



## **Extra-Ordinary EIFCA Meeting**

**To be held at:**

**Yours Business Networks  
18 Tuesday Market Place,  
King's Lynn, Norfolk, PE30 1JW**

**21<sup>st</sup> August 2015**

**1000 hours**



Meeting: Extra-ordinary Meeting

Date: 21 August 2015

Time: 10:00hrs

Venue: Yours Business Networks, 18 Tuesday Market Place, King's Lynn, Norfolk, PE30 1JW

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

### **Agenda**

- 1 Welcome - *Chair*
- 2 Apologies for absence - *Clerk*
- 3 Declaration of Members' interests - *Clerk*

### **Action items**

- 4 Contingency management measures for 2015 Wash cockle fishery – *Senior Research Officer/CEO*

### **Any other business**

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

P J Haslam  
Chief Executive Officer  
14 Aug 2015

### Vision

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



## Action Item 4

### Extra-ordinary Eastern Inshore Fishery and Conservation Authority meeting

21 August 2015

### **2015 Wash cockle fishery contingency management options**

**Report by:** P J Haslam, CEO; R W Jessop, Senior Research Officer

#### **Purpose of report**

The purpose of this report is to report on and make recommendation concerning revisions to the 2015 Wash cockle fishery total allowable catch (TAC).

#### **Recommendations**

**It is recommended that members:**

- **Note that there has been exceptional cockle growth on a discrete sand within the Wash.**
- **Note that there is an opportunity to support the viability of the local fishing industry without hazarding the sustainability of the cockle stock.**
- **Agree to Option 2.**
- **Agree that previous delegations to the CEO regarding the Wash cockle fishery 2015 remain in force.**
- **Delegate powers to the CEO to close the Roger Sand when it is judged that it is no longer offering a viable fishing opportunity.**
- **Direct CEO to implement Option 2 with immediate effect.**

#### **Background**

The 2015 spring cockle surveys found that while there were only 6,238 tonnes of adult cockle stocks (cockles  $\geq 14$ mm width) present on the inter-tidal beds of the Wash regulated fishery, there had been an exceptional spatfall during the previous summer resulting in a stock of 19,048 tonnes of Yr-0 juvenile cockles. Traditionally the TAC for the fishery has been calculated as being a third of the adult stock biomass, this limited the fishery opportunity to 2,079 tonnes. The judgement at the time of the survey was that with only low densities of adult stocks available achieving even this low TAC appeared difficult. The high levels of juvenile stocks present, although the prospects for the 2015 fishery appeared poor, there was optimism for good fisheries in the following two years.

Reviewing past trends from previous surveys allows managers some insight into the prospects for future fisheries. Several factors influence the rate that cockles grow and mature, but in the Wash some sands are known to facilitate growth better than others. By reviewing the stock distributions in the survey data, it was anticipated that the cockles on the faster growing beds on the Friskney and Roger sands would have grown

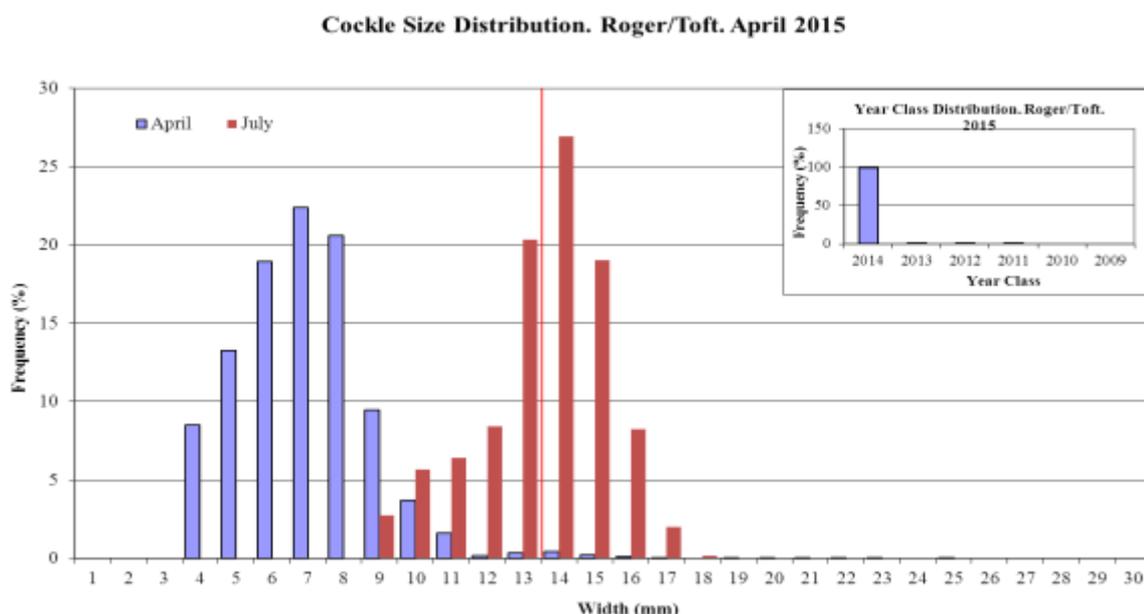
sufficiently to support the bulk of the 2016 fishery, but elsewhere most of the 2014 year-class cockles would only reach harvestable size by 2017. Due to the large numbers of these cockles present on the beds several problems were also anticipated.

