

Eastern



Inshore Fisheries and
Conservation Authority

**Research & Environment
Annual Plan
2015-2016**



1. *RV Three Counties* and tender

This document is available in electronic form from the Eastern Inshore Fisheries and Conservation Authority website:

www.eastern-ifca.gov.uk

Alternatively a hard copy can be viewed at the following location:

Eastern Inshore Fisheries and Conservation Authority
6 North Lynn Business Village
Bergen Way
King's Lynn
Norfolk
PE30 2JG

April 2015



2. Lobster, *Homarus gammarus*



3. Pouting or bib, *Trisopterus luscus*

Research and Environment Plan: 2015-2016

Introduction

The Eastern Inshore Fisheries and Conservation Authority is one of ten regional authorities in England providing inshore fisheries and conservation management. Its district covers the three counties of Lincolnshire, Norfolk and Suffolk, from Haile Sand Fort in Lincolnshire to Felixstowe in Suffolk, and extends six nautical miles seawards.

To help the Authority meet its expectations it takes a strategic approach, guided by the specific framework of a vision, success criteria, and High Level Objectives (Defra, 2010) for IFCAs to work to and be measured against (See appendix 1).

The vision for the Eastern IFCA 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'

This vision presents a considerable challenge for all IFCAs in requiring them to balance the needs and expectations of all those with a stake in the inshore marine environment. As a result IFCAs have a responsibility to focus on the marine conservation and sustainable exploitation of sea fisheries resources through collaborative, local, evidence-based decision making, using on-going and new research paths as a platform.

This annual research and environment plan provides stakeholders with an overview of the key tasks that the Authority's staff will conduct during the 2015-2016 financial year. These work streams flow from the Eastern IFCA Annual Plan and the Research and Environment Strategy 2013-2018. Both of these documents result from instructions and guidance issued to IFCAs by Defra, the Marine Management Organisation and ultimately the Marine and Coastal Access Act 2009.



4. Bass shoal



5. Eastern IFCA District

Research and Environment team

The Authority's Research and Environment team, consisting of four research officers and four marine environment officers, complements the Enforcement and Administrative teams to deliver evidence-based fisheries management that is sensitive to social, environmental and economic needs. A range of inshore fisheries are operated in the district by local fleets and individuals. The main target species are cockle, mussel, shrimp, crab, lobster, whelk, cod, sole, herring and bass – varying according to season and area. Additionally, the district supports a wealth of important natural features that are protected under a suite of UK and EU designations (Site of Special Scientific Interest, Special Protected Area, Special Area of Conservation, Ramsar site). These collectively form a network of Marine Protected Areas, which is due to be augmented by the creation of Marine Conservation Zones over the coming years.

In order to support UK commitments to developing a well-managed, ecologically coherent network of marine protected areas, the Authority must have appropriate fisheries management measures for these conservation sites in place by December 2016. Providing the evidence required to support such management decisions has been a considerable challenge for the Research and Environment team during the past year and will continue to be so into the foreseeable future. In addition to this relatively new challenge, the team must also continue to support the Authority's management of the Wash Fishery Order 1992 which oversees the major molluscan fisheries in The Wash. Additional research and environmental input will also be required in order to support the Authority's new strategic approach to holistic management of the major fisheries within the district, on a prioritised, risk-based basis (the Eastern IFCA Strategic Assessment). To achieve these goals the Authority must maintain the outputs of its existing research and monitoring programme, whilst also developing new skills to deliver the range of projects that will satisfy its new conservation and management requirements.



6. Surveying shellfish beds in The Wash

Research and Environment priorities

The research and environment team provides a broad range of services to the Authority, including field work, data collection and analysis, partner engagement, impact assessment and provision of advice. The team works synergistically across the organisation, but its two branches have distinctive roles to play within the Authority, as set out in this Plan.



7. Northern bottlenose whale in the Wash

Research Priorities

The key objective of the Authority's research team is to provide evidence with which to inform management decisions. To achieve this function in the coming year, the focus for the team during 2015-16 will be:

- To review and, where appropriate, continue with existing long-term Core Research Monitoring projects;
- To advance the Authority's understanding of the features, habitats, species and activities (along with their impacts) within Marine Protected Areas and European Marine Sites;
- To provide evidence to support the management of fisheries identified as operating at "high-risk" in the Authority's Strategic Assessment.
- To ensure staff are adequately trained to fulfil their work objectives;
- To work in partnership with other organisations and stakeholders to effectively gather and share information;
- To produce research reports to ensure the work conducted by the research team members is recorded and recognised.

Environment Priorities

Key focus areas for the Authority's environment team during 2015-16 will be:

- Training, mentoring and development of personnel to enhance expertise and maintain high standards within the environment team;
- The prioritised assessment of the impacts of fishing on protected habitats and species, to support the development of management measures as required, for marine protected areas (European Marine Sites and recommended Marine Conservation Zones) within the Eastern IFCA district;
- Assessment of the impact of Common Rights Holders' activity within European Marine Sites;
- Partnership work to trial the Community Voice stakeholder engagement method to gather views on marine protected areas;
- Promotion of sustainable development in the marine environment through engagement with other marine regulators and developers over marine planning matters;
- To support the strategic assessment approach to achieve sustainable exploitation of sea fisheries resources within the district;
- To undertake and support best practice in relation to shellfish disease and invasive, non-native species; through the review of the Eastern IFCA biosecurity plan and through engagement with the SEFNIS project¹;
- To promote the work of Eastern IFCA through educational outreach work;
- To optimise the management of data generated and stored by the Authority.



8. Intertidal *Sabellaria spinulosa* reef in the Wash

¹ SEFNIS = Safeguarding the Environment From Invasive Non-native Species (<http://www.rinse-europe.eu/sefnis>)

Partnership Working

Partnership working is crucial to the effectiveness and efficiency of all IFCA's. Key partner organisations for the Authority's research and environment team include our funding authorities Lincolnshire, Norfolk and Suffolk County Councils, other IFCA's (through the Technical Advisory Group), the Marine Management Organisation, Natural England, the Centre for Environment, Fisheries and Aquaculture Science (CEFAS), the Environment Agency, Local Nature Partnerships, and wildlife NGOs including the Wildlife Trusts, the Royal Society for the Protection of Birds, the Marine Conservation Society and Seasearch. In addition, the Authority benefits from collaborating with other relevant authorities including Local Authorities and Port Authorities, and with local people on the management groups and advisory groups for the larger European Marine Sites within the district.

Partnership working will be particularly important during the coming years to ensure there is a consistent joined-up approach for monitoring and protecting features and habitats within the developing network of Marine Protected Areas. Eastern IFCA is committed to regular review of its scientific and enforcement functions with partner agencies to ensure resources are optimised amongst the Defra family bodies and other organisations.



9. Beach seine netting in partnership with Environment Agency and K&E-IFCA

REVIEW OF RESEARCH TEAM ACTIVITIES DURING 2014-2015

The research team has 1 Senior Research Officer and 3 Research officers. Taking into account weekends, public and personal holidays, the team has a total of 915 working days available during 2015/16. Since becoming an IFCA, the number of desired research projects requested of the Authority has greatly exceeded the capabilities of the research team to undertake in terms of officer time. This has driven the requirement for the Authority to heavily prioritize the research projects that are conducted each year.

To facilitate the prioritization and planning of the research activities for 2015-2016 a detailed review of the time committed by research officers to the 2014-2015 research programme has been conducted. Table 1 shows both the number of research officer/days planned for each activity and how many days were reported as actually being used.

The activities in the table have been clustered into broad groups that include core stock assessments and water quality monitoring surveys; supporting management of MPAs; partnership working, community events and project reporting; and general administration and support. Also included is some preparatory work associated with a new project for 2015-2016 studying whelks. Immediately apparent from the table is the poor synergy between the time planned for many of the projects during 2014-2015 and how much was actually used. Originally 50 days had been allocated towards inter-departmental work, split between assisting the enforcement team in the ports and crewing vessels, and assisting the environment team with MPA assessments. Subsequent to the plan being approved in April 2014, however, it became apparent that a much greater allocation of time would need to be given to supporting the environment team with the MPA gear/feature impact assessments than had been planned for. The high priority of this work meant efficiencies were required to be made in other projects to compensate for this additional time. This was achieved primarily by using fewer research officers on the vessels while conducting surveys and utilising greater support from the enforcement team during data collection.

Estimating how much time was likely to be used on general administration, training, internal meetings, HR and responding to enquiries was difficult, but from past experience, these activities were allocated 20% of the available time (equating to 183 days). The increased workload associated with the MPA work, both internally and among partner organisations, resulted in a corresponding increase in the number of team and inter-departmental meetings that were required and increased external enquiries and correspondence. As a consequence, these activities occupied a much greater proportion of the team's time than had been planned.

Table 1 – Analysis of the number of research officer/days planned for and actually used during 2014-2015

Activity	Planned	Used
WFO Spring cockle surveys	92	58
WFO Autumn mussel surveys	80	50
WFO Lay biotope surveys	31	16
WFO Mussel regeneration Project	65	17
Titchwell mussel surveys	8	7
SWEEP water quality monitoring	29	28
EHO/DSP biotoxin sampling	61	44
Crab and lobster stock assessment	50	34
Monofilament Netting Review	0	2
Total	416	256
Support management of MPAs		
Monitoring Red Zones – Wash (Sabellaria & cobble/boulder habitats)		46
Mapping Amber/Green features		17
MPA gear/feature impact assessments	(25)*	138
Fishing activity sightings data		3
Humber Eelgrass survey		0
Horseshoe Point cockle survey		17
Suffolk Rivers - Holbrook native oyster survey		10
Suffolk Rivers - Mistley mussel survey		0
Suffolk Rivers - Cockle/clam survey		19
Suffolk Rivers – Peacock worm survey		0
Fin Fish project		24
Sub-littoral mussel surveys		0
Monitoring invasive species		3
Total	130	277
Inter-departmental work		
Assisting IFCO's and MEO's, crewing vessels	50	13 (+138)*
Community engagement and outreach events	16	26
Stakeholder meetings	50	42
Assisting other organisations	10	12
Total	126	93 (+138)*
Administration and support		
General administration, internal meetings etc		204
Staff training		41
Human resources, appraisals etc		11
Total	183	256
Annual research report	60	29
Preliminary sampling for 2015/16 Whelk study		5
Total	915	916

KEY WORK FOR RESEARCH TEAM 2015-2016

Prioritisation of the key research work streams for 2015-2016 has been informed from the Authority's Strategic Assessment, the 2015-2016 EIFCA Annual Plan and the Research and Environment Strategy 2013-2018. It is a requirement for the Authority to have appropriate fisheries management measures for the District's conservation sites in place by December 2016. Providing the evidence required to support these management decisions has been a considerable challenge for the Research and Environment team during the past year and this will continue to be a high priority during 2015-2016. Informing the Authority's management of the Wash Fishery Order 1992 molluscan fisheries continues to be a core role for the team. In addition to this, it is a requirement for the Authority to manage the exploitation of all of its fisheries within maximum sustainable yields (MSY) by 2020 at the latest. In order to provide evidence to support this latter responsibility, the team must improve their understanding of both the relevant stocks and fisheries. The on-going crustacean project is being conducted for this purpose, as will a new project studying the District's whelk stocks and fishery. In order to fit this new project into the schedule, it has been necessary to exclude a number of lower priority projects that have been formally conducted. These will include the mussel surveys at Titchwell, the native oyster and cockle surveys in the Suffolk Rivers and the cockle surveys at Horseshoe Point. Table 2 shows the research work streams planned for 2015-2016.



