Strategic Assessment 2025

Executive Summary

Eastern IFCA undertakes an annual Strategic Assessment which seeks to identify high-priority and business critical work areas to inform an annual refresh of the 5-year business plan. The assessment considered the risks posed to fisheries and by fishing activity to the environment and in particular Marine Protected Areas, evaluates risk in the context of existing internal and external mitigants and then identifies further mitigation to address residual risk.

The assessment broadly follows a PESTLE (Political, Economic, Social, Technological, Legal and Environmental) analysis format and is informed by fisheries data analysis, stakeholder views gathered throughout the financial year and the experience from within the IFCA. As an update to the previous year's assessment and a reflection of the progress made with respect to the delivery of Fisheries Management Plans (FMPs), the actions from each plan have been considered within the PESTLE analysis to represent a potential mitigant and opportunity to contribute to the plan's implementation.

Management of fishing activities within Marine Protected Areas presents the highest risk work area and this is underpinned and highlighted by having missed deadlines to contribute to Government targets (set out in the 25-year environment plan and Environmental Improvement Plan 2023).

The delayed implementation of national requirements for Inshore Vessel Monitoring Systems increases risk across a number of fisheries and in particular, whelk, shrimp and crab and lobster fisheries, which have management plans in place that require enhanced spatial data.

Whelk fisheries are considered to have increased in risk as informed by the Whelk Permit Conditions Review carried out in 2024 which identified a sustainability risk in The Wash and a fisheries viability risk in Suffolk-based whelk fisheries.

No emerging fisheries have been identified however, the herring fishery has continued to increase and now represents the fifth largest fishery in the district.

Three new 'high priority workstreams' are identified to mitigate newly identified risks.

Contents

Introduction

Eastern IFCA seeks to deliver effective inshore fisheries management in a complex legislative, natural, and economic environment. Inshore fisheries business models range from single-handed operations prosecuting artisanal fisheries in open skiffs launched from beaches to larger-scale, multi-vessel businesses capable of transiting between IFCA districts. Inshore marine ecosystems host a range of nationally and internationally important protected habitats and species varying from the rugged chalk structures off the North Norfolk Coast to the intertidal mudflats of the Wash. In addition, the Government's commitments to well managed fisheries and healthy ecosystems have resulted in the biggest shift in fisheries management in a generation in the form of Fisheries Management Plans in addition to the 2023 Environmental Improvement Plan and other policy and legislation.

As a small organisation with finite resources, the Authority's broad remit and complex operating environment necessitates careful consideration of risks at a strategic level to ensure effective delivery of its duties and other obligations.

Eastern IFCA produces a 5-year rolling Business Plan informed by an annual consideration of priorities via the Strategic Assessment. The Strategic Assessment seeks to identify annual priorities based on risk associated with the key fisheries within the district as well as a broader consideration of potential emerging issues.

Methodology

The following data and information are used to inform the assessment:

- **Fisheries data** – primarily from the Marine Mnagameent Organisation's 'buyers and sellers' dataset which consists of landings records. The dataset incorporates landings into ports within the district and fishing by vessels within the district but which land to ports in neighbouring IFCAs. This is also supported by IFCA datasets for cockles, brown shrimps and whelks which is collected by Eastern IFCA for the management of these fisheries within the district specifically. This data is analysed to identify fishing trends, the emergence of novel fisheries and the economic importance of fisheries within the district.
- **Stakeholder views** – Eastern IFCA logs interactions with stakeholders throughout the year and codifies these for the purpose of analysis. This is intended to provide an insight into the main concerns of stakeholders and identify any changes over time.
- **Impacts to the environment** – This includes outputs from Habitat Regulation Assessments which have been carried out by Eastern IFCA and a matrix of fishing gear / feature interaction developed by Defra to support delivery of the revised approach to managing fisheries in marine protected Areas in England[1]. Evidence relevant to environmental impacts is also provided by IFCA knowledge, IFCA research projects and specific scientific literature.
- **Stock status and fisheries productivity** – This is informed by advice from the International Council for the Exploration of the Sea (ICES), IFCA stock assessments (primarily for cockle and mussel) and general fisheries monitoring (including catch per unit effort and qualitative and anecdotal reports from fishing industry).
- **Wider contextual information** – this is informed by IFCA knowledge of legislative and policy changes, and likely changes, affecting fisheries and the environment. This has also been informed by an analysis of Fisheries Management Plan (FMP) actions. Further, consideration has included analysis of marine licence applications within the district.

The assessment uses the available information identify risks and opportunities using PESTLE (Political, Economic, Social, Technological, Legal and Environmental) criteria. The assessment considers what mitigations are already in place to address

[1] Background to the matrix

these risks or align with opportunities and what further mitigation may be required to be considered as new workstreams over the planning period. Typically, where risks are considered 'high', mitigation is likely to be required as a new or existing (not yet completed) 'high priority' workstream. Mitigation associated with 'low' or 'medium' risk may be considered as 'future priorities.' The process also highlights the business critical / 'business as usual' workstreams which are responsible for maintaining a lower level of risk.

Limitations

The key limitations with the assessment relate to the data available to the Authority to inform the assessment. In particular:

- Stakeholder views are generated primarily through the 'message form' system – an internal system which seeks to capture incidents and issues as well as feedback from our stakeholders to enable analysis and consideration within the planning cycle. However, the key themes raised by our stakeholders often reflect the Authority's engagement priorities for any given year. For this reason, whilst an assessment of message forms is provided (at Appendix 1) and outputs considered within the Strategic Assessment, the data should be considered in that context.
- MMO data releases for 'buyers and sellers' are used to inform the assessment as they are the only data available to consider economic elements of the fishery. The data set is limited however because certain fisheries (including hand-worked fisheries such as the cockle fishery and where catch is below 30kg per species) do not generate data under this system. However, the time series is significant, and it provides consistent data capable of identifying trends which is useful to the assessment. The caveat being that many small-scale fisheries may not be well reflected in the economic data. A summary of the outputs of fisheries data analysis is at Appendix 2.
- MMO data does not provide spatial resolution to examine fishing activity only within the Eastern IFCA district. Throughout the assessment, fishing data for ICES statistical rectangles 35F0, 35F1, 34F0, 34F1 and 33F1 have been used. This will include fishing activity outside of the district (particularly that in 33F1 and 35F1). The Eastern IFCA district also extends into 32F1 however, only marginally and so data relating to this ICES statistical rectangle was excluded.
- MMO data relates only to commercial fishing activity. There is no formal reporting mechanism for Recreational Sea Angling (RSA) however information from Cefas surveys (which provide general RSA information based on citizen science) has been used to inform the assessment[2].
- Finally, the data for 2023 was, at the time of undertaking the assessment, still provisional and data relating to the later months of 2023 is likely to be subject to change.

[2] Participation, effort, catches, and impact of COVID-19 of sea anglers resident in the UK in 2016-21

The above limitations have existed with relative consistency since the Strategic Assessments begin in 2016 and it is in that context that they continue to be used and are useful, particularly in identifying trends (rather than being relied on to provide accurate absolute totals).

Key policy and legislative drivers

Key Policy and legislative drivers are considered in more detail in the 5-year Business Plan annual refresh but are summarised here as they represent important contextual factors to determine risk.

IFCA Performance

The IFCA quadrennial conduct and operations report (for 2018 to 2022) was released in February of 2025. The report focusses on stakeholder perceptions of the IFCA's conduct and operations and Government have set out a number of recommendations which reflect the work's findings[3]. In addition, a major new study led by Newcastle University was published in February 2025[4] considered the IFCA's capacity to deliver regional co-management of fisheries in England which also set out recommendations to achieve a 'pathway to change'. Both reports will be carefully considered in the context of the local situation and other research including, for example, 'The importance of rebuilding trust in fisheries governance in post-Brexit England'[5] (Dixon *et al*. 2024). Findings and recommendations are to be incorporated into the Business Plan and Strategic Assessment as appropriate including throughout the course of the financial year.

Environmental protection legislation

The Environmental Improvement Plan 2023[6] set out ambitious environmental targets including in relation to the marine environment. This includes targets for the protection of Marine Protected Areas which the Authority is now delayed in delivering. This is reflected in the risk rating provided to associated factors with the analysis below.

Fisheries Management Plans (FMPs)

FMPs are evidence-based action plans, developed with input from industry and other stakeholders, which set out a range of policies that detail how fisheries will be managed. Several FMPs have now been published and many more are in development. IFCA contribution to the development and delivery of these plans is critical to ensuring locally relevant delivery of national policy which supports sustainable inshore fisheries within environmental parameters.

FMPs include a number of policies which are in the process of being implemented in the short to medium-term including management of whelk fisheries through a national, flexible permit or licencing scheme and an increase in the minimum

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[3] Inshore Fisheries and Conservation Authorities: conduct and operations 2018 to 2022 - GOV.UK
[4] Report out on IFCAs performance - AIFCA
[5] The Importance of rebuilding trust in fisheries management in post-Brexit England, Dixon, M., Grilli, G., Stewart, B., Bark, R., and Ferrini, S. 2024: Marine Policy (available here)
[6] Environmental Improvement Plan 2023 - GOV.UK

conservation reference size for lobster[7]. More broadly, FMPs also set out data gathering requirements which may be taken into account when delivering research and monitoring projects. Where relevant, these have been referred to within the assessment.

Fishery assessment summaries

The full analysis for each fishery is at Appendix 3. A summary of the key elements of the analysis is provided below.

General considerations across all fisheries

Analysis identified several elements which are relevant to most or all of the key fisheries in the District as follows:

- *Fisheries Management Plans* –With the exception of the brown shrimp fishery, all key fisheries within the district will be the subject of an FMP. Contribution to the development and implementation of FMPs is considered crucial to ensuring that inshore fisheries and their regional / local variations are fully recognised.

  In particular, implementation of the bass, whelk and crab and lobster FMPs pose the greatest threats and most opportunities to associated fisheries within the district. Continued engagement with Defra and the MMO is essential to ensure that implementation of associated measures reflects the local conditions of Eastern IFCA's district and the fisheries therein.

- *Review of the East Marine Plan* – The Marine and Coastal Access Act 2009 (MaCAA) required the development of Marine Plans – spatial planning at the regional scale in the marine environment. The East Marine Plan was the first to be developed and is now the first to be reviewed. The review started in 2024 with the agreement of the 'statement of public participation'. Further work has included evidence gathering towards agreeing a vision and objectives. In 2025, the key activities include policy development and plan drafting.

  Inshore fisheries are in competition with other sea users for space which is compounded by the designation of MPAs with the effect of restricting fishing grounds. Inshore fisheries also suffer from a paucity of data which can result in their importance and local benefit to coastal communities being underestimated and marginalised, particularly compared to more economically important national infrastructure. Contribution to the review of the East Marine plan is therefore considered crucial to ensuring that inshore fisheries are recognised for their cultural and economic importance to coastal communities.

[7] Summary of responses and government response - GOV.UK

- *Conservation of Habitats and Species Regulations 2017* – These regulations require that fishing activities must not detrimentally impact the site integrity of MPAs, and government targets set out in the 2023 Environmental improvement plan require all damaging activities to be removed from MPAs by 2024. Whilst the highest risk fishing / MPA interactions have been assessed and relevant management developed (primarily via the prohibition of bottom-towed-gear in certain areas), assessments for so called 'amber & green' risk interactions are yet to be completed. Given that some 96% of the district includes some form of MPA designation, and that the outstanding assessments are relevant to all key fisheries, completion of this workstream is considered crucial to ensuring effective protection of the environment in line with Government objectives. In addition, measures to protect 'red-risk' features in in the process of being implemented (the byelaw making process) and this workstream is not therefore complete. The associated risk is mitigated through two existing high priority workstreams, which remain high priorities as a result of the analysis.

- *Inshore Vessel Monitoring Systems (I-VMS)* – I-VMS is a tracking device which can be affixed to vessel to track its movement at sea and is specifically designed to work on smaller (less than 12m) inshore vessels and provide high resolution data spatial data. Roll-out of the units has taken place over 2023, however national legislation to mandate reporting via the devices was not implemented during 2024 as anticipated, furthering ongoing delays to the project.

  There is also uncertainty about a number of factors including whether the regulation will standardise reporting rates for trackers across all vessels inshore (i.e. in relation to vessels 12m and over) to provide a consistent inshore data set and whether the requirements will apply to all inshore fisheries ('hand-worked' fisheries like the Wash cockle fishery, for example, may not be included in the national requirement). Finally, it appears unlikely that the requirement will be enforceable by IFCAs, which will impact upon the effectiveness of the system in facilitating fisheries management in inshore waters.

  These factors are relevant across all fisheries in the district and the standardisation of reporting rates is considered to be crucial to effective delivery of fisheries management generally and particularly in relation to monitoring closed areas, monitoring whelk and crab and lobster fishing activity and effort management within the shrimp fishery. Therefore, it is considered crucial that consideration is given to the implementation of IFCA byelaws to that effect and particularly to enable the data to be gathered and analysed to inform the completion of 'amber and green' assessments.

- *Recreational Sea Angling (RSA)*

RSA is an important component of fishing activity which contributes to local economies (estimated at £1.5 – 2 billion annually by the 'Sea Angling Diary Project'), to the well-being of those who participate and to the general populations understanding of the environment and environmental protection.

Many IFCAs have their own RSA strategies, which typically seek to enhance engagement with RSA to aid compliance with regulations and to ensure that RSA have a means of informing management decisions.

Whilst Eastern IFCA does not have an active RSA strategy, consideration of other IFCA RSA strategies identifies that most of the aspirations therein fall within other policies (such as the Regulation and Compliance Strategy or the Enforcement Policy) or ither workstreams (such as the Bass FMP workstream). However, it may be beneficial to communication with RSA to consolidate these into a single strategy.