- Since 2008 cockle in the Wash have been suffering high mortality rates from a condition known as “atypical mortality”. Studies conducted in the Wash since 2008 have found that typically this tends to mainly affect cockles that have reached spawning size and that whole cohorts are generally killed once they attain that size. At the time of the surveys it was anticipated that this would occur on the faster growing beds of Friskney and Roger during 2016 and a much more widespread distribution in 2017.
- When cockles settle in high densities and growth rates are high, they frequently cannot all physically fit in the ground any longer. In addition to the high densities causes competition for food that slows their growth, as the ground reaches capacity the cockles begin to push each other out of the ground. In extreme cases this can lead to what is termed “ridging out”. When this occurs, the majority of the cockles within an area are pushed out of the ground and smother each other or can be washed away by storms or strong weather. In such cases mortality can be as high as 90-100%. Due to the high densities that the 2014 cohort had settled in on many of the sands, “ridging out” was anticipated to be a problem.

## Report

In July 2015, following request from fishermen, officers assessed the cockle stocks within an area of the Roger Sand that had been closed to protect Yr-0 juvenile cockles. The cockles in this area were found to have grown exceptionally well (see chart below, comparing cockle sizes at the time of the spring survey with the assessment in July). Following this assessment, the closure was removed from this area for two reasons:

1. Many of the stocks had attained 14mm width, offering a good fishery resource.
2. In many places, where the cockles were present in high densities, ridging out was occurring and their chances of survival were poor.



## **Contingency measures**

The predictions described above concerning the coming fisheries and potential die-offs were based on past trends that had been witnessed in the Wash. The assessment made on the Roger Sand in July, however found the stocks were growing at unprecedented rates. Although this presented improved fishing opportunities for the industry during 2015, this increased growth also meant that the problems predicted for 2016 and 2017 were likely to occur a year earlier than first thought. Juvenile cockles are already ridging out and many of them are now anticipated to reach a size whereby they will be vulnerable to "atypical mortality" next year. Given the context above it is necessary to review the 2015 fishery to make such adjustments as are reasonable to support the viability of local industry without hazarding the long term sustainability of the fishery. The key factors are:

1. There is an opportunity to offer more exploitation opportunities in the 2015 fishery, and;
2. Without a review of management measures, the fishery will end by late August and cockles of harvestable size that would provide significant income to local businesses will subsequently die.
3. Cockle mortalities are anticipated to be high during 2016 risking a wholesale loss of stock.
4. Juvenile cockle stocks are currently exceptionally high, providing a large buffer to protect the future sustainability of the stocks.

It should be noted that this review has been conducted due to exceptional conditions including:

- The presence of exceptionally good juvenile stocks that allow the imposition of exceptional contingent management measures without endangering the sustainability of the fishery.
- Exceptional growth both enabling stocks to be fished earlier than anticipated but also greatly increasing the imminent risk of natural mortality from ridging out or atypical mortality.

Natural losses in the coming two years are anticipated to be high. Increasing the TAC this year will allow some of the more vulnerable stocks from being wasted and reduce pressure from potential losses next year.

## **Industry Perspective**

In the spirit of co-management, local industry members have worked with EIFCA to alert officers to areas of exceptional growth. The Authority has received requests for a review of management measures for the 2015 cockle fishery from both King's Lynn and Boston fishermen's associations all of which highlight the exceptional and unique conditions being experienced this year.

## **Options**

### **Option 1 – Do Nothing**

Approximately 1,500 tonnes of the available 2,079 tonnes have already been harvested (at time of writing). At the current rate of exploitation, the remaining TAC is likely to be used in 6 more days of the fishery. If nothing is done and the fishery closes when the current TAC is exhausted, large numbers of cockles that are currently of a harvestable size will die before next year and be wasted.

