Wash peaked in 2019 and LPUE declined markedly the following year (2020) and did not recover in 2021.
- The declining LPUE indicates that fishing mortality (landed weight) is too high and potentially impacting the sustainability of the stock.
- The anticipated increase in effort is considered likely to impact the sustainability of the whelk fishery further.
- Officers have received reports of non-compliance with the pot limitation, Minimum Landings Size and / or are not reporting catch accurately. These factors are likely to artificially increase LPUE and so LPUE may be lower even than the data suggests which further increases the risk to the fishery.

Management measures to prevent fishing mortality from increasing would reduce the risk to the fishery. Reducing fishing mortality to levels below that seen in 2020 and 2021 would likely have the most beneficial effect on the fishery.

Proposed measures

Proposed management has been developed following an initial assessment of the fishery. It is intended that these proposals would be considered and further developed following consultation with industry and a final decision made taking into account consultation responses.

The intention of the proposed measures is to reduce the risk of additional fishing effort negatively impacting the sustainability of the fishery. The key considerations are as follows.

Ensuring compliance with minimum landing size and pot limitation

The minimum landing size is a key measure for protecting the fishery. Whelks within The Wash are thought to become sexually mature (and therefore capable of reproducing) at around 55mm in length. Therefore, the impacts of excessive fishing effort are, to an extent, mitigated by the minimum landing size.

In addition, monitoring the stock health is dependent on determining LPUE which in turn relies on accurate catch returns. Non-compliance with the pot limitation has a side effect that the landed weights reported by fishermen are

likely to be in excess of what is genuinely caught from 500 pots, which artificially inflates LPUE and gives the impression of a healthier stock.

In both cases, introduction of IVMS and enhanced reporting rates for VMS+ devices are likely to further deter non-compliance and make detection and enforcement of such more effective. Both are anticipated to come into effect as a result of national measures but not during a timeframe which effectively reduces risk in this fishery. Action Item 12 of this meeting reports on consideration of early adoption of these requirements.

In addition, it is proposed that all catch caught from within The Wash must be labelled and stored separately from catch caught from outside of The Wash. This will enhance effective enforcement of the minimum landing size in particular, given that MLS outside of the district is less (45mm).

A limit on annual fishing mortality

In the absence of a stock survey (as in the case of the cockle fishery for example), LPUE is used to estimate an appropriate level of fishing mortality per year.

Given that LPUE declined after 2019, it is assumed that the fishing mortality during 2019 was too high and potentially led to or at least contributed to the subsequent decline. If fishing mortality reaches that level, there is a high risk of further impacts. The total landed weight of whelk that year was 435 tonnes, and it is considered crucial that fishing effort does not reach that level this year.

The fishing mortality from The Wash for the years preceding the marked reduction in LPUE was between 194 and 257 tonnes. Restricting annual landings to this extent may enable the fishery to recover from the observed reduction in LPUE.

However, this would represent a marked decrease in landed weight compared to the last two years (of between 7 and 30% compared to the last two years) at a time when a number of factors are adding pressure to fishing businesses (e.g. cost of living increases, fuel costs and the lack of a cockle fishery). The fishing mortality for 2020 and 2021 was 273 and 279 tonnes respectively.

It is considered likely that enhanced compliance with the minimum landing size and pot limitation will naturally limit fishing mortality and reduce the risk to the fishery. Therefore, it is proposed that it may be appropriate that a cap on annual landed weight could be less precautionary this year, with continued monitoring of the situation used to identify if effort within the year is impacting the stock. It is proposed therefore that measures should limit effort so that it does not greatly exceed the 2020 and 2021 levels but does not exceed 435 tonnes.

Mechanism to limit fishing mortality

In order to effectively limit fishing mortality, it is proposed that access to the Wash whelk fisheries is limited to the 6 permits which fished therein during January to March 2022 and to implement monthly landing quotas.

The limit on access is considered appropriate on the basis that these vessels are established in the whelk fishery already, having invested in the associated fishing gear and are to an extent already reliant on it. In addition, the impact of this is considered limited given that typically, only 1 additional vessel (which had not operated during those months) would join the fishery thereafter. In reality however, this cap will represent a loss of fishing opportunity to those who would have sought to access this fishery as an alternative to the cockle fishery.

Monthly landing quotas are proposed in Table 1 (below). These were determined taking into account the 'normal' seasonality of the fishery (i.e. in areas where there is no annual cockle fishery). If fully exploited, the total annual fishing mortality is estimated to be 321 tonnes. This exceeds the fishing mortality seen in 2020 and 2021 but does not exceed the 2019 level which is considered very likely to impact the stock.

	Jul	Aug	Sep	Oct	Nov	Dec
Monthly quota (kg)	2000	2000	2000	3000	4000	3000

Impacts

Whilst the annual fishing mortality is likely to increase compared to the previous two years, it is anticipated that there will be an impact on fishery livelihoods. This is because there is large variation in the 'normal' landings per month per vessel and some business models ordinarily land more than the above monthly quotas per month. During 2020 and 2021, the average monthly landed weight of whelks per vessel was in excess of 4000kg and some vessels routinely landed between 8 and 18 tonnes per month. The issue arises because the measures effectively assign a similar amount of whelk as is normally landed (in fact around 25% more) over a greater time period and between more vessels (because very few vessels typically continue to fish for whelk during the cockle fishery).

Business models which rely on whelk to a greater extent will be more impacted by the measures. It is suggested however, that the measures provide equitable access amongst those who rely on it and currently have access.

There is also an impact on fishermen who would have sought to participate in the whelk fishery as an alternative to the cockle fishery. Ideally, the fishery would be able to accommodate additional vessels however, such would either risk increasing effort to the extent that the fishery becomes unsustainable or, effort per vessel would have to be reduced to the extent that the fishery is not viable for each individual.

In addition, noting that if fully exploited the monthly quotas would still lead to additional fishing effort (compared to 2020 and 2021), there is a risk of impacting the productivity in subsequent years which would also impact industry through further reductions and/or poor returns from the same amount of fishing effort.

The proposals will be put to consultation with industry to determine the scale of impacts and seek industry's views. This will be taken into account when making a final decision on measures.

Risks

The assessment is based on catch returns with a moderate level of confidence in accuracy. There was a history of effectively over-reporting catch due to fishermen reporting landed weights of whelk caught inside and outside of the district. This affects both the LPUE estimates and estimates of fishing mortality. Whilst this impacts the confidence in the findings, the proposed measures are considered to be proportionate to the level of risk, noting that they effectively permit additional fishing mortality compared with the previous two years.

There is also some uncertainty in relation to the findings that the fishery is over-exploited. In particular, that the observed reduction in LPUE could be a result of natural variation, rather than as a result of high fishing effort in 2019. However, given that the estimated LPUE for recent years is likely to be an under-estimate, and that the permitted fishing effort will still exceed the levels seen in 2021 and 2020, the proposed measures are considered proportionate.

Furthermore, there is a risk that permitting additional fishing mortality (compared to the previous two years) will further impact fisheries sustainability. Again, the proposed measures are intended to balance the potential short-term impacts on industry viability with longer-term benefits on the stock sustainability. This will be mitigated however through continued monitoring of the fishery and further measures could be considered if necessary.

The measures could lead to displacement of fishing to other areas (noting that they apply only in The Wash) which could then lead to over-fishing in other areas. This will be mitigated, to an extent, by monitoring of effort and landings in these areas and further measures can be considered if necessary.

Next steps

A consultation will be held with potentially impacted stakeholders to further consider impacts.

It is proposed that authority is delegated to the CEO in consultation with the Chair and Vice-Chair to make a final decision on the measures. This is to ensure that they can come into effect with a timeframe which will effectively reduce risk to the whelk fishery.

Further consideration of the Wash whelk fishery, and the whelk fisheries throughout the district is required and will be informed by a whelk stock report which is currently being undertaken.

Financial Implications

None identified

Legal Implications

There is an inherent risk of legal challenge in Authority decisions which limit or restrict fishing opportunity. Such would typically challenge either the reasonableness of the measures or the process in coming to a decision.

The proposals are considered reasonable given the evidence which indicates a risk to the stocks and the risk of increased fishing effort in The Wash. However, the reasonableness of the measures needs to be further considered taking into account the views of those impacted. This will be achieved through a consultation and an impact assessment to inform a final decision on the proposals.

In terms of process, the risk of successful challenge is mitigated by due diligence and adherence to the process for introducing flexible permit conditions, which is set out in Schedule 1 of the Whelk Permit Byelaw 2016.

Conclusion

Analysis of the available data indicates a risk to the whelk fisheries as a result of over-fishing. Management measures are considered necessary to reduce this risk in the context that additional effort is anticipated as a consequence of the lack of a cockle fishery.

The proposed measures will prevent fishing mortality increasing to a level which is considered likely to further impact sustainability but not to the extent that the risk is removed entirely. A more precautionary approach would further reduce risk but also be more likely to impact fishery livelihoods.

Whilst the present proposals are considered a reasonable balance given the available information, further action may be required within the year if continued monitoring identifies further indications of over-fishing. This may include additional restrictions to limit annual fishing mortality.

Appendices

Appendix 1 - Initial findings from the Whelk fisheries assessment in relation to The Wash

Background Documents

n/a

Appendix 1 – Initial findings from the Whelk fisheries assessment in relation to The Wash

Introduction

This report considers initial findings from the Eastern IFCA Whelk fisheries assessment (Zoe Pearson, Marine Science Officer) and further analysis on the dataset (Luke Godwin, Senior IFCO – Regulation).

This initial report has been undertaken as a consequence of the increased likelihood of additional fishing effort in the Wash whelk fisheries, related to the likely lack of a cockle fishery this year.

Method and dataset

Whelk fishermen are required to provide monthly catch returns to the Authority. These provide fishing effort information (number of pots, soak duration), landings information (landed weight) and spatial information (areas fished).

This data was used to consider Landing Per Unit Effort (LPUE) i.e. how much whelk is landed per pot. Trends in LPUE can be used to provide insight into the health of a stock. If LPUE reduces over time, it is likely that the stock is becoming less sustainable. Increases in LPUE indicate that a stock is not being 'fully exploited' i.e. that it can sustain additional fishing mortality. Ideally, LPUE should remain stable over time.

The data used has known caveats, primarily that there was a history of unintentional misreporting by fishermen who provided total landed weight of whelk landed from a trip which included fishing from outside of the district. The known caveats are likely to have the effect of artificially increasing LPUE, making the fishery appear more sustainable than it is.

Results

Fishing mortality and LPUE

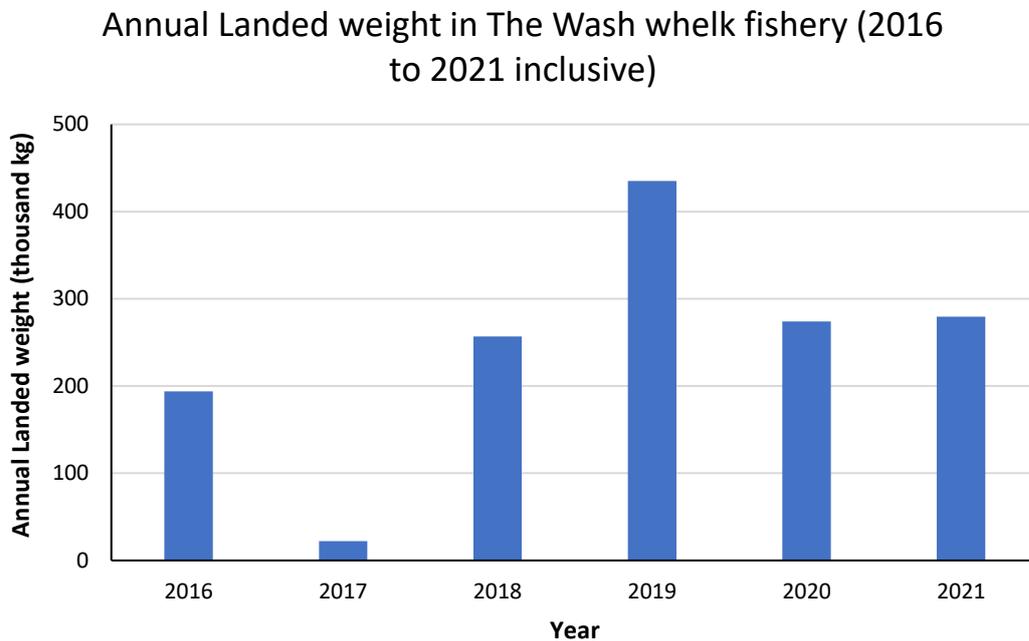


Fig1. Annual landed weight.

Fig 1 shows a peak in landed weight (fishing mortality) during 2019. Landed weights during 2018, 2020 and 2021 are more consistent.

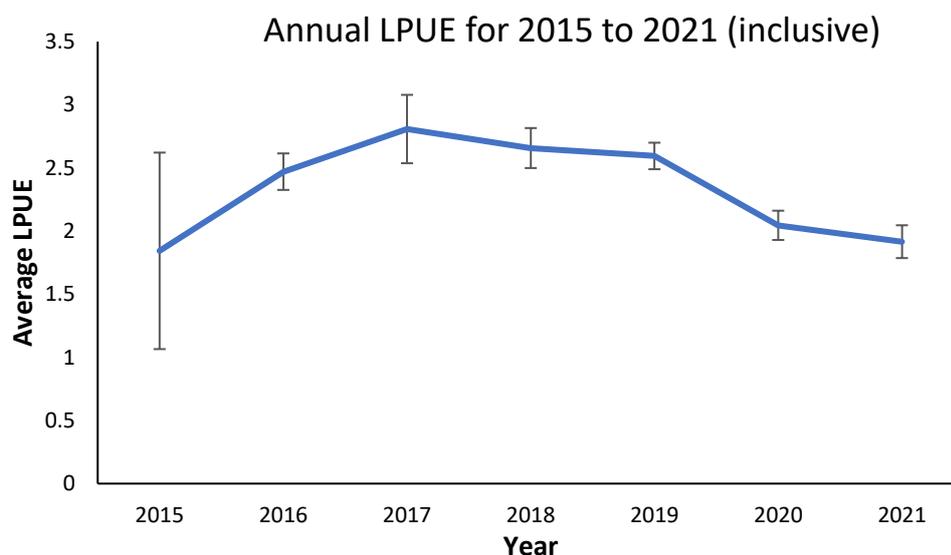


Fig 2. LPUE calculated for each year for the period 2015-2021, including data returned from vessels which may have over-reported landed weight. Error bars provided to indicate statistical differences between years.

Fig 2 shows what is considered a reasonably typical progression of an emerging fishery. The fishery started in The Wash at or around 2015, where there was little effort. The 2015 dataset only includes part of the year, after the Whelk Emergency Byelaw 2015 was introduced and included a reporting requirement which explains the large error for the data point for that year. LPUE then appears to increase until 2017 where it starts to decrease. However, the LPUE for those years does not appear to be significantly different. LPUE for 2020 however reduces relatively sharply and the difference does appear to be significant. The LPUE for 2021 remains at the lower rate, and is significantly different from 2019.

Potential increases in effort as a result of no cockle fishery

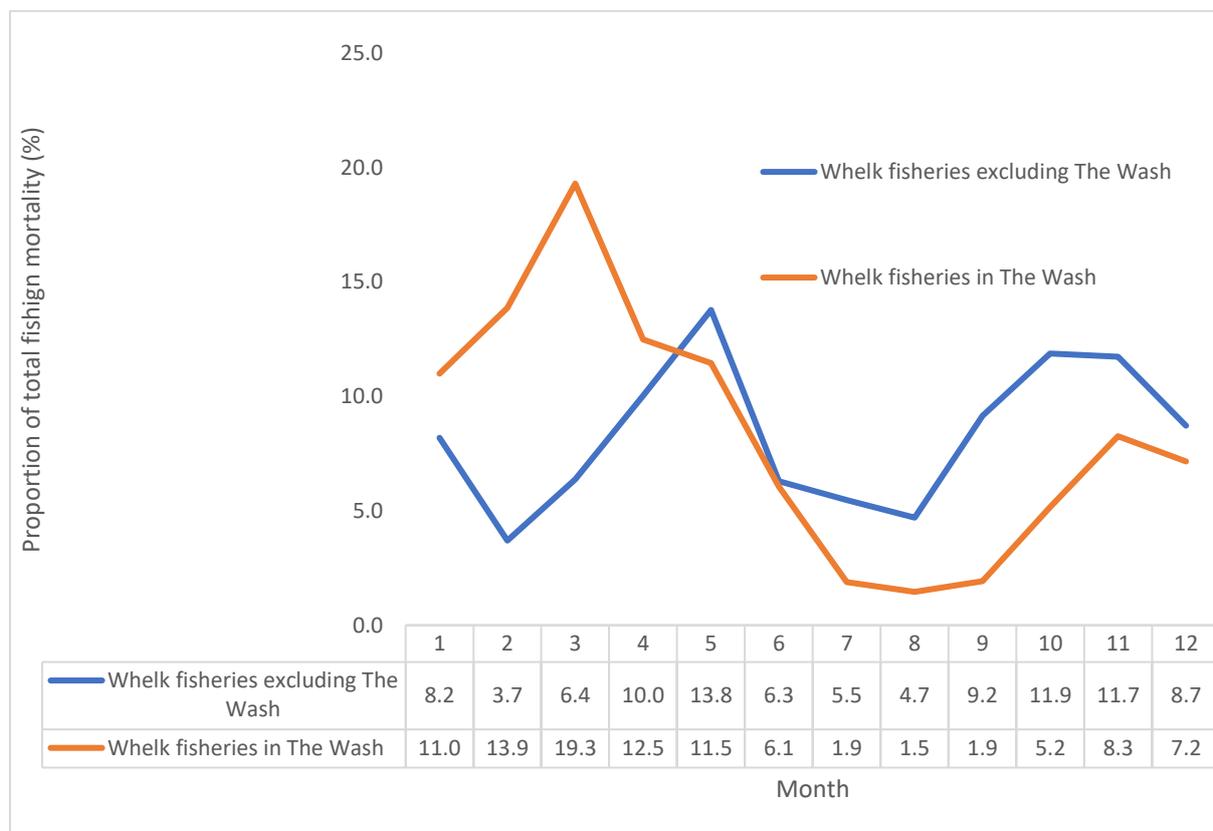


Fig 3. Shows the proportion of annual landed wight for each month in whelk fisheries outside The Wash (blue) and inside The Wash (Orange).

Whelk fisheries in the district are thought to be seasonal which reflects the behaviour of whelks through the year. Whelks are thought to either be less active or move further offshore during warmer months, which typically results in lower effort and lower landings.

The trend seen in fig 3 highlights this trend within and without The Wash.