Cockle and Mussel Fisheries

The key cockle and mussel fisheries occur within The Wash (Lincolnshire and Norfolk) and support up to 63 vessels annually, three processing factories (within the district) and wider associated employment and trade (lorry drivers, factory workers etc.). The cockle fishery in particular is crucially important to supporting the King's Lynn and Boston fishing fleets. A number of 'business critical workstreams' are in place to manage this fishery (see Appendix 3, table 1).

The high-risk factors identified for these fisheries are:

- *Replacement of the Wash Fishery Order 1992* – This ongoing workstream includes development and implementation of a byelaw and associated policy to manage access to the fishery. The Order expired in January of 2023 and interim measures are currently in place pending the confirmation of a byelaw (the Wash Cockle and Mussel Byelaw 2021) and a new Several Order (Wash Several Order). The byelaw is at the final stages of quality assurance but is yet to come into effect (at time of writing). Failure to adopt the byelaw risks inhibiting the Authority's ability to effectively manage the fishery for the protection of the environment, fisheries sustainability, and industry viability. Significant stakeholder dialogue has informed the development of the replacement management measure, however a strength of feeling remains in relation to some parts of industry who are concerned that the management does not provide sufficient surety of access to enable effective business planning. The implementation of the new management system and communication with stakeholders is considered of high priority.

- *Cockle and mussel die-off in The Wash* – these fisheries have suffered from 'atypical mortality' since circa 2007 and various attempts have been made to identify the causes. In 2023, Cefas studies identified a novel pathogen as being the likely cause of the die-off in cockles and contributory to the die-off in mussels. The diseases pose a high risk to the sustainability of the fishery and

the Wash MPAs for which cockles is an important component. There is also a risk in the context of both cockles and mussels providing food resources for designated birds – *post*).

- *Wash bird and seal species* – The Wash hosts a range of MPA designations including in relation to internationally important bird species, including the Oystercatcher, and nationally important populations of common seals. Associated risk is generally mitigated through the 'business critical workstream' related to managing the Wash fisheries, however, there is evidence that both common seals and oystercatchers are suffering from population declines despite having established mitigation measures embedded into the management of Wash fisheries. These are being further investigated, including via the Coastal Health initiative pilot which is using The Wash as a case study to inform national roll-out. Contribution to this workstream is considered crucial to ensuring that the investigations are informed by the best available evidence and expert knowledge of the fishing industry in The Wash with a view to ensure outcomes (including potential management measures) are proportionate. This will also to an extent mitigate risks relating to higher *E-Coli* levels in The Wash and the concomitant risk posed to the fishery.

- *Review of bivalve shellfish management outside of the Wash and North Norfolk Coast SAC* – The Authority inherited three byelaws relevant to bivalve shellfish fisheries from its predecessor (Eastern Sea Fisheries Joint Committee). All three require review to ensure that they remain appropriate.

Crab and Lobster Fisheries

Crab and lobster fisheries occur throughout the district, but the North Norfolk Coast fishery constitutes the main fishery. They support generational, culturally important fisheries, contributing to the sense of place and local economy directly (supporting fishing related employment) and indirectly (via tourism, café and restaurants and recreational fishing).

The high-risk factors identified for these fisheries are:

- *Management of fishing Activity within the Cromer Shoal Chalk Beds MCZ* – the associated ongoing workstream was identified as a high priority workstream in 2021 and seeks to manage the fisheries through an Adaptive Risk Management (ARM) approach. This workstream is considered critical to protecting the MPA from potentially damaging fishing activity and prevent the need to adopt a more precautionary management approach which would likely cause significant impacts to the fisheries' viability and the local coastal economy as a result.
- *Increase in the Minimum Conservation Reference Size for Lobster* – the Crab and Lobster FMP has set out that lobster MCRS will increase to 90mm. This potentially poses a risk in the short-term to inshore fisheries and particularly smaller vessel business models with limited range and with limited access to

other fisheries. Overall however, the measure is considered likely to enhance the measure is likely to enhance fisheries sustainability. Further information is required to identify the level of impact the revised MCRS could have and potentially inform how the measure should be brought into effect.

Brown Shrimp Fisheries

The brown shrimp fishery occurs throughout the district but is primarily located within the Wash and its surrounding area. The fishery constitutes circa 95% of the UK brown shrimp catch and supports circa 50 vessels annually, with three local processors responsible for processing catch supporting international trade and wider local employment. Shrimp fishing deploys mobile bottom-towed-gear which is typically considered more likely to be damaging to the environment than other gear types. However, shrimp fishing is carefully managed under the Shrimp Permit Byelaw 2018 to ensure it remains within environmental parameters to the extent that it does not impact Wash MPAs (reflected as a business critical workstream). In addition, shrimp fisheries sustainability risks are primarily mitigated through industry led management via the Marine Stewardship Council Accreditation Scheme, the Authority's contribution to which is considered to be a 'business critical' workstream and already imbedded into business as usual. Risks to protected habitats and species outside of The Wash are mitigated through the 'amber and green' workstream (*ante*).

Whelk Fisheries

Whelk fisheries were, prior to 2014, considered to be a marginal fishery with very low activity. Since 2014, whelk fisheries have consistently constituted one of the top three most valuable fisheries in the district. Managed through the Whelk Permit Scheme 2016 it is imbedded into business as usual via the associated 'business critical' workstreams which provides the main mitigation for risks associated with the fishery including the implementation of management measures to ensure a sustainable fishery. However, risk has increased in the fishery in 2024 as a result of concerns regarding the accuracy of fishing data, and industry reports of lower stocks.

The high-risk factors identified for these fisheries are:

> *Stock sustainability and permit conditions review* – The permit conditions review identified that stocks in The Wash are at a higher risk (and less likely to be sustainable) and that this may be a reflection of the level of suspected non-compliance with pot limitations. In addition, the review identified that the minimum size for whelks in Suffolk may be too high and may be impacting the viability of the associated fishing industry.

Key finfish species

This group contains the key finfish species targeted within the district, namely, herring, sole, thornback rays, bass, plaice whiting, smooth hound, cod and sprat. These species constitute the most commercially and recreationally important finfish species in the district. The group is targeted primarily by small-scale fishing operations in the southern part of the district (Suffolk) although fishing activity occurs

throughout the district and at varying scales, and these species are often targeted by recreational sea anglers. Primarily, the fishery targets catch using set and drift nets although a minority of vessels also deploy mid-water and bottom towed otter trawls also. Whilst fisheries data suggests it is the least economically important of the key fisheries, the true value of these fisheries is not well reflected. This is primarily because the economic value of RSA is not well understood at a local level and is not included in the value estimate (although likely to be high given that nationally, it is estimated to be worth £1.5 -2 billion per annum) and because small-scale fisheries typically go under-reported as a result of the associated legislation.

All fishery-specific high-risk factors are assessed as being mitigated by either the general considerations (*ante*) or ongoing workstreams.

The assessment of this group has however identified the greatest number of opportunities to enhance the fisheries (Appendix 3, Table 5) to be considered as 'future priorities.' This includes further workstreams associated with RSA.

Other fisheries

Other species are caught within the district, for the most part as catch in relation to the 'key finfish species' group but at significantly lower levels with a much lower level of risk associated.

The data for these species was analysed to determine any key emerging fisheries in particular and none have been identified at this time.

The key risk associated with this group relates to potential for impacts on MPAs which is addressed and mitigated by the general 'Conservation of Habitats and Species' priority workstream.

Outputs

The ongoing and new high priority workstreams identified as required to mitigate high risks are set out below. They are followed by the business critical workstreams – work areas which have been embedded as 'business as usual' and which are required to maintain an acceptable level of risk in relation to associated fisheries. Finally, new and existing 'future priorities' are set out which may be considered as high priority in the future or on the completion of other 'high priority' workstreams or, where there is opportunity, as value added workstreams if they can be incorporated into other 'high priority' or 'business critical' workstreams with limited resource expended.

Priorities

1. To ensure that the conservation objectives of Marine Protected Areas in the district are furthered through:
    a. Implementation of management measures for 'red risk' gear/feature interactions (**carried over**).

    b. Continued implementation of Adaptive Risk Management of fishing activity within the Cromer Shoal Chalk Beds Marine Conservation Zone (**carried over**).
    c. Completion of 'amber/green' gear/fishing interaction assessments and development and implementation of management measures as required (**carried over**).
    d. Participation in the 'Coastal Health' pilot of The Wash (**carried over**).
    e. Habitat mapping in relation to *sabellaria* reef within MPAs outside of the Wash and North Norfolk Coast (**new priority**).
2. Management of cockle and mussel fisheries (wild capture and private) through:
    a. Confirmation of the Wash Cockle and Mussel Byelaw 2021 to enable management of wild capture fisheries (**carried over**).
    b. Implementation of Wash Cockle and Mussel Byelaw access policies (transition) (**carried over**).
    c. Develop appropriate management of private shellfish aquaculture within The Wash (**carried over**).
    d. A review of relevant byelaws inherited from Eastern Sea Fisheries Joint Committee (**carried over**).
3. Obtaining better fisheries data through:
    a. Facilitating and contributing to the roll-out of I-VMS by the Marine Management organisation (**carried over**).
    b. Development of measures (through byelaws and / or permit conditions) to implement standardised reporting rates across of VMS units (**carried over**).
    c. Consider gathering vessel tracking data through alternative means (in lieu of I-VMS) (**new priority**).
4. Contribute to the development and implementation of Fisheries Management Plans though:
    a. Supporting the planning / preparation phase (**carried over**).
    b. Supporting the publication phase including by reviewing and evaluation plans (**carried over**).
    c. Supporting post-publication phase including implementation (**carried over**)
5. Contribute to the development of second-generation Marine Plans through:
    a. Collaboration with the Marine Management Organisation to seek opportunities to improve data and evidence for inshore fishing activities (**carried over**).
    b. Stakeholder engagement to raise awareness of marine planning and identify key issues (**carried over**).
    c. Contributing to policy development by providing expert advice and relaying information from our stakeholders (**carried over**).

<u>Business critical workstreams</u>

No new 'business critical' workstreams were included as a result of this assessment.

- *Management of shrimp fisheries via Shrimp Permit Byelaw 2018 and associated effort limitation scheme* – includes management within the Wash and North Norfolk Coast SAC which mitigates impacts on the associated MPA. During 2025, this will also include a review of the Shrimp Permit Conditions and Eligibility Criteria.
- *Shrimp fishery management via the Marine Stewardship Council accreditation scheme* – This workstream involves participation and contribution to the industry led management of shrimp fisheries and mitigates risks relating to stock sustainability.
- *Study of the Wash Embayment, Environment and Productivity (Business Critical workstream)* – this workstream involves monthly sampling to monitor 'food availability' to mitigate risks associated with exceeding the carrying capacity of the Wash. The workstream is required to enable private aquaculture in The Wash.
- Wash cockle and Mussel management – this includes annual mussel and cockle stock surveys, assessments to identify and mitigate potential impacts on Wash MPAs and development and implementation of associated management measures annually.
- *Management of Whelk fisheries via the Whelk Permit byelaw 2016* – this workstream includes the monitoring of whelk stock health and development and implementation of management measures via permit conditions as may be required. Whelk permit conditions review (2024) identified that additional measures should be considered to increase compliance with the Pot limitation in The Wash and that the minimum size of whelks should be reconsidered in Suffolk. The latter will likely require additional research activities to identify the Size of Maturity of whelks in Suffolk.
- *Assessments for 'unplanned' fisheries* – this workstream is dependent on the identification of any 'new' fisheries without established management measures. It potentially includes research (stock surveys, impacts etc.), assessment (if within an MPA) and the development and implementation of management measures as required and the development of a new system for permitting 'prospecting' for mussels within the district.
- *Advice in relation to sustainable development* – this workstream involves contributing to the Marine Management Organisation's consideration of marine licence applications and advising on potential impacts on inshore fisheries and facilitating dialogue with fishery stakeholders.
- *Compliance monitoring and engagement in accordance with the Compliance Risk Register and TCG* – This workstream involves the effective deployment of the Marine Protection resource to reduce the risk associated with non-compliance.
- *Engagement with Recreational Sea Anglers (RSA)* – this workstream involves engagement with RSA during compliance monitoring and seeks to enhance our understanding of RSA activity and reduce the risk of non-compliance.
- *Monitoring of district-wide biosecurity risk* – this workstream includes the logging and investigation of biosecurity issues detected and consideration of

mitigation measures as may be required (including educational engagement and management measures).

Future priorities / value added workstreams

The Strategic Assessment also identifies workstreams which would be of benefit in achieving the Authority's main duties in areas where a lesser risk is identified or one which could potentially represent a higher risk in the future. They are noted annually to ensure that they can be considered in future years but also, as some may be achievable in the short-term where they can be addressed alongside business critical or high priority workstreams as 'added value' elements to projects. They do not all necessarily represent workstreams which would be led by Eastern IFCA and may be more feasible as projects run by partners or other groups (community and industry groups for example) facilitated by or with contributions from Eastern IFCA.

Fishing data and evidence gathering

- Collaborative working with MMO to develop a 'joined up' approach to gathering fishing data and reduce the burden on fishery stakeholders associated with providing two regulators similar information including potentially through adaptation of the MMO electronic data gathering systems.
- Gather information to improve understanding of wider 'value' of crab & lobster, shrimp and key finfish fisheries.
- Gather information on hand-gathering fisheries throughout the district.
- Develop relationships with RSA to obtain better RSA data.
- Explore options to better reflect understand the local 'value' (economic, societal etc.) of fin-fish fisheries, including RSA within the district.
- Investigate the economic value of RSA fisheries in the District and consider value in developing a RSA strategy
- Investigate use of drones to gather fisheries data (including stock data)
- Investigate use of Artificial Intelligence to facilitate analysis of ROV data.
- Undertake local crab and lobster stock assessments.
- Collaborate with Cefas to develop effective lobster stock assessment data gathering.
- Assessment and trials of alternative shrimp fishing gears which reduce risk to the Wash and North Norfolk Coast MPAs.
- Investigate disturbance impacts on seals from hand-work cockle fishery.

