



**North Western
Inshore Fisheries and Conservation Authority
Meeting 4: 30th September 2011.
Morecambe Town Hall, 10.30 a.m.**

Agenda Item: 7

SCIENCE AND ENVIRONMENT: JUNE TO SEPTEMBER 2011

GENERAL

1. This period has been extremely busy with the scientific staff carrying out extensive intertidal survey work to support the management of the Ribble, Wirral and Morecambe Bay fisheries. In addition, when not carrying out stock assessment work, a number of interesting projects continue to demand input from the science team.

SURVEY AND INSPECTION WORK

Mussels

2. The most significant mussel fishery during the period was that for seed on the South America skear to the south east of Foulney Twist in Morecambe Bay. Scientific staff were involved in the stock and environmental assessment work that led to its opening on 20th June 2011. Previously managed under the now defunct Morecambe Bay Mussel Fishery Order 1978, this regular operation to fish ephemeral stocks of undersize mussels using dredges of an approved pattern from boats, continues under derogation from Byelaws 12 and 15. Due to the dynamic nature of the fishery, officers have delegated authority to undertake whatever management intervention is necessary.
3. Historically, greatest interest has been from the operators in the Menai Strait. However, of the five authorisations issued this year, three were for operators outside Wales; one from England and two from Northern Ireland. At the time of writing, three boats have been active in the fishery taking a total of 7760 tonnes of seed. Since the initial opening a slight extension to the authorised area has been approved and officers have approved a request for an additional period of fishing to compensate for days lost to weather. Annex 1 to this report requests the endorsement of Members for the actions taken by officers so far in managing this fishery and the approval of continued delegated powers.
4. In a related but separate operation, 850 tonnes of seed from South America was relaid in an area between the Barrow Channel and Foulney Twist known as "Barrow 1" from previously approved relay trials. It is hoped, through careful monitoring of growth and persistence, that this exercise will provide more evidence as to the area's suitability for the on-growing of mussels.
5. Inspections were also carried out on the beds at Foulney and Heysham Flat, the results of which are also detailed in Annex1.
6. With effect from 1st April 2011, the newly formed IFCA became responsible for the mussel beds within the English portion of the Dee estuary. These beds were reconnoitred by the Scientific and Enforcement officer in May as part of a familiarisation and awareness exercise for new parts of the District. The beds were found to hold a small but substantial stock of mature mussels. Currently no fishing is allowed due to hygiene classification restrictions.

7. Mussel beds in this area differ from those found elsewhere in the District in that they tend to form on unstable substrata, normally dead cockle shell, in areas that, in their absence, might otherwise be cockle beds. The mussels are slow growing and of low value and these factors, along with the precedence of the cockle fishery in the area, have led to operations for them to be removed to encourage cockle resettlement. This is currently happening in the Welsh sector of the estuary as part of the management of cockle fishery undertaken by the Environment Agency. Officers are monitoring the situation and will inform Members of any developments affecting the beds under the IFCA's jurisdiction.

COCKLES

8. In Morecambe Bay, formal surveys were carried out in June and August with assistance of the relevant Fishery Officers. The results are detailed in Annex 2 to this report. Members will be aware from the postal report made to them at the end of August that densities of adult cockles in the Bay remain very low and consequently, officers recommended, and were granted, a temporary closure from 1st to 30th September 2011 to allow consideration of any further management action at this meeting. The report at Annex 2 asks for endorsement of the management steps taken by officers thus far together with approval of an extension of the current temporary closure under byelaw 13a until 1st May 2012.
9. Members will be aware from postal updates and previous discussions that officers have been predicting a significant cockle fishery in the Ribble Estuary centred on areas normally accessed from the Southport side. Scientific staff carried out extensive stock assessment work and were heavily involved in coordinating a multi agency management response in the run up to the opening on the 1st September 2011. They also assisted with the subsequent enforcement work and continue to monitor stock levels and make up. A more detailed report can be found at Annex 3.
10. Further stock assessment work was completed at Leasowe to inform management of this year's fishery there – see Annex 4 to this report. Members will recall that after the initial peak of activity in September last year, the fishery settled down to a steady but low level of effort throughout the rest of the season. Surveys this year have revealed that a stock of adult cockles persists in the area but no signs of the large settlements and high survival rates seen in 2009 and 2010. As expected, fishing recommenced following the end of the seasonal closure but with mean densities of cockles close to the Authority's adopted "safe" level of 20m⁻², the focus of the scientific work will now be in determining if and when that threshold is reached or passed.