Whelk fisheries in the Wash show a much stronger seasonality than in other areas within the district. The proportion of total annual landings during months 7, 8, 9 and 10 is markedly lower in The Wash compared to the rest of the district in particular.

The seasonality in The Wash is likely to reflect the presence of an annual cockle fishery which typically occurs during these months, rather than less availability of whelk. In other words, it is likely that the seasonality in The Wash does not reflect the availability of whelk but rather, the fishermen's preference to prosecute a different fishery during that time.

In the absence of a cockle fishery, fishing mortality could therefore increase. Using the seasonality of fisheries outside the Wash to project what is potentially available from the Wash fisheries, it is estimated that fishing mortality in The Wash is likely to increase by 25% over the course of the year as a result of no cockle fishery.

Whelk fishing effort and landings are highly variable in The Wash. Months 1,2 and 3 in particular are not good predictors of the total annual landed weight. Therefore, the likely annual landed weight from the fishery is difficult to predict. However, the landed weight in years 2020 and 2021 were very similar and potentially represent the establishment of a 'norm'. On that basis, the projected increased landed weight for 2022 is estimated as 337 tonnes if it were a 'typical' fishery, which would be the second highest annual landed weight (second to 2019). It is likely that without management control, the annual landed weight could be much higher.

Monthly fishing activity

Monthly landed weight was analysed on the basis that restricting such (in the form of a monthly quota) may be an appropriate management measure.

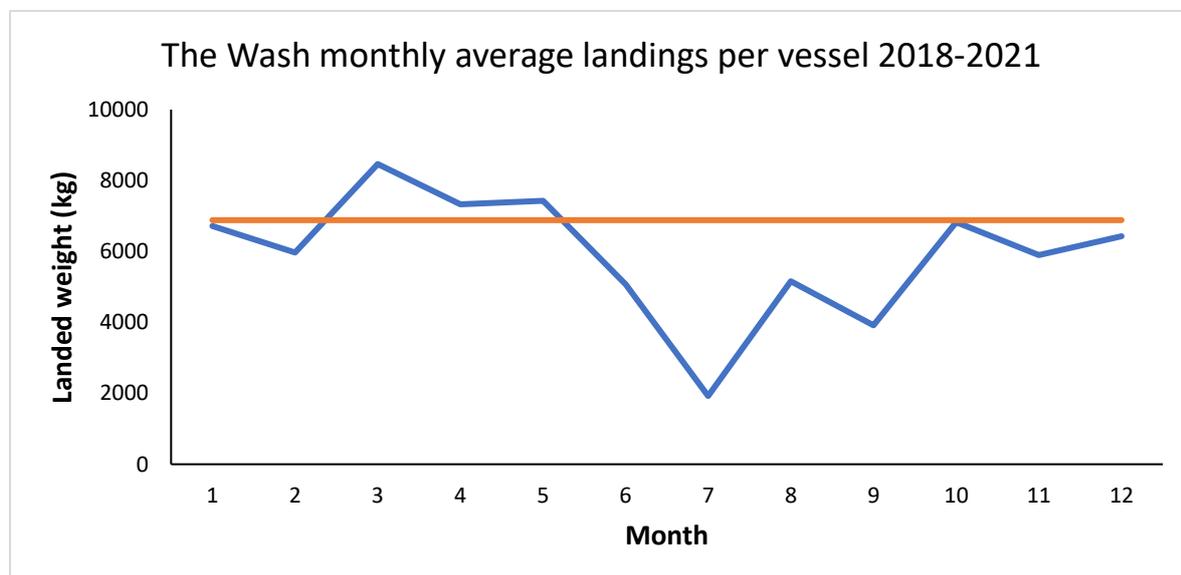


Fig4. Average monthly landed weight per vessel for 2018 to 2021. The trend line (orange) represents the average monthly landed weight for all months excluding 6,7,8,9.

Fig 4 shows that average monthly landed weight per vessel is relatively consistent for most months excluding months 6,7,8 and 9. The average monthly landed weight across the year excluding these months is 6885kg.

However, further analysis identifies that monthly landed weight varies a great deal between vessels.

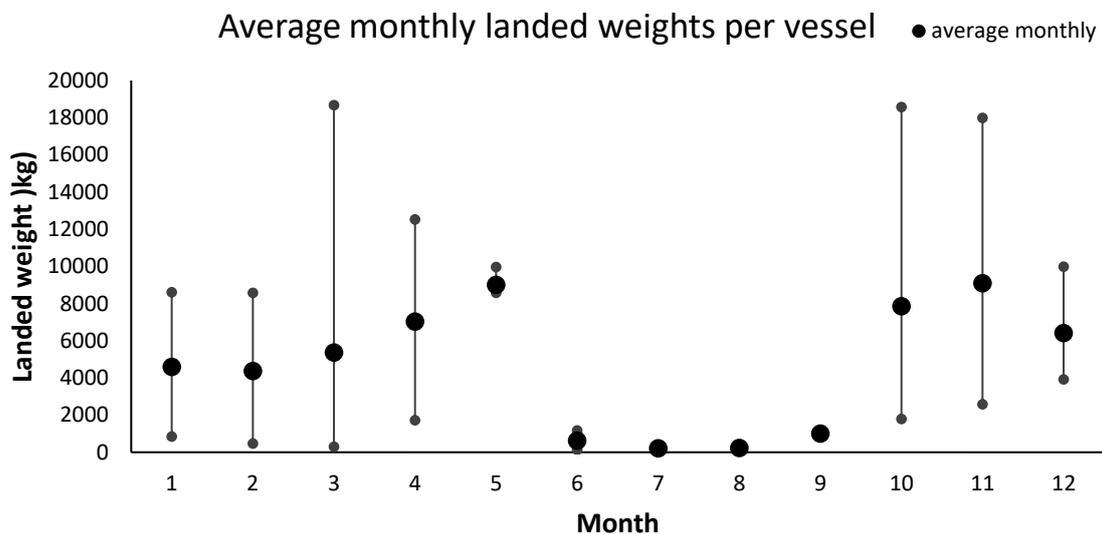


Fig5. Monthly landed weights per vessel during 2021. Large circles indicate the average for all vessels, small circles indicate the highest and lowest monthly landing weight.

Fig 5 highlights the variability per vessel of monthly landings and the large range of values.

Determining an appropriate vessel and monthly cap

In order to ensure the annual total landed weight does not exceed an appropriate level, a monthly cap per vessel could be used. This would also rely on having a limit on the number of vessels prosecuting the fishery.

The number of active participants in the whelk fishery varies annually. Fig 6 shows this variation, with a range of between 3 (2017) and 15 (2020).

Fig 6 also shows that the number of permits issued is not a good indicator of the amount of whelk landed per year. This is because most vessels participate in the fishery for only certain months of the year and as such there is a significant amount of latent capacity. Therefore, a limit on the number of vessel which can access the fishery is not sufficient to manage annual landed weight on its own.

The number of vessels permitted access to the fishery has an obvious impact on the monthly landed cap needed to ensure a certain amount of total effort. As the

number of vessels with access increases, the monthly landing quota would need to reduce proportionately.

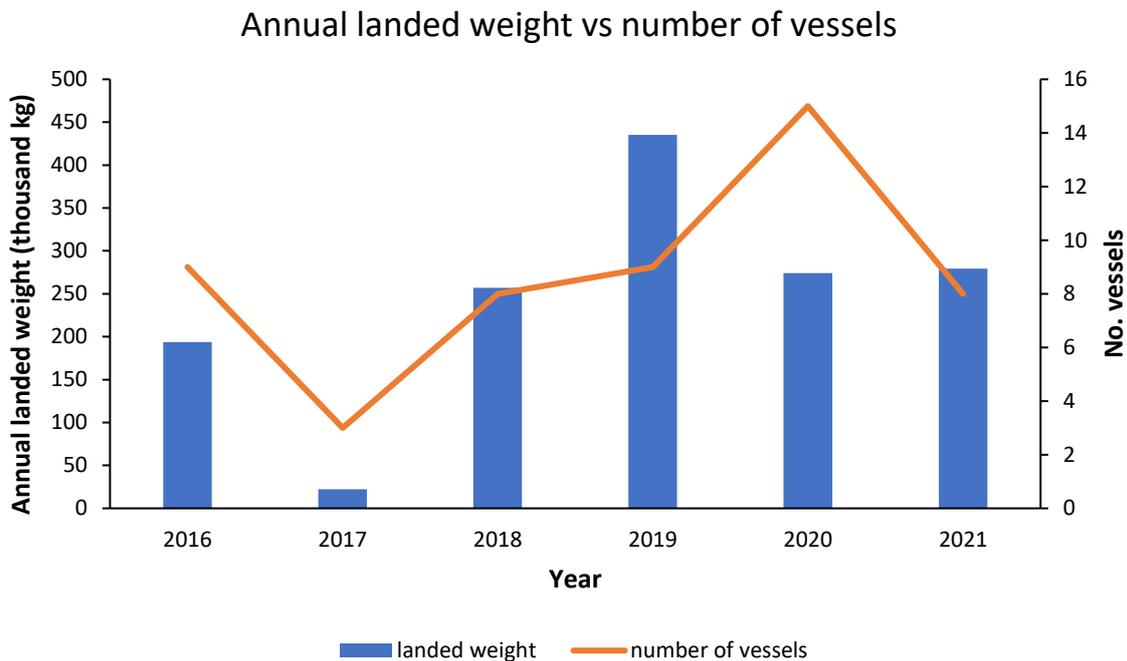


Fig 6. Annual landed weight (blue bars, left axis) and number of vessels actively participating (orange line, right axis) within Wash whelk fisheries.

Six different vessels / permits have activity prosecuted the fishery during months 1,2 and 3 of 2022. It is proposed that, as these vessels have already invested in the fishing gear and permit required to fish and already rely on access to a degree, the minimum amount of access should be six vessels.

Table 1 sets out average monthly landed weights for the fishery based on six vessels participating which, if fully exploited, would result in an 'acceptable' annual fishing mortality (between the 2020/21 level and the 2019 level).

	Jul	Aug	Sep	Oct	Nov	Dec
Monthly quota (kg)	2500	2500	2000	4000	5000	4000

The monthly quota for each month reflects the anticipated seasonality by month for the remaining months of 2022. The total landed weight for the year if this is achieved is 331 tonnes. Note however that the annual estimate uses estimates for months 4, 5 and 6 which cannot be controlled (as measures will not come into effect in time) and cannot be accurately determined through the available data (lag in return forms).

Ultimately, because there are effectively additional months that the fishery will operate in but the same amount of whelk are to be landed, the amount per month will have to decrease compared to a 'normal' year. In addition, the variation in monthly landed weights per vessel means that these limits will impact some fishermen more than others, depending on how they ordinarily operate in the fishery.

As above, increasing the level of access (number of vessels) will reduce the monthly quota per vessel. By way of example, table 2 shows how the monthly quota would have to change to achieve a similar annual total if 10 or 18 vessels were to participate.

Table 2. proposed monthly landing quota in whelk fishery and the estimated total annual landed weight based on differing levels of access							
	Jul	Aug	Sep	Oct	Nov	Dec	Estimated total annual landed weight (kg)
Monthly quota (kg) based on 6 vessels accessing the fishery	2500	2500	2000	4000	5000	4000	331,080
Monthly quota (kg) based on 10 vessels accessing the fishery	1500	1500	2000	3000	3000	2000	326,080
Monthly quota (kg) based on 18 vessels accessing the fishery	1000	1000	1000	1500	1500	1000	325,079

Basing the number of vessels who can access on those active in months 1,2 and 3 is considered appropriate as the number of vessels active within these months is a good indicator of the number of vessels active throughout the year as seen in table 3. Typically, only 1 additional vessel joins the fishery after these months.

Table 3. Vessel activity in The Wash whelk fishery over time		
Year	Number of vessels active in months 1,2&3	Number of vessels active in months 4 to 12 which were not active in months 1,2 or 3.
2016	8	1
2017	2	1
2018	6	2
2019	8	1
2020	12	3
2021	7	1

Discussion

Fishing mortality

The results indicate that LPUE declined after 2019 and did not return to 2019 levels in 2021. Given that the landed weight peaked in 2019, this suggests that the 2019 fishing mortality may have contributed to the decline and that subsequent levels of fishing mortality were too high to enable a recovery back to pre-2019 levels.

Whelk are known to be particularly vulnerable to over-fishing. This is primarily as a result of their low mobility and slow maturity. Whelks are also thought to form 'stocklets'; distinct and localised populations at very small spatial scales compared to most other fisheries. As a result of their low mobility, over-fishing in relatively small areas can lead to the loss of a stocklet which could take a significant amount of time to re-establish, if it all. This is thought to have contributed to what was historically considered a 'boom and bust' fishery in the district.

It is likely therefore that fishing mortality in 2019 exceeded the maximum sustainable yield and allowing it to return to this level could further impact the stocks. However, it is noteworthy that the dataset shows a relatively short time period and that whilst LPUE did decline, it is not yet known whether fishing at the current rates will continue to negatively impact LPUE or whether the fishery has stabilised.

A precautionary approach would be to reduce fishing mortality to pre-2019 levels and monitor if LPUE recovers before adjusting the limit on fishing mortality in subsequent years to find a balance. Alternatively, fishing mortality could be maintained at 2020/2021 levels and monitored further to determine if a decline continues or if

LPUE stabilises. There is a risk of impacting sustainability further however, which would potentially require more drastic fishing mortality reductions to recover from in subsequent years.

The proposed measures would cap total annual landed weight at a level that exceeds those seen in 2020 and 2021, but remains below the 2019 level. Whilst this still represents a risk to the sustainability of the fishery, it is considered proportionate given the level of uncertainty around the potential impacts.

Access limit and Monthly fishing activity

Monthly fishing effort is highly variable between fishing vessels. It is likely that this reflects differing levels of reliance on the Whelk fishery for the different vessels included, noting that some vessels with whelk permits do not have a licence to fish in the cockle fishery.

Therefore, any monthly landing quotas are likely to impact different business models to differing degrees.

The combination of access restrictions and monthly quotas is required to ensure an appropriate level of fishing mortality and the proposed levels appear to represent a good balance between the risks posed to industry viability in the short-term (as a result of limiting access) and stock sustainability in the medium to long term (as a result of over-fishing).

Further analysis and dialogue with industry is needed to determine the impacts of the access restriction and monthly landing quotas which could be significant given the variability in vessel activities.

Uncertainty

The risk that the fishery is over-fished is primarily based on the observed decline in LPUE after 2019. Whilst the reduction is likely to be significant, the LPUE is not considered 'low' and the decline may be the result of natural variation rather than an impact of over-fishing.

However, reports of fishermen exceeding the pot limitation whilst reporting the maximum allowable number (500 pots) would most likely result in LPUE estimates being higher than they are in reality. In addition, the dataset includes instances where fishermen are thought to have over-reported the landed weight of catch (by including catch from outside of the district) but which would also have the effect of increasing LPUE. Therefore, whilst there is some uncertainty, it is more likely that the fishery is being over-fished than not.

In addition, the potential additional effort as a consequence of the lack of a cockle fishery would likely increase fishing mortality to beyond that of the previous peak. There is an uncertainty about the potential impact, but the presently available

information would indicate that this would pose a serious risk to sustainability. In the absence of certainty, a precautionary approach is favoured given the implications of the fishery's failure.

Furthermore, the restrictions will permit fishing mortality in addition to that which has been the case for the last two years and are therefore considered proportionate to the level of uncertainty and risk to the fishery.

Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Action Item 12

Eastern Inshore Fisheries and Conservation Authority Meeting

08 June 2022

Emergency Vessel Monitoring System (VMS) Byelaw

Report by: Luke Godwin (Senior IFCA – Regulation)

Purpose of Report

To report on the consideration of making an emergency byelaw to require Vessel Monitoring Systems to be fitted and reporting for vessels carrying on board and fishing for whelk and Shrimp in the Wash and North Norfolk Coast and to seek the views of members on such.

Recommendations

It is recommended that members:

- **Note** the report including the rationale for introducing an emergency byelaw and the associated initial Regulatory Impact Assessment

Background

Inshore Vessel Monitoring Systems (IVMS) refers to devices fitted to vessels to report location, speed and direction to the Marine Management Organisation's (MMO) national operations centre.

Legislation is due to come into effect which requires all fishing vessels under 12m in length and registered in England to be fitted an IVMS device. This will augment the VMS requirements in place for vessel 12m and over which is already in effect.

Vessels over 12m are required to have functioning VMS+ devices fitted already. These devices report at a lower rate than IVMS devices; VMS+ reports once every 2 hours whereas IVMS reports once every 3 minutes. Given the complexity of inshore environments, and relatively short fishing durations, VMS reporting at a 2-hourly rate does not provide sufficient information to effectively monitor inshore fishing activity. As such, it is also anticipated that vessels fitted with VMS+ devices will ultimately have to report at the same frequency as IVMS devices within IFCA districts.

Roll-out of the devices is already underway and includes a timetable for device installation and grant funding to cover some costs. More information is available on <https://www.gov.uk/government/news/inshore-vessel-monitoring-systems-in-2022>.

The timetable sets out that vessels with a length of 6m and over should have devices installed by 15 August 2022. However, the timetable does not constitute a legislative requirement for IVMS and whilst this is anticipated in November 2022 it is understood that it is possible that it may be delayed until 2023.

The Authority can make emergency byelaws under s.157 of the Marine and Coastal Access Act 2009 under certain circumstances. The Eastern IFCA Constitution and Standing Orders sets out that making emergency byelaws is a responsibility of the CEO to discharge. The CEO must consult the Chair and Vice-Chair prior to making such a byelaw and notify all members of such.

Report

A number of factors are adding pressure to the fishing industry, including increases to fuel costs and the cost of living which have the potential to increase fishing effort generally as industry seeks to make up the shortfall. In addition, the absence of a cockle fishery this year has increased the likelihood of additional fishing effort in both the whelk and shrimp fisheries of the Wash and North Norfolk Coast Marine Protected Area (the MPA).

Whelk fishery

Evidence indicates that whelk fishing mortality is too high, and more information is set out in Action Item 11 on this matter. Additional measures are proposed for this fishery which should reduce the risk of over-fishing as a result of additional effort.

Ensuring compliance with whelk permit conditions will be crucial to preventing adverse impacts on stock sustainability. In particular, in relation to the limitation on the number of pots per vessel and the minimum landings size, both of which are only in effect inside the Eastern IFCA district.

IVMS and an increased reporting frequency for VMS+ devices will enable more effective detection of non-compliance and therefore an additional deterrent which will be crucial to reduce risk to an acceptable level to enable the fishery to continue.

Shrimp fishery

Annual shrimp fishing effort will be managed under the Shrimp Permit Byelaw 2018 when it comes into effect (which is expected imminently). A total number of trips per year will be ascribed to the shrimp fishery in The Wash and North Norfolk Coast each year to prevent impacting site integrity of the associated MPA. Effort is monitored, and management measures will be introduced to reduce effort including limiting the trips per vessel. Ultimately, the fishery will close before the total number of trips is exceeded.