10. Pisces deploying beach seine net in River Deben

Table 2 - Agreed work activities for Eastern IFCA Research team 2015-2016

Project code	Activity	Officer days 2015-2016				
		Q1	Q2	Q3	Q4	Total
RP2015A	WFO Spring cockle stock assessment	58				58
RP2015B	WFO Autumn mussel stock assessment		15	35		50
RP2015C	Supporting environmental assessment of fisheries in Marine Protected Areas					
	~ MPA gear/feature impact assessments	35	35	34	34	138
	~ Fishing activity sightings data	1	1	1		3
	~ Humber Eelgrass survey		3			3
	~ Horseshoe Point cockle survey		6			6
	~ Sub-littoral mussel surveys					0
	~ Monitoring invasive species			3		3
	~ WFO Lay biotope surveys		2	3		5
	~ Monofilament Netting Review				2	2
RP2015D	Monitoring the Sabellaria and cobble/boulder reef closed areas in the Wash	10	15	15	10	50
RP2015E	EHO/DSP biotoxin sampling	11	11	11	11	44
RP2015F	SWEEP water quality monitoring	7	7	7	9	30
RP2015G	Crab and lobster stock assessment	6	10	10	9	35
RP2015H	Fin Fish project	6	5	6	5	22
RP2015I	Whelk project	10	10	10	10	40
RP2015J	WFO Mussel regeneration Project	8	4	4	4	20
RP2015K	Inter-departmental & Collaborative Projects					
	~ Assisting enforcement team and crewing vessels	8	8	8	6	30
	~ Community engagement and outreach events	7	7	7	5	26
	~ Assisting other organisations with surveys		6	6		12
RP2015L	Liaison Meetings With Stakeholder Groups	11	11	11	9	42
RP2015M	Compilation of research reports			10	30	40
RP2015N	General administration and staff development					
	~ General administration, annual planning, internal meetings etc	51	51	51	51	204
	~ Staff training and development	10	10	10	11	41
	~ Human resources, appraisals etc	4	2	2	3	11
	Total					915

RP2015A Spring Cockle Stock Assessment

Objectives

1. Review the survey methodology to determine whether efficiencies can be made and what risk they would entail.
2. Conduct the annual spring cockle survey field work. This involves using the Authority's research vessel, *Three Counties*, to sample approximately 1,300 stations from 21 beds, either using a Day grab deployed from the vessel or quadrats used during foot surveys.
3. Analysis of the survey data to determine the spatial distribution of the adult and juvenile cockle stocks. Production of GIS charts displaying this information.
4. Analysis of the survey data to determine the biomass of adult and juvenile cockle stocks on each of the beds surveyed.
5. Use the information gained from the surveys to develop management recommendations for the 2015 fishery that comply with local byelaws, Wash Fishery Order 1992 regulations and agreed shellfish management policies.
6. Produce a report for the Authority summarising the survey results and detailing the proposed management measures. Present the survey results and management proposals to the June Authority Statutory meeting.
7. Produce detailed report of the survey results for inclusion in the 2015 Annual Research Report.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

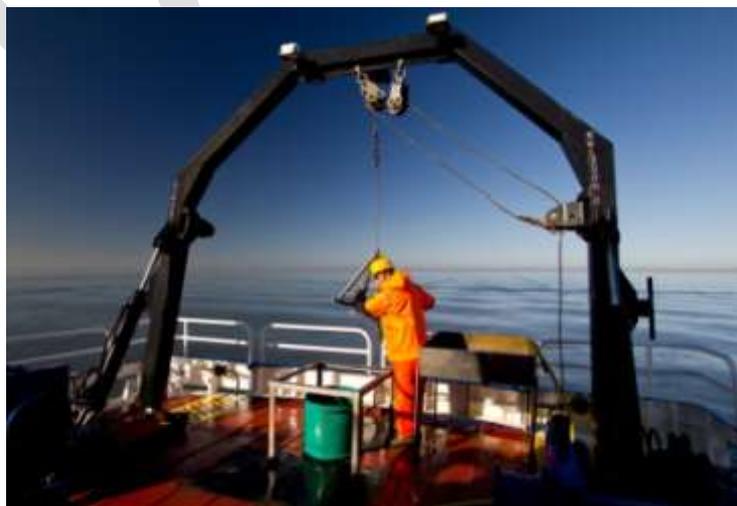
- Success Criteria 4: IFCA's work in partnership and are engaged with their stakeholders
- High Level Objective 4.2
- Success Criteria 5: IFCA's make the best use of evidence to deliver their objectives.
- High Level Objectives 5.1, 5.3
- Success Criteria 6: IFCA's support and promote the sustainable management of the marine environment
- High Level Objective 6.3

Outputs & Timescales

Review survey methodology	March 2015
Completion of survey field work	May 2015
Report summarising survey results, including recommendations for 2015 cockle fishery	May 2015
Presentation of survey results and management recommendations to Authority	June 2015
Report of survey results for inclusion in 2015 Annual Research Report	January 2016

Internal links

<ul style="list-style-type: none"> • Cockle Charter agreed between Authority and Fishermen in 2011 • Wash Fishery Order 1992 • Authority’s Shellfish Management Policies • Authority’s Standard Operating Procedure for cockle surveys • Habitats Regulations Assessment for 2015 cockle fishery • Authority reports regarding Hydraulic Suction Dredge and “Prop-Wash” Impact Assessments • Autumn Mussel Survey programme (RP2015B) • EHO/DSP Biotoxin Sampling (RP2015E) • Liaison meetings with Stakeholder Groups (RP2015L) • Annual Research Report (RP2015M) • General Administration and staff development (RP2015N) 	
External links, including partner agencies	
<ul style="list-style-type: none"> • Industry provides input towards management decisions. • Natural England provides conservation advice through the Habitats Regulations Assessment process 	
External funding	
None	
Reporting officer(s)	
Robin Strigner	Research Officer
Stephen Thompson	Research Officer
Peter Welby	Research Officer
Project lead	
Ron Jessop	Senior Research Officer



11. Deploying Day grab during cockle survey

RP2015B Autumn Mussel Stock Assessment

Objectives

1. Review the survey methodology to determine whether efficiencies can be made and what risk they would entail.
2. Conduct the annual autumn mussel survey field work. This involves using the Authority's research vessel, *Three Counties*, to conduct low-water foot surveys on 20 inter-tidal beds using the "Dutch wand" method.
3. Analysis of the survey data to determine the biomass and size distribution of mussel stocks within the beds. Production of GIS charts displaying this information and the geographical extent of the beds.
4. Use the information gained from the surveys to develop management recommendations for the 2015/16 fishery that comply with local byelaws, Wash Fishery Order 1992 regulations and agreed shellfish management policies.
5. Consult with Wash Fishery Order 1992 Entitlement Holders regarding the recommended management measures for the 2015/16 cockle fishery.
6. Produce a report for the Authority summarising the survey results and detailing the proposed management measures. Present the survey results and management proposals to the January Authority Statutory meeting.
7. Produce detailed report of the survey results for inclusion in the 2015 Annual Research Report.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

- Success Criteria 4: IFCA's work in partnership and are engaged with their stakeholders
- High Level Objective 4.2
- Success Criteria 5: IFCA's make the best use of evidence to deliver their objectives.
- High Level Objectives 5.1, 5.3
- Success Criteria 6: IFCA's support and promote the sustainable management of the marine environment
- High Level Objective 6.3

Outputs & Timescales

Review survey methodology	September 2015
Completion of survey field work	November 2015
Report summarising survey results, including recommendations for 2015/16 mussel fishery	December 2015
Presentation of survey results and management recommendations to MPA Sub-Committee	December 2015
Report of survey results for inclusion in 2015 Annual Research Report	February 2016

Internal links	
<ul style="list-style-type: none"> • Authority's Standard Operating Procedure for mussel surveys • Wash Fishery Order 1992 • Authority's Shellfish Management Policies • Habitats Regulations Assessment for 2015/16 mussel fishery • EHO/DSP Biotoxin Sampling (RP2015E) • Liaison meetings with Stakeholder Groups (RP2015L) • Annual Research Report (RP2015M) • General Administration and staff development (RP2015N) 	
External links, including partner agencies	
<ul style="list-style-type: none"> • Industry provides input towards management decisions. • Natural England provide conservation advice through the Appropriate Assessment process 	
External funding	
None	
Reporting officer(s)	
Robin Strigner	Research Officer
Stephen Thompson	Research Officer
Peter Welby	Research Officer
Project lead	
Ron Jessop	Senior Research Officer



12. Conducting survey of inter-tidal mussel bed

RP2015C Supporting Environmental Assessment of Fisheries in Marine Protected Areas

Objectives

- 1) Support the Environment team to conduct the environmental assessments of the fisheries occurring in the District's Marine Protected areas (MPAs). This will involve:
 - a) Conducting gear/feature interaction literary reviews for the combinations of gear and features found in the District's MPAs.
 - b) Collecting fishing vessel activity sightings data.
 - c) Liaison with the Environment team site champions to assist in the production of Habitat Regulations Assessments (HRAs) for the fisheries within each MPA.
 - d) Participation at Site Management Board meetings.
 - e) Work in conjunction with the IFCA Technical Advisory Group, Cefas and Natural England to identify evidence gaps in relation to the location, extent and condition of designated features within MPAs in order to direct further habitat mapping surveys.
 - f) Work in conjunction with the IFCA Technical Advisory Group, Cefas and Natural England to identify evidence gaps with regard to gear/feature impact assessments.

