

Annual Plan April 2023 to March 2024

Introduction

Under Section (177) of the Marine and Coastal Act 2009 North Western IFCA are required to make and publish a plan setting out the Authority's main objectives and priorities for the year.

North Western IFCA has clearly defined duties to manage sustainable fisheries and conserve the wider marine environment within the coastal waters of the Eastern Irish Sea, Liverpool Bay, Cumbrian coast and estuaries and bays.

This Annual Plan sets out the North Western IFCA's priority objectives to deliver in the forthcoming financial year (April 2023- March 2024), thus demonstrating how NWIFCA will implement inshore management contributing towards the Government's Marine Policy Statement which included the objectives of:

- Achieving a sustainable marine economy
- Ensuring a Strong, healthy and just society
- Using sound science responsibly
- Living within environmental limits
- Promoting good governance

In order to deliver the Annual Plan and fulfil the Authorities function as a competent management body, the North Western IFCA recognise the need to align its work to a strategic vision. With many competing objectives, it is important the Authority maintain this strategic overview in their delivery. This proactive way of working, with the recognition of the need to maintain a capacity for reactive and emerging work and oncoming challenges, will provide a template for the Authority moving forward through 2022 and into 2023.

The strategic direction, as presented in this Annual Plan will enable the Authority to be more transparent with our community and stakeholders, as well as delivery partners, through anticipation of shared goals and objectives, and seek to encourage and complement future funding and joint working opportunities.

Inshore Fisheries and Conservation Authorities

Inshore Fisheries and Conservation Authorities (IFCAs) were created under Section 150 of the Marine and Coastal Access Act 2009 (MaCAA)1 as designated statutory inshore regulators for the marine environment. The National IFCA Vision, High Level Objectives and Success Criteria set out the intentions of the IFCAs to sustainably manage inshore fisheries and conservation in line with these mechanisms and wider UK and EU Legislations.

The IFCA Vision

"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"

IFCA High Level Objectives and Success Criterion

High Level Objectives (HLOs) and Success Criterion (SC) were developed nationally to support attainment of the IFCA Vision and to reflect the developing programme of work delivered by IFCAs nationally and to demonstrate the IFCAs contribution to the delivery of the UK Marine Policy Statement. Figure captures how the Annual Plan sits within this wider context.

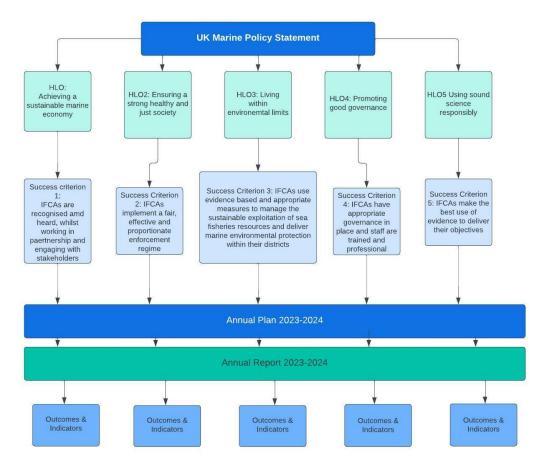


Figure1: IFCA High Level Objectives and Success Criteria

SUCCESS CRITERIA

Success Criterion 1: IFCAs are recognised and heard, balancing the economic needs of the fishery whilst working in partnership and engaging with stakeholders

IFCAs will be visible, respected and trusted regulator within coastal communities and will maintain and deliver a strategy to communicate their vision and duties effectively. IFCAs will engage with policy makers, industry, Non-Governmental Organisations (NGOs), recreational and commercial users and other regulators. They will work jointly and collaboratively with partner organisations across boundaries; will participate and contribute to the development and implementation of regional and national marine policy, including the marine planning regime; will take long-term strategic decisions and manage risks effectively. IFCAs may maintain a national body to co-ordinate the activities of authorities that are party to arrangements.

Success Criterion 2: IFCAs implement a fair, effective and proportionate enforcement regime

The IFCA enforcement regime is risk-based, makes appropriate use of intelligence, meets legislative standards and complies with the Regulators Code. It should make effective use of the resources available to regulators; complement and align, if possible, with the regimes in adjacent IFC Districts and management by other organisations including the MMO and Environment Agency. Consistency and fairness is important. Regulatory compliance is promoted. Enforcement action is carried out by trained, professional officers working to clear standards of conduct.