Monitoring effort has primarily relied on shrimp catch return forms provided by industry. However, compliance with catch returns has been poor historically and this reduces the level of certainty we can assign to our monitoring of effort which increases risk and the likelihood of a more precautionary approach being necessary.

A new catch return system was put into effect from 1 January 2022, which should aid detecting non-compliance where no returns are provided, but which cannot detect falsification of the information provided.

Effort in the shrimp fishery is anticipated to increase if there is no cockle fishery which increases the likelihood that restrictions will need to come into effect. IVMS and increased reporting frequency for VMS+ devices will enhance the quality of the data used to monitor the fishery and provide a deterrent to non-compliance with reporting and any effort management measures which may come into effect.

The case for an emergency byelaw

Legislation which will require IVMS to be installed and reporting is not anticipated to be in effect in a timeframe which will accommodate managing the risks set out above. There is still uncertainty as to when the increased reporting frequency on VMS+ devices will come into effect.

The Shrimp Permit Byelaw 2018 will enable the Authority to implement an IVMS requirement ahead of the national measures, but this is not yet in effect and implementing the requirement as a permit condition will require additional process, with the effect being that it may not come into effect in a timescale which will effectively manage risk either, particularly with respect to the current Shrimp Permit Year (which ends 31 July 2022).

Therefore, consideration has been given to using a byelaw to implement IVMS and VMS+ requirements ahead of national measures coming into effect.

Subject to certain circumstances, the Authority can implement a byelaw without confirmation by the Secretary of State (an Emergency Byelaw) under s.157 of the Marine and Coastal Access Act 2009 (c.23). In effect, the Authority can make a byelaw immediately and which has immediate effect within the District.

The circumstances are that:

- a) The authority considers that there is an urgent need for the byelaw; and
- b) The need for the byelaw could not have reasonably been foreseen.

The current situation is considered to meet the requirements of both circumstances as follows;

Urgent need

Whelk fisheries in the Wash in particular are considered to be over-exploited and effective measures are required to prevent impacts on stock sustainability and industry viability.

Monitoring shrimp fishing effort is crucial to enable to continuation of the fishery within the MPA and ensuring the MPA's conservation objectives are not impacted. Current catch recording requirements are not considered sufficiently effective to mitigate the risk posed by anticipated increases in effort to the same extent as would have been the case in a 'normal' year (i.e. when a cockle fishery would have taken place). The current 'shrimp permit year' ends on 31 July 2022 and effort may need to be managed prior to then to prevent impacts.

The combination of factors driving additional effort in both fisheries also increases the risk associated with non-compliance at a time when compliance with measures will be crucial to prevent impacts on MPAs and stock sustainability.

Unforeseen

The anticipated increase in fishing effort is a result of a combination of low cockle stocks and the increases in cost of living and fuel process. Neither of these could have reasonably been foreseen within the space of time that a conventional byelaw could have been used to address the associated risk.

Legal advice has been sought to confirm the assessment above and the outcome of that advice will be considered prior to making a decision on introducing the byelaw.

Intended effects of the Emergency Byelaw

The Vessel Monitoring System Emergency Byelaw is at Appendix 1. In summary the byelaw intends to have the following effects:

With respect to carriage onboard a vessel of, and fishing for, shrimps or whelks within the 'Wash and North Norfolk Coast';

- To require all vessels to have an IVMS device fitted by a date determined by the vessel length as follows:
 - 8 to 11.99m, by 17 July 2022
 - 6 to 7.99m, by 22 August 2022
 - Less than 6m, by 19 December 2022
- To require all vessels to report information from an IVMS or VMS+ device at the 3-minute reporting rate:
 - Immediately if they have a device installed already; or
 - Immediately after a device is installed.
- To require the person in charge of the vessel to ensure the device is working correctly.
- The area constituting the 'Wash and North Norfolk Coast' is defined within the byelaw:
- Enables authorisation to be given if appropriate to fish without a functioning device.

It is intended to come into effect as soon as possible and only have effect up until the point that national legislation comes into effect which will have the same effect.

Impacts

An initial Regulatory Impact Assessment is at Appendix 2.

In summary, there are no anticipated additional costs associated with the requirement to have IVMS devices fitted, as the requirement will be in line with the national roll-out of IVMS.

There is an additional cost associated with the requirement for VMS+ devices to report at a higher frequency which is estimated to be £144 per annum, which is

thought to be applicable to 23 vessels. The impact of the cost is limited on the basis that it is anticipated that a requirement for the same will come into effect via national legislation in the future.

Ultimately, the risk of overfishing in both fisheries represents a higher risk than that posed by the impacts identified.

Next steps

The CEO will, in consultation with the Chair and Vice-Chair consider the legal advice and responses to consultation with industry in coming to a decision on whether to make the byelaw.

If made, the Authority will advertise the byelaw coming via letters and a website news item.

Financial Implications

None identified

Legal Implications

There is an inherent risk of legal challenge in relation to making byelaws. So as to mitigate the risk of successful challenge, due diligence is given to the Defra guidance to IFCA's on making byelaws.

In particular, representatives of the fishing industry are being consulted informally and an initial impact assessment has been undertaken to inform the recommendation.

We have also received legal advice to the effect that the proposed byelaw is in keeping with the circumstances outlined in MaCAA.

Conclusion

Requiring IVMS and VMS+ at a higher reporting rate is necessary to reduce the risk associated with increased fishing effort in The Wash shrimp and whelk fisheries. The proposed byelaw is considered legal and represents a low risk of legal challenge.

Appendices

Appendix 1 – draft Emergency Vessel Monitoring System Byelaw

Appendix 2 – draft emergency Vessel Monitoring System Byelaw Impact Assessment

Background Documents

n/a

Appendix 1 - draft Emergency Vessel Monitoring System Byelaw



Eastern Inshore Fisheries and Conservation Authority

MARINE AND COASTAL ACCESS ACT 2009 (c. 23)

Emergency Vessel Monitoring System (VMS) Byelaw

The Authority for the Eastern Inshore Fisheries and Conservation District in exercise of its powers under section 157 (1) of the Marine and Coastal Access Act 2009 makes the following byelaw for the District.

Interpretation

1. In this byelaw:

- a) “approved Inshore Vessel Monitoring System tracking device” means any of the following devices:
 - i. ‘Nemo’ manufactured by ‘Fulcrum Maritime Systems Ltd’;
 - ii. ‘MS44’ manufactured by ‘Maritime Systems Ltd’;
 - iii. ‘Nano VMS Cell SP’ manufactured by ‘Satlink S.L.U.’; or
 - iv. ‘SC2’ manufactured by ‘Succorfish Ltd’;
- b) “the Authority” means the Eastern Inshore Fisheries and Conservation Authority as defined in Articles 2 and 4 of the Eastern Inshore Fisheries and Conservation Order 2010 (SI 2010/2189);
- c) “the District” means the Eastern Inshore Fisheries and Conservation District as defined in Articles 2 and 3 of the Eastern Inshore Fisheries and Conservation Order 2010;

- d) “fishing” includes digging for bait; the shooting, setting, towing and hauling of fishing gear; gathering sea fisheries resources by hand or using a hand operated implement; and catching, taking or removing sea fisheries resources and includes activities ancillary thereto including leaving port for the purpose of fishing;
- e) “fishing vessel” means a vessel registered under Part II of The Registry of Shipping and Seaman as governed by the provisions of the Merchant Shipping Act 1995 and the Merchant Shipping (Registration of Ships) Regulations 1993, or in the Channel Islands or Isle of Man; and in respect of which there is a valid fishing licence issued under the Sea Fish (Conservation) Act 1967 (c.84);
- f) “monitoring device” means either an approved Inshore Vessel Monitoring System tracking device or a Vessel Monitoring System +;
- g) “Overall Length” means the length of a vessel, defined as the distance in a straight line between the foremost point of the bow and the aftermost point of the stern, and, for the purposes of this definition:
- i. the bow shall be taken to include the watertight hull structure, forecastle, stem and forward bulwark, if fitted, but shall exclude bowsprits and safety rails;
 - ii. the stern shall be taken to include the watertight hull structure, transom, poop, trawl ramp and bulwark, but shall exclude safety rails, bumkins, propulsion machinery, rudders and steering gear, and divers' ladders and platforms.
- h) “shrimp” means an organism of the species *Pandalus montagui* (commonly known as pink shrimp) or of the genera *Crangon* (including *Crangon crangon*, commonly known as brown shrimp) or *Palaemon*;
- i) “the required information” means;
- i. The unique identification number of the monitoring device;
 - ii. The most recent geographical position of the fishing vessel using coordinates of latitude and longitude on the World Geodetic System 1984(9), with a position error or less than 10 meters;
 - iii. The date and time expressed in Co-ordinated Universal Time of any geographical position of the fishing vessel; and
 - iv. The speed and course of the fishing vessel at that time
- j) ‘the person in charge’ means the owner, master or charterer, if any, of the fishing vessel.

- k) "Vessel Monitoring System +" means the UK approved Vessel Monitoring System terminal manufactured by 'AST';
 - l) "Wash and North Norfolk Coast" means the area set out in Schedule 1;
 - m) "whelk" means a marine organism of the species *Buccinum undatum*.
2. Co-ordinates used in this byelaw are measured from WGS 84 datum. WGS 84 means the World Geodetic System as revised in 1984 and 2004.

Prohibitions

3. A person must not fish for or carry on board a fishing vessel shrimps or whelks within the Wash and North Norfolk Coast from a fishing vessel unless all of the following requirements are met:
- a) the 'installation requirement';
 - b) the 'reporting requirement'; and
 - c) the 'responsibilities requirement'.
4. The 'installation requirement' is that the fishing vessel must have a monitoring device installed by the date specified in Schedule 2.
5. The 'reporting requirement' is that, when installed, the monitoring device must transmit the required information to the Marine Management Organisation United Kingdom Vessel Monitoring System Hub at least once in every three-minutes from the day it is installed on a fishing vessel.
6. The 'responsibilities requirement' is that, once the monitoring device is installed, the person in charge of the fishing vessel must use all reasonable endeavours to ensure that;
- a) the monitoring device is operational;
 - b) the monitoring device is not capable of being manually overridden;
 - c) the monitoring device is not destroyed, damaged, rendered inoperative, or otherwise interfered with;
 - d) any antenna connected to the monitoring device is not obstructed in any way; and
 - e) the power supply to the monitoring device is not interrupted.

Failure of a monitoring device

7. If the monitoring device on board the fishing vessel becomes incapable of meeting the reporting requirement, the person in charge, at the point at which

they know, or could reasonably be expected to know the device had stopped transmitting, must:

- a) contact the relevant supplier of the monitoring device to determine a timescale for the device to be repaired to be able to meet the reporting requirements;
- b) notify the Authority; and
- c) ensure that the fishing vessel is not used to fish for shrimp or whelks unless written authorisation to continue to fish is provided by the Authority and in strict accordance with any conditions therein.

8. A notification under paragraph 7(b)) must include:

- a) the unique identification number of the monitoring device;
- b) the name and Port Letters and Number of the fishing vessel upon which the monitoring device is installed;
- c) where known, by the person in charge of the vessel;
 - i. the date and time at which the monitoring device stopped transmitting the required information;
- d) the estimated timescale for the monitoring device to be repaired to be able to meet the reporting requirements.

9. Authorisation to continue to fish under paragraph 7(c) may be given;

- a) where the device meets the reporting requirement; or
- b) where the device does not meet the reporting requirement:
 - i. at the absolute discretion of the Authority;
 - ii. for a period of time specified by the Authority;
 - iii. subject to conditions contained within such authorisation; and
 - iv. subject to review and withdrawal at any time should the Authority deem it appropriate to do so.

Coming into force and duration

10. the byelaw comes into force on ??? 2022 and remains in force, unless revoked or extended, until ??? 2023.

I hereby certify that The Emergency Vessel Monitoring System (VMS) Byelaw was made under section 157 of the Marine and Coastal Access Act (c.23) on ??? 2022.

The said byelaw comes into force on ??? 2022.

Schedule 1 – The Wash and North Norfolk Coast

The Wash and North Norfolk Coast is defined as the area of the District landward of a line drawn connecting the points listed in the table below and as set out in Figure 1 for illustrative purposes.

Point	Latitude	Longitude
A	53° 11.01' N	000° 21.27' E
B	53° 11.01' N	000° 31.61' E
C	52° 57.07' N	001° 33.35' E
D	52° 52.12' N	001° 27.19' E

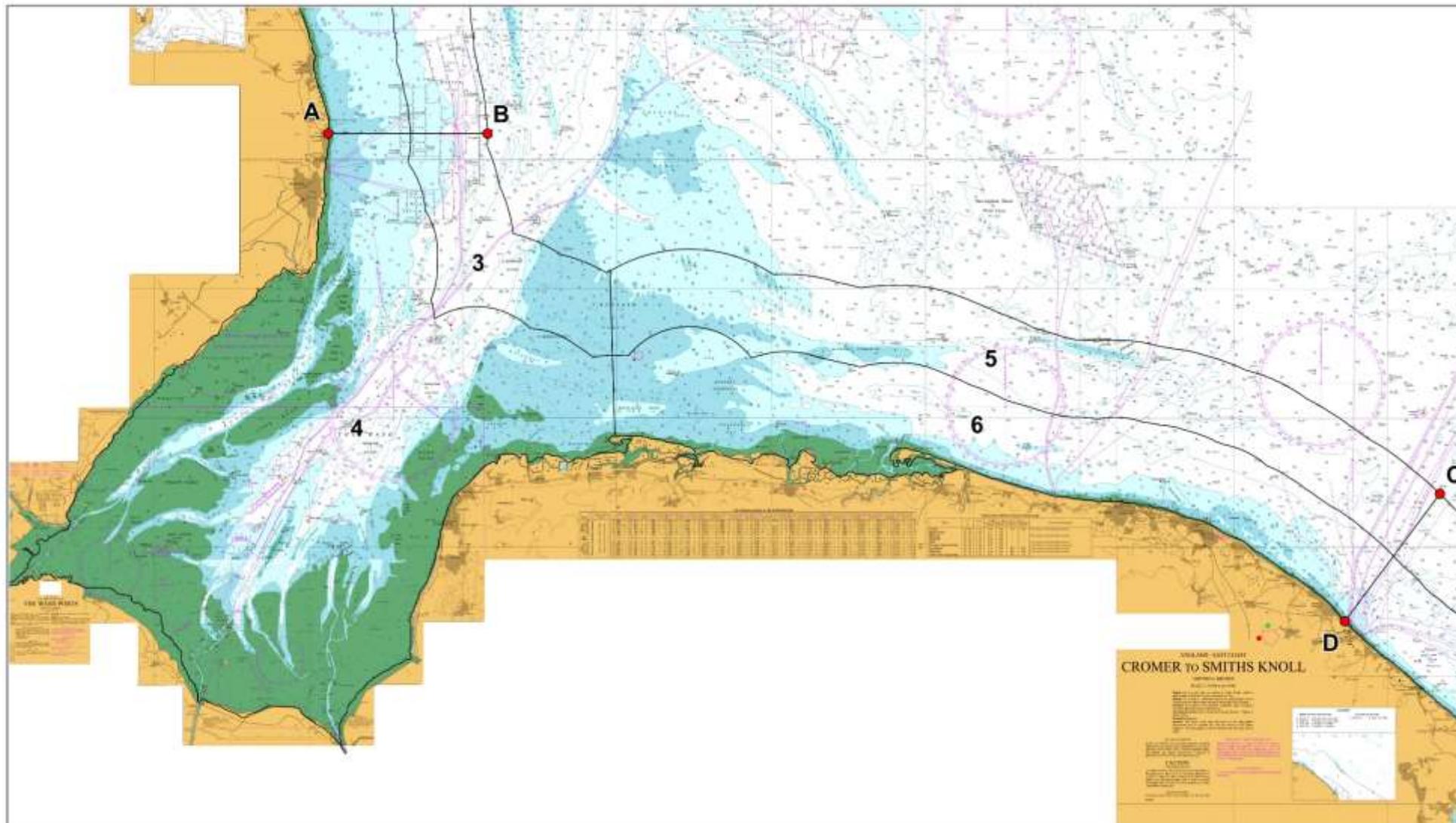


Chart 1: Emergency Vessel Monitoring System (VMS) Byelaw

- Whelk Areas
- Emergency VMS Byelaw Coordinate Points

Not to be used for navigation – for illustrative purposes only

Contains public sector information licensed under the Open Government Licence v1.0 (c) British Crown and OceanWise 2022.
 All rights reserved. Licence No.8K001-20180110. This product has been derived in part from material obtained from the
 UK Hydrographic Office with the permission of the UK Hydrographic Office, Her Majesty's Stationery Office and other relevant authorities.

Date: 26/05/2025
 Drawn by: SC
 Projection: Lat Long WSG84
 EIFCA: Whelk_Areas

Emergency_VMS_Byelaw_WOR

Schedule 2 – dates referred to in paragraph 3: the ‘installation requirement’.

Fishing vessel Overall Length (metres)	Date that the installation requirement must be met
10 to 11.99	17 June 2022
8 to 9.99	17 June 2022
6 to 7.99	22 August 2022
Below 6	19 December 2022

Title: Emergency Vessel Monitoring System (VMS) Byelaw IA No: 0010 RPC Reference No: n/a Lead department or agency: Eastern Inshore Fisheries and Conservation Authority Other departments or agencies: n/a	Impact Assessment (IA)		
	Date: 01/01/2020		
	Stage: Options		
	Source of intervention: Domestic		
	Type of measure: Other		
Contact for enquiries: Chief Executive Officer, Eastern IFCA, Unit 6 North Lynn Business Village, Bergen Way, King's Lynn PE30 2JG. Tel: 01553 775321. Email: mail@eastern-ifca.gov.uk			

Summary: Intervention and Options	RPC Opinion: RPC Opinion Status
------------------------------------------	----------------------------------------

Cost of Preferred (or more likely) Option (in 2019 prices)

Total Net Present Social Value	Business Net Present Value	Net cost to business per year	Business Impact Target Status
£-4912	£-4912	£-571	Non qualifying provision

The Wash and Norfolk Coast (Norfolk, Lincolnshire) supports three key fisheries being whelk, shrimp and cockles. The 2022 cockle stock survey indicates stocks cannot support a fishery this year without impacting the associated Marine Protected Areas and fisheries sustainability. As a consequence fishing effort is likely to increase in the other Wash-based fisheries. Increases in effort in these fisheries poses a high risk of impacting conservation objectives (in relation to shrimp fishing) and fisheries sustainability (in relation to the whelk fishery). Additional monitoring in the form of Vessel Monitoring Systems will reduce the risk to the fisheries by enhancing the deterrent in relation to non-compliance, enhance the detection of non-compliance and improve accuracy of fishing activity monitoring. National requirements for the same are anticipated to come into effect but not in a timeframe which will mitigate the risks identified above.