- 2) Provide evidence to support the management of fisheries and/or protection of environmental features in MPAs. This will involve:
 - a) Surveying eelgrass beds in the Humber/Horseshoe Point closed areas.
 - b) Monitoring the state of the cockle beds at Horseshoe Point (incorporating a full stock assessment survey only if the stocks appear sufficient to support a fishery).
 - c) Conduct stock assessment surveys on any sub-littoral mussel beds that are identified within the District's MPAs. Develop management recommendations for opening such beds that comply with local byelaws and shellfish management policies.
 - d) Analysis of data collected by IFCOs in the Monofilament Netting Database.
 - e) Providing supporting information for management of the WFO 1992 several fishery.
 - f) Liaison with groups monitoring populations of invasive species in the District (eg. SEAFINS).

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

Success Criteria 2: Evidence based, appropriate and timely byelaws are used to manage the sustainable exploitation of sea fisheries resources within the district

- High Level Objective 2.1

Success Criteria 5: IFCA's make best use of evidence to deliver their objectives

- High Level Objectives 5.1, 5.3

<ul style="list-style-type: none"> • Success Criteria 6: IFCA's support and promote the sustainable management of the marine environment • High Level Objectives 6.1. 6.3, 6.4 <p>Success Criteria 7: IFCA's are recognised and heard</p> <ul style="list-style-type: none"> • High Level Objective 7.1 	
Outputs & Timescales	
Completion of required gear/feature interaction literary reviews.	April 2015 – March 2016, as prioritised by individual interactions.
Collection of fishing vessel sightings data	On-going. April 2015 – March 2016
Analysis and mapping of vessel sightings data	March 2016
Liaison with environmental site champions to support production of HRAs	On-going. April 2015 – March 2016
Attendance at Site Management Board meetings	On-going. April 2015 – March 2016
Identification of data gaps for the extent and condition of designated features within the MPAs in our District.	On-going. April 2015 – March 2016
Identification of data gaps detailing fishery impacts on designated features within the MPAs in our District.	On-going. April 2015 – March 2016
Completion of surveys and production of survey report for Humber eelgrass beds	September 2015
Complete assessment of Horseshoe point cockle bed. Complete full stock assessment survey and report if initial assessment deems necessary.	August 2015
Complete stock assessments and produce management advice for sub-littoral mussel beds.	As required. April 2015 – March 2016
Production of report detailing findings of the monofilament netting project	March 2016
Internal links	
<ul style="list-style-type: none"> • Authority's Byelaw Review • RP2015D Monitoring the Sabellaria and cobble/boulder reef closed areas in the Wash • Habitats Regulations Assessment (Wash Fishery Order fisheries; new byelaws, and byelaw derogations) (EP2014D) • Authority's Shellfish Management Policies (for Sub-littoral mussels) 	

<ul style="list-style-type: none"> • Habitats Regulations Assessment for any identified sub-littoral mussel fisheries • EIFCA Site Management Board • Liaison meetings with Stakeholder Groups (RP2015L) • Annual Research Report (RP2015M) • General Administration and staff development (RP2015N) 	
External links, including partner agencies	
<ul style="list-style-type: none"> • CEFAS, MMO, Environment Agency, Natural England, Centrica, Gardline all conduct or commission habitat mapping and fishery impact assessment surveys within the District • Other IFCA's conduct fishery impact assessments • Natural England provide conservation advice through the Appropriate Assessment process • Industry provides input towards management decisions. 	
External funding	
Defra-funded survey equipment: side-scan sonar unit, u/w cameras etc Natural England provide funding for some survey projects	
Reporting officer(s)	
Stephen Thompson	Research Officer
Robin Strigner	Research Officer
Peter Welby	Research Officer
Project lead	
Ron Jessop	Senior Research Officer



13. Chalk reef

RP2015D Monitoring the Sabellaria and Cobble/Boulder Reef Closed Areas in the Wash

Objectives

1. Plan a survey regime that will enable the closed core Sabellaria and cobble/boulder reef areas not covered by the 2014/2015 programme to be surveyed. Secondary objectives will include new areas of core Sabellaria reef identified during Natural England’s evidence review.
2. Conduct acoustic surveys on the identified sites. This will involve using the Authority’s research vessel, *Three Counties*, to track the sites using the Edgetech side scan sonar with 150% coverage.
3. Conversion of the raw jsf. and xtf. acoustic data files to geotiff files that can be used in MapInfo GIS. Creation of mosaic tracks.
4. Analysis of acoustic survey data to identify signatures that are indicative of supporting Sabellaria or cobble/boulder reef features.
5. Conduct a survey to ground truth the data provided from the acoustic survey. This will involve using a combination of Hamon grabs, Day grabs and under-water cameras deployed from the Authority’s research vessel, *Three Counties*, to formally identify signatures found in the acoustic data.
6. Re-analysis of the acoustic data in conjunction with the ground truth data to map the spatial distribution of identified features. Production of GIS charts, images and reports to detail this information, providing evidence to support the Environmental team when producing Habitat Regulation Assessments and the Authority’s fisheries management.
7. Presentation of survey results at appropriate forums.
8. Produce detailed report of the survey results for inclusion in the 2015 Annual Research Report.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

Success Criteria 2: Evidence based, appropriate and timely byelaws are used to manage the sustainable exploitation of sea fisheries resources within the district

- High Level Objective 2.1

Success Criteria 5: IFCA’s make best use of evidence to deliver their objectives

- High Level Objectives 5.1, 5.3
- Success Criteria 6: IFCA’s support and promote the sustainable management of the marine environment
- High Level Objectives 6.1, 6.3, 6.4

Success Criteria 7: IFCA’s are recognised and heard

- High Level Objective 7.1

Outputs & Timescales

Production of survey plan enabling monitoring of core Sabellaria and cobble/boulder reef	April 2015
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closed areas not covered by 2014/15 survey	
Completion of planned acoustic surveys	July 2015
Analysis of acoustic data to identify feature signatures	August 2015
Completion of ground truth surveys	December 2015
Production of report and charts detailing spatial extent of identified features	March 2016
Internal links	
<ul style="list-style-type: none"> • Authority's Byelaw Review • RP2014C Supporting environmental assessment of fisheries in Marine Protected Areas • Authority's Shellfish Management Policies • Authority's Standard Operating Procedure for habitat mapping surveys • Liaison meetings with Stakeholder Groups (RP2015L) • Annual Research Report (RP2015M) • General Administration and staff development (RP2015N) 	
External links, including partner agencies	
<ul style="list-style-type: none"> • CEFAS, MMO, Natural England and commercial consultants (eg. DONG energy, Gardline etc) all conduct or commission habitat mapping within the District. • Other IFCA's conduct habitat mapping surveys outside of the District. • Natural England provide feature evidence and conservation advice through the Appropriate Assessment process • Industry provides input towards management decisions. 	
External funding	
Defra-funded survey equipment: side-scan sonar unit, u/w cameras etc Natural England provide funding for some survey projects	
Reporting officer(s)	
Ron Jessop	Senior Research Officer
Robin Strigner	Research Officer
Peter Welby	Research Officer
Project lead	
Stephen Thompson	Research Officer



14. Deploying side scan sonar



15. Inter-tidal *Sabellaria spinulosa* reef

RP2015E EHO / DSP Biotoxin Sampling

Objectives

1. Collect, process and despatch live shellfish and water samples to support the classification of shellfish waters within the Wash. This involves using the Authority's vessels to collect seven shellfish and two water samples each month from fixed sample stations in the Wash.
2. Collect additional water quality data at each station using YSI sonde.
3. Maintain populations of mussels within holding cages at prescribed sample stations within the Wash, from which samples can be taken as required.
4. Liaise regularly with CEFAS and Local Authorities to review and update sampling protocols.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

- Success Criteria 4: IFCA's work in partnership and are engaged with their stakeholders
- High Level Objective 4.1
- Success Criteria 6: IFCA's support and promote the sustainable management of the marine environment
- High Level Objective 6.3; Performance Indicators 6.2c, 6.3a

Outputs & Timescales

Supply CEFAS and Local Authorities with monthly shellfish and water samples	Monthly, throughout year
Report of survey results for inclusion in 2015 Annual Research Report	February 2016

Internal links

- Spring Cockle Survey programme (RP2015A)
- Autumn Mussel Survey programme (RP2015B)
- SWEEP water quality monitoring (RP2015F)
- Liaison meetings with Stakeholder Groups (RP2015L)
- Annual Research Report (RP2015M)
- General Administration and staff development (RP2015N)

External links, including partner agencies

- Local Authorities responsible for monitoring water quality
- CEFAS protocols for sample collection

External funding

Local Authorities provide funding for the sample collection

Reporting officer(s)

Stephen Thompson	Research Officer
Peter Welby	Research Officer

Simon Lee	Skipper
Simon Howard	Skipper
Project lead	
Robin Strigner	Research Officer



16. Conducting foot surveys in the Wash

RP2015F Water Quality Monitoring (SWEEP)

Objectives

1. Continue the on-going programme recording chlorophyll-a levels in the Wash in order to monitor primary food production fundamental to the health of shellfish beds. This involves using the Authority's vessels to:
 - a. Measure water quality parameters at 7 stations with a hand-held YSI sonde
 - b. Provide processed water samples from 4 of the above stations to Cefas
 - c. Conduct regular meat yields of mussels at 3 sampling stations
 - d. Conduct regular maintenance of YSI data sondes and data buoy
2. Produce detailed report of the survey results for inclusion in the 2015 Annual Research Report.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

- Success Criteria 4: IFCA's work in partnership and are engaged with their stakeholders
- High Level Objective 4.1
- Success Criteria 5: IFCA's make the best use of evidence to deliver their objectives.
- High Level Objectives 5.1, 5.2, 5.3
- Success Criteria 6: IFCA's support and promote the sustainable management of the marine environment
- High Level Objective 6.1
- Success Criteria 7: IFCA's are recognised and heard
- High Level Objective 7.1

Outputs & timescales

Completion of sampling regime	On-going. April 2015 – March 2016
Equipment well maintained and serviced	On-going. April 2015 – March 2016
Report detailing results of project for inclusion in Annual Research report	February 2016