Engagement and communications

- Develop biosecurity awareness communications.
- Develop communications on the potential for seed (mussel) fisheries outside the Wash.
- Facilitate knowledge exchange between established and new fishers to pass on knowledge of traditional ways of working.

- Review the ARM Engagement Strategy (to include ‘celebrating success’ and a proactive approach)
- Consider benefits of consolidating RSA related actions within an Eastern IFCA RSA strategy

Fishing opportunities

- Explorer potential for a razor clam fishery in the Wash
- Explore opportunities to enhance the value of Crab catches.
- Undertake assessment of the potential for climate change impacts locally, including in relation to new fisheries and threats to existing fisheries
- Review the mussel fishery management policies (2008) and replace with an updated ‘mussel fishery management plan.’
- Explore ways to facilitate industry raising the profile of the local shrimp fishery.

Biosecurity

- Develop local biosecurity action plans.

Conclusions

Overall, the risks identified in the 2025 assessment are consistent with those identified in previous assessments and are mitigated through ongoing high priority workstreams. The key new area of risk relates to the whelk fishery and the delayed introduction of Inshore Vessel Monitoring system requirements (through a national Statutory Instrument).

Further consideration of whelk management measures is provided within the associated ‘business critical’ workstream.

To address the delay in Inshore Vessel Monitoring Systems, a new high priority workstream has been identified which will consider the requirement for alternative vessel tracking systems via IFCA byelaws.

A further new ‘High Priority’ workstreams have been generated associated with existing priorities, namely, consideration of additional research in the form of habitat mapping to address revised advice from Natural England regarding an MPA within the district.

Focussing available resource into these areas should mitigate the key risks associated with the fishery and represent the key work areas to successfully achieve our main duties and other legislative obligations.

Appendix 1 - data analysis to identify key fisheries

2024 Landed Weight, Value, and Participating vessels by key fisheries and gear

Key fisheries were quantified in the 2024 Eastern IFCA Strategic Assessment, with subsequent assessments providing an overview of these fisheries within the reporting years alongside a wider view of shorter-term changes that may indicate emerging fisheries. The table below is primarily drawn from MMO landings data, with the exception of data for cockles and mussels, which is drawn from Eastern IFCA catch return data and information from the fishing industry. The table presents 2024 data, with percentage Year-on-Year changes from 2023. National catch data has only been developed for 2023, so the proportion of national catch compares 2023 landings data. Finally, 2024 data has not yet been fully finalised for the later months, so some changes to the dataset may occur.

Table 1. 2024 landing metrics and Year on Year (YoY) changes (2023 and 2024).

	Fishery	Weight (Tonnes)	YoY Change	Value	YoY Change	Vessels	YoY Change	% of National (2023)
Key Fisheries	Cockle and Mussel*	3308.97	19%	£ 3,173,560.90	12%	46	-2%	*30%***
	Shrimp	473.88	4%	£ 2,104,398.36	-23%	27	-18%	95%
	Whelk	801.46	-12%	£ 1,182,742.76	9%	23	-12%	4%
	Crab and Lobster	524.11	7%	£ 1,718,587.26	2%	64	8%	2%
	Key Finfish***	258.61	57%	£ 408,246.35	-1%	79	11%	*N/A*
Gear Types (Excluding Key Fisheries)	Dredges	0.00	*N/A*	£ -	*N/A*	0	100%	*N/A*
	Gill nets and entangling	2.54	215%	£ 2,640.20	-7%	29	52%	*N/A*
	Hooks and Lines	3.69	302%	£ 2,861.28	112%	15	25%	*N/A*
	Miscellaneous Gear	0.00	*N/A*	£ 4.49	*N/A*	1	N/A	*N/A*
	Seine nets	0.00	-100%	£ -	*N/A*	0	-100%	*N/A*
	Traps	0.35	-9%	£ 812.34	-84%	11	-9%	*N/A*
	Trawls	7.20	-14%	£ 5,005.79	-39%	11	22%	*N/A*

*Cockle and Mussel value is estimated based on average cockle prices reported to Eastern IFCA.

**Cockles landed into the district have typically accounted for ~30% of national landings, though national data on cockles is not yet available.

***Key Finfish includes: Herring, Sole, Thornback, Bass, Plaice, Whiting, Smoothhound, Cod, Spurdog, & Sprat.

Key fisheries have been grouped where appropriate, with cockles & mussels being combined as they are fished from the same areas using the same techniques and are governed under the same regulations. Similarly, crabs and lobsters are targeted together in their relevant fisheries and effectively make up a combined catch for industry figures who target them. Finally, the 'Key Finfish' is a group formed with a primary focus on the key catch for the Suffolk fishing industry, which is primarily focused on finfish, but each individual species has reasonably small catch numbers – though as captured below, herring has shown a notable increase in catch over the last 5 years. As such, the important species for the Suffolk industry have been grouped together so the fisheries in that area can be better represented in strategic planning.

This view shows a generally positive picture, with stability in most fisheries, growth in the cockle and mussel fishery due to a good year in 2024. Key finfish shows a significant increase in landings – mostly driven by Herring, which is broken down in more detail below. Whelk shows a minor decrease in landed weight and vessel engagement, but this is likely due to the success of the cockle and shrimp fisheries, with engagement from vessels that may otherwise be whelking.

The non-key fisheries gear view shows landings remain very low. Significant percentage changes can be seen, but this is due to the very low numbers being dealt with – hooks and lines shows a 300% increase, but in practice this only translates to two tonnes difference in landed catch. However, the 2023 Strategic Analysis noted a strong positive trend over time with hooks and lines, and this trend has continued. It is primarily driven by dogfish (lesser spotted and unidentified), but also mackerel. Given that the landed weight remains under 3 tonnes, however, this only warrants ongoing observation at this stage.

5 Year View – Major Changes

Alongside the review of the key fisheries above, an annual review is also undertaken, by individual species, of changes across the most recent 5 years, looking at landed weight, price, and vessel numbers. The goal of this analysis is to identify any emergent issues that would not be captured by looking at the key fisheries; this includes species not captured within the key fisheries, and any major changes within a grouped fishery.

The only significant change within this view is herring, a species considered to be a key finfish. Herring has shown significant increases in landed weight, vessel numbers, and value over the last five years, shown below.

Table 2.Herring landings metrics from 2020 to 2024 (inclusive).

	2020	2021	2022	2023	2024
Landed Weight (Kg)	34.749	41.913	69.8207	123.8599	215.6111
Value	£ 21,571.00	£ 24,411.11	£ 38,913.83	£ 43,537.88	£96,121.70
Vessels	22	20	16	21	32

Over this period, landed weight has increased 520%, value 346%, and vessel numbers by 45%. This means that in 2024, Herring was the fifth most landed species in the district by weight and made up 85% of the key finfish landed weight. Even with this increase it was only the 7th species by value, making up only 24% of the key finfish value, below both bass (45% of value and 6% of landed weight) and sole (25% of value and 3% of landed weight). Nonetheless, five very strong years of growth may indicate further growth to follow, so Herring will continue to be monitored on an ongoing basis, particularly through Eastern IFCA's monthly risk register exercise.

Appendix 2 – Engagement assessment

Key Fisheries Analysis

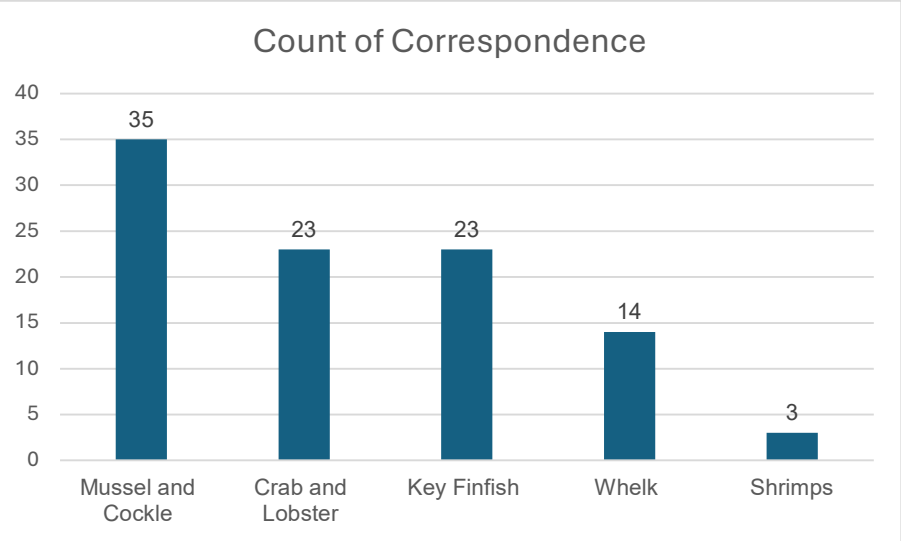
The information analysed in this assessment is the engagement information gathered by officers via direct contact from stakeholders via telephone calls, letter and emails. It excludes intelligence data (i.e. specific reports of non-compliance with fisheries regulation) responses to structured consultation (e.g. written objections to byelaws, completed questionnaires etc.). The data is collated in an internal system (the 'message forms' system) and is analysed by reference to the 'key fisheries'.

Analysis identifies that most engagement related to mussel and cockle fisheries, a large proportion of which related to fishery sustainability; stock levels were a key discussion point with concerns for this at the beginning of the year and optimism towards the end of the year. There was an increase in engagement at the end of the year due to a consultation launched for a potential harvestable mussel fishery.

Engagement around Crab and Lobster fisheries made up a significant proportion of engagement data which was largely as a consequence of engagement exercises regarding management of fishing in the MCZ and concern for the sustainability of the fishery considering economic factors, climate change and management.

Key Finfish Species made up an equal proportion of the engagement data to the Crab and Lobster fishery, from both recreational anglers, and commercial fishers which mostly included discussion around concerns within the Bass fishery.

Fishery	Count of Correspondence	Percentage of Correspondence
Mussel and Cockle	35	30%
Crab and Lobster	23	19%
Key Finfish	23	19%
Whelk	14	12%
Shrimps	3	3%



Cockle and Mussel Analysis

During the first half of the year a consultation was held for the early opening of the 2024 fishery this discussion around cockle growth and die-off in regard to opening an early cockle fishery with precautionary management, which itself generated a large amount of engagement. Towards the latter part of the year, mussels dominated the correspondence with a structured consultation being undertaken due to the potential for a harvestable mussel fishery, this similarly generated high general engagement.

It is also noteworthy that Eastern IFCA also started using the 'Notify' system during 2024 as a means of correspondence rather than letters through the post. This system uses text messages to alert fishers to information becoming available on the website. It was anticipated that this may increase the volume of message forms during 2024 as fishermen adjusted to the new system, however this does not appear to have materialized.

It is also noteworthy that there were very few message forms containing concerns about the pending Wash Cockle and Mussel Byelaw as a replacement for the Wash Fishery order. This is likely to reflect that the byelaw is not the subject of active engagement whilst the authority awaits a decision from the Secretary of State but also potentially that previous engagement on the matter has allayed associated concerns. It is noteworthy also that messages forms include praise for the Authority's management of the cockle fishery.

Key themes:

- Clarification on management measures around the 2024 cockle fishery;
- Concerns regarding the removal of small cockles from The Wash fishery;
- Presence of sublittoral mussel beds within the Eastern IFCA district;
- Potential use of 'low impact dredges' to fish for cockles.

Crab and Lobster Analysis

Analysis of crab and lobster engagement themes identifies that most communication was driven by engagement exercises regarding management within the MCZ. Concerns around sustainability made up only a small proportion of messages forms, including in relation to the potential consequences of climate change.

Key themes:

- Commentary on the proposed Phase 1 permit conditions for managing crab and lobster fishing within the Cromer Shoal Chalk Beds MCZ;
- Concerns about the impacts on fishing industry of future management measures under the Cromer Shoal Chalk Beds Byelaw 2023;
- Concerns over lower productivity at the beginning and end of summer which was compounded by a lower price.

Key Finfish Analysis

In the first quarter of the year, concerns were raised regarding the viability of the Spratt fishery in the context of new mesh-size regulations. RSA dialogue indicated concerns regarding the impact of commercial fisheries in rivers and estuaries for bass in particular.

Key themes:

- Concerns about the level of commercial bass fishing;
- Clarification on herring and sprat fishing methods and regulations;
- RSA queries about fishing methods and regulations.

Whelk Analysis

Engagement around the Whelk fishery was limited during 2024 with a small increase from 2023. A consultation was held to support the Whelk permit Conditions Review however, this received very few responses.

Key themes:

- Concerns regarding the detrimental impact of the whelk minimum size in Suffolk on fishery livelihoods (the size is considered to be too high for this area);
- Queries regarding the current management measures;
- Mixed views on the sustainability of the whelk fisheries.

Shrimp Analysis

Engagement around the Shrimp fishery was limited in 2024 outside of the formal engagement mechanisms for managing effort (periodic meetings with shrimp fishery representatives). This most likely reflects that fishing effort is currently well within the thresholds required to ensure that the fishery does not adversely impact site integrity of associated The Wash MPAs.

Key themes:

- Concerns regarding Shrimp Permit eligibility criteria which excludes access to the Wash and North Norfolk Coast fishery without previous shrimp fishing experience.

Other identified risks

Two other key themes, not related to specific fisheries, were identified during 2024:

- Biosecurity – reports of potential invasive, non-native species observed throughout the district.
- Seal populations – concerns about the increased seal populations and the potential impacts on fisheries.