Success Criterion 3: IFCAs use evidence based and appropriate measures to manage the sustainable exploitation of sea fisheries resources and deliver marine environmental protection within their districts.

The IFCAs were created as statutory inshore regulators by the Marine and Coastal Access Act 2009. They are relevant authorities for implementing international environmental commitments including the Birds, Habitats, Water and Marine Strategy Framework Directives and make an important contribution to securing a network of well managed marine protected areas, including European Marine Sites and Marine Conservation Zones. Fisheries Management Plans identify local management measures which should be based on evidence; be timely; subject to appropriate consultation and in step with national initiatives and priorities. An IFCA should balance the social and economic benefits of exploiting sea fisheries resources with the need to protect the environment. It should make a contribution to sustainable development.

Success Criterion 4: IFCAs have appropriate governance in place and staff are trained and professional.

IFCAs are statutory authorities and sit within the local government family. Authority members may be either general members or local councillors. They comply with Codes of Conduct and the Standing Orders that apply to meetings of local government committees. General members are appointed on merit, through open competition and for a term. They are subject to an annual performance appraisal. 6 An IFCA is funded by levy, charged to its member councils. Funding originates in local taxation. An IFCA is accountable for its use of public resources and should ensure that a proper auditing regime provides confidence in its commitment and spend of public money. It should make effective use of its resources, including staff and assets. An IFCA has a statutory obligation to prepare and publish Annual Plans and Annual Reports.

Success Criterion 5: IFCAs make the best use of evidence to deliver their objectives.

IFCAs are statutory regulators for their Inshore Fisheries and Conservation District. Decision-making should be based on evidence. All IFCAs are supported by officers who pool their expertise and share best practice as a Technical Advisory Group (TAG). A programme of research activity and monitoring is planned, developed and updated in consultation with partners. The programme informs management decisions and supports justification for additional research and evidence gathering

Policy and Legislative Context

Fisheries Act 2020

The Fisheries Act2 ('The Act') was introduced to make provisions in relation to fisheries, fishing, aquaculture and marine conservation following the departure of the UK from Europe. The Act enshrines in law the UK's commitment to sustainable fishing, supporting future generations of fishers, while allowing the marine environment to thrive. It provides a legally binding structure to protect and recover stocks, support a sustainable fishing industry and safeguard the environment.

Fisheries objectives

The Act lists eight fisheries objectives which set the UK's strategic direction for delivering sustainable fisheries management:

- Sustainability objective
- Precautionary objective
- Ecosystem objective
- Scientific evidence objective
- Bycatch objective
- Equal access objective
- Natural Benefit objective
- Climate Change objective

Joint Fisheries Statement

The Act created a legal requirement for the UK's four national fisheries policy authorities to produce a Joint Fisheries Statement (JFS) that will lay out how the eight fisheries objectives will be met. The shared ambition of the JFS is to deliver world class, sustainable management of UK fisheries and aquaculture, focusing on three main themes:

- Protecting and, where necessary, recovering fish stocks
- Reducing the effects of fishing on the marine and coastal environment
- Supporting a modern, resilient and environmentally responsible fishing industry

A consultation on the draft JFS began on the 18th January 2022 which encompasses several aspects of policy including Fisheries Management Plans (FMPs); a document designed to restore one or more stocks of sea fish, or to maintain them at sustainable levels. The consultation ends on the 12th April 2022.

The Marine Strategy Regulations 20103 require fisheries bodies in the UK to take action to achieve or maintain Good Environmental Status (GES) in UK waters. The UK Marine Strategy is a key pillar of making policy in the UK and the JFS is a cross cutting measure which will help to deliver GES for commercial fisheries.

At the point of writing IFCAs have begun to take a crucial part in the implementation of fisheries management plans.