Internal links

- Habitats Regulations Assessment for new lay assessments
- Spring Cockle Survey programme (RP2015A)
- Autumn Mussel Survey programme (RP2015B)
- Supporting environmental assessment of fisheries in Marine Protected Areas (RP2015C)
- EHO/DSP Biotxin Sampling (RP2015E)
- Liaison meetings with Stakeholder Groups (RP2015L)
- Annual Research Report (RP2015M)
- General Administration and staff development (RP2015N)

External links, including partner agencies

- CEFAS – Working in partnership on this project
- Environment Agency conduct similar monitoring in estuaries

<ul style="list-style-type: none"> Natural England provide conservation advice through the Habitat Regulations Assessment process 	
External funding	
<ul style="list-style-type: none"> Natural England provided funding for 2 YSI data sondes CEFAS provide "payment in kind" by analysing monthly water samples 	
Reporting officer(s)	
Stephen Thompson	Research Officer
Peter Welby	Research Officer
Project lead	
Robin Strigner	Research Officer



17. Servicing the Authority's data buoy

RP2015G Crab/Lobster Stock Assessment

Objectives

1. Provide evidence to support the management of the crab and lobster fisheries, focusing on managing both fisheries within MSY by 2016. This will involve:
 - a) Continue capturing MSAR forms in MS Access to build up a time series of returns and effort data for use in monitoring and updating fisheries models.
 - b) To ensure that bio-sampling at ports is carried out on a regular basis to agreed monthly goals.
 - c) Initiate a regime that determines the un-landed component of the catch allowing for population structure analysis.
 - d) Support and collaborate with CEFAS in information gathering efforts.
 - e) Review and utilise recognised stock population models to determine the current health of the stocks and fishery.
 - f) Review and determine the conservation and socio-economic impacts of potential management tools
 - g) Ensure MEDIN compliance for all recorded data.
 - h) Production of a report detailing the results of this study

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

- Success Criteria 5: IFCA's make the best use of evidence to deliver their objectives.
- High Level Objectives 5.1, 5.3
- Success Criteria 6: IFCA's support and promote the sustainable management of the marine environment
- High Level Objective 6.3

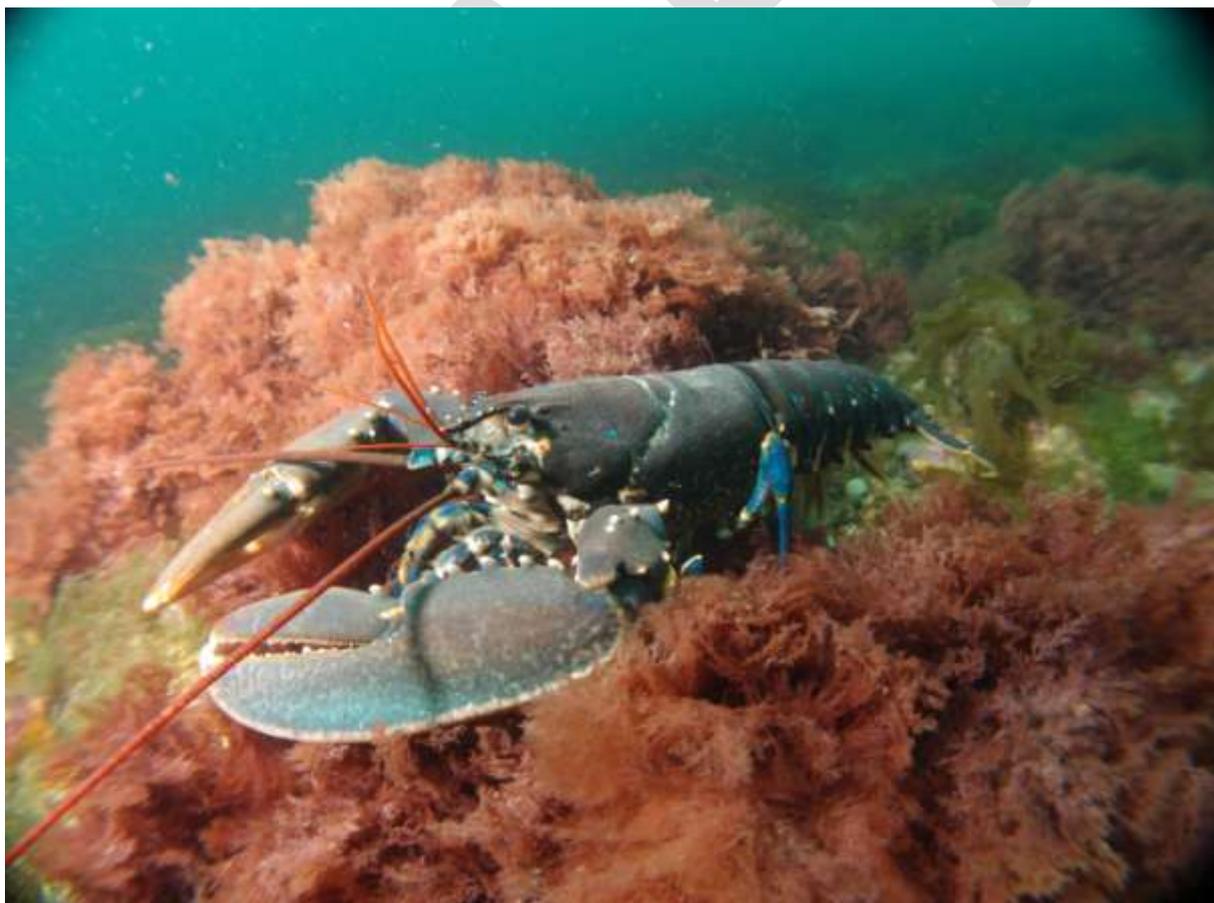
Outputs & timescales

On-going data collection from MSAR forms and bio-sampling in ports.	April 2015 – March 2016
Produce advice for potential management measures.	February 2016
Analysis of data and compilation of report detailing conclusions of study	February 2016

Internal links

- Authority's crustacean bio-sampling data-base
- Authority's Standard Operating Procedure for crab/lobster bio-sampling
- Authority's byelaw review
- Supporting environmental assessment of fisheries in Marine Protected Areas (RP2015C)
- Liaison meetings with Stakeholder Groups (RP2015L)
- Annual Research Report (RP2015M)

<ul style="list-style-type: none"> • General Administration and staff development (RP2015N) 	
External links, including partner agencies	
<ul style="list-style-type: none"> • CEFAS's bio-sampling regime • MMO's MSAR landings data • Other IFCA's Crustacean programmes • Fishing industry for support and advice 	
External funding	
None	
Reporting officer(s)	
Jason Byrne	Area IFCO – Lincs
Alan Garnham	Area IFCO – Suffolk
Ady Woods	Area IFCO – Norfolk
Project lead	
Peter Welby	Research Officer



18. Lobster, *Homarus gammarus*

RP2015H Fin Fish Project

Objectives

1. Provide evidence to support the management of the commercial and recreational bass fisheries occurring within the District. This will involve:
 - a) Continue collating species survey data from previously identified external sources.
 - b) Continue collating fisheries landings data from previously identified internal and external sources.
 - c) Review relevant scientific and legislative reports to keep abreast of current knowledge regarding bass stocks and fisheries.
 - d) Analysis of available data to inform the Authority's management of bass stocks in the District. This will focus primarily on providing evidence for potential bass nursery areas within the District and the potential conservation and socio-economic impacts of other potential management options.
 - e) Production of a report detailing the results of this study.
2. Continue collating data for other key fin fish species.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

- Success Criteria 5: IFCA's make the best use of evidence to deliver their objectives.
- High Level Objectives 5.1, 5.3
- Success Criteria 6: IFCA's support and promote the sustainable management of the marine environment
- High Level Objective 6.3

Outputs & timescales

On-going collation and analysis of species and landings data from internal and external sources.	April 2015 – September 2015
Produce advice to support proposed management measures.	September 2015
Compilation of report detailing conclusions of study	December 2015

Internal links

- Authority's fin fish data-base
- Authority's landings data-base
- Authority's byelaw review
- Supporting environmental assessment of fisheries in Marine Protected Areas (RP2015C)
- Liaison meetings with Stakeholder Groups (RP2015L)
- Annual Research Report (RP2015M)

<ul style="list-style-type: none"> • General Administration and staff development (RP2015N) 	
External links, including partner agencies	
<ul style="list-style-type: none"> • CEFAS's C-Bass project • CEFAS's fish sampling at Sizewell • Environment Agency's Water Framework Directive surveys • Angling 2012 • MMO's MSAR landings data • Other IFCA's fin fish survey programmes • Fishing industry for support and advice • Recreational Sea Angling clubs for support and advice 	
External funding	
None	
Reporting officer(s)	
Jason Byrne	Area IFCO – Lincs
Alan Garnham	Area IFCO – Suffolk
Ady Woods	Area IFCO – Norfolk
Project lead	
Stephen Thompson	Research Officer



19. Grey mullet caught during River Deben survey

RP2015I Whelk Project

Objectives

1. Provide evidence to support the management of the whelk fisheries within the District. This will involve:
 - a) Capture whelk landing data in order to gain understanding of the size and spatial extent of the whelk fishery.
 - b) Conduct whelk bio-sampling to provide size distributions of landed whelks and length-width relationships with which to inform management of potential MLS and riddle size measures.
 - c) Conduct bio-sampling at sea in order to determine population biometrics of un-landed catch.
 - d) Conduct bio-sampling regime to determine size of sexual maturity of whelks in our District.
 - e) Analysis of data to provide understanding of spatial extent of whelk "stocklets" and potential variations in population dynamics between them.
 - f) Work in collaboration with other organisations to determine whelk age-size relationships.
 - g) Review and determine the conservation and socio-economic impacts of potential management tools in order to inform the management process.
 - h) Ensure MEDIN compliance for all recorded data.
 - i) Production of a report detailing the results of this study.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

- Success Criteria 5: IFCA's make the best use of evidence to deliver their objectives.
- High Level Objectives 5.1, 5.3
- Success Criteria 6: IFCA's support and promote the sustainable management of the marine environment
- High Level Objective 6.3

Outputs & timescales

On-going collation and analysis of species size frequency and landings data.	April 2015 – March 2016
Produce advice to support proposed management measures.	Phased advice. March 2015 - September 2015
Compilation of report detailing conclusions of study	February 2016