Appendix 3 – PESTLE style analysis by fishery

Table 1. Cockle and Mussel Fisheries PESTLE analysis

Factor	Analysis	Risks	Existing Mitigation (workstreams)	Risk & RAG	Potential additional mitigation
Political	Ambitious environmental targets set via the 25 Year Environment Plan and Environmental Improvement Plan 2023 (EIP23)[8]. Government review and revision of the EIP23 and the Environment Act (the latter being scheduled for 2026) in response to the five recommendations from the Office of Environmental Protection[9]. The East Marine Plan is under review to inform its replacement. New export rules (as a consequence of EU Exit) for live shellfish have precluded exports to the EU of live shellfish.	Cockle and mussel fisheries in the district occur generally in a very highly designated and complex MPAs (The Wash) with the potential for pre-cautionary management to detrimentally impact fishing opportunities. Marine spatial planning has the potential to contribute to additional marginalisation of fishing activity across sea users and particularly in the Eastern region given the high level of nationally important infrastructure activity (including offshore windfarm development). Mussel seed fisheries in particular are impacted by export rules for live shellfish and have reportedly prevented exploitation of potentially available mussel seed fisheries.	**Wash Cockle and Mussel Surveys and Management (business critical workstream) –** annual, detailed consideration of the fishery's potential to impact associated MPAs is undertaken to ensure no impacts on MPAs. A close working relationship with the SNCB has been established to mitigate necessity of pre-cautionary measures resulting from a lack of evidence. It is unlikely that the current or future government policies and targets will not be met by current workstreams. **Advice in relation to risk of conflicts with other marine users (business critical workstream)** – Contribution to the review of the East Marine Plan provides potential for inshore fisheries to be well reflected and given due consideration. **Contribute to the development and implementation of Fisheries Management Plans (ongoing High Priority workstream)** – this workstream includes contribution to the development of the 2nd generation East Marine Plan with a view to ensure that local, inshore fisheries are well reflected.	**Low**	Highlight impacts of shellfish export rules to government to address trade barriers.

[8] Environmental Improvement Plan 2023 - GOV.UK
[9] Published in January 2025 - Government response to the Office for Environmental Protection's report on progress in improving the natural environment in England from January 2024 - GOV.UK

Economic	Cockles are a high value fishery (£2.3m in 2023) and contribute to a significant proportion of the national catch (circa 30%). Those who participate in cockle fishery are typically highly reliant on this fishery for annual income. Mussels have not been high value for a long time due to low stock levels. Significant employment gained from this fishery: 3 processing factories,~60 vessels Landings are highly variable, depending on stock size and uncontrollable variables, such as atypical mortality. There are a range of business models operating in the fishery, from single handed, independent operators to larger, multi-crew, processor owned vessels. Some reports of the fishery not being economically viable under certain circumstances, usually associated with larger vessels which operate in the fishery with higher over-heads and in the context of the 2-tonne daily quota. Shellfish aquaculture within the Wash is of limited economic value impacted by poor compliance with management measures. However, the fishery has a high economic potential, particularly in the context of the recent regularity of seed mussel available.	Significant contribution to local economy risks job losses and local economic damage if fishery performs poorly, particularly given relatively limited fishing opportunities other than cockles in a poor season. Financial reliance on fishery increases risk of non-compliance with regulation particularly in years of low productivity. Potential for annual management measures to disproportionately impact certain business models. Potential for fees to impact the viability of the fishery (the current fee is circa £1100 annually representing the first sale value of a day in the fishery).	**Implementation of Wash Cockle and Mussel Byelaw and access policy (Ongoing Priority workstream)** – The Byelaw and access policy are intended to enable dynamic management of the fishery to suit the needs of the fishery over time, including to best reflect the capacity of the fishery if needed. The level of access which is economically viable was considered in its own right within the Wash economic assessment. The Eligibility Policy has been developed to ensure fair and equitable access to the fishery and provide surety of access to enable effective business planning. The Eligibility Policy must be reviewed at least every six years or in relation to an identified need (including in relation to industry viability). **Wash Cockle and Mussel Surveys and Management (business critical workstream)** – annual management measures are carefully considered and consulted on with industry to detect and avoid (so far as is possible) impacts on business models. **Enforcement and Education (Business Critical workstream)** – compliance monitoring and engagement reduces the risk associated with non-compliance. **Develop appropriate management of private shellfish aquaculture in The Wash (Ongoing Priority workstream)-** associated management plan to include requirement to provide economic information. This workstream is significantly delayed however as a consequence of delays in the Defra application process.	**Low**	None identified

	Recent fee increases (albeit later than programmed and at a cost to the Authority) have increased overheads. Fees seek circa 50% cost recovery for managing the fishery – overheads generally have increased due to exceptionally high inflation.				

Social	Multi-generational fishery. High levels of interest in the fishery (particularly cockles given the limited investment cost required to operate in a hand-work fishery) but historically there has been very limited opportunity for new entrants. Shellfish aquaculture in the Wash is historical and many 'lay holders' feel a sense of ownership for areas leased to them. However, many are unused and there is interest from those without lays to be provided opportunity. The expiry of the Wash Fishery Order (WFO) 1992 (Jan 2023) and its planned replacement with a byelaw created a strong sense of feeling initially, with industry preference being for the Order to be replaced with another Order. The replacement caused some uncertainty whilst measures were being developed, and the byelaw intended to replace the WFO is yet to be confirmed. The fishery generated fewer message forms in 2024 compared to 2023. This appears to reflect far fewer correspondence relating to the replacement of the WFO and the majority of engagement with fishermen has been regarding the fisheries themselves. Typically highly polarised industry views on management in the fishery, annually and in general. This is potentially reflected within the recently	Historic access created a strong sense of entitlement regarding fishery access. This contributed to the strength of feeling regarding the replacement of the WFO and inhibited effective communication throughout the replacement's development. Some stakeholder conflict remains from a highly critical minority with a risk of further impacting effective coms, particularly through distribution of misinformation. Highly polarised views results in dissatisfaction regarding balanced decisions reducing effectiveness of future coms. If fishery stakeholders do not feel invested in the management system for the Wash cockle and mussel fisheries, there may be an increased risk of non-compliance and trivialisation of the management. Continued dissatisfaction from a minority of stakeholders could result in wider negative perceptions and negative media coverage A procedural barrier to finding and prosecuting seed mussel fisheries outside of the Wash reduces the fishing opportunity with potential economic impacts.	**Implementation of Wash Cockle and Mussel Byelaw and access policy (Ongoing Priority workstream)** – the access policy was agreed and the 'transitional provisions' implemented provisionally and pending the byelaw coming into effect so as to provide surety and enable effective business planning. Policy intended to better enable 'new entrants' compared to WFO. **Wash Cockle and Mussel Surveys and Management (business critical workstream) -** annual development of management measures includes industry consultation and careful consideration of industry views which is published and provided to respondents. During 2024, the mussel fishery management process was revised to ensure that fishery stakeholders knowledge of mussel beds can be incorporated into survey design. **Develop appropriate management of private shellfish aquaculture in The Wash** (**Ongoing Priority workstream**)- The Authority has applied for a Several order (under the Sea Fisheries (Shellfish) Act 1967 to replace that component of the WFO. New Several Order management plan to include consideration for new entrants and lose of a shellfish lay for non-use. **Complete HRAs in relation to 'unplanned' fisheries (business critical workstream) –** Risk associated with lost fishing opportunities (for seed mussels) are primarily mitigated by this workstream. The Authority agreed a process for opening such with the SNCB previously and has the ability to exempt individuals from its byelaws to enable fisheries for 'breeding and cultivating' (i.e. seed fisheries). This was furthered during the 2024/25 financial year by implementing a mechanism through which prospecting can be permitted.	**Medium**	Engagement planning to take into account outputs of the IFCA conduct and operations report and associated recommendations.

	published IFCA Conduct and Operations report. Seed mussel fisheries outside of the Wash and North Norfolk Coast SAC are perceived to be inaccessible as a result of inherited byelaws and the legal requirement to assess the impact of such fisheries under the Conservation of Habitats and Species Regulations 2017 which prevent 'prospecting' for mussels.				
Technological	Vessels operating in the fishery vary markedly in their capacity (range in particular) making them more reliant on the area they currently operate within. Inshore Vessel Monitoring Devices have been rolled out nationally and a regulatory requirement to have them fitted and has been significantly delayed. The annual fishery is highly dependent on sea-going capacity of the Authority in order to undertake surveys to inform stock assessments and a Habitat Regulation Assessment.	Limited capacity to prosecute other fisheries where fishery performance is poor. Potential financial implications for vessels which have not installed devices under early roll-out scheme which included a grant for I-VMS. Potential for the fishery to not open on a precautionary basis if there is a lack of survey data to inform an assessment.	*__Maintenance of sea going assets (Business critical Workstream)__ – The Authority has invested in a new vessel capable of delivering annual surveys. In addition, the long-time series of data supports a fishery opening without a survey in a single year. __Implementation of I-VMS for all fisheries specifically the Wash Shrimp fishery (dependent on partnership working with MMO led project) (Ongoing High Priority workstream)__ – facilitate national roll-out of I-VMS.	**Med**	Potential to use drones to facilitate mussel and cockle surveys Consider vessel monitoring mechanisms separately to the national I-VMS roll-out.

Legal	The Conservation of Species and Habitats Regulations 2017 oblige the Authority to prevent any fishing activities which may impact site integrity and where there is uncertainty, the pre-cautionary approach applies. The fisheries (including private aquaculture) are presently managed under temporary, interim measures pending the confirmation of the Wash Cockle and mussel byelaw 2021. Management measures are well established and based on years of development and dialogue with fishing industry and SNCB. The Association of IFCAs is developing a cockle FMP, which will be considered and published by Defra. Limited regulatory mechanisms to manage cockle / mussel fisheries outside of the Wash. Many of the cockle fishing vessels 12m and over in length, and there is uncertainty as to whether the IVMS SI will standardise reporting rates for larger vessels who currently operate VMS+.	Conservation legislation poses a risk to the fishery and in particular, the adoption of the precautionary principle where there is uncertainty. In particular, there is uncertainty about the impact of fisheries on oystercatcher (designated birds) and common seals within the Wash MPAs and the extent to which fishing activity has contributed to reported die-offs (oystercatchers) and reduced populations (Seals). The fisheries cannot be effectively managed under the interim measures in the longer-term. Delay in replacement with legislation (WCMB and Wash Several Order) risks impacts to business continuity, particularly with regards to managing access. There is potential for local management to come into conflict with national measures under the cockle FMP. Byelaws inherited from Sea Fisheries Committees are unlikely to be capable of adequately managing cockle & mussel fisheries outside of the Wash. There is a risk of environmental impact as a result and / or that a fishery could not be opened because of an inability to implement required management measures.	**Wash Cockle and Mussel Surveys and Management (business critical workstream) –** annual surveys and the adoption of well-established management measures mitigate risk of the fishery damaging the Wash MPAs and of not opening as a consequence of the precautionary principle. **Confirmation of Wash Cockle and Mussel Byelaw to enable management of wild capture fisheries & Implementation of Wash Cockle and Mussel Byelaw and access policy (Ongoing High Priority workstreams)** – the access policy was agreed and the 'transitional provisions' implemented provisionally and pending the byelaw coming into effect so as to provide surety and enable effective business planning. Policy intended to better enable 'new entrants' compared to WFO. **Fisheries Management Plans (Ongoing Priority workstream)** – Eastern IFCA is contributing to the development and implementation of FMPs and has the opportunity to inform the potential for impacts and benefits arising from the plans. The associated risk is considered to be low at this time as a result of this mitigation. **Develop appropriate management of private shellfish aquaculture in The Wash** (**Ongoing Priority workstream**)- The Authority has applied for a Several order (under the Sea Fisheries (Shellfish) Act 1967 to replace that component of the WFO. However, this workstream is significantly delayed (external factors) although, is also of relatively little economic importance at present (although has high economic potential). **Complete Habitat Regulation Assessments in relation to 'unplanned fisheries' (Business critical workstream)** – where a fishery is identified outside of The Wash, an assessment will be undertaken to determine if a fishery can be opened, particularly in the context of MPAs. The risk is further mitigated by the power to implement emergency byelaws under s.157 of the Marine and Coastal Access Act	**High (on the basis of outstanding high priority workstream)**	Investigate the disturbance effect of hand-work fishing activity on seals. **Review and replace inherited byelaws which manage bivalve shellfish to provide a district wide mechanism for enabling fisheries**. Gather information in hand-gathering fisheries outside of Wash.

			2009 in order to manage a fishery if the need to do so was urgent and not reasonably foreseen. **Implementation of I-VMS for all fisheries specifically the Wash Shrimp fishery (dependent on partnership working with MMO led project) (Ongoing High Priority workstream)** – consideration of implementing higher reporting rates for vessels 12m. **Participation in the national 'Coastal Health' project and the pilot in The Wash (ongoing High Priority workstream) –** This workstream includes a Natural England project which is seeking to understand the implications of cockle mortality on bird food models used to inform management of Wash-based fisheries. This mitigates risks associated with meeting legal requirements (conservation objectives) for designated bird species.		

