Agenda item B4

By:	Assistant Chief IFCO
To:	Kent and Essex Inshore Fisheries and Conservation Authority – 22 May 2024
Subject:	TECFO 1994 stock surveys
Classification	**Unrestricted**

Summary:
This report provides a summary of the spring 2024 cockle stock assessment surveys

Recommendations –

For **NOTING** and **COMMENT** only

1. Spring 2024 Cockle Stock Surveys

Stock surveys on the main harvesting areas of the Maplin and Foulness sands commenced on 11 April 2024 over the low ebb spring tides which gave best access to the drying sands that extend out to three miles offshore in some sections (a chart showing the cockle management areas is attached at Appendix A). These surveys took four days to complete, covering a total area of 69.8 km² (22.3 miles²) and a total of 519 quadrat samples were taken. The sandflats were accessed from land using two Honda All-Terrain Vehicles for transportation and cockles were dug out from a 0.1 m^2 quadrat at each sample point, counted, weighed and the age determined (the method is described in more detail in the annual cockle report). The surveys were undertaken by the Authority's officers in teams of four. It is necessary to complete surveys during periods of spring tides when the ebb tide leaves the sands dry and these tide times result in the surveys being carried out around sunrise.

Analysis of the survey results show that there remains a stable number of cockles on the Maplin and Foulness Sands (fig. 1). However the stock contains a large number of 2023 cockles which are yet to reach commercially available size. This is a result of the good spatfall and survival of these cockles through 2023 and into 2024, as seen in figure 2.

Stock on the Maplin Sands is, from an adult stock perspective, much lower than recent years (figure 3) as a result of the lack of recruitment during 2019, 2020 and 2022. This adult stock will be bolstered by the 2023 year class as they grow during this year, with some reaching minimum size during the course of the season.

The graphs below show the latest stock situation.

Fig. 1: Abundance of cockles from 2004 to 2024 in the main cockle harvesting areas of the Maplin and Foulness sands.

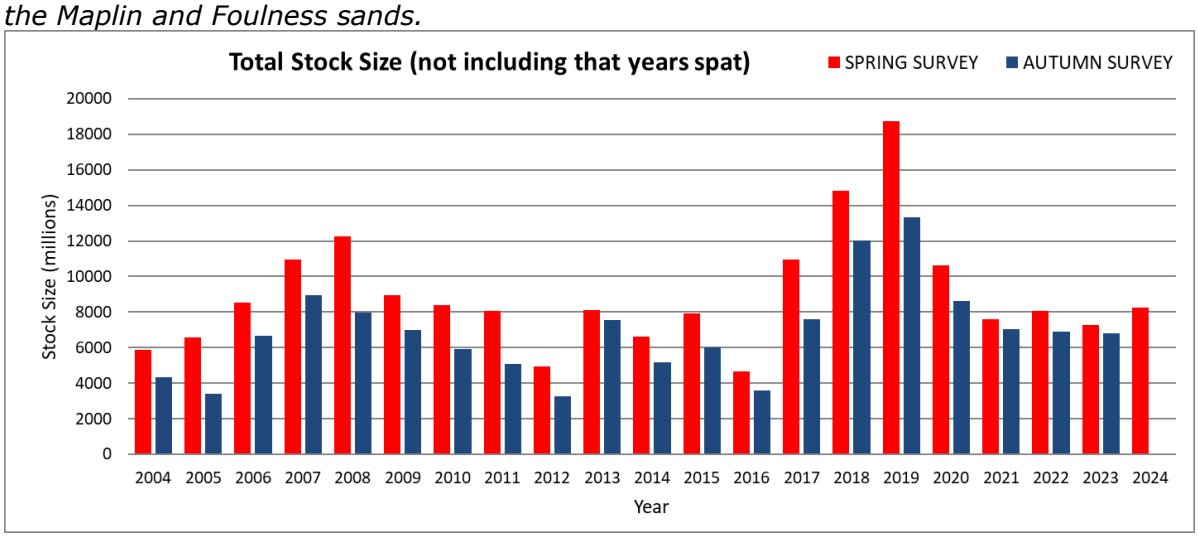


Fig. 2: Abundance of spat before and after the first winter for 2003 to 2023 year classes in the main cockle harvesting areas of the Maplin and Foulness sands