Marine and Coastal Access Act

The North Western IFCA has clearly defined duties and responsibilities to ensure that the marine environment within the District is conserved and maintained in a viable state. The main duties for the North Western IFCA are identified within the Marine and Coastal Access Act, 20094 (MaCAA), Part 6 (Sections 153 and 154). In performing its duties under this legislation North Western IFCA must:

Section 153 (2)

- a) Seek to ensure that the exploitation of sea fisheries resources is carried out in a sustainable way.
- b) Seek to balance the social and economic benefits of exploiting the sea fisheries resources of the District with the need to protect the marine environment from, or promote its recovery from, the effects of such exploitation.
- c) Take any other steps which in the authority's opinion are necessary or expedient for the purpose of making a contribution to the achievement of sustainable development.
- d) Seek to ensure that the conservation objectives of any Marine Conservation Zones in the District are furthered.

Section 154

1) Seek to ensure that the conservation objectives of any Marine Conservation Zones in the District are furthered.

The Conservation of Habitats and Species Regulation

Duties under Regulation 63 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 20195 ('Conservation Regs. 2019'), require North Western IFCA, as a defined competent authority, to make appropriate assessments of a plan or project which is likely to have a significant effect on a European Marine Site (EMS) (either alone or in combination with other plans or projects).

The Conservation Regs. 2019 transpose the land and marine aspects of the Habitats Directive6 (Council Directive 92/43/EEC) and the Wild Birds Directive7 (Directive 2009/147/EC) (known collectively as the Nature Directives) into UK statue. Under these Directives IFCAs must ensure that fishing activity does not damage, disturb or have an adverse effect on the wildlife or habitats for which a European Marine Site (EMS) is legally protected.

The Wildlife and Countryside Act

Under Sections 28g and 28i of The Wildlife and Countryside Act 19818, when carrying out our duties, North Western IFCA must consider any Site of Special Scientific Interest (SSSI) with marine components which are providing protection to species and/or habitat of national importance.

North Western IFCA

The District

The North Western Inshore Fisheries and Conservation Authority district spans 850km of coastline. It reaches from the Welsh Border in the Dee Estuary to the Scottish Border in the Solway Firth. The area covered includes coastal council landward areas and sea areas up to 6 nautical miles off shore. The NWIFCA District is different in not sharing a coastal area with another IFCA District.



The District's Fisheries and Conservation

Commercial Fisheries

Commercial fisheries in the NWIFCA District cover a diverse range of metiers from traditional trawl fisheries to hand gathering for shellfish intertidally. Morecambe Bay contains the largest mussel beds in Europe and are fished by hand for size and undersize mussels under a byelaw permit, there are also dredge permits issue to larger vessels when conditions allow. Commercial potting for crab, lobster and whelk take place across the district

Recreational Fisheries

Recreational gathering of shellfish, push netting for shrimps and recreational sea angling take place across the district. There are numerous intertidal net fisheries and boat based net fisheries and recreational potting. All managed under byelaw. In recent years recreational hand gathering of bivalves has increased.

Aquaculture

Marine Conservation

Across the district there is an exceptional array of different marine habitats and species

MPAS, SPAs, MCZ, HPMA

Resources

The North Western IFCA Authority

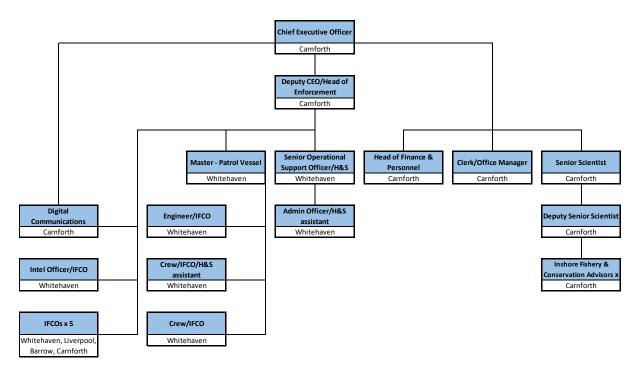
Membership of the Authority

| Appointed by Constituent Authorities | | | | |
|--------------------------------------|---------------------------------|--|--|--|
| Cllr. A. J. Markley | Cumbria County Council | | | |
| Cllr. M. Wilson | Cumbria County Council | | | |
| Cllr. N. Brookes | Blackpool Borough Council | | | |
| Cllr. S. Clarke | Lancashire County Council | | | |
| Cllr. J. Parr | Lancashire County Council | | | |
| Cllr. D. Mitchell | Wirral Council | | | |
| Cllr. B. Woolfall | Halton Borough Council | | | |
| Cllr. | | | | |
| Cllr. P. Williams | Cheshire West & Chester Council | | | |
| | | | | |