Environmental	Cockle and mussel fisheries primarily take place in the highly designated and complex Wash MPAs. The fishing methods (hand working for cockles and mussel dredges) are generally considered to be of low environmental impact however non-compliance can cause significant damage and potentially impact the MPA. Both cockles and mussels in The Wash have been exhibiting atypical mortality which has changed the dynamic of the cockle fishery, and it thought to be contributing to poor mussel stocks. The Wash is likely to have a limited carrying capacity and capable of supporting a finite quantity of bivalve shellfish however this is unknown. There have historically been concerns that food availability (for bivalves) has not been able to support wild cockle and mussel populations. Water Framework Directive measures have, in general, led to less organic matter being washed into the Wash embayment potentially reducing the carrying capacity. A trend towards landing small (pre-spawning) cockles has been observed in recent years in conflict with the code of best practice. Mussel fisheries operate under the 2008 fishy 'management policies' which require review and revision in the	The fishery potentially poses a risk to the MPAs it operates in and particularly with regards to designated bird species and common seals (both of which include features which are in decline). The complexity of the Wash MPAs necessitates a significant evidence gathering to avoid adopting a pre-cautionary approach, failure to secure adequate evidence risks closure or significant restriction of the fishery. If food availability is limited, and private aquaculture or invasive species (such as slipper limpets and American razor clams which cannot be fished) are reducing the food available to wild commercial shellfish, this poses a risk to the long-term sustainability of the stocks. The presence of diseases in cockles and mussels poses a risk to the long-term sustainability of the fishery and impacts of the MPA features reliant on cockles. The mussel fishery management plan (management policies) were developed prior to the understanding of mussel mortality. The cause of high E-Coli levels in The Wash are not understood and there is a risk that failure to identify such could result in high levels occurring more often with impacts on the fishery and industry viability. The Coastal Health intuitive is using the Wash as a case study to inform national roll-out and is seeking to address this issue as part of that work.	**Wash Cockle and Mussel Surveys and Management (business critical workstream) –** annual surveys and the adoption of well-established management measures mitigate risk of the fishery damaging the Wash MPAs and of not opening as a consequence of the precautionary principle. The workstreams also includes consideration of management in the context of the atypical mortality. **Study of the Wash Embayment, Environment and Productivity (Business Critical workstream) –** monthly monitoring of phytoplankton levels and meat yields are undertaken to monitor food availability and inform management of private aquaculture to mitigate risks relating to food availability. However this does not reduce the risk associated with invasive non-native species (including razor clams and slipper limpets). **Investigation into cockle & mussel die-off (Future Priority acted on within 2023/24 financial year)** – The Authority has been facilitating a Cefas led investigation into cockle and mussel mortality including contribution to the newly established 'Coastal Health' programme. **Monitoring of district-wide biosecurity risk (Business Critical Workstream)** – A Wash Biosecurity plan is in place which is specifically relevant to the management of the Several fisheries and seeks to avoid introduction of invasive and non-native species and diseases. National measures (coordinated by the Fish Health Inspectorate) also mitigate against associated risks. **Participation in the national 'Coastal Health' project and the pilot in The Wash (ongoing High Priority workstream) –** This workstream includes a Natural England project which is seeking to understand the implications of cockle mortality on bird food models used to inform management of Wash-	**High**	Seek to investigate the disturbance effect of hand-work fishing activity on seals (seal disturbance) Investigate potential for removal of invasive Razor Clams in The Wash. Review mussel fisheries management plan

	context of mussel mortality in The Wash. High E-Coli levels have been detected in The Was and new measures have been brought in (by the Food Standard Agency) to protect public health.		based fisheries. This mitigates risks associated with meeting legal requirements (conservation objectives) for designated bird species. This workstream also considers water quality which mitigates against associated risk.		

Table 2. Crab and Lobster PESTLE analysis

Factor	Analysis	Risk	Existing Mitigation (workstreams)	Risk & RAG	Potential additional mitigation
Political	There have been a number of negative articles and negative media coverage surrounding management within the MCZ. Ambitious environmental targets set via the 25 Year Environment Plan and Environmental Improvement Plan 2023. Government review and revision of the EIP23 and the Environment Act (the latter being scheduled for 2026) in response to the five recommendations from the Office of Environmental Protection. The East Marine Plan is under review to inform its replacement.	Polarised stakeholders are dissatisfied by a balanced approach to managing the fishery (particularly in the Cromer Shoal MCZ) leading to reputational risk – potential to impact relationships with governing bodies/ partners / funders. Risk of impactful precautionary management measures for the protection of the environment at the expense of the fishery. Marine spatial planning has the potential to contribute to additional marginalisation of fishing activity across sea users and particularly in the Eastern region given the high level of nationally important infrastructure activity (including offshore windfarm development).	**Adaptive Risk Management (ARM) of Cromer Shoal Chalk Beds MCZ (Ongoing High Priority workstream)** – collaborative management of the fishing activity (which lends itself to the 'co-management' objective in the Fisheries Act 2020 which is also aligned with s.154 of the Marine and Coastal Access Act 2009 and SCNB advice. ARM includes adoption of an engagement strategy to mitigate risks regards polarised stakeholders so far as possible. **Advice in relation to risk of conflicts with other marine users (Business critical)** – Contribution to the review of the East Marine Plan provides potential for inshore fisheries to be well reflected and given due consideration. **Contribute to the development and implementation of Fisheries Management Plans (ongoing High Priority workstream)** – this workstream includes contribution to the development of the 2nd generation East Marine Plan with a view to ensure that local, inshore fisheries are well reflected.	**Medium**	Proactive dialogue and engagement with community leaders Evidencing success in delivering ARM – published updates, reports etc.

Economic	The landed weight and value of both crab and lobster is high although it is also known to be an under-representation of the true total because of reporting criteria. Fishers targeting crab and lobster tend to be reliant on this fishery for the majority of their economic income. Known data gaps in economic importance of fishing grounds within MCZ – national data sets do not provide sufficient data (economic & spatial). Information received about an increase in market demand for crab containing roe. Rising overheads including the price of bait. North Norfolk Coast fisheries contribute to 'sense of place' and culture of the area – coastal communities have economic reliance on fishing culture (e.g. tourism). Natural Capital contribution of Cromer Shoal Chalk Bed habitats are unknown. Marine Conservation Society's 'good fish guide' rates the fishery as 'needs improvement' and does not take into account local conditions of the fishery relying on the stock assessment for the Southern North Sea. Edible crab and lobster have shown a steady increase in price per kilo annually. Planned increase of MCRS for lobster to 90mm.	Financial reliance on fishery increases risk of non-compliance with regulation which is compound by rising overheads. Risk of non-compliance creates risk to the fishery, the environment, economy and socially. Increased demand for crab containing roe increases the risk to fisheries performance and long-term sustainability. 'Good Fish Guide' rating potentially impacts the marketability of local crab catches, reducing its value. Increase in Lobster MCRS may detrimentally impact inshore fishers, particularly those with a limited range or operating around the North Norfolk Coast because there is limited scope to make up for losses by fishing for other species.	**Adaptive Risk Management (ARM) of Cromer Shoal Chalk Beds MCZ)** – seeks to mitigate risks to the environment and limit economic impacts on local fishing industry. Includes a potential workstream to determine economic importance of inshore MCZ areas and wider societal value of the MCZ. **Enforcement and Education** – compliance monitoring and engagement to build qualitative evidence on the importance of inshore fishing grounds. Targeted information gathering regards 'roe crab' within engagement framework. **Crab and Lobster Byelaw 2023** – includes provision to permit edible crab waste (i.e. cooked offal) to be used as bait to reduce bait costs (lobsters, whelks). The workstream is now delayed however. *N.B. The authority engaged with the MCS 'Good Fish Guide' during 2024 who consulted on changes to scores associated with the fishery. This highlighted the potential for the associated score to increase. MCS ultimately decided to keep the fishery under review for 12 months before making a decision on the score. The score change related primarily to management of the fishery over the Cromer Shoal MCZ.* **Fisheries Management Plans** - Engage with government with respect to implementation of lobster MCRS increase.	**Medium**	Explore potential to enhance the value of landed catch (facilitate or contribute to Fisheries Improvement Plan and / or trademarking 'Cromer Crab') or as added benefit to delivery of ARM Collaboration with Marine Management Organisation to develop spatially relevant datasets for economic data Undertake local stock assessments to inform 'Good Fish Guide' rating within Eastern IFCA district and engage in dialogue with MCS GFG.

Social	The crab and lobster fishery on the North Norfolk Coast and within the Cromer Shoal Chalk Beds MCZ is of cultural importance to coastal communities. Societal value of the Cromer Shoal Chalk Bed MCZ is broadly unquantified however. Multigenerational fishery with an aging demographic (many reportedly retiring in next 5-10 years) – industry concern regards lack of small scale fishing industry coming through to replace resulting in larger scale operations over traditional grounds. Highly polarised stakeholders in relation to management of potting fishery within the Cromer Shoal MCZ leading to dissatisfaction with 'balanced approach'. Information received from industry suggests that inshore areas in the MCZ (linked to the rugged chalk) are more productive and crucially important to smaller scale fishing activities. New regulation as a result of ARM and national FMP workstreams in combination with anticipated enforcement of I-VMS within the same financial year could lead to 'consultation fatigue' and confusion.	Loss of traditional / small scale fishing knowledge and skills. Less ownership / husbandry of the fishery potentially resulting in increased risk of impacts (sustainability / habitats). Conflict with and between stakeholders can cause negative media coverage (reputational risk) and impinge on ARM within the Cromer Shoal Chalk Beds MCZ. Management decisions not informed by broader understanding of societal value of the fisheries and the MCZ risks unintentional social impacts. Fishery stakeholders become dissatisfied with extent of regulations and / or find it difficult to come to terms with cumulative changes to the detriment of compliance which increases the risk of damage to the environment and fisheries sustainability.	**Adaptive Risk Management (ARM) of Cromer Shoal Chalk Beds MCZ)** Collaborative and balanced approach to managing the fisheries within the MCZ supported by an Engagement Strategy. Also includes management measures (Cromer Shoal Chalk Beds MCZ) which could enhance / inhibit new entrants – the matter to be considered during consultation on relevant measures under the byelaw. Also includes potential for a societal value study to inform ARM and wider management. This included a review of the Engagement Strategy during 2024 to reduce risk. **Enforcement and Education** Provides routine engagement with potentially impacted fishery stakeholders and supported by engagement / reference materials as required.	**Medium**	Explore potential for knowledge exchange to capture traditional ways of working and pass on knowledge to new starters.

Technological	Vessels operating in the fishery vary markedly in their capacity (range in particular) making them more reliant on the area they currently operate within. Smaller inshore operators often do not have electrical generators or navigational equipment. Inshore Vessel Monitoring Devices have been rolled out nationally. However, the national requirement to have them fitted and operating is significantly delayed. Evidence gathering within MCZ reliant on under-water ROV operation, which is impacted by weather and sea going capability and highly resource consuming video analysis. Limited technological opportunities to reduce impacts of potting on Cromer Shoal Chalk Beds MCZ identified.	Potential for smaller scale operators to be disproportionately impacted by new regulation as a result of limited capacity and range. Inshore vessels are less capable to adapt to comply with new regulations, including those associated with ARM. Non-compliance risks increase impacts on the MCZ and conflict with other stakeholders. A lack of high spatial resolution fishing activity data jeopardises the delivery of ARM through a lack of evidence to support ongoing assessments and a failure to monitor and evidence compliance with relevant measures. Evidence gathering using under-water ROV detracts from delivery in other workstreams with various associated risks. Timescales to analyse data potentially not compatible with delivery of ARM. If fishing gear modifications are required to reduce impacts to the MCZ but cannot be identified or are too costly to action (by the industry), the MCZ is at risk of damage and the fishery is at risk of closure.	**Adaptive Risk Management (ARM) of Cromer Shoal Chalk Beds MCZ)** – Includes implementation of a byelaw which can require gear modifications to minimise damage to MCZ. Gear modification trials to be undertaken through this project. Project has also obtained navigational aids for fishers within MCZ to aid compliance. **Implementation of I-VMS requirements for all fisheries –** continued facilitation of the I-VMS roll out including distribution of information and dialogue with MMO (lead organisation for I-VMS).	**High**	Explore use of AI to analyse ROV video evidence to reduce resource requirement. **Consider roll-out of vessel monitoring systems outside of I-VMS (i.e. separate trackers).**

Legal	Legal obligation to ensure sustainable fisheries and further the conservation objectives of MCZs (S.153 & 154 of Marine and Coastal Access Act 2009). Eastern IFCA has submitted the Cromer Shoal Chalk Beds Byelaw 2023 and the Crab and Lobster Byelaw 2023 for confirmation (via the MMO formal quality assurance process). The former will represent a significant shift in management of crab and lobster fisheries on the North Norfolk Coast. Defra have published the Crab and Lobster FMP which is seeking to harmonise management and ensure the fishery meets the objectives set in the Fisheries Act 2020, the 25 Year Environment Plan and the Environmental Improvement Plan 2023. This is likely to result in regulatory changes. Some crab and lobster vessels are over 12m in length, and there is uncertainty as to whether the IVMS SI will standardise reporting rates for larger vessels who currently operate VMS+. The Sea Fisheries (Amendment) (No. 2) Regulations 2024 increased the minimum Conservation Reference Size for crawfish to 110mm in 2024.	The Authority's legal requirement to further the conservation objectives of the MCZ override the general duties of fisheries management. Ultimately, if ARM does not provide mitigations in the form of technical measures, and research identifies that the site's conservation objectives are being hindered, more impactful management measures may be required which risks detrimentally impacting the fishery significantly across a number of factors. Byelaw provisions risk impacting the economic viability of the fishery. Harmonisation of minimum conservation reference sizes for crabs will be economically detrimental to the crab fisheries in the Eastern IFCA district which has been internationally recognised as justifying a smaller MCRS (of 115mm) including via an exemption to European measures historically. The increase in minimum size for crawfish is not reflected in the Minimum sizes byelaw 2019 making the provision ultra vires (because IFCAs cannot implement management measures which are less stringent than national measures). For this reason, any action taken by IFCOs in this regard could be challenged on a point of law.	**Adaptive Risk Management (ARM) of Cromer Shoal Chalk Beds MCZ) (Ongoing High Priority Workstream)** – ARM reduces the risk of implementing disproportionately impactful management measures on a precautionary basis. Includes implementation of a byelaw which enables the Authority to implement flexible management measures after undertaking an impact assessment and consultation with industry to mitigate the risk of unintended or excessive impacts where not required. **Fisheries management Plans (Ongoing High Priority Workstream)** – Eastern IFCA is contributing to the development and implementation of FMPs and has the opportunity to inform the potential for impacts and benefits arising from the plans. This will include revision of the Authority's byelaws as required including the Minimum Sizes Byelaw 2019 with respect to Crawfish. **Implementation of I-VMS requirements for all fisheries (Ongoing High Priority Workstream) –** consider implementing regulation to standardise VMS reporting rates.	**High (on the basis of outstanding high priority workstreams)**	**None identified** (risk mitigated through existing workstreams)