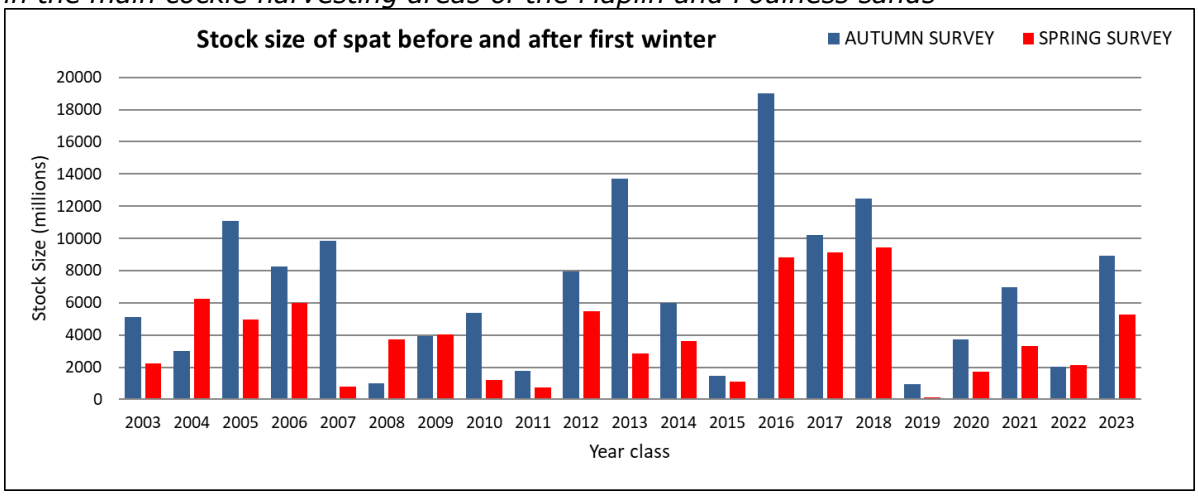
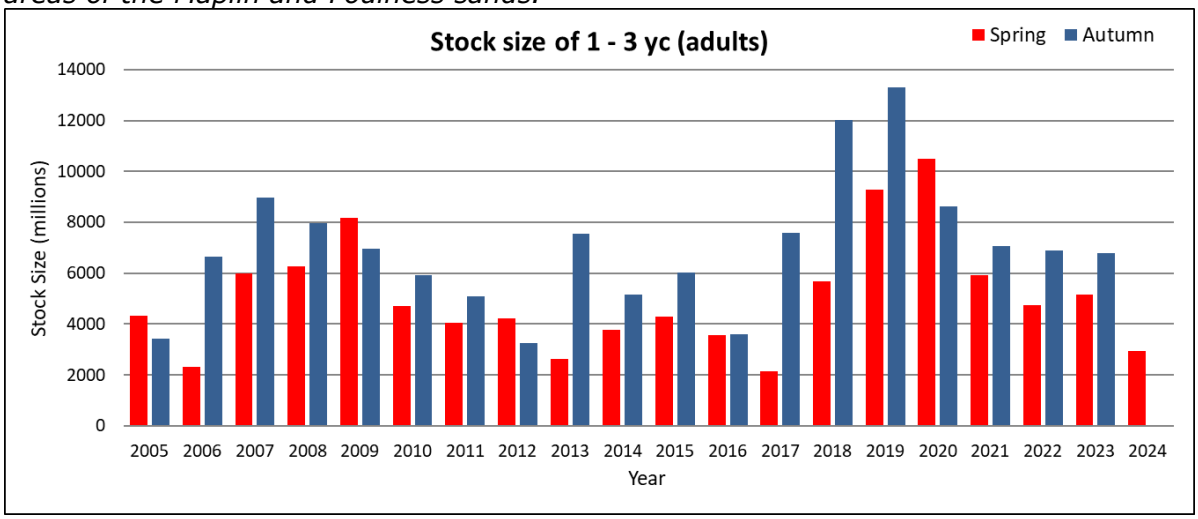


Fig. 3: Abundance of adult cockles from 2005 to 2024 in the main cockle harvesting areas of the Maplin and Foulness sands.