Internal links

- Authority's whelk bio-sampling data-base
- Authority's landings data-base
- Authority's Standard Operating Procedure for whelk bio-sampling

<ul style="list-style-type: none"> • Authority's byelaw review • Supporting environmental assessment of fisheries in Marine Protected Areas (RP2015C) • Liaison meetings with Stakeholder Groups (RP2015L) • Annual Research Report (RP2015M) • General Administration and staff development (RP2015N) 	
External links, including partner agencies	
<ul style="list-style-type: none"> • Other IFCA's whelk monitoring programmes • CEFAS/Bangor University for assistance in ageing whelks • Fishing industry and processors for support and advice 	
External funding	
None	
Reporting officer(s)	
Luke Godwin	Project Officer
Jason Byrne	Area IFCO – Lincs
Ady Woods	Area IFCO – Norfolk
Project lead	
Robin Strigner	Research Officer



20. Common whelk, *Buccinum undatum*

RP2015J Mussel Regeneration Project

Objectives

1. Continue to trial the use of cockle shell cultch to enhance the recruitment of seed onto the Wash inter-tidal mussel beds, promoting the recovery of healthy beds. This will involve:
 - a. Source industry funding for the project from the WFO 1992 propagation fund.
 - b. Gain MMO agreement that project is exempt from requiring an MMO license.
 - c. Source required materials and tender for vessels to conduct relaying of shells.
 - d. Conduct laying of 200 tonnes of shells within proposed area of Trial Bank mussel bed.
 - e. Set spat collectors at designated locations in the Wash.
 - f. Conduct regular monitoring of experimental area and spat collectors.
 - g. Analyse data to determine whether recruitment has been successfully enhanced within the experimental area.
 - h. Produce a report detailing the results of the study for inclusion in the annual research report.
 - i. Develop measures to implement successful methodologies.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

Success Criteria 4: IFCA's work in partnership and are engaged with their stakeholders

- High Level Objective 4.2

Success Criteria 5: IFCA's make the best use of evidence to deliver their objectives.

- High Level Objectives 5.1, 5.3

Success Criteria 6: IFCA's support and promote the sustainable management of the marine environment

High Level Objective 6.3

Outputs & timescales

Acquisition of WFO 1992 propagation funding	31 March 2015
Gain agreement of exemption from MMO license	9 May 2015
Vessel tendering process completed and required materials sourced	23 May 2015
Shells and spat collectors positioned within experimental sites.	June 2015
Experimental areas monitored	July 2015 – October 2015
Data analysed and report produced detailing results of study.	February 2016

Internal links

- Authority's Standard Operating Procedure for mussel surveys
- Wash Fishery Order 1992

<ul style="list-style-type: none"> • Authority's Shellfish Management Policies • Autumn Mussel Survey programme (RP2015B) • Liaison meetings with Stakeholder Groups (RP2015L) • Annual Research Report (RP2015M) • General Administration and staff development (RP2015N) 	
External links, including partner agencies	
<ul style="list-style-type: none"> • Industry members will be sought for advice and to provide vessels and materials for field work. • Natural England provides conservation advice through the Habitats Regulations Assessment process 	
External funding	
Wash Fishery Order Propagation Fund	
Reporting officer(s)	
Stephen Thompson	Research Officer
Peter Welby	Research Officer
Robin Strigner	Research Officer
Frances Burrows	Marine Environment Officer (Data Lead)
Project lead	
Ron Jessop	Senior Research Officer



21. Laying shells for mussel regeneration project

RP2015K Inter-departmental & Collaborative Projects

Objectives

1. To assist the Marine Protection team by supporting IFCO's at sea and in ports when carrying out fisheries enforcement duties.
2. To perform crew duties aboard the Authority's vessels (excluding research duties).
3. To attend and contribute towards community outreach events.
4. To assist other organisations with collaborative research projects.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

Success Criteria 4: IFCAs work in partnership and are engaged with their stakeholders

- High Level Objectives 4.1, 4.2
- Success Criteria 5: IFCAs make the best use of evidence to deliver their objectives.
- High Level Objectives 5.1, 5.2, 5.4
- Success Criteria 6: IFCAs support and promote the sustainable management of the marine environment
- High Level Objective 6.1, 6.2, 6.3

Success Criteria 7: IFCAs are recognised and heard

- High Level Objective 7.1, 7.2

Outputs & timescales

Assist in fisheries enforcement duties	As required/On-going
Perform crew duties aboard vessels	As required/On-going
Attend community engagement events	As required/On-going
Assist with collaborative events and workshops	As required/On-going

Internal links

- Communication and engagement plan
- EIFCA monthly and weekly rosters and work plans
- Liaison meetings with Stakeholder Groups (RP2015L)

External links, including partner agencies

- Industry provides input towards management decisions.
- Natural England, CEFAS, MMO, Other IFCAs
- Organised community events, county shows

External funding

None

Reporting officer(s)

Robin Strigner	Research Officer
Stephen Thomson	Research Officer
Peter Welby	Research Officer
Judith Stoutt	Senior Marine Environment Officer
Luke Godwin	Marine Environment/Data Officer

Sandra Cowper	Marine Environment and GIS Officer
Jason Byrne	Area IFCO – Lincs
Alan Garnham	Area IFCO – Suffolk
Ady Woods	Area IFCO – Norfolk East
Project lead	
Ron Jessop	Senior Research Officer



22. Display tank at community show

RP2015L Liaison Meetings With Stakeholder Groups

Objectives

1. To attend necessary meetings with stakeholder groups, including Authority meetings and liaison with the fishing industry, RSA, CEFAS, NE, EA, RSPB etc.
2. SRO to represent the Authority on the IFCA Technical Advisory Group (TAG) and sub-groups.
3. To attend and contribute towards internal and external collaborative events and workshops.
4. Provide papers, presentations and reports for meetings and workshops as required.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2013/14)

- Success Criteria 4: IFCA's work in partnership and are engaged with their stakeholders
- High Level Objective 4.2
- Success Criteria 5: IFCA's make the best use of evidence to deliver their objectives.
- High Level Objectives 5.2, 5.4
- Success Criteria 7: IFCA's are recognised and heard
- High Level Objective 7.1

Outputs & timescales

Attendance and participation at Authority and stakeholder meetings.	April 2015 – March 2016
Provision of timely paperwork and presentations for meetings	April 2015 – March 2016

Internal links

- Communication and engagement plan
- MPA Site Management Board
- Spring Cockle Survey programme (RP2015A)
- Autumn Mussel Survey programme (RP2015B)
- Supporting environmental assessment of fisheries in Marine Protected Areas (RP2015C)
- Monitoring the Sabellaria and cobble/boulder reef closed areas in the Wash (RP2015D)
- EHO/DSP biotoxin sampling (RP2015E)
- SWEEP water quality monitoring (RP2015F)
- Crab and lobster stock assessment (RP2015G)
- Fin Fish project (RP2015H)
- Whelk project (RP2015I)
- WFO Mussel regeneration Project (RP2015J)
- Inter-departmental & Collaborative Projects (RP2015K)

External links, including partner agencies

<ul style="list-style-type: none"> • CEFAS, DEFRA, MMO, Other IFCA's, Natural England, Environment Agency, RSPB, Fishermen, Recreational Sea Anglers 	
External funding	
None	
Reporting officer(s)	
Judith Stoutt	Senior Marine Environment Officer
Stephen Thompson	Research Officer
Peter Wellby	Research Officer
Robin Strigner	Research Officer
Project lead	
Ron Jessop	Senior Research Officer



23. Participants of IMARES workshop in Netherlands

RP2015M Annual Research Report

Objectives

1. To compile scientific reports detailing the outcomes of the research and monitoring projects undertaken throughout the year.
2. Publish the reports on the Authority website and the Technical Advisory Group Huddle

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2013/14)

Success Criteria 5: IFCA's make the best use of evidence to deliver their objectives.

- High Level Objectives 5.1, 5.3

Success Criteria 7: IFCA's are recognised and heard

- High Level Objective 7.2

Outputs & timescales

WFO Spring cockle stock assessment report	February 2016
WFO Autumn mussel stock assessment report	February 2016
Wash Sabellaria and cobble/boulder reef habitat mapping report	February 2016
Crab and lobster stock assessment report	February 2016
Fin Fish project report	February 2016
Whelk project report	February 2016
SWEEP water quality monitoring report	February 2016
EHO/DSP biotoxin sampling report	February 2016
Mussel regeneration project report	February 2016
All reports published on Authority website and shared on TAG Huddle	March 2016

Internal links

- Spring Cockle Survey programme (RP2015A)
- Autumn Mussel Survey programme (RP2015B)
- Supporting environmental assessment of fisheries in Marine Protected Areas (RP2015C)
- Monitoring the Sabellaria and cobble/boulder reef closed areas in the Wash (RP2015D)
- EHO/DSP biotoxin sampling (RP2015E)
- SWEEP water quality monitoring (RP2015F)
- Crab and lobster stock assessment (RP2015G)
- Fin Fish project (RP2015H)
- Whelk project (RP2015I)
- WFO Mussel regeneration Project (RP2015J)
- EIFCA website

External links, including partner agencies

Technical Advisory Group Huddle	
External funding	
None	
Reporting officer	
Stephen Thompson	Research Officer
Peter Welby	Research Officer
Robin Strigner	Research Officer
Project lead	
Ron Jessop	Senior Research Officer



24. Sunrise at the River Stour

RP2015N General Administration and Staff Development

Objectives

1. Conduct the relevant administrative tasks required for the effective management of the research team. This includes submitting work time forms, participation in internal staff and team meetings, filing, annual project planning, monthly and weekly staff rostering and numerous sundry tasks.
2. Provide appropriate internal and external training for staff to ensure they are competent and sufficiently skilled to perform their roles and able to develop within their roles.
3. Engage with Human Resources to develop and enact Authority policies.
4. Respond in a timely manner to internal and external enquiries, correspondence and data/information requests.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

- Success Criteria 1: IFCA's have sound governance and staff are motivated and respected
- High Level Objectives 1.1 – 1.6
- Success Criteria 5: IFCA's make the best use of evidence to deliver their objectives.
- High Level Objectives 5.1
- Success Criteria 7: IFCA's have sound governance and staff are motivated and respected
- High Level Objectives 7.2