| Appointed by Marine Management Organisation | | | | |
|---|-------------------------|--|--|--|
| Dr. J. Andrews (Vice Chair/TSB) | Mr. D. Harpley | | | |
| Mr. N. Baxter | Mr B. Leigh (Chair TSB) | | | |
| Mr. R. Benson | Mr. R Lomax | | | |
| Mr S. Brown | Mr S. Manning | | | |
| Mr. P. Capper (Chairman) | Dr. C. Mihailovici | | | |
| Mr. R. Donnan | Mr G. Piddock | | | |
| Mr W. Friend | Dr. A Richardson | | | |
| Ms. C. Salthouse | Mr. L. Stainton | | | |
| Mr K. Thompson | | | | |

| Representatives of Partner Organisations | |
|--|--------------------------------|
| Ms. S. Kennedy | Environment Agency |
| Mr S. Johnson | Marine Management Organisation |
| Mr L. Browning | Natural England |

The North Western IFCA Team



Professional Development

Staff Appraisals form a crucial function in providing clarity on how the Authority will support the performance and development of its staff. The North Western IFCA recognise the importance of both individual and team performance as critical in building and maintaining a high performing Authority.

The North Western IFCA Budget 2023-2024

Local Authorities are supported in part by an area based grant from DEFRA of £..... This grant recognises the new burdens of the MaCAA and supports fisheries and conservation functions of the Authority. At the time of writing there may be specific funding available for new work burdens from DEFRA but this has not been finalised for 2023-2024, it is assumed the 'area based grant' will remain the same as previous years, with the proportion paid from Cumbria County Council split between the two new unitary Authorities, Cumberland Council and Westmorland & Furness Council.

The budget for 2023-2024 agreed a proposed levy of 35 at the meeting of the full Authority in December 2021. This uplift accounts for the NJC salary rise from the 21-22 financial near which was concluded in October 2022.

North Western IFCA Annual Plan 2022/23 <u>www.nw-ifca.gov.uk</u> Authory Action Chief Eucentics Officer Jesenh Maul

| NWIFCA LEVY 2022-23 | Levy | % of | Levy |
|---------------------------------|----------|---------|----------------------|
| 3% INCREASE | 2023-23 | NWIFCA | 2022-23 |
| | 3% | Total | 3% |
| COUNCIL | Increase | Levy | Increase |
| Blackpool Borough Council | | 1.65% | £23,178 |
| Cheshire West & Chester Council | | 7.30% | £102,546 |
| Cumberland Council | | 20.47% | £575,098 (Cumbria |
| Westmorland & Furness Council | | 20.47% | (CC) |
| Halton Borough Council | | 2.22% | £31,185 |
| Lancashire County Council | | 33.14% | £465,529 |
| Liverpool City Council | | 4.26% | £59,842 |
| Sefton Council | | 5.09% | £71,501 |
| Wirral Council | | 5.40% | £75,856 |
| TOTAL | | 100.00% | £1,404,735 |

| EXPENDITURE | 2023-24 | 2022-23 |
|-------------------------|---------|---------------|
| Employees | | £1,028,694 |
| Premises | | £60,800 |
| Transport | | £205,490 |
| Replace Patrol Vessel | | £121,151 |
| Supplies & Services | | £53,600 |
| Corporate | | £28,000 |
| TOTAL EXPENDITURE | | £1,497,735 |
| INCOME | | |
| 7151 Levy 3% Increase | | £1,404,734.60 |
| 7251 Shellfish Sampling | | £9000 |
| 7257 Permit Fees | | £75,000 |
| 7351 Interest | | £9000 |
| TOTAL INCOME | | £1,497,735 |
| SURPLUS/DEFICIT | | NIL |

Success Criteria 5

IFCAs make the best use of evidence to deliver their objectives

IFCAs are statutory regulators for their Inshore Fisheries and Conservation District. Decision making should be based on evidence. All IFCAs are supported by officers who pool their expertise and share best practice as a Technical Advisory Group (TAG). A programme of research activity and monitoring is planned, developed, and updated in consultation with partners. The programme informs management decisions and supports justification for additional research and evidence gathering.