What are the policy objectives of the action or intervention and the intended effects?

The intended outcomes is that fishing activity within The Wash and North Norfolk Coast does not exceed levels which negatively impact on the conservation objectives of associated Marine Protected Areas and / or the sustainability of the shrimp and whelk fisheries.

The desired effect is that all fishing vessels fishing for, or carrying on board, shrimp or whelk within the Wash and N.Norfolk Coast must have a VMS device installed on the vessel by a certain time and that, once installed, the device must report to the MMO immediately. This will act as a deterrent to non-compliance in relation to measures already in place and provide best evidence for future management decisions within a timeframe which will mitigate the identified risks.

- Option 0 – ‘do nothing’: This option is considered to pose too high a risk to stock sustainability in the Wash and North Norfolk Coast whelk fisheries and to conservation objectives in relation to marine protected areas in the same area.
- Option 1 (**the preferred option**) – s.157 Marine and Coastal Access Act 2009 Byelaw (i.e. an emergency byelaw): considered necessary to mitigate risks in the required timescale.
- Option 2 – Voluntary measures: not considered sufficient to mitigate the identified risks
- Option 3 – s.155 Marine and Coastal Access Act 2009 (c.23) Byelaw (i.e. a conventional byelaw): not considered sufficient to mitigate the identified risks in an appropriate timescale

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** 06/2023

Is this measure likely to impact on international trade and investment?	No			
Are any of these organisations in scope?	MicroYes	Small Yes	Medium No	LargeNo
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)	Traded: n/a		Non-traded: n/a	

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible SELECT SIGNATORY: _____ Date: _____

Summary: Analysis & Evidence

Policy Option 1

Description:

FULL ECONOMIC ASSESSMENT

Price Base Year 2019	PV Base Year 2020	Time Period Years: 10	Net Benefit (Present Value (PV)) (£)		
			Low: n/a	High: n/a	Best Estimate: -4912

COSTS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	n/a		n/a	n/a
High	n/a		n/a	n/a
Best Estimate	£0		497	4912

Description and scale of key monetised costs by 'main affected groups'

The key monetised cost relates to the cost per report transmitted by VMS+ devices at an increased rate (once in every 3 minutes) for an estimated 23 vessels at a cost of circa £144 per year for up to 18 months.

Other key non-monetised costs by 'main affected groups'

The cost of installation of IVMS devices is not monetised because grant funding is available for installation. VMS+ devices are already a mandated requirement and so no cost is associated. IVMS reports are the key non-monetised cost which are thought to range from £0 to £150 per annum.

BENEFITS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	n/a		n/a	n/a
High	n/a		n/a	n/a
Best Estimate	n/a		n/a	n/a

Description and scale of key monetised benefits by 'main affected groups'

None identified

Other key non-monetised benefits by 'main affected groups'

The key non-monetised cost relate to the long term sustainability to whelk fisheries within The Wash and North Norfolk Coast and enabling a shrimp fishery to remain open where there is a risk to the conservation objectives in the associated Marine protected Area.

Key assumptions/sensitivities/risks

Discount rate

The monetised costs are estimated on the basis that the requirement will have effect for two years. This is unlikely because the emergency byelaw will only have effect for 12 months (potentially 18 months if extended) and because it is anticipated that national measures will come into effect to require the same during that time.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £:			Score for Business Impact Target (qualifying provisions only) £m:
Costs: 571	Benefits:	Net: 571	
			non-qualifying provision

Evidence Base

Problem under consideration

A number of factors are adding pressure to the fishing industry, including increases to fuel costs and the cost of living which have the potential to increase fishing effort generally as industry seeks to make up the shortfall. In addition, the likely absence of a cockle fishery this year (2022) has increased the likelihood of additional fishing effort in both the whelk and shrimp fisheries of the Wash and North Norfolk Coast Marine Protected Area (the MPA).

Whelk fishery

Evidence indicates that whelk fishing mortality is too high². Additional measures are proposed for this fishery which should reduce the risk of over-fishing as a result of additional effort.

Ensuring compliance with whelk permit conditions will be crucial to preventing adverse impacts on stock sustainability. In particular, in relation to the limitation on the number of pots per vessel and the minimum landings size, both of which are only in effect inside the Eastern IFCA district.

IVMS and an increased reporting frequency for VMS+ devices will enable more effective detection of non-compliance and therefore an additional deterrent which will be crucial to reduce risk to an acceptable level to enable the fishery to continue.

Shrimp fishery

Annual shrimp fishing effort will be managed under the Shrimp Permit Byelaw 2018 when it comes into effect (which is expected imminently). A total number of trips per year will be ascribed to the shrimp fishery in The Wash and North Norfolk Coast each year to prevent impacting site integrity of the associated MPA³. Effort is monitored, and management measures will be introduced to reduce effort including limiting the trips per vessel. Ultimately, the fishery will close before the total number of trips is exceeded.

Monitoring effort has primarily relied on shrimp catch return forms provided by industry. However, compliance with catch returns has been poor historically. This reduces the level of certainty we can assign to our monitoring of effort which increases risk and the likelihood of a more pre-cautionary approach being necessary.

² Paper and minutes for Action Item 11, 48th Eastern ICA meeting 8 June 2022.

³ Minutes and papers for Action Item 12, 37th Eastern IFCA meeting 11 September 2019

A new catch return system was put into effect from 1 January 2022, which should aid detecting non-compliance where no returns are provided.

Effort in the shrimp fishery is anticipated to increase if there is no cockle fishery which increases the likelihood that restrictions will need to come into effect. IVMS and increased reporting frequency for VMS+ devices will enhance the accuracy of the data used to monitor the fishery and provide a deterrent to non-compliance with reporting and any effort management measures which may come into effect.

The case for an emergency byelaw

National legislation, which will require IVMS to be installed and reporting⁴, is not anticipated to be in effect in a timeframe which will accommodate managing the risks set out above. There is still uncertainty as to when the increased reporting frequency on VMS+ devices will come into effect.

The Shrimp Permit Byelaw 2018 will enable the Authority to implement an IVMS requirement ahead of the national measures, but this is not yet in effect and implementing the requirement as a permit condition will require additional process, with the effect being that it may not come into effect in a timescale which will effectively manage risk either, particularly with respect to the current Shrimp Permit Year (which ends 31 July 2022).

Therefore, consideration has been given to using a byelaw to implement IVMS and VMS+ requirements ahead of national measures coming into effect.

Subject to certain circumstances, the Authority can implement a byelaw without confirmation by the Secretary of State (an Emergency Byelaw) under s.157 of the Marine and Coastal Access Act 2009 (c.23). In effect, the Authority can make a byelaw immediately and which has immediate effect within the District.

The circumstances are that:

- a) The authority considers that there is an urgent need for the byelaw;
and
- b) The need for the byelaw could not have reasonably been foreseen.

⁴ <https://www.gov.uk/guidance/inshore-vessel-monitoring-i-vms-for-under-12m-fishing-vessels-registered-in-england>

The current situation is considered to meet the requirements of both circumstances as follows;

Urgent need

Whelk fisheries in the Wash in particular are considered to be over-exploited and effective measures are required to prevent impacts on stock sustainability and industry viability.

Monitoring shrimp fishing effort is crucial to enable to continuation of the fishery within the MPA and ensuring the MPA's conservation objectives are not impacted. Current catch recording requirements are not considered sufficiently effective to mitigate the risk posed by anticipated increases in effort to the same extent as would have been the case in a 'normal' year (i.e. when a cockle fishery would have taken place). The current 'shrimp permit year' ends on 31 July 2022 and effort may need to be managed prior to then to prevent impacts.

The combination of factors driving additional effort in both fisheries also increases the risk associated with non-compliance at a time when compliance with measures will be crucial to prevent impacts on MPAs and stock sustainability.

Unforeseen

The anticipated increase in fishing effort is a result of a combination of low cockle stocks and the increases in cost of living and fuel prices. Neither of these could have reasonably been foreseen within the space of time that a conventional byelaw could have been used to address the associated risk.

Policy objective and intended effects

The overall policy objective is as follows:

Fishing activity within The Wash and North Norfolk Coast does not exceed levels which negatively impact on the conservation objectives of associated Marine Protected Area⁵ and / or the sustainability of the shrimp and whelk fisheries

The byelaw intends to have the following effects:

With respect to carriage onboard a vessel of, and fishing for, shrimps or whelks within the 'Wash and North Norfolk Coast';

⁵ The associated MPA is the Wash and North Norfolk Coast Special Area of Conservation

- To require all vessels to have an IVMS device fitted by a date determined by the vessel length as follows:
 - 8 to 11.99m, by 17 July 2022
 - 6 to 7.99m, by 22 August 2022
 - Less than 6m, by 19 December 2022
- To require all vessels to report information from an IVMS or VMS+ device at the 3-minute reporting rate:
 - Immediately if they have a device installed already; or
 - Immediately after a device is installed.
- To require the person in charge of the vessel to ensure the device is working correctly.
- The area constituting the 'Wash and North Norfolk Coast' is defined within the byelaw:
- Enables authorisation to be given if appropriate to fish without a functioning device.

It is intended to come into effect as soon as possible and only have effect up until the point that national legislation comes into effect which will have the same effect.

Rationale and evidence to justify the level of analysis used in the IA (proportionality approach)

This impact assessment should be considered an 'initial impact assessment' as referred to in Defra Guidance to IFCAs on making byelaws⁶.

As a consequence of the lack of a cockle fishery in The Wash in 2022, there is a real possibility of significant increases in effort and fishing mortality in both shrimp and whelk fisheries in The Wash.

The evidence which sets out the risk in relation to the potential for the shrimp fishery to impact site integrity of associated Marine Protected Areas is well documented including through the associated Habitat regulations Assessment⁷.

With regards to the whelk fishery, they are identified from initial findings from a wider body of work to investigate the sustainability of the fishery within the whole district. These initial results are however in keeping with a similar assessment from within the Wash Economic Assessment undertaken by MarFishEco and which is to be published imminently. The information

⁶ <https://www.gov.uk/government/publications/ifca-byelaw-guidance>

⁷ <https://www.eastern-ifca.gov.uk/habitats-regulations-assessment-impacts-shrimp-fishery-wash-north-norfolk-coast-special-area-conservation/>

available is also corroborated by concerns raised by some within the fishing industry.

The rationale to justify the proposed emergency byelaw is considered sufficient given the level of risk posed to the fishery and the limited impact on fishery stakeholders relative to the potential for future impacts (longer term) for both fisheries and in the context that the measures are essentially an acceleration of national measures which are likely to be in place within the life span of this byelaw.

Description of options considered

Option 0 – ‘do nothing’

The risk posed as a consequence of the lack of a cockle fishery requires mitigation to prevent impacts on stock sustainability in whelk fisheries and impacts on site integrity in relation to MPAs concurrent with shrimp fisheries.

The ‘do nothing’ option is not considered appropriate because failure to implement protective measures could be constituted as failure to meet our main duties set out in the Marine and Coastal Access Act 2009. In addition, the potential longer-term impacts on fishery livelihoods is considered greater than the short-term impacts of the measures.

Option 1 (preferred option) – s.157 Marine and Coastal Access Act 2009 Byelaw (i.e. an emergency byelaw).

This is the preferred option because it mitigates the risks identified in a timeframe which will benefit the protection of site integrity within the MPA and the sustainability of the whelk fishery in The Wash and north Norfolk Coast.

Option 2 – voluntary measures

Voluntary measures are not considered likely to be effective in this case. This is primarily based on evidence which indicates non-compliance with catch return reports which are already mandated (partially in the shrimp fishery) which reduces the likelihood of voluntary compliance with similar measures, and the risk posed to both an MPA and stock sustainability.

Option 3 - s.155 Marine and Coastal Access Act 2009 (c.23) Byelaw (i.e. a conventional byelaw)

A conventional byelaw would not likely come into effect within a timeframe which would mitigate the identified risks.

Summary and preferred option with description of implementation plan

Option 1 will be implemented via an emergency byelaw (under s.157 of the Marine and Coastal Access Act 2009).

Once in effect, the byelaw will be advertised on the Eastern IFCA website and communicated directly to the persons to whom the byelaw applies (i.e. shrimp and whelk fishermen).

Monetised and non-monetised costs and benefits

Expected costs relate primarily to the cost of increased reporting rates by VMS+ devices. These devices are installed on fishing vessel with a length of 12m and such is a mandatory requirement. The devices currently report once in every 2 hours, but reporting rates will be required to increase to once in every 3 minutes for the purpose of meeting the policy objective. The estimated cost per vessel is £144 per annum. An estimated 23 vessels within the whelk and shrimp fleets will be affected by the measures in this way.

The cost associated with installation of IVMS devices is mitigated by the national roll-out of the system which includes grant funding to cover this cost. Depending on the supplier, a cost may be associated with sending reports from the device which is understood to be in the region of £150 per year.

In both cases, the scale of impact as a result of these measures is limited because device installation and reporting at the higher rate (once in every 3 minutes) is anticipated to be mandated via national legislation in the near future (i.e. the impact is limited to the time between this measure coming into effect and the national legislation also coming into effect).

Costs estimated for the purpose of this initial assessment are based on the requirements having effect for two years, and as such are likely to be a significant over-estimate of the real costs to industry.

Benefits cannot be monetised but the whelk fishery in The Wash is a significant part of the local fisheries economy with an average annual first sale value of £862,349 since 2018 (£1.4m in 2019, £592,000 in 2018). Failure of this fishery as a result of over-fishing could significantly impact the local fishing interests and associated processing factors (two of which are based in King's Lynn) and which have wider economic value to the local economy.

With respect the shrimp fishery, the proposals will reduce the risk of closure of the fishery on a pre-cautionary basis as a result of low confidence data (which is a reflection of poor compliance with mandated catch returns) and prevent impacts on site integrity of the associated MPA which itself supports the shrimp fishery.

Risks and assumptions

The key risk is in relation to the measures relate to the burden in relation to the cost for increased reporting of VMS+ units and the assumption that the associated impact is limited. A number of factors are impacting fishery

livelihoods including the cost of living increases, fuel price increases and the lack of a cockle fishery this year. The impact of the cost is therefore likely to exceed that which would have been the case where these pressures were not present.

The key assumption is that the byelaw will enable effective management of the associated fisheries and effectively reduce the identified risks.

Impact on small and micro businesses

All businesses impacted by the byelaw are assumed as either 'small' or 'micro' businesses in accordance with the definition from guidance issued by the Regulatory Policy Committee⁸ (i.e. have less than 49 full-time equivalent employees).

There are thought to be two small businesses affected by the measures with the remainder of those effected being 'micro-businesses'.

As such, these business types cannot be exempted from the proposals. However, micro businesses are more likely to operate using vessels below 12m in length, and therefore will not be impacted by the key monetised impact (relating to the VMS+ increased reporting rate).

Wider impacts (consider the impacts of your proposals)

No wider impacts are identified beyond those described above.

A summary of the potential trade implications of measure

None identified.

Monitoring and Evaluation

The measures will be reviewed within 12 months of coming into effect and potentially extended for a maximum of 6 additional months. Given that the measures are in effect only the early adoption of what is anticipated to be a national requirement within the timeframe of the byelaw, it is unlikely that review will be necessary.

8

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/827960/RPC_Small_and_Micro_Business_Assessment_SaMBA_August_2019.pdf

Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Information Item 13

Eastern Inshore Fisheries and Conservation Authority Meeting

08 June 2022

Cromer Shoal Chalk Beds Marine Conservation Zone Update

Report by: Samantha Hormbrey – Marine Science Officer
Judith Stoutt – Senior Marine Science Officer

Purpose of Report

The purpose of this report is to provide an update on the potting assessment and the adaptive risk management work being undertaken by the Authority in relation to the potting fishery in the Cromer Shoal Chalk Beds Marine Conservation Zone (the MCZ).

Recommendations

It is recommended that members:

- **Note** the content of this report.

Background

Marine Conservation Zone designation

Cromer Shoal Chalk Beds was designated as a Marine Conservation Zone (MCZ) in 2016. This designation requires regulators to manage activities in a manner that furthers the MCZ's conservation objectives. One of the protected habitats in the MCZ is subtidal chalk.

The scientific consensus before the site was designated was that potting fisheries are low-impact fisheries, based on the absence of evidence that potting impacts seabed habitats. That view resulted in the designation being widely supported on the basis that it would bring conservation benefits without needing restriction of the area's long-established crab and lobster fishery. It also resulted in Defra's [economic] impact assessment of the effects of designating the MCZ identifying no impacts on the potting fishery.

Assessment of impacts of potting fishery

Eastern IFCA's initial assessment (2018) of the effects of fisheries in the MCZ, based on best available evidence at that time, concluded that potting was compatible with the conservation objectives. However, following survey work undertaken in 2019 to specifically examine the condition of chalk close to shanks of pots in the MCZ, Natural England advised Eastern IFCA in 2020 that fishing using pots could be hindering the conservation objectives of the MCZ, because potting gear was causing physical damage to chalk structures on the seabed.

Eastern IFCA has subsequently updated its assessment of the impacts of the potting fishery on the MCZ, informed by the 2019 study and a range of recent scientific literature that considers the effects of potting on seabed habitats and their biological communities. This paper reports on the findings of the updated assessment and mitigation being applied to reduce impacts.

Adaptive Risk Management

Natural England advised in 2020 that Eastern IFCA take an "adaptive risk management" (ARM) approach to managing the potting fishery in the MCZ – i.e. to introduce measures to minimise impacts from pots on the MCZ chalk feature, assess the effectiveness of the measures, then adapt management as required. The alternative to the ARM approach would be to prohibit potting in the areas of sensitive seabed habitat in the MCZ, which could render the fishery unviable. ARM is compatible with the IFCA duties to "*seek to balance the social and economic benefits of exploiting the sea fisheries resources of the district with the need to protect the marine environment from, or promote its recovery from, the effects of such exploitation*" (MaCAA 2009, s.153, 2(b)) and the overarching duty to "*seek to ensure that the conservation objectives of any MCZ in the district are furthered*" (MaCAA 2009, s.154,1).

Since 2020, Eastern IFCA, Natural England and fishery stakeholders have adopted a partnership approach to progress ARM work, supported by the Marine Conservation Society, academic partners, divers, beach cleaners, and other local stakeholders. This paper reports on progress in the management and research being undertaken under the ARM approach.

