



Eastern IFCA Shrimp Industry Workshop Report – 10th July 2015

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

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1. Introduction

A significant shrimp fishery has existed within Eastern IFCA's district – specifically The Wash – for over 100 years. The shrimp caught from within The Wash contribute around 95% of the shrimp landed in the UK making it a nationally important fishery, albeit predominantly targeting a continental European market.

Pursuant of our vision statement and obligations under legislation, Eastern IFCA regularly reviews the status of fisheries in its district in terms of social, economic and environmental sustainability. Where fisheries occur in designated marine protected areas, particular consideration is given to habitats and species in those sites. In 2015, Eastern IFCA carried out a focused assessment (called a Habitats Regulation Assessment) to determine whether shrimp fishing within The Wash is potentially having a damaging effect on its habitats and features. The Wash is part of a marine protected area known as a European Marine Site (The Wash and North Norfolk Coast European Marine Site) which is internationally important for migratory birds as well as being recognised for its intertidal and subtidal habitats, some of which are found almost exclusively in East Anglia¹.

The results of the assessment indicated that shrimp fishing within The Wash requires additional management in order to protect the habitats for which the site is designated. On 22nd April 2015 the Site Management Board (made up of members of Eastern IFCA's Authority) discussed the findings of the assessment and decided that additional measures should be explored including the use of codes of conduct, permitting schemes, fishing gear specifications and closed areas.

1.1 Holistic approach

The shrimp fishing industry has approached Eastern IFCA with ideas and suggestions on additional management of the shrimp fishery for a more sustainable fishery, particularly within the last few years. Eastern IFCA identified the shrimp fisheries as at medium risk of sustainability issues within our annual Strategic Assessment in part because of the minimal management currently in place to safeguard the fishery.

As such, it was felt that any measures for shrimp fishing within our district should be designed taking into account fisheries sustainability in addition to environmental protection. This holistic approach to managing the fishery aims to secure a long-term, sustainable fishery with minimal environmental impact.

Eastern IFCA therefore decided that the first step to designing shrimp management measures would be to engage with the industry in a workshop.

¹ Biogenic *Sabellaria spinulosa* (Ross worm) reefs are found in five MPAs in the UK, four of which are in either the inshore or offshore sections of East Anglian coastal waters.

1.2 Objectives of the workshop

It was felt that this process would benefit from a workshop (rather than written consultation or a standard meeting) as the views of shrimp fishers – many of whom have considerable experience – could be expressed and discussed in the most meaningful way.

The objectives of the workshop were as follows:

- To inform shrimp fishers of the results of the assessment as carried out by Eastern IFCA and the decision of the Site Management Board to implement shrimp management measures²;
- To supplement information on current shrimp fishing activity within The Wash;
- To introduce and discuss a new shrimp fishing returns form to help gather data; and
- To discuss potential issues and solutions currently facing the shrimp fishery in The Wash.

² Whilst not directly part of the workshop, NFFO and their commissioned consultants (Ichthys Marine and APBmer) were also in attendance in order to get an insight into the Wash shrimp fishery to inform their own Habitats Regulations style Assessment.

2. Presentation summaries

The shrimp Industry Workshop started with a series of four presentations. A summary of the presentations and the key questions/messages which came out of them are presented below.

2.1 Shrimp fishery management: international context (Chris Firmin, CEFAS and ICES *Crangon* Working Group)

Shrimp fishing effort by UK vessels is primarily made up of 10-12 metre vessels. However accurate effort data is only available for the 12m and over portion of the fleet (smaller vessels are not currently required to use the satellite tracking Vessel Monitoring System or VMS).

The shrimp fishery within The Wash is important from a national context contributing to some 95% of the total landed weight of shrimp in the UK. However, within the countries which make up the ICES Working Group on *Crangon* Fisheries and Life History (WGCRAN), UK landings make up a marginal proportion. As such there is limited representation of UK interests within the ICES working group. The priority of the ICES working group is to understand how fishing effects brown shrimp populations and interactions between shrimp populations and the ecosystem.

Key points raised during questions

- How data is used – there are inherent dangers in relying on limited data sets for determining the status of a fishery particularly when considering the current lack of long-term data for shrimp landings and effort. It was explained that landings data do not necessarily reflect stock availability as there are many environmental and socioeconomic factors that affect landings including season and interrelationships with other fisheries.
- More data needs to be collected to effectively analyse the shrimp fishery.
- In particular the relationship between landings and effort (landings per unit effort) needs to be considered for making management decisions.