Indicators:

SC5A: The IFCA will demonstrate progress that has been made towards identifying its evidence needs by publishing a research plan each year.

SC5B: The IFCA will publish a research report annually that demonstrates how evidence has supported decision making.

SC5C: The IFCA's contribution to TAG and progress that has been made towards a national evidence needs programme will be recorded in the IFCA's Annual Report.

| Work streams | Outputs | Responsible | Expected delivery |
|---|---|--------------|----------------------|
| 5a) Scientific surveys (sea- going) | Plan and carry out habitat surveys in the Solway to inform future mussel fisheries (side scan ground discrimination) Plan and carry out Solway cockle survey – dry out on beds. Process and analyse survey data Prepare project report | Science team | Summer 2023 |
| 5b) Scientific surveys (shore based) | Plan and carry out annual shore based surveys (cockles, mussels, bivalve etc. in addition to those included in 5e and 5f) Process and analyse survey data Prepare reports and inspection notes. Make available on the NWIFCA website. | Science team | Ongoing |

2022-2023 NWIFCA Success Criteria 5 - key work streams

| | Report to TSB and Authority meetings. | | |
|---|--|------------------|------------------------------------|
| 5c) Participate in TAG meetings | Attend and contribute to TAG meetings and report on meeting outcomes to the Authority and NWIFCA staff. | Senior scientist | Quarterly throughout 2023/24 |
| 5d) Consultation and engagement with major development s | Provide feedback on relevant marine works to developers, MMO and the planning inspectorate Provide evidence to help with development decisions and impact assessments where required Attend relevant meetings with external stakeholders regarding proposed works Disseminate relevant information to industry | Science team | Ongoing |
| 5e) Cockle fishery stock assessment and fishery recommenda tions | Annual cockle survey schedule planning Annual cockle surveys Analysis of survey data Preparation of HRA's and delivery of recommendations for management Production of survey notes / results Consultation with NE re. HRA advice and conclusions Update technical science and byelaw committee on progress and management decisions Develop permit conditions / authorisations | Science team | Ongoing |
| 5f) Mussel fishery stock assessment and fishery | Annual mussel survey schedule planning Annual mussel surveys Analysis of survey data | Science team | Ongoing |

| recommenda tions | Preparation of HRA's and delivery of recommendations for management | | |
|------------------------|--|------------------|----------------|
| | • Production of survey notes / results | | |
| | Consultation with NE re. HRA advice and conclusions | | |
| | Update technical science and byelaw committee on progress and management decisions | | |
| | Develop permit conditions / authorisations | | |
| | Exploration of drone technology to monitor stocks and inform management. | | |
| | Undertake summer sampling of whelks – industry provision of samples | | |
| | Analyse data | | |
| 5g) Whelk SOM study | • Prepare report on the research findings | Science team | Summer 2023 |
| | Present work to TSB with recommendations for the minimum landing size increments in Byelaw 4 flexible permit conditions | | |
| | Prepare annual research plan by April 2023 – present to Authority | | |
| | Assess research priorities and time planning | | |
| 5h) Annual research | Identify funding streams | Senior scientist | April 2022 |
| researcn plan | Apply for funding projects – FISP scheme etc. by developing proposals and engaging industry partners. Potential project involving shrimp fishery declines, and mussel monitoring through drone use (5f). | Senior scientist | April 2023 |

| 5i) Dispensation s | Assess the suitability of dispensation applications and proposed activities Provide dispensation for activities from byelaws in consultation with enforcement team | Science team | Ongoing |
|--|--|------------------|------------------|
| | Provision of GIS, data and analysis to inform evidence requirements e.g. maps, vessel sightings and fish stocks etc. Training in QGIS for whole team and transfer from Mapinfo | | |
| 5j) Data analysis and services | Maintain data sources and analyse IFCO shore sightings, and patrol vessel sightings | Science team | February 2023 |
| | Training in R-stats for team members Explore new approaches to analysing survey data | | |
| | Development of new landings/returns database and establishing new reporting mechanisms | | |
| 5k) Support development and maintenance of MPA management measures | Develop MCZ and EMS fisheries assessments for outstanding sites Prepare any required evidence needed for management | Science team | Ongoing |
| 5I) Develop species management plans for district fisheries | Regional management plans: Review Fisheries Act and Statements and scope of requirements, national, regional, and priority species etc. Attend national workshops and engage through TAG as to progress of FMPs. NWIFCA management plans: Assess data held and data requirement to inform species management plans. | Senior Scientist | April 2024 |
| | NWIFCA management plans: Prioritise cockle and mussel | | |