Outputs & timescales

Required routine administration tasks are completed in timely manner	April 2015 – March 2016
Annual research and environment plan developed	April 2015
Monthly rosters and work plans developed	Monthly. April 2015 – March 2016
Attendance at internal staff and team meetings	April 2015 – March 2016
Research staff are trained to skill levels appropriate for their roles	April 2015 – March 2016
Timely response to enquiries and requests for data and information	April 2015 – March 2016

Internal links

- Authority annual plan
- Authority policies
- Spring Cockle Survey programme (RP2015A)
- Autumn Mussel Survey programme (RP2015B)
- Supporting environmental assessment of fisheries in Marine Protected Areas (RP2015C)
- Monitoring the Sabellaria and cobble/boulder reef closed areas in the Wash (RP2015D)
- EHO/DSP biotoxin sampling (RP2015E)
- SWEEP water quality monitoring (RP2015F)

<ul style="list-style-type: none"> • Crab and lobster stock assessment (RP2015G) • Fin Fish project (RP2015H) • Whelk project (RP2015I) • WFO Mussel regeneration Project (RP2015J) • Inter-departmental & Collaborative Projects (RP2015K) • Liaison Meetings With Stakeholder Groups (RP2015L) • Compilation of research reports (RP2015M) 	
External links, including partner agencies	
All stakeholders and members of the public	
External funding	
None	
Reporting officer	
Stephen Thompson	Research Officer
Peter Welby	Research Officer
Robin Strigner	Research Officer
Project lead	
Ron Jessop	Senior Research Officer



25. Collecting shellfish samples

KEY WORK FOR ENVIRONMENT TEAM 2015/16

Table 3. Agreed work activities for Eastern IFCA Environment team 2015/16

Project		Officer days 2015/2016				
		Q1	Q2	Q3	Q4	Total
EP2015A	Assessment of Commercial Fisheries in European Marine Sites (production of Habitats Regulations Assessments for high-risk ambers; support for fishing footprint project; site visits; review of lower-risk amber interactions; update of NOIR)	53	49	52	46	200
E2015B	Assessment of Commercial Fisheries in Marine Conservation Zones (Habitats Regulations-style assessment)	4	5	0	0	9
EP2015C	Assessment of Common Rights activities in European Marine Sites	24	8	0	0	32
EP2015D	Common Ground (community voice project)	5	20	3	12	40
EP2015E	Development of commercial fisheries management measures in Marine Protected Areas (including MPA monitoring plan, Strategic assessment, byelaw review, liaison with neighbouring IFCAs, SPA disturbance reduction, shrimp MSC accreditation support, EMS management group representation; stakeholder engagement, Impact Assessment)	46	54	48	42	190
EP2015F	WFO Habitats Regulations Assessments (including intertidal mussel & cockle fisheries, sublittoral mussel fishery, shellfish lay approval, EIFCA research projects)	3	2	3	2	10
EP2015G	Biosecurity (including invasive non-native species risk assessment; Norfolk Biodiversity Forum; SEFINS support)	4	4	12	2	22
EP2015H	Consultations (including act as statutory consultee in marine planning and licensing applications)	30	32	37	36	135
EP2015I	Derogations	5	5	5	5	20
EP2015J	Inter-departmental working (including Strategic assessment input, enforcement risk register, community engagement outreach, website, social media, corporate environment accreditation, partner	8	8	16	17	49

	MOU reviews, promote RSA strategy, support iVMS introduction)					
EP2015K	Data management (data management system update, vessel sightings, landings, VMS, MEDIN, fisheries database)	8	2	14	18	42
	Total	187	187	187	188	749

Environment Officer Availability

Team	Total Days	Actual available days*
3.7 x Environment staff	856	749

* The environment team has one Senior Marine Environment Officer and three Marine Environment Officers, filling a total of 3.7 Full Time Equivalent posts. Taking into account weekends, public and personal holidays, the team has a maximum total of 856 working days available during 2015/16. Of these days, it has been estimated that 20% will be required to fulfil staff development requirements (including training and appraisals) and necessary administration duties (planning, managing, liaison and reporting). This leaves a total of 749 days Environment officer time available during 2015/16, which, with the team now at full capacity, delivers an increase of 12.5% on 2014/15.

EP2015A Assessment of Commercial Fisheries in European Marine Sites

Aims

To further the conservation objectives of European Marine Sites (Special Areas of Conservation and Special Protection Areas) by quantifying the risk to site features from commercial fisheries, and by supporting the Authority in the development of measures to remove or mitigate those risks.

Objectives

1. Utilising fishery impact reviews produced by the Eastern IFCA research team, and best available information on fishing activity and feature extent, complete the assessment of high-risk fishery/feature interactions in European Marine Sites within the Eastern IFCA district in order to identify risks to site features;
2. Support the feasibility assessment of the Fishing Footprint project through membership of the project steering group and close liaison with IFCA Technical Advisory Group;
3. Undertake site visits and site manager liaison to refine data on activities within and threats to European Marine Sites within the Eastern IFCA District;
4. Review available data for lower-risk fishery/feature interactions; undertake assessments for these and identify strategies to fill data gaps;
5. Review monitoring plan for red-risk features and align with Adaptive Risk Management approach, following best practice guidelines for the management of ephemeral features in marine protected areas;
6. Update "Non-Occurring Interactions Report" as required, providing evidence for designation of interactions in this category.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

Success Criteria 6: Support and promote sustainable management of the marine environment

- High-level Objectives 6.4 and 6.4

Outputs & timescales

Tests of Likely Significant Effect and Habitats Regulations Assessments for high risk amber and green interactions	April to December 2015
Contribution to Fishing Footprint report	May 2015
Marine protected area site visit and site	April to December 2015

manager liaison reports	
Test of Likely Significant Effect and Habitats Regulations Assessments for lower risk amber and green interactions	October 2015 to March 2016
Monitoring plan and monitoring report for red-risk features protected under Eastern IFCA Protected Areas Byelaw	September 2015
Updated Non-Occurring Interactions Report	March 2016
Internal links	
<ul style="list-style-type: none"> • Supporting environmental assessment of fisheries in Marine Protected Areas (RP2015C) • Monitoring the Sabellaria and cobble/boulder reef closed areas in the Wash (RP2015D) • Assessment of Common Rights Activities in European Marine Sites (EP2015C) • Development of management measures for fisheries in Marine Protected Areas (EP2015E) • Inter-departmental working (European Marine Site/estuary management groups; Outreach and community engagement) (EP2015J) 	
External links, including partner agencies	
Marine Management Organisation, other IFCAs, Natural England, The Wildlife Trusts, National Trust, Royal Society for the Protection of Birds, fisheries stakeholders	
External funding	
Fisheries Footprint project funded via Defra's Impacts Evidence Group for marine protected areas.	
Reporting officer(s)	
Sandra Cowper	Marine Environment Officer (GIS lead)
Frances Burrows	Marine Environment Officer (Data lead)
Ron Jessop	Senior Research Officer
Project lead	
Dan Steadman	Marine Environment Officer (Consultations Lead)

EP2015B Assessment of Commercial Fisheries in Marine Conservation Zones

Aims

To further the conservation objectives of Marine Conservation Zones by quantifying the risk to site features from commercial fisheries, and by supporting the Authority in the development of measures to remove or mitigate those risks.

Objectives

1. Utilising fishery impact reviews produced by the Eastern IFCA research team, external reports and best available information on fishing activity and feature extent, assess the fishery/feature interactions in the recommended Marine Conservation Zone within the Eastern IFCA district in order to identify risks to site features.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

Success Criteria 6: Support and promote sustainable management of the marine environment

- High-level Objectives 6.4 and 6.4

Outputs & timescales

Assessment of fishing impacts in Cromer Shoal Chalk Beds recommended Marine Conservation Zone	March 2016
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Internal links

- Supporting environmental assessment of fisheries in Marine Protected Areas (RP2015C)
- Development of management measures for fisheries in Marine Protected Areas (EP2015E)
- Inter-departmental working (European Marine Site/estuary management groups; Outreach and community engagement) (EP2015J)

External links, including partner agencies

Natural England; North Norfolk Fisheries Local Action Group; SeaSearch East

External funding

None

Reporting officer(s)

Sandra Cowper	Marine Environment Officer (GIS Lead)
Daniel Steadman	Marine Environment Officer (Consultations Lead)

Project lead

DRAFT

EP2015C Assessment of Common Rights activities in European Marine Sites

Aims

To provide evidence to Defra in order to determine whether the exemption of Common Rights activities from the Eastern IFCA Protected Areas byelaw could pose a risk to the integrity of European Marine Sites in the Eastern IFCA district.

Objectives

1. Using official registers and local contacts, to evaluate the potential and actual nature, scale and duration of common rights activities undertaken in or adjacent to European Marine Sites in the Eastern IFCA district;
2. To liaise with holders of rights in common and site managers to enhance our understanding of these activities;
3. To assess the impact of common rights activities on European Marine Site integrity;
4. To produce a report to Defra on the findings of these investigations and assessment.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

Success Criteria 6: Support and promote sustainable management of the marine environment

- High-level Objectives 6.4 and 6.4

Outputs & timescales

Review of Common Rights Register	June 2015
Report of Common Rights activities in European Marine Sites in Eastern IFCA district	September 2015
Assessment of impacts of Common Rights activities on European Marine site integrity	November 2015

Internal links

- Supporting environmental assessment of fisheries in Marine Protected Areas (RP2015C)
- Development of management measures for fisheries in Marine Protected Areas (EP2015E)
- Inter-departmental working (European Marine Site/estuary management groups; Outreach and community engagement) (EP2015J)

External links, including partner agencies	
Common Rights Holders associations, Local Authorities, European Marine Site management groups and local advisory groups; Natural England, Wildlife Trusts, RSPB, National Trust	
External funding	
None	
Reporting officer(s)	
Frances Burrows	Marine Environment Officer (Data Lead)
Daniel Steadman	Marine Environment Officer (Consultations Lead)
Project lead	
Sandra Cowper	Marine Environment Officer (GIS Lead)

DRAFT

EP2015D Common Ground - Community Voice project	
Aims	
To gather views of coastal communities on the value of marine protected areas in the Eastern IFCA district, in order to inform the development of effective and balanced fisheries management measures within protected sites.	
Objectives	
<ol style="list-style-type: none"> 1. Collaboratively with the Marine Stewardship Council project team, undertake project planning and interview preparation; 2. Attend and facilitate with project partners interviews at a range of coastal venues in the Eastern IFCA district; 3. Collaboratively with project partners, plan and attend workshops with local community groups to follow up interviews and develop reports to reflect community views on marine protected areas. 	
Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)	
Success Criteria 7: IFCA's are recognised and heard <ul style="list-style-type: none"> • High-level objective 7.2 	
Outputs & timescales	
Community Voice interview videos (MCS lead)	January 2016
Community Voice workshop reports (MCS lead)	March 2016
Internal links	
<ul style="list-style-type: none"> • Development of management measures for fisheries in MPAs (EP2015E) • Inter-departmental working (European Marine Site/estuary management groups; Outreach and community engagement) (EP2015J) 	
External links, including partner agencies	
Marine Conservation Society	
External funding	
Marine Conservation Society	
Reporting officer(s)	
Dan Steadman	Marine Environment Officer (Consultations Lead)
Frances Burrows	Marine Environment Officer (Data Lead)
Project lead	
Sandra Cowper	Marine Environment Officer (GIS Lead)

EP2015E Development of commercial fisheries management measures in Marine Protected Areas

Aims

To support the implementation of a well-managed, ecologically-coherent network of marine protected areas in UK seas by implementing measures that ensure commercial fishing activities are undertaken in keeping with conservation objectives for marine protected areas.