Report

Assessment of impacts of potting on chalk in the MCZ

- In April 2022, officers updated Eastern IFCA’s assessment of the potting fishery in Cromer Shoal Chalk Beds MCZ. The assessment has focused on the abrasion / penetration pressures that pots and ropes can apply to chalk structures. It examined how such pressures affect biological communities that live on the chalk, by considering the sensitivity of species to physical pressure and their ability to recover after impact. A key consideration has been how pressures from potting could affect the surface and structural complexity, and the stability of the subtidal chalk (ref. CSCB MCZ Conservation Objectives⁹).
- A review of recent scientific literature to inform the assessment found that most published studies relate to hard rock habitats and there is a scarcity of information on the interactions between pots and “soft rock” habitats like chalk. Officers have therefore been required to make judgements based on available evidence and scientific principles.
- This assessment has concluded that:

Over very long timescales, the risk of the potting fishery hindering MCZ conservation objectives could not be ruled out, although in the short-to-medium term, it is unlikely that the conservation objectives would be hindered by the potting fishery.
- As hindering the conservation objectives over the long term could not be ruled out, Eastern IFCA has a duty to apply mitigation to reduce the risk. Mitigation is ongoing in the form of the Adaptive Risk Management (ARM) work (see below). With this mitigation in place the Authority is satisfied that there is no significant risk of the activity hindering the conservation objectives stated for the MCZ.
- Natural England is currently considering the updated assessment and will provide formal conservation advice in due course.

Adaptive Risk Management – development of management measures

- Natural England’s advice on the impacts of potting on chalk in the MCZ identified that lost pots had the greatest potential to damage the chalk feature. As part of the ARM approach, Eastern IFCA has focused initially on reducing this risk. The Management Task and Finish Group has

⁹ Cromer Shoal Chalk Beds Marine Conservation Zone, Supplementary Advice on Conservation Objectives, <https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UKMCZ0031&SiteName=MCZ&SiteNameDisplay=Cromer+Shoal+Chalk+Beds+MCZ&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=0>, accessed 19th May 2022

developed a Code of Best Practice for potting in CSCB MCZ in consultation with the fishing industry and wider stakeholders. Its purpose is:

- to reduce the risk of fishing gear becoming lost by building upon and promoting existing best practice in relation to the operation of fishing gear,
 - to establish a simple reporting system that will be used to help quantify the extent of gear loss, monitor the positive effect of the Code over time, and facilitate recovery
- Following informal consultation with industry and members of the Stakeholder Group (summarised in officers' consultation outcome report¹⁰) the Code has now been implemented within the MCZ and endorsed by fishermen from the North Norfolk Fisherman's Society and the Norfolk Independent Fishermen's Association.
 - In line with the ARM approach, the Code of Best Practice will be a live document that will be reviewed, refined and adapted over time as we develop our understanding of what works best in practice and as new ideas emerge.
 - A voluntary agreement on reporting, recovery and disposal of snagged, missing and lost potting gear is also currently in development. Its intention is to facilitate effective collaboration between fishermen, divers and beach cleaners who wish to work together and to facilitate and monitor their reporting and recovery actions.
 - Eastern IFCA have started to develop a permitting byelaw for crab and lobster potting within the Eastern IFCA district, potentially with separate conditions applying to potting within the MCZ. This byelaw will be developed through close consultation with stakeholders. It is intended that the byelaw will enable the Authority to implement flexible permit conditions as required, providing a mechanism for compulsory measures to be implemented as determined by ARM.
 - Fishermen continue to voluntarily use vehicle trackers provided by Eastern IFCA on their boats to provide detailed spatial information on fishing activities. Currently 12 trackers have been distributed across the fleet with a view to distributing more if other fishermen volunteer. The information that these trackers provide is extremely useful in helping us

¹⁰ https://www.eastern-ifca.gov.uk/wp-content/uploads/2022/05/Informal_Consultation_Outcome_You_Said_Our_Response.pdf

understand more about fishing practices but also will provide us with ongoing monitoring data of fishing activity.

Adaptive Risk Management - Research

- The Research and Development Task and Finish Group is planning experimental surveys for the upcoming months and have developed a project plan for the group. This can be found on our website: <https://www.eastern-ifca.gov.uk/wp-content/uploads/2022/03/2021-2022-Research-Development-Task-Finish-Group-Project-Plan.pdf>
- Research streams include:
 - Improved mapping of “rugged” chalk, to better understand the distribution of the MCZ feature that is sensitive to impacts from potting;
 - Improved mapping of fishing activity;
 - Further video surveys to assess impacts of potting on chalk features;
 - Adapted gear trials, to investigate whether physically adapting potting gear can reduce abrasion and penetration pressures on chalk;
 - Economic assessment of potting fishery on rugged chalk areas compared with other parts of the MCZ, to inform the impact of any measures required to restrict potting in rugged chalk areas.
- In 2021 Natural England commissioned the re-analysis of multibeam survey data:
 - to improve the resolution of the outputs;
 - to include analyses of rugosity; and
 - to include an analysis of the ROV footage collected by Eastern IFCA in the MCZ during August and September 2021.
- Eastern IFCA have received the final report for the re-analysis of multibeam survey data and a draft report for the analysis of the ROV footage. Outputs from these analyses will be reviewed and where appropriate will contribute to the mapping of rugged chalk features.

- An Evidence Group has been established which sits within the Stakeholder Group and provides a route for local stakeholders to share knowledge and information with the Research and Development and Management Task and Finish groups. The group met initially in March and identified several sources of data which could be used to contribute to Adaptive Risk Management.

Impacts of netting activity in the MCZ

Although the main fishery in the MCZ is potting for crab and lobster, the potential for the much smaller-scale activity of netting also requires re-assessment. It has not been possible to progress this assessment this quarter because of competing priorities and the loss of Science team members. The netting assessment will be picked up when resources allow.

Conclusion

Adaptive risk management of the potting fishery in the Cromer Shoal Chalk Beds Marine Conservation Zone remains a key priority for Eastern IFCA. Officers are directing significant resources to developing evidence-based management, using collaborative research and through meaningful engagement with stakeholders and close liaison with Natural England. Progress has been made in the development of voluntary measures and initial steps taken towards a byelaw that will allow future, flexible, regulatory management of the potting fishery. The increasing willingness of stakeholders to work with Eastern IFCA in research, monitoring and development of measures has been very encouraging; its continuation is vital to the success of the ARM approach.

Financial Implications

No new measures or activities are proposed within this paper. The financial implications of the Authority's activities described in this paper relate to ongoing costs associated with research, stakeholder engagement and development of management measures.

Legal Implications

The Authority has a statutory duty to ensure the activities it manages do not hinder the conservation objectives of Marine Conservation Zones. If the Authority did not take the advised adaptive risk management approach, it would be required to precautionarily prohibit the potting fishery over rugged chalk areas in the MCZ.

Appendices

Not applicable

Background Documents

Click or tap here to enter text.

1. Eastern IFCA (2020) Authority meeting 42, Item 12: Cromer Shoal Chalk Beds Marine Conservation Zone
2. Eastern IFCA (2019) Authority meeting 36, Item 13: Marine Protected Areas Byelaw 2019
3. Eastern IFCA (2018) Assessment of fisheries on Cromer Shoal Chalk Beds Marine Conservation Zone
4. Tibbitt, F., Love, J., Wright, J., Chamberlain, J. 2020. Human Impacts on Cromer Shoal Chalk Beds MCZ: Chalk complexity and population dynamics of commercial crustaceans. Natural England Research Report number 04412.
<http://publications.naturalengland.org.uk/publication/4884193307000832>
5. Natural England (2020) Formal advice to Eastern IFCA on the impacts of potting on chalk: press release including summary of advice:
https://www.eastern-ifca.gov.uk/wp-content/uploads/2020/10/2020_10_15_Cromer_Shoal_Media_Release.pdf
6. Marine & Coastal Access Act 2009
<https://www.legislation.gov.uk/ukpga/2009/23/contents>
7. Natural England (2018) Cromer Shoal Chalk Beds Marine Conservation Zone: Supplementary Advice on Conservation Objectives: subtidal chalk
<https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UKMCZ0031&SiteName=MCZ&SiteNameDisplay=Cromer+Shoal+Chalk+Beds+MCZ&countyCode=&responsiblePerson=&SeaArea=IFCAAra=&NumMarineSeasonality=0>
8. Eastern IFCA (2022) Cromer Shoal MCZ Adaptive Risk Management Research & Development Task & Finish Group Project Summary 2021-2022 <https://www.eastern-ifca.gov.uk/wp-content/uploads/2022/03/2021-2022-Research-Development-Task-Finish-Group-Project-Plan.pdf>
9. Eastern IFCA (2022) Code of Best Practice for potting in Cromer Shoal Chalk Beds Marine Conservation Zone https://www.eastern-ifca.gov.uk/wp-content/uploads/2022/05/Code_of_Best_Practice_MCZ.pdf
10. Eastern IFCA (2022) Code of Best Practice for potting in Cromer Shoal Chalk Beds Marine Conservation Zone: Consultation outcome report https://www.eastern-ifca.gov.uk/wp-content/uploads/2022/05/Informal_Consultation_Outcome_You_Said_Our_Response.pdf

Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Action Item 14

48th Eastern Inshore Fisheries and Conservation Authority Meeting

8th June 2022

Report by: J. Gregory, Chief Executive Officer

Review of Annual Priorities and Risk Register

Purpose of report

The purpose of this report is to update members on progress against 2021-22 priorities and to review the Risk Register

Recommendations

Members are recommended to:

- **Note** the content of this report

Background

Eastern Inshore Fisheries and Conservation Authority is mandated to produce an annual plan each year to lay out the expected business outputs for the year ahead.

The Authority has a rolling five-year Business Plan that incorporates annual priorities informed by the annual Strategic Assessment. The plan also includes the high-level objectives agreed with Defra.

The rolling five-year business plan reflects the need to engage in longer term planning in the context of high levels of demand and the requirement to be flexible with priorities to reflect the dynamic nature of inshore fisheries, the marine environment and the policy landscape.

The Risk Register is contained within the Business Plan, and it captures key issues that are judged to pose potential risks to the organisation. The matrix sets out the magnitude of the risk to Eastern IFCA from an organisational viewpoint, incorporating amongst others reputational and financial risks. It also sets out the likelihood of an identified risk occurring.

Report

This update encompasses the period from the last update to the end of March 2022.

The tables at Appendix 1 detail the progress against the key priorities for 2021-22, as set in the Business plan for 2021-26.

The Risk Register is set out at Appendix 2 and the current status of each risk area is shown at Appendix 3.

Appendices

Appendix 1 – Update on priorities set for 2021-22

Appendix 2 – Risk Register

Appendix 3 – Update on Risk Register

Background documents

Eastern Inshore Fisheries and Conservation Authority Business Plan 2021-26.

APPENDIX 1 - Progress against Annual Priorities – February 2022 to April 2022

Four key priorities are established for 2021-22.

Financial Year 2021-22		
Priorities 2021-22	Progress	Comment
<p>1. To ensure that the conservation objectives of Marine Protected Areas in the district are furthered by:</p> <p>a) Development of management measures for ‘red-risk’ gear/feature interactions in the Inner Dowsing, Race Bank and North Ridge SCI;</p> <p>b) Assessing the impact of fishing activities on the Cromer Shoal Chalk Beds (MCZ) and delivering management measures (if required).</p>		<p>1.a) Ongoing. <i>Haisborough, Hammond & Winterton SAC:</i> The Marine Protected Areas Byelaw 2019 includes protection of “red risk” features in this site. Implementation of this byelaw has been delayed whilst an exemption has been considered for a small scale fishery in another site. The Closed Areas Byelaw 2021 (agreed by the Authority in December 2021, awaiting implementation) will supersede the Marine Protected Areas Byelaw 2019 and incorporate the previously-agreed measures for Haisborough, Hammond & Winterton SAC.</p> <p><i>Inner Dowsing, Race Bank & North Ridge SAC:</i> The Closed Areas Byelaw 2020 agreed by the Authority in September 2020 (awaiting implementation) includes protection of most of the “red risk” feature in this site. After additional scrutiny of evidence and survey work, additional measures were agreed by the Authority in September 2021. Both sets of measures for this site are included in the Closed Areas Byelaw 2021, agreed by The Authority in December 2021 and awaiting implementation. NE have advised that an additional area should be closed within this site; officers consider there is sufficient evidence to show the red risk feature is absent in that area but have agreed to re-survey the area in 2022 after which a recommendation can be made. Surveys are planned for May 2022.</p>

1.b) **Ongoing.** Management of bottom-towed fisheries within the MCZ has been agreed – originally in the Marine Protected Areas Byelaw 2019, now superseded by the Closed Areas Byelaw 2021, agreed by Authority December 2021 and awaiting implementation. Includes exemption for small artisanal shrimp fishery.

Officers will update their 2018 assessment of the impact of non-potting fisheries on Cromer Shoal Chalk Beds MCZ to incorporate new information on netting activity. This could potentially lead to management measures for netting within the MCZ, but the work has been delayed whilst officers focus on the much more significant potting fishery.

An Adaptive Risk Management (ARM) approach was agreed with Natural England as the most suitable approach to assess and manage the interaction between potting fisheries and the site features. This allows research to be conducted alongside the development of management measures. Under the direction of a Project Board, two Task and Finish groups are operating to undertake the research and management workstreams, while a Stakeholder Group enables wider engagement.

In the first year of the ARM project, research work was conducted to gain a better understanding of where the sensitive chalk features are located, where the potting activity occurs with respect to these features and the interaction between potting and the site's sensitive features. This has included work by Cefas to re-analyse existing multibeam survey data to significantly improve the spatial resolution of the previous maps and to also use the data to

<p>c) Development of priority Monitoring and Control plans as identified by the strategic assessment.</p> <p>d) Completion of amber/green gear/feature interactions. Development of management measures where required.</p> <p>e) Effort Monitoring within the Wash SAC including implementation of new catch returns system</p>	<p>show rugosity of the features. Together these have been used to better identify the more sensitive rugged features where multibeam data were available. Officers also conducted video surveys using a BlueROV2 Remotely-Operated Vehicle (ROV) to help map the extent of the rugged chalk and to examine the impacts of potting upon it. During the 2021 survey season 87 ROV dives were conducted, some of them successfully following shanks of pots to capture video evidence of the types of impacts the fishing gear might be having on the features. Over winter these videos were analysed by an external consultant, primarily assessing the biological communities and are currently being assessed inhouse for evidence of gear interactions with the chalk features using metrics agreed during two workshops held in December. The project also requires gaining a much better understanding of fishing activity in the site. This is being accomplished using small vehicle trackers that are being carried voluntarily aboard 10 local fishing vessels. These have so far provided high-resolution information of those vessel's activities, allowing us to identify which areas are important for potting activity. Two additional fishermen have volunteered to carry trackers in 2022.</p> <p>The survey work conducted in 2021 highlighted that interactions between the ground ropes and the higher relief chalk features could be problematic. Practical approaches to minimise these interactions have been considered by the R&D TF group; it has been agreed to test the use of small floats on the drop lines to minimise rope contact with the raised chalk features. This approach will be tested in the coming months using a set of experimental potting gear</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

that can be configured in various ways to test practical solutions. Using a set of test gear in this way will also enable cameras and various sensors to be attached to the pots and ropes to record the effectiveness of the modifications.

As part of the ARM approach, officers have created a *Code of Best Practice¹¹ for potting in the MCZ* with fisheries stakeholders and Natural England. Following consultation, this Code has been endorsed by the two local Fishermen's Associations. Their input to and support for the Code highlights these stakeholders' positive collaboration with the Authority and Natural England to address potential risks to MCZ features with practical, feasible measures.

1.c) **Delayed.** This work has not progressed since the last update, because resources have been directed towards priority MCZ work and cockle surveys. Resources have been particularly stretched during the quarter as the Marine Science team lost an experienced team member in April 2022 at the same time as inducting two new starters (employed to replace the loss of two team members who moved on from Eastern IFCA in August 2021 and January 2022). However, it should be noted that monitoring and control comprise routine work for the Authority and continue despite formal monitoring and control plans not yet being produced.

1.d) **Delayed / Ongoing.** Management has been agreed for "highest risk" amber/green gear/feature interactions, i.e. towed demersal fishing on subtidal sediment habitats.

¹¹ https://www.eastern-ifca.gov.uk/wp-content/uploads/2022/05/Code_of_Best_Practice_MCZ.pdf

		<p>Amber/green assessments to be completed for more recently designated MPAs and management developed if found to be required. Officers are continuing to review the original suite of amber/green assessments to finalise them (but progress is limited because of the need to focus on MCZ work, cockle surveys and team churn.</p> <p>The Shrimp Permit Byelaw 2018, which will be the mechanism for managing the 'amber' interactions between shrimp fishing and MPAs, is awaiting the consent of the Secretary of State.</p> <p>1.e) Completed. Shrimp return forms were revised to aid their completion and a new regime for their return was implemented and in full effect as of 1 January 2022. A database for storing associated data and monitoring returns has been developed and is now in use.</p>
<p>2. To develop management of the fisheries regulated under the WFO (regulated and several fishery)</p> <ul style="list-style-type: none"> a) Replacement of Several Order. b) Social/Economic study of Wash Cockle Fishery viability. c) Continued development of WFO policies. d) Replacement of WFO 1992 with permit byelaw e) Continuation of review in relation to access to the fisheries 		<p>2.a) Ongoing. After consideration of the substantive consultation responses, completion of the Habitats Regulations assessment and updates to the associated Fisheries Management Plan, the Several Order application was submitted to Defra in April 2022. Natural England provided formal advice supporting the application, subject to future consultation as and when management changes are proposed.</p>

2.b) **Ongoing.** MarFishEco presented the findings of their economic assessment to the Authority at the 47th meeting (9th March 2022). These findings have been carefully scrutinised and taken into account within draft policies.

2.c/e. **Ongoing.** Officers have continued to refine the access policies for the Wash Cockle & Mussel Byelaw, informed by ongoing dialogue with fishing industry representatives. A formal consultation is being prepared; following this the policies will be recommended for agreement at a subsequent Authority meeting.

2.d. **Ongoing.** The Wash cockle and mussel Byelaw 2021 has been returned to the MMO to continue the formal QA having considered their initial responses with our legal advisor. No changes were made which alter the intended effect of the byelaw.