2.2 EIFCA Strategic Assessment and MPA management (Judith Stoutt, Eastern IFCA)

The Eastern IFCA annual Strategic Assessment found that the shrimp fisheries within The Wash were at a medium risk of sustainability issues primarily because of the high weight of landings and the high value of the fishery, minimal regulation of the fishery (i.e. Eastern IFCA have limited measures in place to ensure a sustainable fishery) and the lack of evidence for fisheries sustainability (primarily effort data).

The recent Habitats Regulation Assessment of the shrimp fishery found that there was potential for the shrimp fishery within The Wash to be damaging some

its protected features (namely sub-tidal mud habitats and sub-tidal mixed sediment habitats). In April 2015, Eastern IFCA's Site Management Board decided that management measures would be required for the protection of these habitats. New regulations to protect these habitats need to be in place by the end of 2016.

Key points raised during questions

- Limited evidence – there are no Wash-specific studies upon which to base the conclusions of the assessment. The Authority responded to confirm that, although there are no Wash-specific studies, the effects of similar gears on similar seabed habitats were considered. It was explained that EIFCA assessments have highlighted that fishing gears used in the Wash are smaller and lighter than beam trawls used to target fish. In addition, the Authority highlighted their involvement in developing a “fishing footprint” approach to these assessments, in which gear dimensions are taken into consideration.
- Unique shrimp fishery in The Wash – shrimp fishing practices in The Wash are likely to be very different from those which take place in other areas (e.g. Dutch Wadden Sea) and in the studies used in the assessment. In particular The Wash shrimp fisheries are thought to use lighter gear, fewer vessels and smaller vessels.
- A Wash specific study would be beneficial to designing shrimp management measures in the longer term but this had to be balanced with Eastern IFCA's requirement to protect the habitats by the end of 2016.

2.3 Offshore MPA management (Elaine Young, MMO)

The Marine Management Organisation (MMO) is responsible for managing fishing activity within marine protected areas (MPAs) within the 6–12 nautical mile limit³. The MMO are currently carrying out assessments of fishing activities within MPAs around England.

MMO is eager to engage with industry who fish within the following sites: the Inner Dowsing, Race Bank and North Ridge (which is adjacent to The Wash); the Haisborough, Hammond and Winterton; and the Margate and Long Sands European Marine Sites. This is to ensure that best available evidence on fishing activity informs risk based assessments and potential management options.

The MMO expects to have completed its assessments regarding the potential for damage to the sites from fishing activity by August.

³ MMO (with agreement with the relevant IFCA) can manage within the 6nm limit.

A formal consultation will be held in due course for fishers to consider the proposed management option. Any management will be in place by the end of 2016.

Defra are responsible for managing sites from 12–200nm⁴ and are holding regional offshore management meetings to discuss potential management options.

2.4 Shrimp fishery accreditation and data forms (Luke Godwin, Eastern IFCA)

Eastern IFCA (and the MMO) are required to implement shrimp fisheries management for the protection of habitats and to secure a long-term viable industry. By working with the industry, Eastern IFCA can support the fishers towards fulfilling the requirements of Marine Stewardship Council (MSC) Accreditation for the shrimp fishery in The Wash.

MSC Accreditation would improve the market position of the shrimp caught within The Wash and as such would provide a financial benefit to shrimp fishers. MSC Accreditation is not likely to be achievable without Eastern IFCA implementing measures.

Pursuant of fulfilling Eastern IFCA's duties and MSC Accreditation within The Wash, Eastern IFCA will require shrimp fishers to complete logbooks of shrimp fishing activity. This will provide some of the evidence required to prove and manage a sustainable fishery.

Key points raised during questions

(Note: questions regarding the new returns forms were not fielded as this was to be discussed during the workshop)

- MSC Accreditation may not necessarily result in more money for shrimp fishers if market forces were unfavourable (particularly if other countries managed to gain MSC Accreditation first) but without MSC Accreditation, the shrimp fishery would not have a market to sell to in the coming years – MSC Accreditation is crucially important to a shrimp fishery continuing.

⁴ Defra with agreement with MMO can manage within the 6 – 12 nm

3. Group discussion summaries

The workshop then split into five groups to discuss key questions related to the issues discussed during the presentations. Groups were denoted by the table on which attendees had chosen to sit, rather than being proactively assigned. All participants were asked to leave their name, the organisation they represented (if any) and their contact details.