### **Option 2 – Ring Fence Roger/Toft sand**

Rapid growth of cockles on the Roger Sand have provided a good fishing opportunity but also created a problem of high mortalities through ridging out and potentially atypical mortality. If these cockles are not exploited this year, the majority will be lost. Following the cockle survey of April 2015 the Roger Sand was assessed to be able to contribute 159 tonnes of adult cockle stock to the overall TAC. The exceptional growth experienced this year has markedly increased the amount of adult stock making the initial judgement of Apr 15 unsound; the stock of cockles on the bed have not performed in line with forecast expectations. To mitigate this inaccuracy it proposed to ring fence the Roger Sand and treat the exploitation of its cockle stocks in a bespoke manner. By ring fencing this sand, it is proposed that any cockles harvested from this area would not be discounted from the TAC. Instead only cockles harvested from other sands would be taken from the TAC.

The Roger initially contributed 159 tonnes towards the total TAC. This amount will be discounted from the TAC deriving a new TAC of 1920 that would apply to all other opened cockle beds in the Wash which are not experiencing exceptional growth and are performing in line with forecast expectations. This will enable those who cannot or choose not to fish the Roger Sand to still enjoy a productive fishery. The stocks on the Roger sand would then be allowed to be fished independently of the TAC until their densities were reduced to levels in which they were no longer considered commercially viable (or officers felt that continued exploitation was causing adverse disturbance to the ground). This would have the added dividend of thinning out those cockle present leaving juvenile stock the space to fully develop without the risk of further "ridging out".

The benefits of this option, in addition to the obvious additional opportunity for the industry are:

- Cockles on this sand that are likely to die will not be wasted
- Due to growth and mortalities that have occurred since the surveys, it is difficult to accurately assess how much stock is currently present on this sand. Determining a figure by which to increase the TAC would, therefore, be difficult and potentially underestimate the harvestable stock. As the majority of the stock on this sand is expected to die from either ridging out or atypical mortality, fully exploiting them will not make a difference to the sustainability of the fishery or hazard the overall delivery of statutory duties.
- Managing the density of cockle on the sand through hand worked exploitation will reduce the risk of subsequent "ridging out" events.
- Ring fencing this area will enable the TAC to be exploited from other parts of the Wash, enabling vessels to exploit sands closer to their home ports and other areas that are vulnerable to mortality.

Disadvantages of this option are:

- Industry members could expect these exceptional contingent management measures to be used in future years when the conditions are not exceptional.
- Ring fencing the Roger sand could create enforcement issues if vessels claim they have fished the Roger sand when in actuality they have fished elsewhere.

### **Option 3 – Increase the TAC**

Based on the exceptional conditions witnessed on the Roger Sand, the TAC could be increased throughout the fishery to include the Juvenile cockles on the Roger Sand that have now reached commercial size. This would increase the TAC by 1,432 tonnes.

The advantages of taking this approach are:

- The industry would benefit from an increased TAC could be exploited on any of the beds currently opened.
- The enforcement issues highlighted in option 2 would not occur
- The fishing opportunity will be derived from familiar procedures.

Disadvantages of this option are:

- The Roger Sand would not be specifically ring-fenced, the conditions listed on that sand as reasons for taking exceptional contingency management measures could legitimately be applied to other areas, too. This could lead to an expectation that other areas would be included and demands for further assessments to be conducted on other sands that the Authority is not resourced to respond to.
- It is likely that the Roger Sand can support a fishery greater than the proposed 1,432 tonnes increase. If that is the case, once that additional TAC had been exploited, remaining cockles would still be lost. This would likely prompt a demand from the industry for further contingency measures to be considered.

### **Risk**

The review of the Roger Sand comprises a unique action to accommodate exceptional circumstances to benefit the viability of local industry. There is a risk that it will be interpreted by some as setting a precedent for future years. There will likely be calls for similar action in future years when the conditions do not warrant it. The Authority is not currently resourced to carry out successive surveys of cockle beds throughout the season and any demand for this service would introduce risk to the delivery of other business outputs.

Similarly, there is a risk that this 'one off' review of cockle growth on one discrete sand will be interpreted as a Wash-wide growth study and may create a demand for a "Growth Factor" to be calculated and applied to all sands in subsequent fisheries to artificially increase the TAC at the outset of a cockle fishery.

### **Financial implications**

There are no immediate financial implications to accepting the recommendations above.

### **Legal implications**

There is no legal risk in accepting the recommendations above.

## **Conclusion**

The mission statement of the Authority is to 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. The dynamic review and adaptive management of the 2015 Wash cockle fishery delivers this remit.