<p>3. Industry Viability</p> <p>a) Investigation into mussel die off</p>		<p>3.a) Ongoing. In February 2020 officers began collaborating with scientists from Cefas to study what might be the cause of the high mussel mortalities seen in The Wash since 2010. All the samples required for the project have been collected, including two additional samples of cockles, which have also been suffering “atypical” mortalities since 2008. These samples are currently being analysed by various teams in Cefas looking at the histology, pathology and biochemistry of the samples. Conclusions based on this analysis still require statistical verification, but early analysis has identified an unusual development and necrosis in the reproductive follicles of male mussels which will reduce the quantity of spermatozoa released; the presence of cleft haemocyte cells and a high prevalence of a previously unidentified <i>haplosporidian</i> species. The cockle samples were found to host a previously unidentified <i>Marteilia</i> species that seemed to have a strong correlation with the health of the cockles. Further analysis is required to determine whether any of these findings are causal in the die-offs. Another set of moribund cockle samples were collected recently for Cefas to purify and sequence the <i>Marteilia species</i> infecting the cockles to obtain more sequence data for this species.</p>
<p>4. Obtaining better fisheries data</p> <p>a) Implementation of I-VMS for all fisheries specifically the Wash Shrimp fishery (dependent on partnership working with MMO led project).</p>		<p>4.a) Ongoing. Roll-out of I-VMS is underway and the MMO have published guidance to fishing industry on how to comply with the requirements and receive grant funding for devices (https://www.gov.uk/guidance/inshore-vessel-monitoring-i-vms-for-under-12m-fishing-vessels-registered-in-england). As the Authority’s Spring 2022 cockle survey identified stocks are too low to support a fishery and meet</p>

		conservation requirements, it is anticipated effort could increase in the shrimp and whelk fisheries over the coming months. Monitoring of this activity is crucial to inform management to ensure these fisheries remain within stock and environmental sustainability limits. Therefore consideration is being given to an emergency byelaw to require the use of I-VMS in these fisheries ahead of the MMO I-VMS roll-out.
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Key:

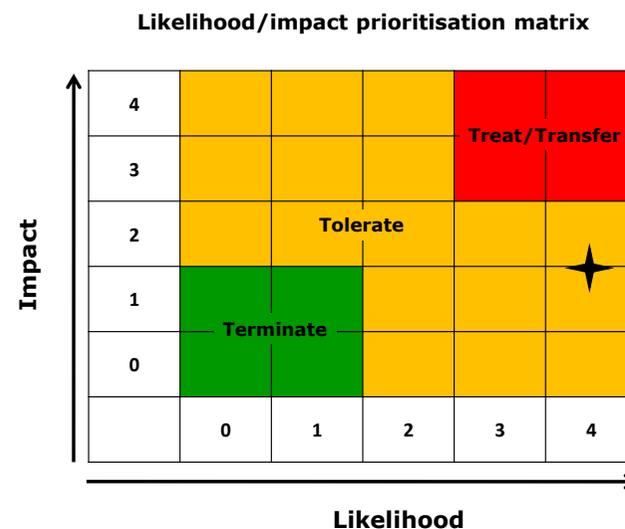
	Complete
	In progress
	Progress stalled

APPENDIX 2 – Risk Register

The risk matrix sets out the magnitude of the risk to Eastern IFCA from an organisational viewpoint incorporating amongst others reputational and financial risks. The matrix also sets out the likelihood of an identified risk occurring. Mitigation which is in place or to be introduced is identified. Risk is ranked on an arbitrary scale from 0 (low risk – coloured green) to 4 (high risk – coloured red). The average of the combined financial and reputational risk is taken and plotted on to the matrix below, the likelihood of that risk occurring is also plotted. Mitigation action is noted. It should be noted that in most cases there are already many actions being undertaken as part of routine working practices to reduce the risks to the Eastern IFCA.

The four actions that can be applied are:

Treat	Take positive action to mitigate risk
Tolerate	Acknowledge and actively monitor risk
Terminate	Risk no longer considered to be material to Eastern IFCA business
Transfer	Risk is out with Eastern IFCA's ability to treat and is transferred to higher level.



Risk matrix with worked example

Risk A poses a financial threat (2) to the organisation and a reputation threat (1) generating a combined impact level of 1.5. The likelihood of the threat occurring is determined as 4. The resultant risk to Eastern IFCA is therefore plotted using the matrix and is identified as a risk that should be tolerated.

50

Description	Owner	Implications	Organisational impact (Reputation + Financial/2)		Likelihood	Risk	Mitigation	Action
Eastern IFCA fails to secure funding to replace assets	CEO	Substantial reduction in Eastern IFCA mobility particularly seaborne activities with consequential inability to fulfil full range of duties	4		2 Finance Directors agreed to annual capital contributions from 2019-20 onwards to cater for the cost of asset replacement as an alternative to requests for a lump sum amounts as assets are replaced. No guarantees were given or implied. Eastern IFCA will explore all avenues for funding.		<ul style="list-style-type: none"> • Current level of reserves provides sufficient funding to cover replacement of <i>RV Three Counties</i> • The open RHIB, FPV Seaspray, was procured using EMFF funding • Seek efficiencies and promote cost effectiveness. • Demonstrate value for money. • Advertise/promote Eastern IFCA output and effectiveness to funding authorities through regular engagement with Council leaders and Financial Directors. • Engage with partner agencies to identify alternative funding sources • Explore asset sharing initiatives • Agreement in place with funding authorities for capital funding contributions each year. Confirmed at the annual meeting with representatives of the Finance Directors. 	Tolerate
			Reputation	Financial				
			4	4				
		Drive for savings may impact County Councils' decisions regarding Eastern IFCA funding. Visible presence reduced, enforcement and survey activities compromised.	Inability to generate sufficient reserves to meet asset replacement schedule would threaten Eastern IFCA's ability to function.					
			Closure costs could result.					

Description	Owner	Implications	Organisational impact (Reputation + Financial/2)		Likelihood	Risk	Mitigation	Action
Impact of EU exit on Eastern IFCA duties and the wider economic environment	CEO	Potential changes in several areas, including: - regulatory framework - fisheries management methodology - regulations (enforcement) - environment conservation	3		3 EU exit will have an inevitable but currently unpredictable impact. Eastern IFCA responsibilities unchanged in the short term to medium term		<ul style="list-style-type: none"> Monitor developments in the post-EU exit landscape, particularly fish and shellfish exports Engage in national I to help inform and influence developments (e.g. IFCA Chief Officers Group, Association of IFCAs) Continue "business as usual" Maintain communication with partners Eastern IFCA is fully engaged with the MMO in terms of operational readiness, with a MoU in place for the provision of vessels and joint patrols. Officers engaged in future of inshore fisheries management work with Defra and other stakeholders. The Authority is supportive the REAF initiative. 	Tolerate
			Reputation	Financial				
			3	3				
			Eastern IFCA may be affected by developments beyond their control (fisher's expectations were high and were not fully met). Blame for change and or lack of change.	Grant funding from EU not replaced. Market for fishers catch affected. Fee/licence income reduced. Operating costs increased.				

Description	Owner	Implications	Organisational impact (Reputation + Financial/2)		Likelihood	Risk	Mitigation	Action
Eastern IFCA fails to maintain relevance amongst partners	CEO	If Eastern IFCA fails to maintain relevance amongst partners Eastern IFCA's utility will come under scrutiny potentially resulting in re-allocation of duties	4		2	Possible – Whilst positive relationships have been established the existence of disparate partner aspirations introduces complexities which may drive perceptions of bias or inefficiency.	<ul style="list-style-type: none"> Provide a leadership function. Be proactive and identify issues early. Engage with all partners routinely. Use Business Plan to prioritise and communicate outputs, Measure progress/deliver outputs Represent community issues to higher authorities Effective business planning process in pace. Leading role where appropriate e.g. Op Blake. Proactive approach to raising issues with Defra (e.g. Bass management, proposals for effort management trial). Participation in Parliamentary Review 2019. 	Tolerate
			Reputation	Financial				
			4	4				
Negative media comment	CEO	Negative perceptions of Eastern IFCA utility and effectiveness created at MMO/Defra Loss of Partner confidence Media scrutiny of individual Authority members	3		2	Possible – disenfranchised partners seek to introduce doubt as to Eastern IFCA professionalism, utility and effectiveness	<ul style="list-style-type: none"> Actively and regularly engage with all partners including media outlets. Utilise full potential of social media and web-based information. Embed professional standards and practices. Deliver change efficiently and effectively. Promote activity Assure recognition and understanding through community events Routine updating of news items on website. Active on social media with demonstrable improvements in 'reach'. Parliamentary Review (above). 	Tolerate
			Reputation	Financial				
			4	2				
			Eastern IFCA perceived to be underperforming	Negative perceptions introduce risk to continued funding				
			Eastern IFCA considered poor value for money					
			Eastern IFCA perceived as irrelevant					
Description	Owner	Implications	Organisational impact (Reputation + Financial/2)		Likelihood	Risk	Mitigation	Action
Degradation of MPAs due to fishing activity	CEO	Loss or damage of important	3.5		2	Possible - Eastern IFCA's approach	<ul style="list-style-type: none"> Proposed fishing activities authorised by Eastern IFCA are assessed per Habitats Regulations 	Tolerate
			Reputation	Financial				
			4	3				

		<p>habitats and species within environmentally designated areas Potential for European infraction nationally resulting in significant financial penalties at the local level.</p>	<p>Eastern IFCA is not meeting statutory duties under EU & UK conservation legislation Eastern IFCA not achieving vision as champion of sustainable marine environment</p>	<p>Legal challenge brought against Eastern IFCA for failing to meet obligations under MaCAA and the Habitats Regulations</p>	<p>to managing sea fisheries resources considers environmental obligations</p>		<ul style="list-style-type: none"> • Eastern IFCA is fully engaged in national fisheries/MPA project, prioritising management of highest risk fisheries in MPAs and implementing new management measures • Effective monitoring of fishing activity and enforcement of measures • Adaptive co-management approach to fisheries management – i.e. engagement with fishing and conservation interests in the development of management measures, and appropriate review of measures to respond to changing environmental and socio-economic factors • Ongoing, close liaison with Natural England regarding all conservation matters • Review agreed Wash Cockle & Mussel Policies • Develop the use of iVMS as a management tool by the Authority • Continue to progress research into the impact of fishing activities on MPA features to ensure the Authority has an up-to-date evidence base to inform its management decisions. • MPA management has been a high priority since 2012 with substantial progress made. Current workstreams (e.g. Cromer Shoal MCZ, remaining 'red risk' sites) are a high priority and are being progressed. 	
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

Description	Owner	Implications	Organisational impact (Reputation + Financial/2)		Likelihood	Risk	Mitigation	Action	
Shellfish and fish stocks collapse	CEO	Risk of significant negative impact upon industry viability with associated social and economic problems	3		3		<ul style="list-style-type: none"> Annual stock assessments of bivalve stocks in Wash Annual review of the level of threat via the Strategic Assessment Ability to allocate sufficient resources to monitoring of landings and effective enforcement Consultation with industry on possible management measures Use Project Inshore Phase 4 output to inform MSC pre-assessment review of fisheries and validate management measures Develop stock conservation measures for crab and lobster fisheries through engagement with Cefas and fishing industry. Continue support for industry led Fisheries Improvement Plan SWEEP research into primary productivity levels within the Wash Regular engagement with the industry to discuss specific matters Continued research into the cockle mortality events Maintain whelk management measures Introduce shrimp management measures Consider bass management measures if necessary, in light of EU/UK measures Annual surveys of Wash cockle and mussel stocks alongside innovative approach to management of the cockle fishery. Ongoing workstream to identify cause of mussel mortality. Closure of cockle fishery in Nov 2019 due to emerging findings of mussel surveys in order to mitigate impact on 2020 cockle fishery. 	Treat	
			Reputation	Financial					Possible - Bivalve stocks have high natural variation; "atypical mortality" affecting stocks despite application of stringent fishery control measures Crustacean stocks not currently subject to effort control Bass stocks nationally and internationally under severe pressure Regional whelk and shrimp fisheries effort becoming unsustainable. Regional crab and lobster stocks being exploited beyond maximum sustainable yield
			3	3					
			Loss in confidence of the Eastern IFCA ability to manage the sea fisheries resources within its district	Resources directed at protecting alternative stocks from displaced effort Additional resources applied to research into the cause of collapsed stocks and increased engagement and discussion with partners					

Description	Owner	Implications	Organisational impact (Reputation + Financial/2)		Likelihood	Risk	Mitigation	Action
Failure to secure data	CEO	Non-compliance with General Data Protection Regulations (GDPR) Prosecution casefiles compromised Loss of data in the event of fire or theft Breakdown in dissemination of sensitive information between key delivery partners	4		2	High	<ul style="list-style-type: none"> All computers are password protected. Individuals only have access to the server through their own computer. Secure wireless internet Remote back up of electronic files Access to electronic files is restricted Up to date virus software installed on all computers Important documents secured in safes ICT equipment and policies provided by public sector provider – including encrypted laptops/secure governmental email system All Eastern IFCA personnel undergo DPA training Electronic backup of all Eastern IFCA documents held by ICT provider offsite Policies and processes developed to ensure compliance with GDPR. 	Tolerate
			Reputation	Financial	Possible - Limited staff access to both electronic and paper files Office secure with CCTV, keypad entry system and alarm			
			4	4	Partners no longer believe that confidential information they have supplied is secure Personnel issues arise over inability to secure information			
New Burdens Funding discontinued	CEO	Substantial reduction in Eastern IFCA capability with	4		2	High	<ul style="list-style-type: none"> Association of IFCAs has consistently lobbied for the continuation of funding Association of IFCAs have engaged with Defra review of New Burdens funding during 2018-19 and submitted a paper in 	Treat
			Reputation	Financial	Defra have continued to roll over new			
			4	4				

		consequential inability to fulfil full range of duties or additional burden on funding authorities.	Inability to meet all obligations would have a significant impact upon reputation.	Circa 25% of the annual budget is provided by Defra under the New Burdens doctrine so its loss would have a significant impact.	Burdens funding in recognition of the value that IFCA's provide in meeting national policy objectives.		<p>support of an increase nationally from £3m to £6m as part of the planned SR2019 and SR2020 (both on hold due to the Covid-19 pandemic)</p> <ul style="list-style-type: none"> • Finance Directors representatives briefed and understand that in the event that the funding is discontinued there may be a desire to increase levies • Financial plan in place to cope with loss of New Burdens 	
--	--	-----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

Description	Owner	Implications	Organisational impact (Reputation + Financial/2)		Likelihood	Risk	Mitigation	Action
The Wash Fishery Order 1992 is not replaced in time when it expires in January 2023	CEO	Inability to manage the fishery with consequential impact upon industry viability and associated social and economic issues	4		3 The Authority agreed to replace the WFO 1992 with a byelaw in March 2020 and work is underway to introduce such a byelaw. There is judged to be sufficient time to get a byelaw approved but industry opposition may adversely affect this. If a replacement Regulating Order were applied for then the likelihood rating would increase to 4 and it is thought that it would be very unlikely that a new Order would be in place in time		<ul style="list-style-type: none"> • Early decision taken to replace the WFO 1992 with a byelaw • Byelaw making process commenced • Work underway to develop polices that will sit under the Byelaw • Engagement with industry to address misgivings about the use of a Byelaw • Engagement with industry to develop policies that will sit under the Byelaw 	Treat
			Reputation	Financial				
			4	4				
			The effective management of all fisheries within the Wash is important in terms of industry viability, sustainability of stocks and managing the impact of fishing activity in a heavily designated MPA. Loss of confidence in Eastern IFCA's ability to manage the cockle and mussel fisheries is likely to be significant if the WFO 1992 is not replaced in a timely way	Potential for legal challenge against Eastern IFCA				

Appendix 3 – Risk Register Update November 2021 to February 2022

Risk Description	Update
Eastern IFCA fails to secure funding to replace assets	<p>Agreement in place with funding authorities for capital funding contributions each year. Confirmed that this will continue at the annual meeting with representatives of the Finance Directors on Friday 19th November 2021.</p> <p>No change from previous quarter</p>
Impact of EU exit on Eastern IFCA duties and the wider economic environment	<p>Whilst Eastern IFCA supported the MMO in terms of operational readiness for a 'no deal' scenario and in particular was prepared to provide sea patrols under a Memorandum of Understanding, planned patrols did not take place as a consequence of weather and a deal with the EU meaning that there was not a strong requirement for them. Officers continued to support Cefas (and the Fish Health Inspectorate) in engaging industry regarding export and import of shellfish and worked with North Norfolk District Council to facilitate registration of food 'premises' as a result of EU exit related changes to the requirements. Officers engaged in future of inshore fisheries management work with Defra and other stakeholders.</p> <p>No change from previous quarter</p>
Eastern IFCA fails to maintain relevance amongst partners	<p>Effective business planning process in pace. Leading role taken where appropriate e.g. CEO is one of two IFCA representatives on the IFCA/MMO Strategic Operations Group. Recent revisions to the Adaptive Risk Management project for Cromer Shoal MCZ to address wider stakeholder concerns about engagement with the project.</p> <p>No change from previous quarter</p>
Negative media comment	<p>Routine updating of news items on website. Active on social media with demonstrable improvements in 'reach'. The replacement of the WFO 1992 with a Byelaw has not been well received by industry and various means of expressing dissatisfaction are being employed, including the use of media. This is being monitored and explanatory information provided where possible and appropriate. Following a second adverse article being published in Fishing News in early October 2021 the Chair wrote a letter to the Editor and the Authority's lawyer wrote an article addressing IFCA duties and powers and in particular the</p>

	<p>ability of byelaws to replace regulating orders. Both were published in Fishing News and prompted a further letter from Boston fishermen criticising the work of the Authority.</p> <p>In recent weeks there has been further contact from Fishing News and the tone has continued to be one that is critical of our work. A factual response has been provided on each occasion.</p>
Degradation of MPAs due to fishing activity	<p>MPA management has been a high priority since 2012 with substantial progress made. Current workstreams (e.g. Cromer Shoal MCZ, remaining 'red risk' sites) are established priorities in the Business Plan and are being progressed.</p> <p>No change from previous quarter</p>
Shellfish and fish stocks collapse	<p>Annual surveys of Wash cockle and mussel stocks alongside innovative approach to management of the cockle fishery. Ongoing workstream to identify causes of mussel and cockle mortality. Closure of cockle fishery in Nov 2019 due to emerging findings of mussel surveys in order to mitigate impact on 2020 cockle fishery. Innovative approach to surveys enabled the 2020 Wash cockle fishery. Active monitoring of the 2021 cockle fishery identified that very small cockles were being landed, which was a threat to sustainability. Active consideration was given to the introduction of a minimum landing size, but this was not progressed on the basis that it would not be an appropriate short-term intervention.</p> <p>Work to support industry in establishing a Fisheries Improvement Plan for crab and lobster ongoing. Stakeholders have expressed views that the whelk stocks in the district, and particularly within the Wash, are potentially under threat of overfishing and this is also indicated by consideration of available data. It is noteworthy that initial findings of the Economic Assessment for the Wash fisheries (which considered interdependencies between all the Wash fisheries) identified a similar decline in stock sustainability. This fishery has become one of the most valuable in the District and represents one of very few available fishing opportunities within the district. Research (including an assessment of stock sustainability) is ongoing to identify the level of risk posed and potential mitigation.</p> <p>The absence of a cockle fishery this year due to insufficient stock levels is of significant concern and is likely to result in additional pressure on the whelk and brown shrimp fisheries.</p>
Failure to secure data	<p>Policies and processes developed to ensure compliance with GDPR.</p> <p>No change from previous quarter</p>
New Burdens funding discontinued	<p>Defra previously advised that 2020-21 would be the last year that New Burdens funding would be paid in its current form. Defra and the IFCAs worked on the 'co-design' of a replacement for New Burdens, which</p>