Each group had a facilitator to co-ordinate discussion and note key points. Of the five groups, three were facilitated by Eastern IFCA staff, one by a member of national MMO staff and one by the project manager of the Wash & North Norfolk Coast European Site management scheme.

3.1 Group discussion topics

Group participants were asked to respond to the following questions:

- 1. Where does shrimping fishing activity occur?*
- 2. Are there any practices that may threaten the fishery?*
- 3. What potential measures could have a positive effect on the fishery?*
- 4. What do you think of the format of the shrimp returns forms?*

For question 1, participants were invited to draw/mark/shade areas of brown and pink shrimp fishing activity within and beyond The Wash & North Norfolk Coast SAC and the Inner Dowsing, Race Bank & North Ridge SCI. For question 4, participants were shown a draft copy of the shrimp returns form.

3.2 Topic 1 – Shrimp fishery activity location

All groups stated that brown shrimp are a highly variable target species, in both time and place, making precise spatial representation of activity challenging. Key zones of activity included:

The Wash

- The embayment is the focus for all shrimping activity.
- There were differing interpretations of how much of the embayment is accessed by the fishery: all agreed on the edge of intertidal zones being the main area of activity, but some also stated subtidal zones were regularly used (e.g. Roaring Middle, though principally by the now defunct pink shrimp fishery).
- Deeper subtidal zones are not accessed by the brown shrimp fleet. “Deep” zones were defined as those ranging from 40ft (12.2m) to 70ft (21.3m).
- Given the exposure of The Wash to high winds, the intertidal nature of activity may represent the need to continue to fish safely rather than selection of optimal grounds (one group suggested that shrimp actively migrate from inshore/intertidal zones to deeper water in winter).

North Norfolk Coast

- All groups agreed that at least some of the brown shrimp fleet accesses the North Norfolk Coast regularly.
- Some described only the thin intertidal strip of the coast being used, others included the whole of Burnham Flats (extending out beyond the SAC) and others sub-sets of the Burnham Flats.
- One group suggested that only vessels of 12-14m length were capable of getting out to this coastline, specifically mentioning fishing off Blakeney Point. Another group suggested that the intertidal strip along the coastline was only accessed at night.

Inner Dowsing/Lynn Knock

- Two groups specifically mentioned activity in the SCI.
- Both groups located activity in the 0-6nm section of the SCI, with one group denoting activity in the western edge of the 6-12nm section.
- Grounds from Gibraltar Point up to Haile Sand were viewed as contiguous, therefore the SCI is mostly likely to be accessed when continuously trawling up the Lincs coast
- Activity in the 0-6nm section is unlikely to take place within the three Inner Dowsing, Lynn and Lincs offshore wind farm arrays; the group that drew lines drew them to east and west of arrays.

3.3 Topic 2 – Practices that might harm the fishery

Whilst there were common themes across all groups, there was not a single practice that all groups raised (though almost all practices were raised by more than one group). There was a clear divide between those practices identified by fishers using “small” vessels and those identified by fishers using “large” vessels. Key practices included:

Use of non-selective gear

- The landing of catch that either contains too many juvenile shrimp or is of a poor quality (i.e. ‘D’ class shrimp) was raised by two groups
- This was attributed to a lack of consistency in catch sorting equipment and in mesh size requirements, rather than specific targeting of undersize or non-shrimp catch.

Use of habitat-impacting gear

- Three groups raised the potential issue of gear impacting the seabed; given the conclusion of the IFCA’s MPA assessments of the fishery, some raised this in response to the assertion that shrimping causes habitat damage, whereas some raised it proactively.
- The weight of gear was expressed by two groups as the principal source of habitat damage and that only larger vessels are able to tow gear of sufficient weight to cause habitat damage.
- Several groups confirmed that the principal part of the gear that contacts the seabed is the trawl “shoes” and that these are capable of causing surface abrasion.

- One group explained that it is not in their interests to bring up sediment in their catch and so sensitive features/harder grounds are not targeted.

Excessive effort – length of individual tows/length of fishing trips/total number of tows

- Three groups raised the potential issue of vessels taking fishing trips that are too long and therefore completing an excessive total number of tows during a trip.
- Two groups raised the potential issue of vessels having too much horsepower and therefore towing for too long at a time.
- These groups asserted that vessels that tow for too long effectively cause localised depletions of the stock.