| | management plan. Develop a management plan based on best available examples, and identify knowledge gaps for future research proposals. | | |
|---|--|------------------|------------|
| 5m) Biosecurity plan updates | Maintain and implement the NWIFCA biosecurity plan alongside NE. | Science team | Ongoing |
| 5n) Scientific survey capability | Maintenance of vehicles and equipment for shore based scientific surveys. | Science team | Ongoing |
| 5o) Participate in and contribute to relevant groups | Maintain attendance and involvement with national, regional and area specific groups such as FISHGIG, Whelk working group, Blue carbon working group, NW standing environment group, NW Shellfish liaison group, Solway firth partnership, Mersey tidal power etc. | Science team | Ongoing |
| 5p) Annual research report | Prepare the Annual Research Report: Report on achievement of objectives set in Annual Research Plan and demonstrate use of evidence for decision making – April 2024 | Senior scientist | April 2024 |
| 5q) Monitoring and control plan | Carry out review of HRAs in line with the monitoring and control plans to ensure the HRA's previously completed are still appropriate for current activity Check conservation advice hasn't changed, and activity levels not changed | Science team | Ongoing |
| 5r) Highly Protected Marine Areas | Engage in evidence sharing and discussions with Defra and there partner organisations regarding Allonby Bay HPMA Maintain and/or facilitate stakeholder engagement | Science team | July 2023 |

Author: Acting Chief Executive Officer Joseph Moulton

| | Report quarterly on the progress of designations to the Authority Dependant on the site selection, develop implementation plans to identify knowledge gaps and areas of priority. | | |
|------------------------------------|--|--------------|-----------------|
| 5s) Mussel MLS investigation | Undertake the action plan agreed at the TSB meeting to investigate the stunting of mussel in Morecambe Bay and potential management options. | Science team | May 2023 |
| 5t) Joint working | • Small fish surveys with the EA as part of the WFD and natural capital work | Science team | October 2023 |

Criteria 5 work stream schedule:

The proposed work stream schedule shows the annual timeline for works with set time frames.

| Work streams | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 5e) Cockle surveys | | | | | | | | | | | | |
| 5f) mussel surveys | | | | | | | | | | | | |
| 5e) Cockle fishery HRAs | | | | | | | | | | | | |
| 5f) Mussel fishery HRAs | | | | | | | | | | | | |
| 5l) Species management plans | | | | | | | | | | | | |
| 5h) Annual planning | | | | | | | | | | | | |
| 5q) Annual reporting | | | | | | | | | | | | |
| 5a) Solway surveys | | | | | | | | | | | | |

| 5m) Biosecurity plan | | | | | | |
|---------------------------|--|--|--|--|--|--|
| 5g) Whelk SOM analysis | | | | | | |

Research work streams

Ongoing research

The work streams provided in the table above include both ongoing and new research work. Ongoing research work is carried out annually by NWIFCA such as: cockle and mussel surveys (including data analysis), which inform stock assessments and fishery HRA's.

1) Cockle and mussel surveys

Cockle and mussel surveys are carried out annually from spring until late summer. The surveys collect information on the spatial distribution, abundance and biomass of cockle across the main cockle beds in the District. The information is critical to informing HRA's and ensuring sustainable management of the District stocks. This work is high priority and resource intensive. These surveys take place from quads and/or by foot. For mussels, surveys are undertaken using the Dutch Wand method, and for cockles, samples are taken by quadrat on a grid system across the bed. The information is gathered and analysed, and is then provided to the Authority at both the quarterly meetings of the Technical Science and Byelaw Committee, and the full Authority for approval and recommendations regarding the annual fishery openings. This work stream helps to ensure sustainable fisheries and protection of the districts protected area features.