PROJECT WORK

Recreation Sea Angling (RSA 2012)

11. This DEFRA sponsored project, coordinated by CEFAS, aims to capture, at a national level, the extent of recreational sea angling in the UK. IFCA's were asked to help with collection of data relating to shore based and non-charter boat activities and the Scientific and Enforcement Officer has been working to facilitate this through the appointment of a person to the post of Sea Angling Surveyor. However, CEFAS have recently decided to put the project on hold until the New Year while issues surrounding the logistics and stakeholder consultation are resolved.

MCZs

12. Throughout the period, the Scientific and Enforcement Officer has been working closely with the Chief Executive to consider the potential impacts of the various iterations of this project. A considerable amount of effort has already gone into the mapping aspects during the designation phase and it would appear a lot more will need to be done on other aspects once the project moves on to considering the management measures required for each MCZ.

Burbo Bank Windfarm Environmental Monitoring

13. Scientific Officers, working closely with the operator and Natural England, completed an Assessment of Likely Significant Effect (ALSE) for the programme of trial tows relating to the annual monitoring of the site.

Wildlife Trusts Graduate Work Experience Programme

14. As reported previously, four new graduates have been taken on by Lancashire and Cumbria Wildlife Trusts to gain work experience in marine sciences. During the period, scientific staff have provided support and direction to the programme as well as training the graduates in shellfish survey techniques. In return the graduates have so far assisted with a number of surveys and associated lab work in processing and recording shellfish samples. With the graduates now in a position to carry out shellfish surveys independently, Officers are keen to ensure that the IFCA will continue to benefit from the additional data collection capacity that this very worthy project provides.

Cockle transplant experiment

15. Former members of the Sea Fisheries Committee may recall discussions relating to a proposal from an operator in the Southport area to conduct a cockle transplantation experiment. Originally it was proposed that cockles from outside the District be used but members were concerned about the possible introduction of non-native species and voted against this. However, they did approve the use of cockles from Morecambe Bay subject to Natural England's agreement. Unfortunately, that decision in June 2009, coincided with an extended period of low settlement within the Bay and as a result the project has been on hold awaiting a suitable stock of "seed" cockles. In August this year a survey of the bed known as North Run, in the Ribble estuary off Lytham, revealed what officers consider to be an ideal stock. The bed has high densities of small cockles of uniform size and of the same year class. These factors will help considerably in overcoming the main difficulty in experiments of this type which is identification of the transplanted stock. Officers have since revisited the area to look at potential relay areas and have been liaising with the operator regarding the practicalities of the operation which will involve the use of mechanical harvesting and seeding machinery. Officers consider this to be an excellent opportunity to gain evidence relating to the ecology of cockle stocks in this area as well as testing the potential of a more active approach to cockle fishing. It is hoped that a detailed project outline will be available for consideration at the next Technical, Science and Byelaws Sub Committee meeting and that work might commence soon afterwards. In the meantime, officers are requesting the endorsement of the members for the actions taken so far and to be allowed to progress this matter through the TSB.

Remote sensing of cockles through earth observation (EO) data from satellites

16. This is another long running project that has been held up by circumstances beyond officers' control. Originally the proposal was to investigate the possibility of measuring cockle stocks in Morecambe Bay using radar and/or optical data from satellite overpasses. It eventually became apparent from discussions with the staff from the UK Space Agency (UKSA) that the technology is not currently available to detect cockles directly from space. However, it is thought that it may be possible to detect cockle settlements indirectly through the identification of suitable habitats combined with analysis of bed height. At a meeting in August with UKSA and Lancaster City Council (LCC), another partner in the project, it was agreed that the future focus of the project should concentrate on gaining as much information as possible relating to bed contours and channel positions and movements from EO data obtained by LCC. While this is a long way from the original aim of the project, Officers consider that these data will be extremely valuable in

supporting the Authority's work in both fisheries and conservation terms and consequently, as they can be acquired at little or no direct cost to the IFCA, the project warrants continued support.

Training

17. All three scientific staff successfully completed the European All Terrain Vehicle Safety Institute (EASI) ATV Rider Course organised through the Whitehaven office.
18. The Scientific and Enforcement Officer attended a Fire & Safety course in July.

Meetings

19. Aside from attending numerous meetings connected to the various cockle fisheries, officers provided support to, and were present for, the Technical, Science and Byelaw Sub Committee, Dee Estuary Sea Fisheries Liaison Group and Barrow Borough Council Wildlife & Heritage sub Committee.

OTHER

20. Scientific Officers again assisted with the collection of hygiene samples within the District.
21. Following discussion and endorsement by the Authority at their last meeting, the application for a Hybrid Fishery Order for Morecambe Bay was finalised and submitted to DEFRA in September.

Science Team
21 September 2011