Environmental	The potting fishery within the Cromer Shoal MCZ is not considered likely to hinder conservation in the short-term but impacts cannot be ruled out over time. The evidence base informing the associated assessment and SNCB advice is very limited. Cefas stock assessments indicate that the Southern North Sea stock of crab is being exploited beyond the associated maximum limits to achieve MSY but is stable and there is noted uncertainty noted in the model and data used. There is a strong upward trend in crab landings since 2010 although this is partly driven by a peak in 2019. Landings into Cromer specifically show a steady decline since 2019. Lobster data is significantly lacking and associated stock assessments carry high uncertainty. Landed weights of lobster show a downward trend over time, driven primarily by reductions in landed catch into Wells, Cromer and Grimsby. It is noteworthy also that the number of vessels operating form Grimsby and catching lobsters have conversely increased significantly although catch landed into this port will primarily come from outside of the Eastern IFCA district. Eastern IFCA has not been able to conduct a local assessment since the transition between data gathering forms (issued by the MMO) due to a lack of data. Fishery stakeholders have reported shifts in the timing of the starting of the crab season indicating that it is starting sooner than is ordinarily expected. Engagement with stakeholders also identifies concerns about poor stock performance (crabs) and that increasing water temperatures, potentially as a consequence of climate change, is changing the seasonality of the crab fishery and the ultimate consequence of this is not well understood. Crab and Lobsters are generally caught with pots and traps at a commercial scale within the district (with crab tiling for bait being the only other form of fishing known within the district) and which are typically considered to be of low impact with the exception of within the Cromer Shoal Chalk Bed MCZ. However, the MMO have	There is the potential that the fishery will hinder the conservation objectives of the MCZ which also risks implementation of a more precautionary approach (potentially to the detriment of the viability of the fishery). In lieu of local stock assessments, and better fisheries data (including effort estimates), the fishery appears to be operating at a level beyond Maximum Sustainable Yield, although this was not reflected in previous local assessments undertaken. Taking action to manage the fishery (including on a pre-cautionary basis), risks economic impacts which are potentially not proportionate. A shift in the start of the season could indicate the effects of climate change given that the crabbing season is strongly associated with water temperature. Potting is not currently considered likely to impact *Sabellaria* features within MPAs, however, recent MMO assessments have concluded the potential for impacts, and which may necessitate management within the district, particularly in the context of the target to remove all damaging activities from MPAs by end of 2024.	**Adaptive Risk Management (ARM) of Cromer Shoal Chalk Beds MCZ) (Ongoing high priority workstream) –** includes research projects to determine the extent of damage caused by potting and whether it is sufficient in scale to hinder the conservation objectives of the MCZ. Management measures are adopted as voluntary measures or flexible permit conditions which can be revised dynamically on the basis of new evidence. **Completion of amber/green gear/feature interactions and development / implementation of management measures where required** (**Ongoing high priority workstream**)– In particular in relation to the impacts of potting on *Sabellaria* reef. This workstream is now delayed and has missed associated government deadlines. **Monitoring of district-wide biosecurity risk (Business Critical Workstream)** – to identify emerging risks and potentially mitigate against them collaboratively with stakeholders. Does not fully mitigate biosecurity risks as it does not include consideration of actions to address the risks. **Fisheries management Plans (Ongoing High Priority Workstream)** – an important component of FMPs is mitigating the impacts of climate changes and seeking to ensure fisheries are	**High (on the basis of outstanding high priority workstreams)**	Undertake local stock assessments to inform Cefas stock assessments and potential future management measures. Include consideration of climate change (water temperature in particular) impacts on the crab and lobster fisheries as part of local stock assessment. Collaboration with Cefas / industry to inform development of alternative assessment methods for lobster. Research and develop biosecurity action plan including potential solutions to known non-native species which could threaten local fishers.

	recently consulted on the prohibition of potting over the biogenic reef feature *sabellaria sp.* reef within the inner Dowsing, Race Bank and North Ridge SAC. Reports have been received of spider crabs being present within edible crab fishing grounds.	Climate change driven changes to the ecosystem risk detrimentally impacting and displacing naturally occurring systems and potentially risk the established fisheries.	resilient to such, potentially mitigating the associated risk.		

Table 3. Shrimps PESTLE analysis					
Factor	**Analysis**	**Risk**	**Existing Mitigation (workstreams)**	**Risk & RAG**	**Potential additional mitigation**
Political	Ambitious environmental targets set via the 25 Year Environment Plan and Environmental Improvement Plan 2023 which include delivery of management measures in all MPAs by end of 2024). Government review and revision of the EIP23 and the Environment Act (the latter being scheduled for 2026) in response to the five recommendations from the Office of Environmental Protection. The East Marine Plan is under review to inform its replacement. The Joint Fisheries Statement did not include reference to shrimp fisheries as requiring a Fisheries Management Plan.	Risk of impactful precautionary management measures for the protection of the environment at the expense of the fishery. Particularly outside of the Wash and North Norfolk Coast SAC where there are limited management measures in place. Marine spatial planning has the potential to contribute to additional marginalisation of fishing activity across sea users and particularly in the Eastern region given the high level of nationally important infrastructure activity (including offshore windfarm development). The UK shrimp fishery is almost exclusively within the Wash and North Norfolk Coast, diminishing the need for a national plan. However, there is the potential that the fishery becomes marginalised from a policy perspective as a result. The risk is particularly high with respect to consideration of the fishery with regards to the Marine Spatial Prioritisation programme and Marine spatial planning generally.	**Effort monitoring within the Wash SAC and North Norfolk Coast including, and permit scheme administration (business critical workstream) –** The Authority manages Shrimp fishing within the Wash & N. Norfolk Coast through a flexible permit byelaw which enables the introduction, variation or revocation of management measures to address the needs of the fishery and the environment and enables adaption in the context of policy change. **Completion of amber/green gear/feature interactions and development / implementation of management measures where required (Ongoing High Priority Workstream) –** Completion of the outstanding assessments within the district will mitigate this risk although could result in additional management measures and restrictions on the fishery. This workstream is now delayed and has missed associated government deadlines. **Advice in relation to risk of conflicts with other marine users (business critical workstream)** – Contribution to the review of the East Marine Plan provides potential for inshore fisheries to be well reflected and given due consideration. **Contribute to the development and implementation of Fisheries Management Plans (ongoing High Priority Workstream)** – this workstream will ensure that the importance of the shrimp fishery will be reflected in the 2nd Generation East Marie Plan	**Low (but High in relation to delivery of Amber and Green assessment)**	Consider raising profile of shrimp fishery to mitigate marginalisation compared to other fisheries in UK policy including via the marine spatial prioritisation programme.

Economic	Wash brown shrimp is nationally significant, accounting for ~95% of shrimp fished in UK waters. The shrimp fishery supports between 30 and 58 vessels annually although showing a general decline since 2010. Shrimp is processed by three local factories supporting tertiary employment. First sale value of catch was £2.7m in 2023 across 34 vessels. The fishery supports diversification of Wash fishing business models to maintain business continuity where other fisheries perform poorly (particularly cockles). Increased overheads and operating costs were impactful during 2021 to 2023, in particular, fuel and energy costs. The price per kilo of shrimp has shown a gradual increase over time and a significant increase in 2023 (almost twice the average price per kilo). The main fishery is reportedly reliant on retaining the MSC accreditation to provide access to markets. Landings are highly variable year-to-year, depending on shrimp populations and market demand. Shrimp catch represents, on average, circa 45% of annual landed catch of those who target it. There are few other species to target in poor performance years (cockles and whelks primarily).	The relative importance of the fishery to Wash-based industry is significant and poor performance risks significant impacts to livelihood and maintaining the infrastructure to facilitate the fishery (i.e. processors). The natural variability of the fishery and the increased overheads represents a risk to business continuity, particularly in the context of there being very few other available target species locally. Management measures or poor fisheries performance which doesn't enable inshore fishers to diversify into the fishery as needed risks impacting business models, particularly if the Wash cockle fishery performs poorly. Poor fisheries performance could drive non-compliance given economic reliance of most business models, particularly with regards to the Shrimp Effort limitation scheme. Failure to adhere to MSC requirements could result in loss of accredited status, damaging the reputation and economic viability of the fishery.	**Shrimp Fishery Management (MSC accreditation) (business critical workstream)** – The industry led management plan which secured shrimp accreditation from the Marine Stewardship Council includes management of the stocks to reduce the risk of continued poor performance as a result of fishing activity and monitoring and analysis of fishing data which mitigates economic risk to an extent. **Effort monitoring within the Wash SAC and North Norfolk Coast including, and permit scheme administration (business critical workstream)** –The shrimp effort limitation scheme seeks to not limit access to the fishery so as to enable diversification of inshore fishers but is a flexible management mechanism which can be amended to suit the particular needs of the fishery as informed by routine monitoring.	**Medium**	Economic assessment of shrimp fishery to determine extent of economic reliance and better understand the different business models which rely on access to the shrimp fishery, including outside of The Wash and North Norfolk Coast.

	There is little information about the economic importance of shrimp fishing outside of the Wash and North Norfolk Coast SAC.				

Social	The fishery is, to an extent, self-regulated via the MSC shrimp accreditation, with measures primarily implemented by processors refusing to purchase shrimp from non-compliant vessels. Whilst self-regulation via market control is often seen as preferable to implementing regulation, there is concern from some stakeholders that buyers have significant control of the fishery. A range of business models exist within the Wash shrimp fishery; some are wholly reliant on the fishery, others rely on it very occasionally as something to diversify into if other fisheries perform poorly. Outside of The Wash, the fisheries are very small scale, some operating hand-deployed shrimp trawls. The effort limitation scheme (implemented by Eastern IFCA) also intends to utilise co-management to manage effort within environmental parameters in the first instance. The fishery is of national importance given that it represents circa 95% of UK shrimp landings. Environmental NGOs typically regard any bottom towed gear as a threat to marine habitats. The fishery is of local, cultural importance and historically included a pink shrimp fishery which is no longer present due to market conditions and restrictions on fishing over areas of *Sabellaria* reef,	Where fisheries performance is poor, the self-regulatory system could favour certain business models over others. Additional restrictions, partiualry on access to the fishery, could impact business continuity of stakeholders who rely on shrimp as a fishery to diversify into rather than on a regular basis. As a consequence of the range of business models within the fishery, measures which restrict the fishery are likely to result in uneven impacts across the different business models. Small scale fisheries outside of the Wash and North Norfolk Coast risk being marginalised and impacted by other sea use developments, particularly because they do not typically generate fishing data as a consequence of their small scale. Inshore fishing business models typically require the ability to diversify into various fisheries and the experience requirement may impact such for fishers who do not meet the requirements.	**Shrimp Fishery Management (MSC accreditation) (business critical workstream)** – Eastern IFCA works collaboratively with the industry led accreditation scheme and isa member of the Shrimp Fisheries Assessment Working Group. Where market failures are detected which inhibit the fishery with respect to the Authority's main duties, management measures (byelaws) may be considered). **Effort monitoring within the Wash SAC and North Norfolk Coast including, and permit scheme administration (business critical workstream)** – Management of shrimp fishing in accordance with the effort limitation scheme will include consultation with wider industry and consideration of impacts across business models to seek to minimise impacts on any one in particular. The permit conditions underpinning this management are to be reviewed during 2025. Specific consideration can be given to the 'experience requirements' and potential impacts. **Advice in relation to risk of conflicts with other marine users (Business critical)** – Contribution to the review of the East Marine Plan provides potential for inshore fisheries to be well reflected and given due consideration.	**Low**	

	further diminishing the species available to inshore fishermen in the area. Stakeholders from outside of the Wash and North Norfolk Coats have expressed concern that current 'experience requirements' in place under Category 1 Shrimp permits (to fish within The Wash and North Norfolk Coast SAC) are excluding them from entering the fishery.				