	<p>concluded that any funding would remain static at current levels, with the allocation to each IFCA unchanged. It was due to form part of SR 2020 but as a consequence of the Covid-19 pandemic there was a single year funding settlement for 2021-22, which did include funding for IFCAs. Budget planning had accounted for the possibility that central funding may not be forthcoming or may be reduced and the three Finance Directors representatives were fully briefed at the meeting of the 10th November 2020 and updated on 19th November 2021.</p> <p>Defra subsequently advised that they intend to continue to provide some funding and had included it in the spending plans, but it may be associated with the development of new metrics to demonstrate that the funding achieves value. More recently Defra asked IFCAs to submit funding proposal linked to specific areas of work in anticipation of a government wide comprehensive spending review that is being conducted during Autumn. As a consequence, the Association of IFCAs on behalf of all IFCAs, submitted their anticipated spending requirements for the next three years to Defra.</p> <p>Funding at the same level as that provided previously has been provided by Defra but the outcome on the bid for additional funding is still awaited.</p>
<p>The Wash Fishery Order 1992 is not replaced in time when it expires in January 2023</p>	<p>The byelaw to replace the regulating order has been 'made' by the Authority and work to progress the associated policies for access to the fishery has been progressed as a high priority. Initially delayed to align with policy development the byelaw was formally submitted to the MMO and Defra for approval in December 2021. Significant progress has been made in the development of the byelaw policies, in consultation with fisheries stakeholders to resolve the outstanding objections from the formal consultation and the final proposals were to the March meeting of the Authority and following further work have now gone to formal consultation.</p> <p>Development of the Several Order and the associated Fisheries Management Plan has been delayed and the process for application is known to potentially take a significant amount of time. The level of activity on the lays is considered marginal, especially considered against the number of lays issued. A total of 544.5 tonnes of mussel has been removed from lays since 2015, with an annual average value of circa £78,000. In the context of other fisheries in the District, this fishery is of a similar value to thornback ray fishery, but supports fewer different business models, with only two known operations (out of the 30 different lay holders) being active during that time. Therefore, the risk associated with industry generally is considered marginal, however the impact on the two businesses currently utilising the fishery could be much higher. It is noteworthy that the intention of the proposed Fisheries Management Plan is intended to address the issue of aquaculture not being effectively utilised and to ensure that it is available to those</p>

	<p>who can and do intend to use it to enhance its value to the Wash fishing industry more generally. Defra are aware of the issue, and we are in dialogue about potential short-term solutions to mitigate the associated risk.</p>
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

After consideration of the substantive consultation responses, completion of the Habitats Regulations assessment and updates to the associated Fisheries Management Plan, the Several Order application was submitted to Defra in April 2022. Natural England provided formal advice supporting the application, subject to future consultation as and when management changes are proposed.

Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Information Item 15

Eastern Inshore Fisheries and Conservation Authority Meeting

08 June 2022

Wash Fishery Order 1992 Licence applications

Report by: Luke Godwin (Senior IFCO – Regulation)

Purpose of Report

To report to members the Wash Fishery Order 1992 Licence transfers which were approved by the CEO in consultation with the Chair and Vice-Chair

Recommendations

It is recommended that members:

- **Note** the contents of the report

Background

At the 31st Eastern IFCA meeting (31 January 2018), Members agreed to delegate authority to transfer Wash Fishery Order 1992 (WFO) licences / Entitlements to the CEO in consultation with the Chair and Vice-Chair. The delegated authority includes that any such decisions are reported back to the Authority.

Report

Table 1 (below) sets out the Licences which have been transferred since the above delegated authority came into effect.

Entitlement Number	Date transfer agreed	Transferred from	Transferred to
58	20/05/2019	John WILLIAMSON	Steven WILLIAMSON
17	28/04/2020	Alan BREWSTER	Roy BREWSTER
9	28/05/2020	Alan BREWSTER	Kevin BREWSTER
10	28/03/2022	Roy BREWSTER	Wayne BREWSTER
17	28/03/2022	Roy BREWSTER	Wayne BREWSTER
11	28/03/2022	Roy BREWSTER	Kevin BREWSTER

Members are asked to note the above.

Financial Implications

None identified

Legal Implications

None identified

Appendices

n/a

Background Documents

Papers and minutes relating to Action Item 19, 31st Eastern IFCA meeting, 31 January 2018.

Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Information Item 17

48th Eastern Inshore Fisheries and Conservation Authority Meeting

08 June 2022

Operational Update

Report by: Jon Butler Head of Operations

Purpose of Report

To provide members with an overview of the work carried out by the Marine Protection and Marine Science teams during the period of March, April and May.

Recommendations

It is recommended that members:

- **Note** the content of the reports

Financial Implications

None

Legal Implications

None

Appendices

Appendix 1 – Marine Protection Report

Appendix 2 – Marine Science Report

Background Documents

Not Applicable

Appendix 1



MARINE PROTECTION MONTHLY REPORT

MARCH 2022

An overview of the work conducted by the Marine Protection Team.
Report by: Jon Butler Head of Operations



Enforcement and engagement priorities throughout district:

Area 1- Gather intelligence through high visibility port visits and coastal patrols. Educate and engage with fishers.

Area 2- Shrimp return compliance and inspections. Complete shrimp forms onboard. Whelk gear and catch inspections, EMS Monitoring.

Area 3- Gather intelligence, Commercial landing inspections. Shrimp returns compliance and inspection, EMS Monitoring.

Area 4- Gather intelligence, Commercial and RSA landing inspections. Whelk compliance and inspection. Bass compliance, inspection, and engagement.

Enforcement Outcomes:

No enforcement actions in respect of offences this month. Continued focus on engagement with MCZ, RSA's and fishers.

Enforcement metric	Number completed			
	Area 1	Area 2	Area 3	Area 4
Shore Patrols	5	3	6	1
Port visits	11	5	18	4
Catch inspections (landings observed)	0	0	12	0
Catch Inspections (Landings not observed)	0	0	3	0
Vehicle Inspections	0	0	0	0
Premises inspections	0	1	0	0
Enforcement actions/Offences	0	0	0	0
Intelligence reports submitted	1	2	2	2
Fishers engaged	4	5	24	3
Vessel Patrols	1	10	0	0
Boardings	0	5	0	0
Gear Inspections	0	1	0	0

EMS monitoring:

Monitoring of 'restricted areas' under the Marine Protected Areas Byelaw 2018 conducted throughout the reporting period. The following monitoring occurred:

Protected Feature	<i>Intertidal biogenic reef</i>	<i>Subtidal biogenic reef: Sabellaria spp. (Ross worm), subtidal stony reef, subtidal mixed sediments, subtidal mud.</i>	<i>Intertidal seagrass beds, subtidal mixed sediments, subtidal mud.</i>	<i>Eelgrass beds (Humber)</i>
Protected Areas	1-13	14-29	30-35	36
March 2022	28	20	1	0

Engagement messages received

- Very little fishing activity for time of year, bass being closed would be only species of value.
- Herring and sprat at sea but not viable.
- Concerns on the price of fuel, will also impact on white diesel as well so may have to spend more time at sea to cut fuel/travel costs.
- Concerns that the MMO have now started enforcing the 2019 Tech Con restriction of no drift nets with mesh size of less than 50mm for pelagic species. This effectively would stop the sprat fishery completely as cannot be caught in any other way.
- RSA catching lots of whiting, mostly undersize in Norfolk
- Frustration with iVMS and wearing of lifejackets at sea whilst potting.
- RSAs pleased to see Fisheries Officers but little being caught on Lincolnshire coast.
- Not many lobsters being caught
- Frustration with MCA inspections.
- Issues with MMO catch recording app.
- Whelk fishing is good out of wells.
- Queries on the Seaweed Farm Proposal off Morston

Fishing trends

Area 1: West-North (Hail Sand Fort to Gibraltar Point).

Whelk – steady effort, mostly caught outside the six,

£1 per kg.

Shrimp – landings have dropped off, expecting the price to increase soon £4.30 -

£4.80per kg

Area 2: West-South (The Wash and North Norfolk Coast to Brancaster).

Crab & Lobster – minimal effort, very few vessels with pots out, more vessels taking gear to sea towards end of month. Crab **£1.40 per kg**, Lobster **£18 per kg**.

Skate & Ray – effort increased at start of month, minimal catches reduced effort. Markedly reduced compared to other years.

Whelk – little effort, reduced compared to other years. **£1.30 per kg**

Herring – minimal effort, lack of demand and market limiting efforts, many fishing to use as bait. **£0.50 - £3.50 per kg**.

Sprats – minimal but steady effort, **£1.50 - £3.50 per kg**.

RSA – quiet, small whiting and dab caught mostly.



Area 3: East-North (Brancaster to Great Yarmouth).

Crab **£1.40 per kg**.

Lobster **£18 per Kg**

Recreationally quiet with small whiting and dab most frequently reported.

Herring **50p - £3.50 per kg**

Whelk **£1 per kg**. Little effort.

Area 4: East-South (Great Yarmouth to Harwich).

Crab & Lobster – minimal effort and catches (no known landings of Lobster), many attempted to buy crab in from Norfolk but unable to. Crab **£1.40 per kg**, Lobster **£20 per kg**.

Skate & Ray – decreased through month, **£1.50 per kg**.

Whelk – steady effort outside the district, **£1.30 per kg**.

Herring & Sprats – minimal steady effort, only viable fishery due to seal issues. Lack of demand and market limiting efforts. Herring **£0.50 - £2.50 per kg**, Sprats **£1.50 - £3.50 per kg**

RSA – effort reduced, small whiting and dab only reported catches.



MARINE PROTECTION MONTHLY REPORT

APRIL 2022

An overview of the work conducted by the Marine Protection Team.
Report by: Jon Butler Head of Operations



Enforcement and engagement priorities throughout district:

Area 1- Gather intelligence through high visibility port visits and coastal patrols. Visit ports and Quaysides, including patrols at Grimsby. Visit key ports, educate and engage with fishers. Shrimp Returns.

Area 2- Gather intelligence through port visits and coastal patrols. Commercial Landing inspections, Whelk compliance and inspections. Shrimp Returns

Area 3- Gather intelligence, Commercial landing inspections and boardings in respect to Whelk and Lobster. Evening and weekend inspections with RSAs. MSC Engagement. Shrimp Returns

Area 4- Gather intelligence, Commercial and RSA landing inspections. Bass compliance with visits to restaurants. Shrimp Returns.

Enforcement Outcomes:

No enforcement actions in respect of offences this month. Continued focus on engagement with MCZ, RSA's and fishers.

Enforcement metric	Number completed			
	Area 1	Area 2	Area 3	Area 4
Shore Patrols	5	3	5	6
Port visits	21	6	25	15
Catch inspections (landings observed)	0	3	18	11
Catch Inspections (Landings not observed)	0	0	1	1
Vehicle Inspections	0	0	0	0
Premises inspections	0	0	1	6
Enforcement actions/Offences	0	0	0	0
Intelligence reports submitted	11	1	11	17
Fishers engaged	15	2	55	37
Vessel Patrols	0	9	3	1
Boardings	0	0	0	0
Gear Inspections	0	0	0	0

EMS monitoring:

Monitoring of 'restricted areas' under the Marine Protected Areas Byelaw 2018 conducted throughout the reporting period. The following monitoring occurred:

Protected Feature	<i>Intertidal biogenic reef</i>	<i>Subtidal biogenic reef: Sabellaria spp. (Ross worm), subtidal stony reef, subtidal mixed sediments, subtidal mud.</i>	<i>Intertidal seagrass beds, subtidal mixed sediments, subtidal mud.</i>	<i>Eelgrass beds (Humber)</i>
Protected Areas	1-13	14-29	30-35	36
April 2022	33	1	6	1

Engagement messages received

- Commercial Crab season started well, in area safe from storms.
 - On MCZ, concerned if taking tracker to sea, information will be used against them.
 - MCA unreasonable and changing requirements mid-way through rather than on annual inspection.
 - The expense of gear and fuel making profit hard to get.
 - Price of Lobster per kg is making fishing worthwhile.
- 
- Commercial - Crab to the factories is £1.55 per kg which is hardly covering expenses with the cost of bait and fuel so high.
 - Commercial - Fishers moved all their gear off the Chalk bed in preparation for the bad weather, so it shows evidence of responsible fishing because it's in our interest to protect the chalk bed and our gear as its more secure of the bed in bad weather.
 - RSA – catching some undersize whiting and some larger being retained, reports of cod off Ness Point.
 - Commercial – Herring fishery increased effort, 2 vessels now targeting and can sell locally. Positive towards future co-management in fisheries. Concerned about seine netters further offshore. Weather keeping many ashore.
 - Some of the opinion that without IFCA's there would be no fishing.
 - Some areas of Crab poor quality and not worth landing. Lobster good quantity for time of year.
 - RSA - Not much being caught on the beach, few whiting but undersized.
 - No lobsters on the ground due to the rough weather.
 - Crabs in good numbers but don't seem to be in the areas you would expect them to be this time of year (possibly the weather)
 - Whelks have improved in numbers but have dropped over the last day or two, still better than a few weeks ago
 - Suffolk Coast. Too much weed to net for bass at sea, not many to be caught yet. Bass in good numbers in Suffolk rivers already.
 - Steady crab catches, around 25 from 20 pots. Minimal lobster and most are undersize. Frustration with MCA, possible new appeals process.
 - RSA - Large amount of undersize whiting being caught from beaches, 45 in an hour for some. Many fishing for bass but only catching whiting.
 - Commercial Fishers interested in results from recent cockle surveys
 - Weather conditions not good for fishing.

Fishing trends

Area 1: West-North (Hail Sand Fort to Gibraltar Point).

Whelks are hit and miss so need to jump between both them and Crab.
Whelk prices still low at **£1.05 per kg**
Lobster prices have remained high since Christmas at **£21.50 per kg**.
Crabs are at **£2.00 per kg**

Area 2: West-South (The Wash and North Norfolk Coast to Brancaster).

Shrimp **£5.20 - £6.00 per kg**.
Rough weather and time of year limiting effort,
with herring and skate the main fisheries.
Crab/lobster effort increased, most vessels have
some, if not all, pots out. Increase in crab
catches, large demand **£1.40 per kg**. Minimal
lobster catches, **£18 per kg**.
Whelk effort steady from Wells, **£1.05 - £1.30 per
kg**.
Skate & Ray effort steady through the month,
minimal catches.
Herring effort high and steady, **£0.45 - £1.00 per
kg**.
Sprats minimal continued effort.
RSA catches limited to a few small dab and whiting.



Area 3: East-North (Brancaster to Great Yarmouth).

Crab **£1.40 per kg**.
Lobster **£18 per Kg**
Herring **50p - £3.50 per kg**
Whelk **£1 per kg**.

Area 4: East-South (Great Yarmouth to Harwich).

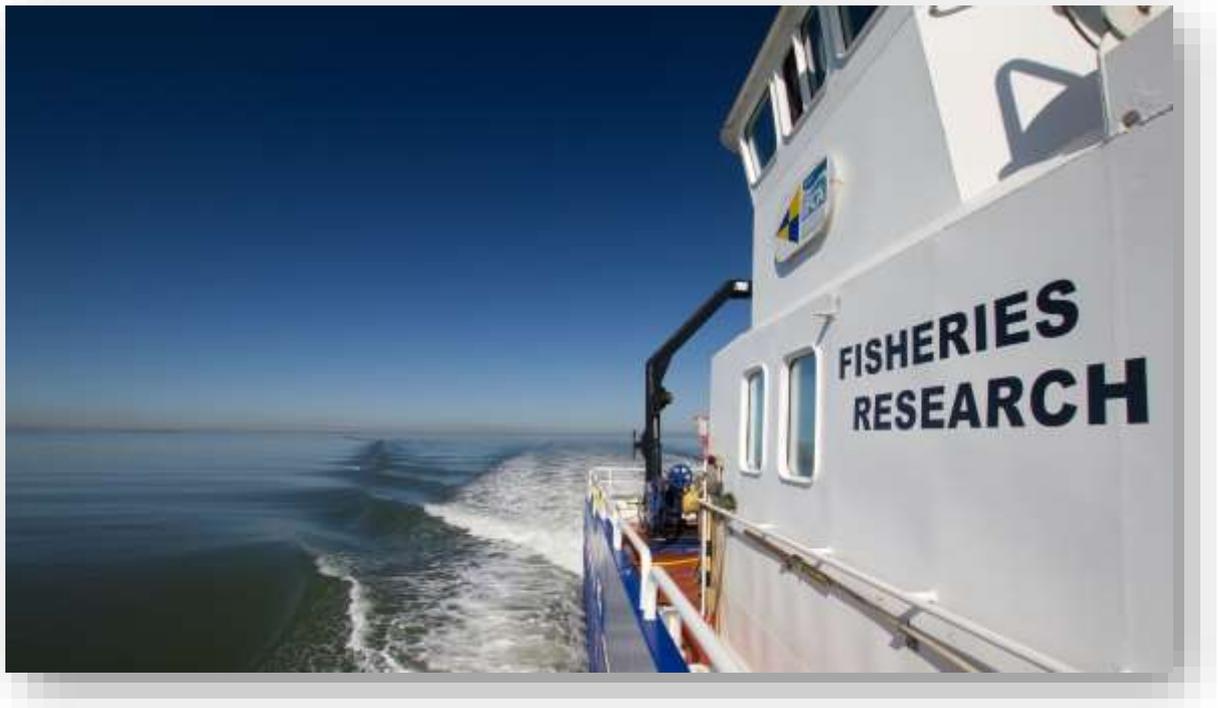
Minimal patrols to determine activity in Suffolk area



MARINE PROTECTION MONTHLY REPORT

MAY 2022

An overview of the work conducted by the Marine Protection Team.
Report by: Jon Butler Head of Operations



Enforcement and engagement priorities throughout district:

Area 1- Continue to gather intelligence through port visits and coastal patrols. Bass Landings and Sales outlets. Visit key ports, engage and educate fishers. Shrimp Returns

Area 2- Continue to gather intelligence through port visits and coastal patrols. Commercial Landing inspections, Whelk compliance and inspections, Shrimp Returns

Area 3- Continue to gather intelligence, Commercial landing inspections and boardings in respect to Whelk and Lobster including RSA, MSC Engagement. Shrimp Returns

Area 4- Continue to gather intelligence, Bass compliance with visits to restaurants. RSA and Commercial Boardings. Shrimp Returns.