Objectives

1. Using the conclusions of the assessments of commercial fisheries in European Marine Sites and Marine Conservation Zones, develop management options as required to mitigate against damage and or disturbance to site features;
2. Provide evidence to the Authority to inform management decisions;
3. Undertake stakeholder consultation including community engagement to ascertain the social, economic and environmental impact of potential new regulations;
4. Undertake a Test of Likely Significant Effect for potential new regulations;
5. Undertake an Impact Assessment to accompany proposed new regulations.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

Success Criteria 2: Evidence-based, appropriate and timely byelaws are used to manage the sustainable exploitation of the sea fisheries resources within the district

- High-level Objective 2.1

Success Criteria 6: Support and promote sustainable management of the marine environment

- High-level Objectives 6.4 and 6.4

Success Criteria 7: IFCA's are recognised and heard

- High-level objective 7.2

Outputs & timescales

Management Options report	April 2015 – March 2016
Community Engagement meetings	June 2015 – March 2016
Information gathering and byelaw consultation documents	September 2015 – March 2016
Test of Likely Significant Effect for new regulations	September 2015
Impact Assessment	December 2015

Internal links	
<ul style="list-style-type: none"> • Development of management measures for fisheries in Marine Protected Areas (EP2015E) • Inter-departmental working (European Marine Site/estuary management groups; Outreach and community engagement) (EP2015J) • Eastern IFCA Site Management Boards; MPA sub-committee; Regulation & Compliance Sub-Committee 	
External links, including partner agencies	
Defra, Marine Management Organisation byelaw team, community groups, fishing industry stakeholders	
External funding	
None	
Reporting officer(s)	
Sandra Cowper	Marine Environment Officer (GIS Lead)
Daniel Steadman	Marine Environment Officer (Consultations Lead)
Frances Burrows	Marine Environment Officer (Data Lead)
Luke Godwin	Project Officer
Project lead	
Judith Stoutt	Senior Marine Environment Officer

EP2015F Wash Fishery Order Habitats Regulations Assessment**Aims**

Eastern IFCA fulfils its duties as a regulator under the Habitats Regulations, by assessing the impacts of the regulated and several fisheries under the Wash Fishery Order 1992 before granting associated licences and leases. Viable fisheries are operated and the integrity of the Wash and North Norfolk Coast European Marine Site is protected.

Objectives

1. To ensure the bivalve shellfishery activities regulated by Eastern IFCA through the Wash Fishery Order 1992 (the Regulated Fishery) are managed in a way that supports the achievement of the conservation objectives for the Wash & North Norfolk Coast European Marine Site;
2. To ensure the bivalve shellfishery activities permitted by Eastern IFCA through the Wash Fishery Order 1992 (the Several fishery) are assessed in accordance with the Habitats Regulations before leases are granted.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

Success Criteria 6: IFCAs support and promote sustainable management of the marine environment

- High-level objectives 6.3 and 6.4

Outputs & timescales

Habitats Regulations Assessment of Wash
cockle fishery

May 2015

Habitats Regulations Assessment of Wash
mussel fishery

December 2015

Internal links

Wash Fishery Order spring cockle stock assessment (RP2015A)

Wash Fishery Order autumn mussel stock assessment (RP2015B)

Development of management measures for fisheries within marine protected areas (EP2015E)

Wash Fishery Order – lay biotope surveys (RP2015C)

Wash Fishery Order – mussel regeneration project (RP2015J)

External links, including partner agencies	
Natural England, Wash fisheries stakeholders	
External funding	
None	
Reporting officer(s)	
Ron Jessop	Senior Research Officer
Dan Steadman	Marine Environment Officer (Consultations Lead)
Frances Burrows	Marine Environment Officer (Data Lead)
Project lead	
Sandra Cowper	Marine Environment Officer (GIS Lead)

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EP2015G Biosecurity**Aims**

Eastern IFCA will achieve an up-to-date understanding of biosecurity risks in its district. Paying due regard to environmental regulations relating to biosecurity and synergies with partner organisations, Eastern IFCA develops an effective biosecurity plan to remove, mitigate or manage identified risks.

Objectives

1. Provide practical support to the SEFINS (Safeguarding the Environment From Invasive Non-native Species) project investigating risk to estuarine environments across the southern North Sea, through the Wash & North Norfolk Coast European Marine Site project;
2. In conjunction with partner bodies, support the production of a risk assessment for invasive non-native species in the Eastern IFCA district, to inform the review of Eastern IFCA's Biosecurity plan;
3. Engage with regional biodiversity partnerships and ensure coastal and marine non-native species issues are appropriately prioritised.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

Success Criteria 6: IFCA's support and promote sustainable management of the marine environment

Outputs & timescales

Risk assessment for invasive non-native species in Eastern IFCA district	September 2015
Identification of relevant legislation and Eastern IFCA duties in relation to biosecurity	June 2015
Risk mitigation measures and contingency plans	January 2016

Internal links

Eastern IFCA Biosecurity Project

External links, including partner agencies

Wash & North Norfolk Coast European Marine Site project/Norfolk County Council (SEFINS project lead); Environment Agency (Water Framework Directive); GB Non-Native Species Secretariat.

External funding	
SEFINS project is funded through the EU Interreg II programme.	
Reporting officer(s)	
Luke Godwin	Project Officer
Judith Stoutt	Senior Marine Environment Officer
Project lead	
Frances Burrows	Marine Environment Officer (Data Lead)

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EP2015H Consultations**Aims**

To ensure developers and regulators of marine developments are aware of impacts on fisheries and the marine environment in the Eastern IFCA district; to enable the Authority to influence proposals to minimise such impacts; and to promote co-existence of fisheries with other uses of the marine environment, in keeping with the East Marine Plans.

Objectives

1. To develop an Eastern IFCA consultation strategy to guide officers with consultation responses and ensure the Authority Members has input into major developments;
2. To monitor the PINS planning portal for upcoming development applications to ensure early Eastern IFCA involvement in consultation;
3. To utilise the MMO marine licensing system to identify and engage with applications relevant to the Authority's district;
4. To manage and record the consultation process to ensure provision of timely, accurate and proportionate responses, in keeping with East Marine Plan objectives, for consultations on activities affecting the marine environment and inshore fisheries;
5. To maintain the spatial information function to enable instant access to location and other details of consultation cases, and to provide a visual record of cumulative or in-combination impacts;
6. To liaise internally with Eastern IFCA members and officers, and externally with appropriate individuals or organisations, to exchange local information pertinent to consultation cases;
7. To engage with developers and/or regulators, as necessary, so that all parties obtain up-to-date information relevant to consultation cases, and where necessary to identify mitigation for impacts identified during the consultation process;
8. To engage with developers and/or regulators to record the effectiveness of interventions (consultation responses);
9. To promote co-existence between developers and commercial and recreational fishing interests.
10. To publish Eastern IFCA consultation responses to major developments on the Eastern IFCA website, and to use social media as appropriate to publicise this.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)	
<p>Success Criteria 4: IFCA work in partnership and are engaged with their partners</p> <p>Success Criteria 6: IFCA support and promote the sustainable management of the marine environment</p> <ul style="list-style-type: none"> High-level objectives 6.2 to 6.4 	
Outputs & timescales	
Eastern IFCA consultation strategy	July 2015
Directory of major developments and Eastern IFCA involvement at each stage of application or development	September 2015
Consultation responses	April 2015 – March 2016
Regularly updated consultation section on Eastern IFCA website	April 2015 – March 2016
Linked projects	
<ul style="list-style-type: none"> EP2015J Interdepartmental working: website and social media updates 	
External links, including partner agencies	
<ul style="list-style-type: none"> Planning Inspectorate Marine Management Organisation Commercial and recreational fishing organisations Local authorities Natural England Renewable energy, marine aggregates, oil and gas sectors 	
External funding	
No external funding has been identified for this project.	
Reporting officer(s)	
Frances Burrows	Marine Environment Officer/Data Lead
Sandra Cowper	Marine Environment Officer/GIS Lead
Judith Stoutt	Senior Marine Environment Officer
Project lead	
Daniel Steadman	Marine Environment Officer/Consultations Lead

EP2015I Derogations	
Aims	
Eastern IFCA facilitates scientific monitoring of marine species and habitats by partner organisations through the timely consideration of applications and granting of exemption (derogation) from Eastern IFCA byelaws for scientific purposes.	
Objectives	
<ol style="list-style-type: none"> 1. To consider applications for exemption from Eastern IFCA byelaws in relation to impacts on target species, non-target species and the wider marine environment 2. To undertake Tests of Likely Significant Effect where applications coincide with marine protected areas. 3. To provide a timely service to applicants for the consideration and granting of exemptions. 	
Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)	
Success Criterion 4: IFCA's work in partnership and are engaged with their partners.	
Outputs & timescales	
Acknowledgement of receipt of derogation request	Within five days of receipt
Test of Likely Significant Effect (if required)	Within ten days of receipt
Derogation	Within 28 days of receipt
Internal links	
Eastern IFCA Support and Enforcement teams	
External links, including partner agencies	
Natural England, Centre for Environment, Fisheries & Aquaculture Science, Environment Agency, marine developers' ecological consultants.	
External funding	
None	
Reporting officer(s)	
Sandra Cowper	Marine Environment Officer (GIS Lead)
Frances Burrows	Marine Environment Officer (Data Lead)
Project lead	
Dan Steadman	Marine Environment Officer (Consultations Lead)

EP2015J Inter-departmental work including Outreach**Aims**

Eastern IFCA staff have a clear understanding of organisation-wide objectives and their own roles in meeting collective goals. Work is undertaken across departments for mutual support in achieving actions set out in the Eastern IFCA Annual Plan and the supporting plans for enforcement, research and environment work. Non-department specific work, for example community engagement and educational outreach work, is undertaken proportionately by all staff according to resource availability.