2023/24 new research streams

In addition to our ongoing work streams, we have discrete research work planned for 2023/24. A full research plan will be developed for April 2023. These new projects aim to fill knowledge gaps that will promote sustainable management of our fisheries and improve our data handling and reporting. The work will aim to be initiated this year, with potential conclusion this year or the following dependent on resource constraints and timings of work.

1) Whelks

In 2022, Byelaw 4 – Potting permit byelaw was introduced in the NWIFCA district. Under this new byelaw fishers can now pot for whelks across the NWIFCA district, a practice previously prohibited under old sea fisheries committee byelaws. Whelk are commonly known to mature at different sizes across the UK. An incremental increase in the minimum landing size (MLS) of whelk was introduced into the flexible permit conditions of Byelaw 4, to promote sustainable harvesting. The MLS was based on information from populations in close proximity to NWIFCA District. However, there is very little information regarding the size-at-maturity of whelk in the NWIFCA District, and therefore, it is essential that this work takes place to ensure that the SOM provided in the flexible permit conditions is fit for purpose. Samples for this work will be collected in the summer and analysed in the autumn months to be completed by winter 2023.

2) FISP

The Fisheries Industry Science Partnership (FISP) scheme is a £10 million government fund which seeks to: improve data collection, particularly for data limited species, enhance knowledge of technical measures including fishing gear selectivity, and/or build a better understanding of the ecosystem benefits and environmental impacts of aquaculture.

NWIFCA science officers have developed two proposals to discuss with TSB and industry to bid for the following round of funding from 21st of November to 5th of Jan 2023. The proposals for this work include; 1) Looking into the long-term sustainability of shrimp fisheries in the District, and 2) Use of drone technology for managing mussel stocks.

3) Mussel MLS

Industry has requested NWIFCA look into an area of 'stunted mussel' on the main mussel beds in Morecambe Bay and investigate reasoning for this. An action plan has been agreed to identify the area, take samples, and conduct a review into the potential management options for this area.

Data and evidence work streams

NWIFCA manages a number of different datasets that are used to inform management decisions based on scientific evidence. In the coming year, the science team will look to streamline many of the current datasets and update our analytical capabilities to help provide better evidence in support of management decisions and feed into fisheries management plans.

2023/24 new work streams

1) GIS improvements

There is a significant need to improve our Geographic Information System (GIS) handling and data analysis procedure. Currently NWIFCA operate using Mapinfo which is outdated and limited in its abilities. Training for staff in QGIS is planned for the beginning of 2023, and will offer the chance to transfer our current working practices into a more user friendly and efficient system. This will enable more evidence sharing and analysis

2) Landings/returns database

In 2022, NWIFCA identified concerns with monitoring landings data received from fishers. Currently there are three byelaws requiring fishers to provide landings returns, and differing methods of reporting dependant each. In addition, the use of paper forms leads to concerns with accuracy of data entry, and incomplete datasets. To streamline this approach NWIFCA are investigating the implementation of a new database system currently in use by Sussex IFCA. The aim of the new system is to promote accurate recording and reporting of returns, improve efficiency of reporting for fishers, increase our confidence in long term datasets, and inform stock monitoring and aid in sustainable management. The work stream is not time specific but is already underway and will aim to be completed by the end of 2024.

3) Statistical analysis development

There is a need to improve our current analytical capabilities, and review our longstanding procedures for analysing datasets. NWIFCA will undertake training in R-stats to help build our inhouse abilities in data analysis. This predominantly will focus on analysis of our cockle data.

Management and Engagement work streams

In addition to the research and evidence work, NWIFCA science will be involved in development of species management plans within the District, and the continued work regarding selection of the candidate Highly protected marine area, Allonby Bay in Cumbria.

1) Species management plans

Work under this heading falls into two categories. 1) providing data and information to assist in the development of regional fisheries management plans and 2) developing NWIFCA species management plan for cockles and mussels which can aid in management decisions and identify clear research gaps. This is a priority work stream for 2023/24.

2) Highly protected marine areas

NWIFCA will look to support ongoing work by Defra regarding the selection of the first candidate HPMA. This will involve providing information where necessary, attending online workshops and meetings, and facilitating engagement with stakeholders. Dependant on the outcome of the selection in summer 2023, further work may be anticipated and developed at such time accordingly.