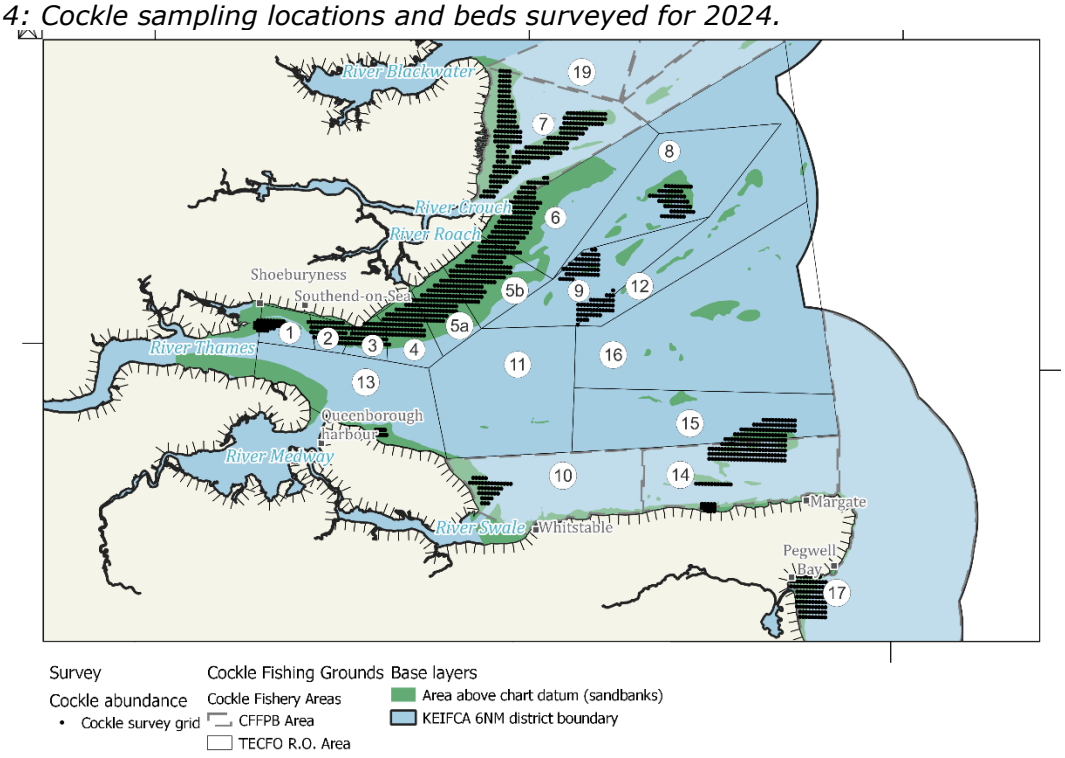


Whilst stock levels are relatively good, the main factor restricting the TAC at present is the size of those cockles. During the April surveys, growth was observed on all cockles, which is much earlier than we would usually expect to see it. Whilst this would usually result in a recommendation to delay the start of the season, as this is the last year of TECFO 1994, the end date of the season is fixed at the 29th September 2024.

Surveys of additional cockle grounds beyond the major harvesting areas have also been completed. Areas 8, 9 and 12 have proven to be very productive in recent years, and area 15 (North Margate Sands) produced significant numbers of cockles in recent years. All of these areas have been considered when setting this years' TAC.

Surveys are continuing on beds outside of the main harvesting areas to explore where additional stocks may be located.

Fig. 4: Cockle sampling locations and beds surveyed for 2024.