Technological	Inshore Vessel Monitoring Devices have been rolled out nationally. However, the national requirement to have them fitted and operating is significantly delayed. Alternative fishing gears are known to exists which potentially reduce the extent of the interaction with sensitive habitat but previous attempts to investigate such have been unsuccessful. Fishing vessel life pans vary, but there is a general trend for vessel sizes to increase once replaced.	Potential financial impact if eligible shrimp fishermen have not installed I-VMS via the national roll out grant scheme at the time associated regulation comes into effect. Failure to implement I-VMS through national legislation reduces the ability of the Authority to effectively monito compliance and fishing effort. Failure to harmonise reporting rates between I-VMS and VMS+ will limit the benefit of I-VMS generally, as a significant proportion of fishing activity within inshore region is undertaken by vessels larger than 12m and will not have I-VMS. A lack of data presents a significant risk to the continuation of the fishery in The Wash given the highly sensitive habitats and requirement to monitor, to a very high spatial resolutions, fishing activity over these habitats. Gear modification or alternative gear types could reduce the need for effort limitations. Increased vessel size and capacity could increase the impact of the shrimp fleet overall on sensitive habitats.	**Implementation of I-VMS for all fisheries specifically the Wash Shrimp fishery (dependent on partnership working with MMO led project) (Ongoing Priority workstream) –** The situation with the roll out of I-VMS is being followed and the Authority is working collaboratively with the MMO to facilitate the SI coming into effect. **Effort monitoring within the Wash SAC and North Norfolk Coast including, and permit scheme administration (business critical workstream) –** Monitoring of shrimp fishing effort includes monitoring vessel and gear replacement to mitigate the risk of technological creep increasing the impact (footprint) of the fishery. The byelaw which underpins the effort limitation scheme includes a provision which enables the Authority to harmonise VMS reporting rates as necessary. **Implementation of I-VMS for all fisheries specifically the Wash Shrimp fishery (dependent on partnership working with MMO led project) (Ongoing Priority workstream) –** continue facilitation on national roll-out of IVMS.	**Med**	Investigate potential gear modifications or alternative gear types which reduce interaction with sensitive features. **Consider roll-out of vessel monitoring systems outside of I-VMS (i.e. separate trackers).**

Legal	It is anticipated that I-VMS will become a legal requirement for all vessels less than 12m in length during 2024. Many of the shrimp fishing vessels are greater than 12m in length, and there is uncertainty as to whether the SI to require use of I-VMS will standardise reporting rates for larger vessels who currently operate VMS+. The Shrimp Permit Byelaw 2018 is in effect and has been fully implemented. The Conservation of Habitats and Species Regulations 2017 requires that fishing activity does not detrimentally impact site integrity of MPAs.	Failure to harmonise reporting rates between I-VMS and VMS+ will limit the benefit of I-VMS generally, as a significant proportion of fishing activity within inshore region is undertaken by vessels larger than 12m and will not have I-VMS. A lack of data presents a significant risk to the continuation of the fishery in The Wash given the highly sensitive habitats and requirement to monitor, to a very high spatial resolutions, fishing activity over these habitats. Restrictions which may have economic impacts on the fishery may have to be imposed to prevent impacts to site integrity of associated MPAs.	**Implementation of I-VMS for all fisheries specifically the Wash Shrimp fishery (dependent on partnership working with MMO led project) (Ongoing Priority workstream) –** The situation with the roll out of I-VMS is being followed and the Authority is working collaboratively with the MMO to facilitate the SI coming into effect. Where the SI does not address harmonisation of reporting rates this can be achieved through the shrimp Permit Byelaw 2018. **Effort monitoring within the Wash SAC and North Norfolk Coast including, and permit scheme administration (business critical workstream) –** the fishery is managed via the Shrimp permit Byelaw and associated effort limitation scheme to ensure compliance with the Habitat Regulations.	**Low**	None identified

Environmental	Shrimp stocks are highly variable annually but stable over-time and very resilient to long-term impacts of overfishing. Shrimp fishing effort is not managed by Eastern IFCA but is self-regulated via an industry led accreditation Scheme. Shrimp beams (a type of bottom towed gear) interact with the seabed and have the potential to detrimentally impact seabed habitats. The main shrimp fishery operates in a heavily designated MPA (The Wash). VMS+ data provides some awareness of trawling, but limited resolution (1 report every two hours) diminishes its usefulness in monitoring impacts . Reports of recreational beam trawling in Suffolk Natural England have recently revised their advice with regards to managing *Sabellaria* reef within one MPA to the effect that a more precautionary approach is required. *Sabellaria* reef and bottom-towed-gear is a red-risk interaction which requires the pressure to be removed (i.e. closure to areas supporting the feature). This primarily effects shrimp beam trawling (the primary use of bottom-towed-gar in the district). The revised advice is on the basis that an adaptive risk management approach is no longer appropriate because of a lack of monitoring of *Sabellaria* reef by Eastern IFCA within the associated MPA.	Highly resilient stocks supported by harvest control rules (implemented by the industry in relation to the accreditation) presents very low risk to stocks. Interaction between bottom-towed shrimp nets and seabed has potential to damage protected habitats within MPAs, particularly in the Wash Special Area of Conservation (SAC) and cause damage through by-catch. Adequate fisheries data to inform continuous monitoring of the effects of shrimp fishing on the associated MPAs is required to meet the obligations under the habitats Regulations and ensure the integrity of MPAs. Failure to secure this data risks the requirement to adopt a precautionary approach and implement further restrictions the fishery, impacting industry viability. Recreational shrimp fishing using towed gear has the potential to impact the integrity of MPAs. This is of particular risk given that the Shrimp Permit Byelaw 2018 is not applicable to recreational fishing and because the scale of the activity is unknown. The revised NE advice requires revisions to the MPA Byelaw 2021 (not yet in effect) with respect to the associated MPA. The advice may be relevant to other MPAs also, leading to a requirement for either further monitoring or further closures).	**Shrimp Fishery Management (MSC accreditation) (business critical workstream)** – Eastern IFCA works collaboratively with the industry led accreditation scheme and isa member of the Shrimp Fisheries Assessment Working Group. Where market failures are detected which inhibit the fishery with respect to the Authority's main duties, management measures (byelaws) may be considered. **Implementation of I-VMS for all fisheries specifically the Wash Shrimp fishery (dependent on partnership working with MMO led project) (Ongoing High Priority workstream) –** The situation with the roll out of I-VMS is being followed and the Authority is working collaboratively with the MMO to facilitate the SI coming into effect. Where the SI does not address harmonisation of reporting rates this can be achieved through the shrimp Permit Byelaw 2018. **Effort monitoring within the Wash SAC and North Norfolk Coast including, and permit scheme administration (business critical workstream) –** the fishery is managed via the Shrimp permit Byelaw and associated effort limitation scheme to ensure compliance with the Habitat Regulations. **Completion of amber/green gear/feature interactions and development / implementation of management measures where required (Ongoing High Priority Workstream) –** Completion of the outstanding assessments within the district will mitigate this risk although could result in additional management measures and restrictions on the fishery, including on recreational fishing activity.	**High (on the basis of outstanding High Priorities)**	**Habitat mapping workstream to include *Sabellaria* reef monitoring in relevant MPAs and/or revised closures for the protection of the feature.**

Table 4. Whelk Fisheries PESTLE analysis

Factor	Analysis	Risk	Existing Mitigation (workstreams)	Risk & RAG	Potential additional mitigation
Political	Ambitious environmental targets set via the 25 Year Environment Plan and Environmental Improvement Plan 2023 which include delivery of management measures in all MPAs by end of 2024). Government review and revision of the EIP23 and the Environment Act (the latter being scheduled for 2026) in response to the five recommendations from the Office of Environmental Protection. The East Marine Plan is under review to inform its replacement.	Risk of impactful pre-cautionary management measures for the protection of the environment at the expense of the fishery. Marine spatial planning has the potential to contribute to additional marginalisation of fishing activity across sea users and particularly in the Eastern region given the high level of nationally important infrastructure activity (including offshore windfarm development).	**Advice in relation to risk of conflicts with other marine users (Business critical)** – Contribution to the review of the East Marine Plan provides potential for inshore fisheries to be well reflected and given due consideration. **Completion of amber/green gear/feature interactions and development / implementation of management measures where required (Ongoing High Priority Workstream) –** Completion of the outstanding assessments within the district will mitigate the risk of disproportionate pre-cautionary measures to an extent although could result in additional management measures and restrictions on the fishery. In particular, with respect to use of whelk pots over biogenic reef habitats.	**Low**	None identified

Economic	Fishery is of high economic importance locally, supporting 32 vessels in 2023, with an average total annual first sale value of £1.6m. Whelks are also processed within the district with tertiary local economic benefits. The fishery in its current form is relatively novel, having previously been a more marginal fishery prosecuted only during winter months. Vessels which target whelk are typically highly reliant on whelk landings as a proportion of their total income (on average, 67%). The Landings per Unit Effort (LPUE) of catch has been reducing, and there are concerns that the data supporting this is masking a greater decline in productivity although reports from whelk fishermen are mixed with regards to the fisheries sustainability. The increased minimum landing size for whelk within the Eastern IFCA district is potentially impacting the viability of the fishery in Suffolk, where it is reported anecdotally that the size of maturity is less than within Norfolk and Lincolnshire. Eastern IFCA has submitted an amendment to the byelaw prohibiting the use of edible crab for bait which would permit the use of cooked offal.	Given the high reliance on the fishery and its contribution to supporting local processing facilities, poor productivity could have significant local economic impacts and the loss of local processing infrastructure. A decline in LPUE will reduce the profitability of catch, (particularly in the context of higher overheads a as result of inflation etc.) and increase the risk of non-compliance with measures (particularly the pot limitation and the minimum size). A disproportionately high minimum size for whelk potentially limits the local inshore fleet from diversifying into the fishery and detrimentally impacts business continuity and reduces resilience of associated business models. This was highlighted as a key risk during the 2024 review of whelk permit conditions. Use of cooked edible crab offal as bait will potentially reduce bait costs and increase catches, potentially increasing LPUE.	**Development of measures to address the sustainability of whelk stocks (Business critical workstream)** – whelk fisheries are monitored routinely to inform the need for management measures which can be implemented via the Whelk Permit Byelaw 2016. The management mechanism enables flexible management measures to meet the needs of the fishery and mitigates the risk associated with impacts arising from declines in stocks. However, in lieu of an effective stock survey, the monitoring relies primarily on monitoring LPUE which can cause a lag between identifying an issue and the stocks having been over fished. The above workstreams includes investigation into the size of maturity of whelks to determine its appropriateness.	**Medium**	Consider alternative methods for monitoring whelk stocks Seek out opportunities to identify and promote markets for other available species (e.g. herring) within the district to reduce reliance on key species.

Social	Non-compliance within the whelk fishery is one of the key concerns of industry. Mixed views on the sustainability of the whelk fishery from the perspective of industry. Concerns raised about the minimum size for whelk and the impact on fishers in Suffolk. Conflict between fishermen, particularly over whelk fishing grounds and in relation to disturbing fishing gear.	Compliant fishers may become dissatisfied if they perceive non-compliance to go undetected and without recourse. Increases likelihood of conflict and non-compliance. Inability to reassure stakeholders that the fishery is sustainable risks disenfranchising stakeholders, reducing buy-in to existing measures and increasing the likelihood of impacts from non-compliance. Conflict between stakeholders increases the likelihood of economic impacts (lost gear, lost fishing grounds etc,) and reduces likelihood of collaborate approach to managing fisheries. Increases tendency towards market failures and increased likelihood of impacts on fisheries sustainability.	**Development of measures to address the sustainability of whelk stocks (Business critical workstream)** – whelk fisheries are monitored routinely although the outputs from monitoring are not routinely published. Publishing outputs may increase stakeholder confidence in the measures and the compliance activities which support them.	**Low**	None identified

Technological	Inshore Vessel Monitoring Devices have been rolled out nationally. However, the national requirement to have them fitted and operating is significantly delayed. Engagement has identified that rotary riddles are now being deployed within the fishery.	Potential financial impact if eligible fishermen have not installed I-VMS via the national roll out grant scheme at the time associated regulation comes into effect. Failure to implement I-VMS through national legislation reduces the ability of the Authority to effectively monitor compliance and fishing effort. This is a particularly high risk within the whelk fishery given that the 2024 review of whelk permit conditions identified that non-compliance with the pot limitation was a significant risk to fisheries sustainability. Implementation of I-VMS requirements nationally will significantly reduce risk associated with other factors (particularly environmental). The significant delays to the national requirement coming into effect has increased the associated risk in the context of the high-risks associated with the Whelk fishery in The Wash. The use of rotary riddles presents a risk primarily because of conflicting evidence regarding the potential impact of their use, with some evidence to suggest they increase mortality of bycatch conflicting with evidence that they are beneficial overall. The level of risk is mitigated at this time by the low level of adoption of the technology, with only one vessel thought to be using it at this time.	**Implementation of I-VMS for all fisheries specifically the Wash Shrimp fishery (dependent on partnership working with MMO led project) (Ongoing Priority workstream) –** The situation with the roll out of I-VMS is being followed and the Authority is working collaboratively with the MMO to facilitate the SI coming into effect. However national roll-out is now significantly delayed.	**High**	Investigate the potential for rotary riddles to impact the whelk fishery. **Consider roll-out of vessel monitoring systems outside of I-VMS (i.e. separate trackers).**

Legal	Defra have published a Whelk FMP which will potentially result in novel management regimes to manage whelks at a national level. It is anticipated that I-VMS will become a legal requirement for all vessels less than 12m in length during 2024. A minority of the whelk fishing vessels are greater than 12m in length, and there is uncertainty as to whether the SI to require use of I-VMS will standardise reporting rates for larger vessels who currently operate VMS+. The Conservation of Habitats and Species Regulations 2017 requires that fishing activity does not detrimentally impact site integrity of MPAs. Whelk permit conditions are due for review in 2024. Increased levels of non-compliance detected.	Whelk stocks are thought to be highly localised and benefit from a regional / local level of management. National level management risks causing unintended economic or environmental impacts if management is harmonised without considering the local context. Failure to harmonise reporting rates between I-VMS and VMS+ will limit the benefit of I-VMS generally, although to associated risk with respect to the whelk fishery is limited compared to shrimp (for example) as most vessels will be covered by I-VMS. Potting is not currently considered likely to impact *Sabellaria* features within MPAs, however, recent MMO assessments have concluded the potential for impacts and which may necessitate management within the district, particularly in the context of the target to remove all damaging activities from MPAs by end of 2024. Non-compliance with permit conditions risks impacting the sustainability of the fisheries and impacting the environment.	**Development of measures to address the sustainability of whelk stocks (Business critical workstream)** – Whelk fishery permit conditions were reviewed during 2024. **Fisheries management Plans (Ongoing high priority workstream)** – Eastern IFCA is contributing to the development and implementation of FMPs and has the opportunity to inform the potential for impacts and benefits arising from the plans. This may include implementing addition regulatory measures to meet the aims of the FMP. **Implementation of I-VMS for all fisheries specifically the Wash Shrimp fishery (dependent on partnership working with MMO led project) (Ongoing high priority workstream) –** Consider standardising the reporting rates for VMS units (using Whelk permit Byelaw) – addressed above	**Low**	