Excessive effort – number of vessels participating in fishery

- Two groups raised the potential issue of overall effort, in terms of numbers of vessels active in the fishery, being too high
- These groups were concerned that, with uncertainty around the biology of brown shrimp and their response to exploitation, stock levels may not be able to withstand current effort levels indefinitely.

Fishing during shrimp breeding season

- Three groups raised the potential issue of fishing during times of the year when high densities of retained shrimp are egg-bearing. One group specifically stated that this was not an issue.
- These groups stated that there are certain times of year where even selective fishing will involve high degrees of small shrimp, simply because these are the only shrimp available.

There were several specific potential issues mentioned by single groups only:

- Sectoral conflict: There are two fundamental business models at play in this fishery and there will always be disagreement and non-flexible regulations are likely to disadvantage one group over the other
- EIFCA Environmental damage conclusions being flawed: As mentioned in the discussion around the presentations, there was concern that the assertion that shrimp trawling gear can cause habitat damage was not based on Wash-specific studies.
- Use of short-term datasets: Concerns were raised about the ability to make management decisions based on only a few years of landings data/habitat data.

3.4 Topic 3 – Solutions to practices that might harm the fishery

All groups addressed potentially harmful fishery practices and their solutions at the same time, therefore the potential issues listed above and groups' proposed solutions are shown in Table 1.

Table 1. Potential issues/harmful fishery practices in the UK east coast brown shrimp fishery and solutions proposed by workshop groups.

Potential issue	Proposed solutions	Total groups proposing solution
Use of non-selective gear	Requirement to use rotary riddle	1
	Requirement to use 5.2mm mesh riddle	1
	Requirement to use water-filled hopper	1
	Requirement to use 24mm minimum mesh size inner cod-end	2
	Requirement to use waste shoot back into water	1
Use of habitat-impacting gear	Use of trials to test wheels instead of trawl shoes	1
	Use of trials to test wing fly trawls	1
	Use of trials to test electro-pulse trawls*	2
Excessive effort – length of individual tows/length of fishing trips/total number of tows	Restriction of effort to 60hrs per vessel per week (incl. weekends)	1
Excessive effort – number of vessels participating in fishery	Permit system for shrimp fishing**	1
Fishing during shrimp breeding season	Prohibition on fishing for brood	1
	Closed season for shrimp (various measures proposed)***	3

* One group specifically did not want electro-pulse trawling to be trialled

**One group specifically did not want a permit system

***Groups proposed that the timing of a closed season should be dictated by either the period when shrimps are known to breed, the period when the cockle fishery is active or during the months of summer.

Potential proposed solutions that individual groups did not want to see introduced included:

- Closed areas: The group raising this solution claimed closures would only lead to other problems elsewhere i.e. displacement
- Code of Conduct/voluntary measures: The group raising this solution claimed that changes to the shrimp fishery would only be viable with legislative measures.

3.5 Topic 4 – Feedback on the shrimp returns forms

Feedback on Eastern IFCA's draft shrimp returns forms could be grouped into three main categories:

- Proposed additions to the form
- Clarification/improvement of form
- General feedback on Eastern IFCA data use

Proposed additions to the form

- Inclusion of beam length/width
- Weather conditions
- Percentage of total landings per tow
- Pre-filled in forms (i.e. specific forms for a vessel/PLN number)
- Bycatch recording per tow
- Use of carbon-copy format so fishers have a copy of all data
- Space to add more tows

Clarification/improvement of form

- The grid cells used to record tows may be too small (two groups stated that, at current scale, tows are likely to start in one cell, and cross several during the course of a tow). One group suggested that four cells at the current scale should equal one cell. (NB Two other groups claimed grid cells were fine at current scale)
- Average tow speed may be a problematic metric to record as it is highly variable over the course of a single tow. Tow speed is likely to change once worked grounds are reached.
- The form doesn't specify when it should be returned – given there is one form per day – a bundle of them per month seems reasonable.

Generic feedback on Eastern IFCA data use

- One group raised concerns that the whole process of data collection may be jeopardised by ongoing mistrust among fishers of what data are used for (especially spatial indications of effort patterns). This group particularly stressed the suspicion that the similar data have been shared with offshore wind farm companies.
- The same group raised the issue that these data would be highly different for the "small" boat sector and the "large" boat sector of the fleet and that it may be appropriate to split out data on these sectors i.e. a "small" boat form and a "large" boat form.