Enforcement Outcomes:

3 Advisory letters served following gear inspections and ongoing investigation in relation to breach of conditions relating to Whelk Permit Bylaw and the landing of undersized whelks.

Continued focus on engagement with MCZ, RSA's and fishers.

Enforcement metric	Number completed			
	Area 1	Area 2	Area 3	Area 4
Shore Patrols	4	5	8	5
Port visits	16	8	30	17
Catch inspections (landings observed)	0	5	16	4
Catch Inspections (Landings not observed)	0	2	1	1
Vehicle Inspections	0	0	0	0
Premises inspections	0	3	0	2
Enforcement actions/Offences	0	1	0	0
Intelligence reports submitted	1	11	10	3
Fishers engaged	27	32	26	27
Vessel Patrols	2	8	5	3
Boardings	0	4	0	0
Gear Inspections	0	4	0	0

EMS monitoring:

Monitoring of 'restricted areas' under the Marine Protected Areas Bylaw 2018 conducted throughout the reporting period. The following monitoring occurred:

Protected Feature	<i>Intertidal biogenic reef</i>	<i>Subtidal biogenic reef: Sabellaria spp. (Ross worm), subtidal stony reef, subtidal mixed sediments, subtidal mud.</i>	<i>Intertidal seagrass beds, subtidal mixed sediments, subtidal mud.</i>	<i>Eelgrass beds (Humber)</i>
Protected Areas	1-13	14-29	30-35	36
MAY 2022	21	9	2	2

Engagement messages received

- Crab, Lobster North Norfolk Coast is hit and miss
- Suffolk Coast, no sole, only Bass and Whiting
- Good to see Fisheries Officers out
- Concerns about the fishing industry in the wash, low shrimp catches, whelk fishery under pressure and increasing fuel costs.



- Meeting with small groups of fishers needs to take place to discuss how the wash is managed as opinions are that it is not working currently.
- Skate prices are low and still no SOL fishery. Merchant trying to raise value of catch for local UK species.
- Concerns about cockle fishery
- Worst year ever for crab, larger vessels fishing all year round with too many pots ruining the fishery for everyone else.
- National management measures needed outside EIFCA remit.
- Costs seem to be getting out of control making it much more difficult to make money.
- Bass only viable species to fish for, price low and dropping demand due to rising living costs.
- Poor catches of crab, seems lots of crabs on the ground but not in the pots small crab stripping the bait within 24hrs and then exiting via escape gaps in pots.
- Cost of bait hitting harder than fuel price due to smaller crabs stripping bait from pots with 24hrs.
- Fishers trying not to travel so far to save on fuel.
- RSAs not happy with parking at Huttoft, Lincs with RSAs moving to other areas.
- iVMS is an invasion of privacy, fishing not viable enough, no one can afford to go into it.
- Struggling with fuel costs, Whelk fishery is dropping off, very hard to make any money. Some fishers have been going to sea for nothing.
- Brown Shrimp fishers are working for companies fishing all week and hardly covering fuel costs.
- Poor crab fishery, warm weather, and winds in East
- Water thick with algae
- Rising bait and fuel costs
- Resistance to wear lifejackets due to the nature of the fishing

Fishing trends

Area 1: West-North (Hail Sand Fort to Gibraltar Point).

RSAs are catching occasional whiting, mostly undersized, dogfish and smoothound.
Bass – Occasional bass being caught on beaches
Minimum fishing activity.



Area 2: West-South (The Wash and North Norfolk Coast to Brancaster).

Whelks – lots of small whelk suggests will be good for fishery next year, if no cockle fishery, then stocks will be hit hard. £1.05 kg but expected to increase soon.
Averaging 1-2 tons per day.

Shrimp – Boston boats focusing activity around Boston Deeps and Black Buoy,

Lynn boats in the channels and of N Norfolk coast, £6.12 kg. Low landings.

Crab – steady for time of year, reports from Cromer and Sea Palling that numbers that catch is very hit and miss day to day, £1.20 kg.

Lobster – good catches off wrecks, demand and price still good, possibly due to issues in north-east, £22 kg.

Ray – steady, low value species, £2 kg.

RSA are catching good sized bass off beaches (50 – 56cm). Also whiting, mostly undersized, dogfish and smoothound. Bass being caught as far North as Walcott now, stock moving north.

Area 3: East-North (Brancaster to Great Yarmouth).

Poor crab catches, with spider crab being caught off some beaches

Lobster price per kg has dropped since easter from £22.50 to £14.

Crab price increased from £1.55 per kg to £1.75 per kg. Bass only viable species to fish for, price low and dropping demand due to rising living costs. £7/kg at BFP.

Area 4: East-South (Great Yarmouth to Harwich).

Bass – being caught in south of district, north of Aldeburgh is quiet. Expect effort to increase as stock moves north. £11 kg.

Crab & Lobster – poor catches, minimal effort. CRE £1.20 kg, LBE £22 kg.

Herring – visiting pelagic trawlers still in area and intel suggest large numbers still being caught.

Ray – steady activity, £2 kg.

Whiting – low numbers and smaller sizes.

RSA – bass being caught in the south of the district, particularly the rivers. Also catching ray and whiting. Increase in number of charter vessels fishing off the coast.

APPENDIX 2



Eastern Inshore Fisheries and Conservation Authority

Marine Science Quarterly Report

March - May 2022



Managing Fisheries in Marine Protected Areas

The main focus of Marine Protected Area work during the quarter has been the potting fishery in the Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ), but casework relating to The Wash & North Norfolk Coast and Inner Dowsing, Race Bank & North Ridge SACs has also been progressed.

Impacts of potting on chalk in the Cromer Shoal Chalk Beds MCZ

Please note, a more detailed update on Eastern IFCA's work relating to the Marine Conservation Zone is provided at Agenda item 13.

Officers completed their updated assessment of potting activities in Cromer Shoal Chalk Beds MCZ and submitted it to Natural England (NE) on 28th April 2022. NE will review the assessment and provide formal advice in due course¹². The assessment concluded that abrasion pressures on the subtidal chalk and rock features caused by potting meant that the possibility of the activity hindering the conservation objectives for the site could not be ruled out. Mitigation is in the form of the ongoing Adaptive Risk Management (ARM) (see below). With this mitigation in place, officers are satisfied that there is no significant risk of the activity hindering the conservation objectives for the MCZ.

Adaptive Risk Management (ARM) in the Cromer Shoal Chalk Beds MCZ

ARM requires that management is implemented to reduce pressures from potting, and then research is undertaken to assess the effectiveness of measures then adapt them if necessary. The Management Task and Finish Group have developed a Code of Best Practice for potting in the MCZ, which has, following consultation, been endorsed by the two local Fishermen's Associations. A voluntary agreement on reporting, recovery and disposal of snagged, missing and lost potting gear is also currently in development. The intention of the agreement is to facilitate effective collaboration between fishermen, divers and beach cleaners who wish to work together and to facilitate and monitor their reporting and recovery actions.

Other work feeding into the ARM approach in the Cromer Shoal MCZ within this period includes:

¹² Officers are currently continuing to follow NE's 2020 advice on the need to manage the potting fishery by applying Adaptive Risk Management.

- Eastern IFCA are in the process of developing a permitting byelaw for potting activities within the MCZ. This will enable the Authority to implement flexible permit conditions as required, providing a mechanism for compulsory measures to be implemented as determined by ARM.
- Fishermen continue to voluntarily use vehicle trackers provided by Eastern IFCA on their boats to provide detailed spatial information on fishing activities. Currently 12 trackers have been distributed across the fleet with a view to distributing more. The information that these trackers provide is extremely useful in helping us understand more about fishing practices but also will provide us with ongoing monitoring data of fishing activity.
- Last year Natural England commissioned the reanalysis of the current multibeam survey data to improve the resolution of the outputs and to include analyses of rugosity and the analysis of the ROV footage collected by Eastern IFCA in the MCZ during August and September last year. Eastern IFCA have now received the final report for the reanalysis of multibeam survey data and a draft report for the analysis of the ROV footage. Outputs from these analyses will be reviewed and where appropriate will contribute to the mapping of rugged chalk features.
- The Research and Development Task and Finish Group are in the process of planning experimental surveys for the upcoming months, including the trialling of adapted gear designed to reduce contact with rugged chalk. The Group have developed a project plan: <https://www.eastern-ifca.gov.uk/wp-content/uploads/2022/03/2021-2022-Research-Development-Task-Finish-Group-Project-Plan.pdf> New team members are being trained in the use of the ROV and survey work is due to resume in late May, weather-permitting.
- An Evidence Group has been established which sits within the Stakeholder Group and provides a route for local stakeholders to share knowledge and information with the Research and Development and Management Task and Finish groups. The group met initially in March 2022 and identified several sources of data which could be used to contribute to Adaptive Risk Management.

Impacts of netting activity in the MCZ

It has not been possible to progress this assessment this quarter because of the need to focus on the more significant potting fishery and other priorities, as well as the loss of Science team members. The netting assessment will be picked up when resources allow.

Inner Dowsing, Race Bank & North Ridge Special Area of Conservation (SAC)

The Authority's agreement of the Closed Areas Byelaw 2021 (46th Authority meeting) will provide protection for the feature "biogenic reef: *Sabellaria*" within the inshore (0-6nm) part of this SAC. [The MMO manages fisheries in the offshore part of the SAC and has recently announced new conservation measures: <https://www.gov.uk/government/publications/the-inner-dowsing-race-bank-and-north-ridge-special-area-of-conservation-specified-areas-prohibited-fishing-gears-byelaw-2022>]. The Authority noted that Natural England had advised a further inshore area of the SAC should be managed as *Sabellaria* reef, but that officers, having scrutinised the supporting evidence, did not consider the evidence showed reef in that area. This view was supported by an Eastern IFCA survey in 2021, which strongly indicated the absence of *Sabellaria* reef in the area, but in the absence of "ground truthing" (i.e. verifying the acoustic data using cameras and/or grab samples) the survey was not conclusive. It was therefore agreed that the Authority would undertake a further, dedicated survey of the area in question to gather additional evidence on the habitats there.

Officers undertook the first part of that survey using *RV Three Counties* in May 2022, which involved an acoustic (sidescan sonar) survey of the sea bed. Officers have started to process the sidescan data by creating "mosaics" and plotting them in GIS. A technical issue with the GPS has created some difficulty in creating mosaics for all the survey line data collected. Officers are investigating different ways to resolve this. The raw data for the entire area surveyed will be analysed independently as a 'waterfall'. Preliminary analysis of this data seems to suggest no presence of *Sabellaria* reefs; this observation is not final however and will be refined with the further examination of the produced mosaics and a more in-depth prosecution of the 'waterfalls'. The results of this analysis will inform the second part of the survey, which will be ground-truthing using cameras on the ROV, and will be undertaken as soon as possible.

Other Marine Protected Area casework



- Cromer Shoal Chalk Beds Marine Conservation Zone: multiple workstreams – see above;
- Habitats Regulations assessment of the proposed new Several Order for The Wash has been completed and submitted to Natural England. NE has provided advice in support of the Several Order application, subject to future consultation when Eastern IFCA amend management.

- Discussions with NE regarding cockle stocks and bird food requirements, to inform the decision regarding potential for a 2022 Wash cockle fishery;



- Harbour seal investigations with Natural England and Sea Mammal Research Unit (SMRU) continues. SMRU is shortly due to complete its updated report on usage of haul-out sites in The Wash, which will be used by NE to refresh their advice so that management to minimise disturbance to seals is as relevant as possible. The significant increase in grey seal populations in the Southern North Sea is recognised and has been cited as a potential factor for recent declines in Harbour seal populations.
- “Amber & Green” assessments: this workstream has been put on hold as officers have needed to focus on core work relating to Cromer Shoal Chalk Beds MCZ, Wash cockle surveys and Inner Dowsing *Sabellaria* surveys.
- Monitoring and Control Plans: this workstream has also been put on hold as officers have needed to focus on other core work. However, officers have focused heavily on monitoring and control of the Wash shrimp fishery, given the anticipated increase in effort in this fishery over coming months and the need to ensure effort remains within the limits identified in the shrimp HRA mitigation plan.

District-wide partnership work and stakeholder engagement

Eastern IFCA officers participate in a range of partnership and stakeholder groups, with significant focus given to relationships with fishery stakeholders, Natural England and conservation NGOs. As well as routine liaison, recent partnership work relating to fisheries in MPAs has included:

- Ongoing collaboration with *Natural England, University of Essex and Cefas* in relation to improving understanding of the rugged chalk feature in Cromer Shoal Chalk Beds MCZ
- Ongoing work with *Marine Conservation Society’s Agents of Change* project for stakeholder engagement in relation to MCZ research and development of management
- Ongoing collaboration with local stakeholders and MMO in relation to retrieval and disposal of lost fishing gear
- *Estuarine & Coastal Sciences Association* conference, University of East Anglia – Senior Marine Science Officer (Environment) presented on cockle fishery management and Habitats Regulations Assessment
- *IFCA Technical Advisory Group (TAG)*
- *Whelk Working Group* – regular meeting to discuss whelk stock assessment and management around UK
- *Southern North Sea Environment Group* – regular meeting with conservation NGOs and NE to discuss conservation across district.

- *Shellfish Liaison Group / local authorities* meetings to discuss shellfish sampling for bacteriological/toxin monitoring and other shellfishery issues
- *MMO liaison re. assessment and management of fisheries in offshore sections of MPAs*
- Regular meetings with wind farm developers and regulators in relation to environmental compensation for wind farm impacts
- *Advisory Groups for The Wash & North Norfolk Marine Partnership*
- *University of St. Andrews* fishing trackers project.
- Liaison with *Sea Mammal Research Unit* and *Natural England* on seal haul-out mapping.

Fisheries Sustainability

Cockle stock assessment

- Eastern IFCA officers conducted a full stock survey of the Wash Fishery Order cockle beds in April and May 2022. The full survey report and management recommendations are set out at Agenda Item 10. In summary, for the first time in two decades, cockle stocks have fallen below the thresholds needed to support a fishery. This means there are insufficient stocks to support a fishery without jeopardising the sustainability of the stock, and depleting available food for protected, dependent bivalve-eating bird populations. Officers recognise the hardship likely to be caused by the lack of a cockle fishery during 2022, and have investigated with Natural England whether a small-scale fishery could be enabled, but it is clear that even a small fishery would risk the conservation objectives for The Wash & North Norfolk Coast Special Area of Conservation and The Wash Special Protection Area, which Eastern IFCA is duty-bound to protect.
- Officers are continuing to liaise with Cefas to investigate the cause(s) of the “atypical mortality” seen in cockle and mussel populations in The Wash. It is understood that Cefas have made some progress and are due to report within the coming months.

Whelk stock assessment

- Having relatively poor mobility and no planktonic larval phase to aid their dispersal and recolonisation, whelk are extremely vulnerable to localised over-fishing. Within the District, an increased minimum landing size (MLS) and a pot limitation scheme are among the measures used to keep the fishery sustainable. Since 2015, officers have been using data from landings returns to monitor the health of the District’s whelk stocks using a Landings Per Unit Effort (LPUE) metric. This data, which show a steady increase in effort and landings between 2015 and 2019, have, in some areas, subsequently shown a decline since the 2019 peak, leading to concerns that the stocks are being over-fished. Data analysis is ongoing, however

due to the low cockle stocks this year the fishery is being closely monitored to analyse how an increase in fishing effort may affect whelk stocks. This will inform consideration of future management measures, with immediate measures being taken if necessary.

Fisheries Management Plans

- Eastern IFCA officers are standing by to contribute as required to the regional Fisheries Management Plans being developed for crab and lobster, whelk, bass and flatfish.

Environmental Monitoring

The Wash EHO/biotoxin & SWEEP sampling

- The Authority collects monthly cockle and mussel samples from The Wash for routine bacteriological and biotoxin testing by the Local Authorities' Environmental Health Offices. Samples have been consistently collected throughout this quarter. Analyses have not led to the activation of any investigation states in this period, however high levels of E. coli were present in the Heacham and Hunstanton (B04AP) cockle sample collected by King's Lynn Borough Council in early May, resulting in the activation of an investigation state.

Sustainable Development

District-wide input to consultations on marine developments



Officers have provided input to several consultations within this period. Most consultations relate to offshore renewable energy projects, and include the consideration of “compensatory measures” or “measures of equivalent environmental benefit” required by wind farm projects to counter their potential or actual impacts on marine protected areas. Officers are currently in compensatory measures discussions relating to the following wind farm projects:

Hornsea 3, Sheringham and Dudgeon Extension Projects, Norfolk Vanguard and Norfolk Boreas.

Derogations from Eastern IFCA Byelaws

Officers have reviewed, and where relevant, granted applications for scientific derogations from Eastern IFCA byelaws during the quarter. These have related to scientific sampling of undersized whelks - project expansion (Cefas), scientific beam trawl to obtain data on the distribution and abundance of commercial flatfish species

(Cefas) and the landing of berried lobsters to stock a lobster hatchery - project expansion (Wells Harbour). Details of the derogations granted are available upon request.

Eastern IFCA Marine Science team updates

New Team Members

Following a successful recruitment process, the Marine Science Team have welcomed two new Marine Science Officers to the team within this quarter; Fletcher Noble and Elena Jaxtheimer, who both joined in April 2022.

Both Fletcher and Elena have recently graduated from the University of Exeter, with Fletcher studying Marine Biology before undertaking a Master's degree in Marine Vertebrate Ecology and Conservation. Fletcher is also a qualified PADI Open Water Scuba Instructor. Elena completed her undergraduate degree in Biology at the University of Innsbruck, Austria, before undertaking her Master's degree in Conservation and Biodiversity at Exeter. Elena also has experience in arctic ecosystems, aquaculture, marine protected area assessments and marine mammal conservation.

Marine Science officers have been delivering a suite of in-house training sessions for the new team members covering subjects including cockle surveys, risk assessments, consultations, EHO sampling, side-scan operation, ROV operation and data analysis. Work streams have been allocated across the team; Fletcher will be contributing to the MCZ rugged chalk assessments, specifically focussing on the economic benefits of the chalk to local fishers. Elena will be monitoring the Brown Shrimp fishery, focussing on the identification of a yearly sustainable effort limit.

The team lost an experienced member, Stephen Thompson, in April 2022 when he moved on to work for the Pembrokeshire Coastal Forum. Stephen's scientific knowledge, professional experience and passion for sustainable fisheries and effective stakeholder dialogue had contributed a huge amount during his nine years with the Authority. Some of his more recent roles have included project-managing the Cromer MCZ ARM work, leading on the Authority's contributions to the Sizewell C planning examination, co-ordinating IFCA/MMO marine licensing liaison and leading on the Authority's shrimp Habitats Regulations assessment. It is intended to recruit a Grade 6 Marine Science officer as soon as possible to ensure team productivity is maintained.