Environmental	Stakeholder concerns have been raised regarding stock sustainability, and recent monitoring indicates that the stocks may be declining. The confidence in catch return data is reduced however due to suspected non-compliance and overall landings are showing a general increase. The Wash whelk fishery has been identified as being of a high risk. The risk is in part associated with non-compliance with pot limitations. Potting fisheries may impact biogenic reef features within MPAs although no such assessment has been undertaken within the district as of yet. Reports of the whelk fishing season starting later in the year, potentially due to unseasonably high water temperatures.	Whelks are particularly sensitive to over-fishing being slow growing and of low mobility – stock replenishment can be slow and has historically resulted in a 'boom and bust' fishery, prior to the introduction of management measures to control effort. Stock collapse would have large scale impacts on fishing livelihoods and the associated tertiary employment (lorry drivers, processors, bait providers etc.). Impacts on biogenic reef can have dipropionate large impacts on general biodiversity and the integrity of associated MPAs. The potential impacts of climate change are generally unknown with regards to whelks.	**Development of measures to address the sustainability of whelk stocks (Business critical workstream)** – Whelk fishery permit conditions are to be reviewed during 2024 and the recent concerns regarding sustainability and non-compliance lend themselves towards considering additional measures. This may include spatial closures over areas of *Sabellaria* reef.	**High**	**Consider implementation of additional measures in The Wash to reduce risk associated with over-fishing.**

Table 5. Key Finfish Fisheries (Herring, Sole, Thornback, Bass, Plaice, Whiting, Smoothound, Cod, Sprat) PESTLE analysis					
Factor	**Analysis**	**Risk**	**Existing Mitigation (workstreams)**	**Risk & RAG**	**Potential additional mitigation**
Political	Ambitious environmental targets set via the 25 Year Environment Plan and Environmental Improvement Plan 2023 which include delivery of management measures in all MPAs by end of 2024). Government review and revision of the EIP23 and the Environment Act (the latter being scheduled for 2026) in response to the five recommendations from the Office of Environmental Protection. The East Marine Plan is under review to inform its replacement.	Risk of impactful precautionary management measures for the protection of the environment at the expense of the fishery. Marine spatial planning has the potential to contribute to additional marginalisation of fishing activity across sea users and particularly in the Eastern region given the high level of nationally important infrastructure activity (including offshore windfarm development) and the low economic value (first sale value) of this group in particular.	**Advice in relation to risk of conflicts with other marine users (Business critical)** – Contribution to the review of the East Marine Plan provides potential for inshore fisheries to be well reflected and given due consideration. This will include consideration of economic & wider benefits of the associated fisheries not captured by economic fisheries data presently and contribution to the review and development of a replacement East Marine Plan. **Completion of amber/green gear/feature interactions and development / implementation of management measures where required (Ongoing High Priority Workstream) –** Completion of the outstanding assessments within the district will mitigate the risk of disproportionate pre-cautionary measures to an extent although could result in additional management measures and restrictions on the fishery. In particular, with respect to use of whelk pots over biogenic reef habitats.	**Low**	Explore options to better reflect the 'value' (economic, societal etc.) of fin-fish fisheries, including RSA within the district.

Economic	The value of landed catch shows a marginal downward trend since 2010 (primarily as a consequence of a sharp decline between 2010 and 2014) although a year-on-year increase in 2023 of nearly 20% driven primarily by increased landed weight. Fishing data relating to this group potentially under-represents the actual landing and economic value given that many operators are small scale and sell directly to the public and do not therefore generate economic fisheries data. Conversely, it may also represent some larger scale fishing operations occurring offshore which are not relevant to the district. As such there are noted limitations to this dataset and the outputs for this part of the assessment. Key finfish species price per kilo typically fluctuates seasonally but generally show an upward trend over time and a partiualry strong increase during 2023. In Suffolk particularly, these fisheries also contribute to the sense of place and is of cultural importance, likely generating economic benefits (e.g. from tourism) as a result although these are poorly understood. Herring catch has continued to (10-fold) increase in price per kilo during 2023 and it is likely that the North Sea herring quota will increase in 2024. This is thought to be as a consequence of a secondary, higher value market having been identified which is relevant only to a small proportion of the catch. The species within this group also represent important Recreational fisheries (particularly	The general downward trend in vessels operating in the fishery and catch indicates that the fisheries may generally be in decline, however the reasons for this are not well understood. Limited economic understanding of the fishery presents a risks that future management may have unintended consequences. Increased value of herring catch could lead to sudden increases in effort and potentially increases risk of non-compliance with fisheries legislation.	**Compliance monitoring and engagement in accordance with the Compliance Risk Register and TCG (business critical workstream)** – Compliance activities reduces the risk of non-compliance through monitoring to inform targeted enforcement action and engagement with industry to ensure buy-in with management measures. **Engagement and education with RSAs (business critical workstream)** – compliance activities and management with RSA inform the general understanding of the fisheries and mitigate the associated risk to an extent in combination with national RSA studies (e.g. the 'Sea Angling' projects including the 2012 and 2021 reports). **Fisheries management Plans (ongoing high priority workstream) –** given that all the associated species feature in a current or future FMP (as listed within the Joint Fisheries Statement), risks associated with the fisheries generally can be mitigated against through collaboration on the development of associated FMPs.	**Medium**	Detailed analysis of fin-fish fisheries and report on reasons for general decline. Explore options to better reflect the 'value' (economic, societal etc.) of fin-fish fisheries within the district. Explore potential for increasing the value of local catch. Undertake a more detailed economic assessment of these fisheries.

	Bass) although the extent of the activities and the contribution to the economy are not well understood at a local scale.				

Social	Whilst the finfish fisheries are of lower total economic value compared to other key fisheries, they support on average more vessels (67 on average annually since 2010) and business models can be highly dependent on relatively low catches of high value species (particularly Sole and bass). The number of vessels operating in this fishery shows a strong downward trend. In Suffolk particularly, the local fishing industry is also thought to contribute to the sense of place and is of cultural importance. Environmental NGOs typically regard any bottom towed gear as a threat to marine habitats – use of demersal otter trawls represent circa 22% of the catch associated with this fishery, albeit by 6 vessels on average. RSA contributes to the well-being of those involved and the sense of place, particularly around rivers and estuaries. Message form analysis identified some concerns that RSA's contribution in this way is not fully recognised. The national Sea Angling Strategy 2019-2024 sets out the following headline aims: increasing participation in angling, connecting more people with nature through angling for their well-being and to improve the environment, and increase the economic impact of angling and in particular deliver economic benefits in rural and coastal communities and revenue to clubs, fisheries and businesses.	Relatively economically small fisheries risk becoming marginalised in policy and national management with the potential for detrimental impacts on a high number of business models reliant on the small-scale fisheries. Disproportionality negative characterisation of fin-fish fisheries in the context of using bottom-towed-gear and partially in the context that associated Habitat regulation assessments have yet to be completed. Increased participation in RSA activity has potential benefits for environmental protection, well-being and contribution to local economies, particularly in coastal communities. Increased RSA activity also increases the need for engagement activity to promote compliance with byelaws.	**Fisheries management Plans (ongoing high priority workstream) –** given that all the associated species feature in a current or future FMP (as listed within the Joint Fisheries Statement), risks associated with the fisheries generally can be mitigated against through collaboration on the development of associated FMPs and in particular, by ensuring that the business models which operate in this fishery are recognised therein. **Completion of amber/green gear/feature interactions and development / implementation of management measures where required (Ongoing High Priority Workstream)** – Completion of the outstanding assessments within the district will mitigate the risk of disproportionately negative perceptions about bottom-towed fishing gear. **Compliance monitoring and engagement in accordance with the Compliance Risk Register and TCG (business critical workstream)** – Compliance activities reduces the risk of non-compliance through monitoring to inform targeted enforcement action and engagement with industry to ensure buy-in with management measures.	**Medium**	Explore options to better understand the local 'value' (economic, societal etc.) of fin-fish fisheries, including RSA within the district. Consider development of an Eastern IFCA RSA strategy if benefits can be identified beyond that provided in other areas (e.g. gathering better data about stocks in rivers)

Technological	Failure to implement I-VMS through national legislation reduces the ability of the Authority to effectively monito compliance and fishing effort.	Potential financial impact if eligible fishermen have not installed I-VMS via the national roll out grant scheme at the time associated regulation comes into effect.	Implementation of I-VMS for all fisheries specifically the Wash Shrimp fishery (dependent on partnership working with MMO led project) (Ongoing Priority workstream) – The situation with the roll out of I-VMS is being followed and the Authority is working collaboratively with the MMO to facilitate the SI coming into effect.	**Low**	None identified

Legal	The fisheries are regulated nationally including through technical conservation measures and TACs and quota legislation, with limited IFCA management. All species are to be considered via an FMP. Bass FMP has been published. The Conservation of Habitats and Species Regulations 2017 requires that fishing activity does not detrimentally impact site integrity of MPAs. It is anticipated that I-VMS will become a legal requirement for all vessels less than 12m in length during 2024. There is uncertainty whether the reporting rates of VMS will be harmonised across the different types within the inshore region this year. Mesh size requirements for sprat fishing are considered to be impacting the viability of the fishery.	Small-scale, artisanal fisheries risk being marginalised at a EU / national level when considering management measures. The bass FMP is unlikely to result in changes to management in the short-term with more exploratory actions set out for the immediate future. Failure to contribute to the implementation of the plan risks a lack of representation from the small-scale fisheries within the district and potentially impactful outputs as a result. There is a legal requirement that fishing activities must not detrimentally impact the conservation objectives of MPAs. Application of the precautionary principle with regard to low evidence fisheries potentially risks disproportionate detrimental impacts (costs) to small-scale fishing operations. Failure to harmonise reporting rates between I-VMS and VMS+ will limit the benefit of I-VMS generally, particularly with respect to managing mobile gear within MPAs (potential to led to disproportionately impactful pre-cautionary measures). Sprat landings have increased, potentially as a reflection of the performance of the fishery although there is limited understanding of this fishery within the district given its small scale. If there is the potential for a viable fishery, this could present an additional species for inshore fishers to diversify into and dipropionate prohibitive mesh sizes	**Fisheries management Plans (ongoing high priority workstream)** – Eastern IFCA is contributing to the development and implementation of FMPs and has the opportunity to inform the potential for impacts and benefits arising from the plans. This may include implementing addition regulatory measures to meet the aims of the FMP and facilitation of evidence gathering to ensure that the local / regional bass fisheries are taken into account. The Sprat FMP is also in development which will mitigate associated risk. **Completion of amber/green gear/feature interactions and development / implementation of management measures where required (Ongoing High Priority Workstream)** – Completion of the outstanding assessments within the district will mitigate the risk to an extent (dependant on available data) of disproportionate pre-cautionary measures to an extent although could result in additional management measures and restrictions on the fishery. **Implementation of I-VMS for all fisheries specifically the Wash Shrimp fishery (dependent on partnership working with MMO led project) (Ongoing Priority workstream**) – Consider standardising the reporting rates for VMS units (using a new byelaw).	**High (on the basis of outstanding High Priority Workstreams)**	None identified

		presents a risk to the associated fishing opportunities.			

Environmental	The majority of catch is taken using midwater otter trawls (49%) and demersal otter trawls (22%). However, the vast majority of vessels operate in the fishery using nets (gill nets, drift nets) and longlines, with only 6 vessels on average deploying bottom towed otter trawls. In general, the gear deployed in these fisheries have limited impact on habitats, with the exception of bottom-towed otter trawls. Thornback ray have shown a strong declining trend in landed weight since 2010, with only 7 tonnes reported as having been landed in 2023, down from 41 tonnes in 2014. Herring, cod and smoothound landings increased significantly in 2023. Use of rivers as nursery areas in the District is not well understood, particularly bass which are likely to now use some rivers and estuaries as nursery areas as the population appears to have shifted north following the northward progression of the thermocline, presumably as a consequence of climate change.	Bottom-towed-gear has the potential to impact habitats within designated MPAs and impact biodiversity generally. Nets and long-lines have higher potential for bycatch including of bird species. Assessments to determine the level of impact are not complete. Failure to undertake assessments and implement management measures during 2024 risks the fishery not meeting Environmental Improvement plan targets. Sudden increases in in landed weight of herring, cod and smoothound indicate greater availability (particularly for cod) and better market conditions which may lead to further increases in effort and risks to sustainability of the fisheries. Potential for commercial and non-commercial netting activity to impact marine mammal populations through by catch (particularly in the Southern North Sea SAC) and impact stocks of species which use rivers (e.g. bass nursery areas) – netting activity in rivers has the potential to have a disproportionately negative impact on wider fish stocks.	**Completion of amber/green gear/feature interactions and development / implementation of management measures where required (Ongoing High Priority Workstream) –** Completion of the outstanding assessments and implementation of relevant management measures within the district will mitigate the risk for impacts on the environment. **Fisheries management Plans (ongoing high priority workstream) –** given that all the associated species feature in a current or future FMP (as listed within the Joint Fisheries Statement), risks associated with the fisheries generally can be mitigated against through collaboration on the development of associated FMPs. This includes in relation to bass nursery areas in rivers for which there are specific actions.	**High on the basis of outstanding High Priority Workstreams)**	Develop relationships with RSA to obtain more fisheries data, including consideration of the added value of developing an RSA strategy.