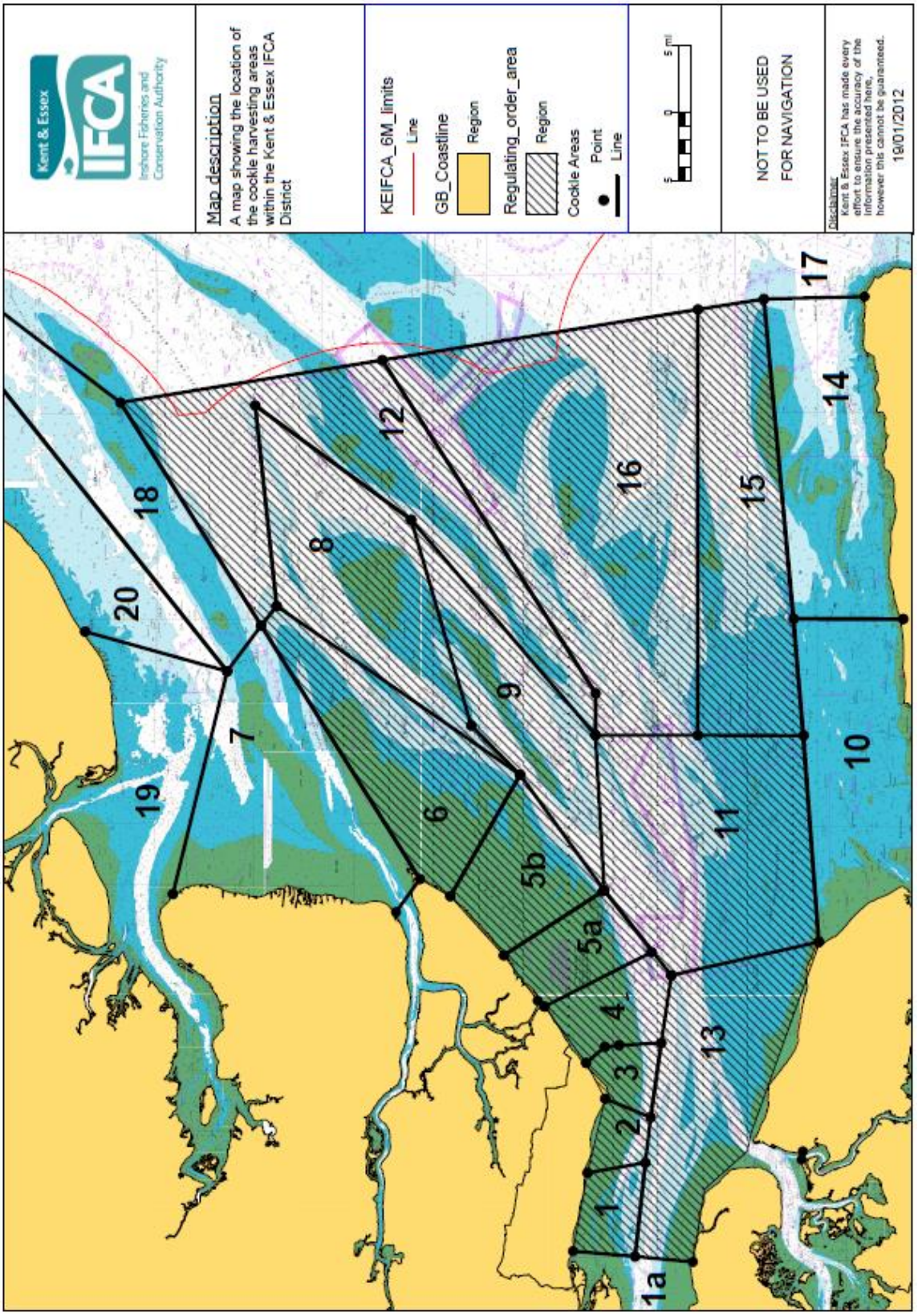
Areas 8, 9 and 12, similar to last year, appear to contain improved numbers of cockles this year when compared to last year when there were very few cockles found. In a similar way to the Maplin Sands beds, these cockles are currently mainly below minimum size however they are growing very quickly and it is anticipated that they will have reached the required size by the time the fishery starts and continue to grow throughout the season.

Area 15 had not been fished since the early 1990's, but in 2020 the industry found significant stocks on the northern edge of the Margate Sands. The area has been fished in most years since 2020 and has continued to provide some of the largest cockles ever found in the Thames. The surveys showed no spat from 2023 on the site, but did contain some numbers of adult cockles which are now of good size. Of further note is that the seabed in the area seems to have changed considerably, with up to 3 metres of water depth change being noted on the surveys compared to last year.

Recommendations –

For **NOTING** and **COMMENT** only

Appendix A



A chart showing the cockle production areas within the Kent and Essex IFCA District