4. Conclusion and next steps

The shrimp industry workshop provided a vital opportunity for regulators and industry members to consider the UK east coast shrimp fishery and openly discuss potential fishery issues/pressures and proposed solutions. The workshop confirmed that there are several reasons to act to reform the fishery; these reasons included:

- Industry concerns over various practices and gear variations that could harm long-term fishery viability
- Eastern IFCA Marine Protected Area (MPA) assessment conclusions that the fishery is having adverse effect on specific subtidal habitats
- Eastern IFCA strategic risk-based assessment of all fisheries across its district which concludes that the fishery is data poor and highlights the lack of available knowledge on the biological response of shrimp to exploitation
- The potential that the fishery could not pass Marine Stewardship Council accreditation in its current state; the pressure to achieve this accreditation is dictated by the buyers of the product. Should buyers refuse to support the fishery, its long-term future would be in doubt.

In response to these reasons to act, the Authority will take the following actions:

Action 1 – Propose mitigation to MPA adverse effect conclusions

- As adverse effect has been concluded, the current practices of the fishery must be altered to comply with European MPA legislation.
- Many of the proposed solutions outlined in section 3.4 of this document will improve the fishery for industry members but will also have a protective, environmental effect by relieving pressure on the target species and subtidal habitats.
- The Authority will compile these solutions into a formal mitigation proposal that is likely to involve several discrete measures; the proposal will be discussed with Natural England.

Action 2 – Consult the industry formally and informally on proposed measures

- The workshop format will be used again once the MPA mitigation proposal has been approved by Natural England and will be used to discuss this proposal in more detail.
- Formal, written consultation will be developed after this second workshop, after which point, the development of legislative measures is likely to begin.

Action 3 – Develop a final draft of the shrimp returns forms

- Following the feedback summarised in section 3.5 of this document, the Authority will produce a final draft of the shrimp returns form and circulate it to the industry
- Data collection will be a key strand of proposed MPA mitigation and MSC accreditation application, therefore the Authority will require the completion of these forms and considers that – in order to comply with the existing EIFCA Byelaw 11 “Development of Shellfish Fisheries” – fishers are legally required to do so.

5. Acknowledgements

The Authority would like to thank all industry attendees of the workshop for their co-operative and enthusiastic contributions to discussions. We would also like to thank the representatives of all partner organisations for their participation, expertise and guidance in conducting the workshop.

Appendix – Alphabetical list of attendees

The workshop was attended by the following participants (organisations represented by individuals are shown in brackets):

- K Bagley (Independent)
- Shane Bagley (Independent)
- Dr. Rob Blyth-Skyrme (Ichthys Marine)
- Sharron Bosley (Wash & North Norfolk Coast European Marine Site Management Scheme)
- A Brewster (A & N Brewster Ltd.)
- R.A. Brewster (Boston Association)
- Jason Byrne (IFCO, Eastern IFCA)
- Gary Castleton (Lynn Shellfish Ltd.)
- James Castleton (Lynn Shellfish Ltd.)
- L Doughty (Independent)
- E. Ellis (Independent)
- Dean English (Lynn Shellfish Ltd.)
- Chris Firmin (Cefas)
- Jacqui Foy (Marine Management Organisation)
- RJ Garnett (Kings Lynn Fishing Industry Co-Op)
- Paul Garnett (Kings Lynn Fishing Industry Co-Op)
- James Garnett (Independent)
- Peter Garnett (Independent)
- Martin Garnett (Independent)
- Luke Godwin (Eastern IFCA)
- Phil Haslam (Eastern IFCA)
- Roman Koziel (Independent)
- Neil Lake (John Lake Shellfish Ltd.)
- Jason Leman (Independent)
- Jim Manning Coe (Independent)
- John Plumley (Lynn Shellfish Ltd.)
- John Poll (Lynn Shellfish Ltd.)
- Ben Ralph (Independent)
- Caroline Roberts (ABPMer)
- Joe Roper (Lynn Shellfish Ltd.)
- Andy Roper (Greater Wash Fishing Industry Group)
- Daniel Steadman (Eastern IFCA)
- John Stipetic (Marine Management Organisation)
- Judith Stoutt (Eastern IFCA)
- Stephen Thompson (Eastern IFCA)
- Sandra Unterhollenberg (Natural England)
- Steven Williamson (Lynn Shellfish Ltd.)
- Elaine Young (Marine Management Organisation)