Objectives

1. To support the ongoing development of Eastern IFCA's Strategic Assessment – in particular, providing input on environmental aspects for consideration in the holistic management of the district's fisheries;
2. To support the development of Eastern IFCA's compliance monitoring plan for environmental regulations, including the Protected Area byelaw;
3. To assist with the planning and execution of community engagement and educational outreach events;
4. To provide regular accurate and informative website and social media updates about the environmental work of Eastern IFCA;
5. To support Eastern IFCA in attaining a corporate environmental accreditation;
6. To review partner Memoranda of Understanding and/or Service Level Agreements relating to environmental projects;
7. To continue to represent Eastern IFCA in European Marine Site management groups and estuary partnerships, including their Advisory groups
8. To support the Marine Enforcement team in relation to the introduction of inshore Vessel Monitoring Systems.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

This work is relevant across the spectrum of all the IFCA Success Criteria.

Outputs & timescales

Environmental input to Strategic Assessment	October 2015
Protected Area byelaw compliance monitoring input	July 2015
Community engagement including educational	April 2015 to March 2016

outreach	
Eastern IFCA website and social media updates on the Authority's environmental work	At least monthly
Review of Eastern IFCA's ability to achieve corporate environmental accreditation	March 2016
Review of environmental project MOUs or SLAs	October 2015
European Marine Site and Estuary Partnership participation	April 2015 to March 2016
Support for introduction of Eastern IFCA inshore Vessel Monitoring Systems	April 2015 to March 2016
Internal links	
Eastern IFCA Annual Plan 2015/16; Eastern IFCA Strategic Assessment; Enforcement risk register; Eastern IFCA website and social media; Development of Management Measures for fisheries in MPAs (EP2015J)	
External links, including partner agencies	
Marine Management Organisation, Natural England, Marine Conservation Society, Wildlife Trusts, fisheries stakeholders, Wash & North Norfolk Coast European Marine Site management group and advisory groups; Stour & Orwell Estuaries management group; Norfolk County Council (schools outreach).	
External funding	
Community engagement project (Common Ground) funded by Marine Conservation Society Inshore Vessel Monitoring System project funded through European Fisheries Fund	
Reporting officer(s)	
Sandra Cowper	Marine Environment Officer (GIS Lead)
Daniel Steadman	Marine Environment Officer (Consultation Lead)
Frances Burrows	Marine Environment Officer (Data Lead)
Luke Godwin	Project Officer
Ron Jessop	Senior Research Officer
Project lead	
Judith Stouff	Senior Marine Environment Officer

EP2015K Data management

Aims

Eastern IFCA inputs, stores and retrieves its data in an efficient manner, and meets the requirements of data-related regulations under the Data Protection Act and the EU Inspire Directive. Data for internal and external use are appropriately accessible and metadata are available to describe data holdings.

Objectives

1. To complete the update of Eastern IFCA's electronic filing system;
2. To maintain the electronic staff timesheet system and maximise its efficiency;
3. To improve and maintain Eastern IFCA databases for contacts, research activities, vessel sightings and inspections, and fish and shellfish landings;
4. To provide support to the Eastern IFCA research team, and the wider IFCA Technical Advisory Group, in producing metadata and uploading scientific data to relevant data archives;
5. To support the marine protection team with the management of data obtained via vessel monitoring systems.

Linked high-level objectives (set out in Eastern IFCA Annual Plan 2015/16)

Success Criterion 2: Evidence-based, appropriate and timely byelaws are used to manage the sustainable exploitation of sea fisheries resources within the district

- High-level objective 2.1

Success Criterion 4: IFCAs work in partnership and are engaged with their partners

- High-level objective 4.2

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

- High-level objective 5.3

Outputs & timescales

Eastern IFCA electronic filing system fully updated	June 2015
Electronic staff timesheet system maintained	April 2015 to March 2016
Vessel sightings database reviewed, updated and maintained	April 2015 to March 2016
Fish and shellfish landings database reviewed, updated and maintained	April 2015 to March 2016
Metadata routinely provided to data archive	April 2015 to March 2016
Vessel monitoring system data managed effectively	October 2015 to March 2016

Internal links	
Update of EIFCA electronic filing system; staff timesheet management; vessel sightings database review; fish and shellfish landings database review; EIFCA research plan 2015/16;	
External links, including partner agencies	
Norfolk County Council (IT provider); IFCA data sharing commitments; Marine Management Organisation	
External funding	
None	
Reporting officer(s)	
Lewis Bowers	Temporary Data Filing Officer
Luke Godwin	Project Officer
Ron Jessop	Senior Research Officer
Project lead	
Frances Burrows	Marine Environment Officer (Data Lead)

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References

Defra. (2010) Inshore Fisheries and Conservation Authorities: Vision, Success Criteria and High Level Objectives. Defra. London.

List of Images

1. *RV Three Counties* and tender © Ron Jessop
2. Lobster, *Homarus gammarus* © Rob Spray & Dawn Watson
3. Pouting or bib, *Trisopterus luscus* © Rob Spray & Dawn Watson
4. European sea bass *Dicentrarchus labrax* © Rob Spray & Dawn Watson
5. Eastern IFCA district © Eastern IFCA
6. Surveying shellfish beds in The Wash © Eastern IFCA
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8. Intertidal *Sabellaria spinulosa* reef in the Wash © Ron Jessop
9. Beach seine netting with Environment Agency and K&E-IFCA © Eastern IFCA
10. Pisces deploying beach seine net in River Deben
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16. Conducting foot surveys in the Wash © Ron Jessop
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19. Grey mullet caught during River Deben survey © Eastern IFCA
20. Common whelk, *Buccinum undatum* © Eastern IFCA
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23. Participants of IMARES workshop in Netherlands
24. Sunrise at the River Stour © Ron Jessop

25. Collecting shellfish samples © Ron Jessop

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Appendix 1 – IFCA Success Criteria and High Level Objectives

Delivery of priorities

The following tables illustrate the activities that Eastern IFCA will conduct during the 2015-2016 financial year. Defra has established seven Success Criteria for IFCAs to meet. For each Success Criterion a number of High Level Objectives (HLOs) have also been established. The current HLOs were established in 2010 to guide the transition from the previous Sea fishery committee structure to the IFCA construct. As a result some HLOs may appear to be time-late or overtaken by events. The Success Criteria and HLOs will be reviewed and updated by Defra in 2015 (Full details for annual plans are provided by Defra Guidance to IFCAs (Defra2010a)).

Success Criterion 1: IFCAs have sound governance and staff members are motivated and respected

Staff feel proud to work for their IFCA and have the training and skills to deliver their Authority's objectives in a professional, fair and consistent manner. They are supported by excellent leaders and managers, working alongside engaged and effective committees. These committees are representative of the communities they serve and wider stakeholder interests; they have the backing of constituent local authorities and provide the strategic direction to ensure the long-term sustainability of the marine environment in and around their districts

High Level Objective	Outcome	Performance Indicators
1.1 By April each year, publish an annual plan that meets minimum standards as set out in Defra guidance, setting out the authority's main objectives and priorities for the year. Each IFCA has an annual plan that clearly sets out, in a way that is easy to understand, what the Authority does and its main objectives and priorities for the coming year. Annual plans to meet the requirements of the IFCA and Defra are prepared and published before the beginning of each financial year. Copies of annual plans are sent to Defra's Secretary of State by 30 April each year.	Each IFCA has an annual plan that clearly sets out, in a way that is easy to understand, what the Authority does and its main objectives and priorities for the coming year.	Delivery of Annual Plan for signature by Planning and Communication sub-committee with document published by 31 st March 2015. Development of annual plan 2015-16
1.2 As soon as is reasonably practicable after the end of each financial year, prepare a report on the IFCA's activities in that year, in line with Defra guidance.	Each IFCA has an annual report that clearly sets out, in a way that is easy to understand, the Authority's achievements in the last year.	Publication of the Eastern IFCA Annual Report 2014-15 Copy of annual reports sent to Defra's Secretary of State by 30 November in the year

High Level Objective	Outcome	Performance Indicators
<p>1.3 Demonstrate a long-term, strategic approach to sustainable marine management, in line with duties in the Marine and Coastal Access Act, clearly articulating how the IFCA will do this through annual plans and/or longer-term strategies. Delivery is ongoing, with the first formal review in 2015</p>	<p>Report reviewing marine sustainability issues and fisheries management in the District and proposing new management measures to address concerns.</p>	<p>Continue work to deliver fisheries management measures for to protect designated 'Amber and Green' features within EMS</p> <p>Develop and publish the Authority's Environment and Research Strategy</p> <p>Continue to support district fishermen in bid to achieve MSC accreditation for the brown/pink shrimp fisheries within the district.</p> <p>Understand our commitments to meet MSFD requirements, particularly Bass, Whelk and Crab and lobster stocks.</p>
<p>1.4 Staff management systems are in place that include:</p> <ul style="list-style-type: none"> • an annual staff performance monitoring system, which sets clear work objectives for every member of staff that are linked to the organisational objectives described in the annual plan and monitors their performance against a set of agreed criteria; • a performance improvement procedure. <p>IFCAs must show progress in this objective by April 2011, for example by having gained Committee agreement to introduce such a system, with fully-functioning staff management systems in place by April 2012</p>	<p>Staff management system in place to meet requirements of the objective.</p>	<p>Staff performance management system linking to individual training and development plans -developed and implemented. Continue to embed as part of the organisational culture</p> <p>Continue development of first line managers role to take full ownership of areas of responsibility</p> <p>Performance improvement procedure in place. To be used as required</p>
<p>1.5 Develop and deliver a people capability strategy, which ensures that staff can deliver the organisational objectives as set out in annual plans, aided through training, mentoring and new skills development. The strategy should be developed by April 2012; IFCAs should demonstrate ongoing delivery, with the first formal review in 2015</p>	<p>Gaps in the capability of the IFCA to meet its duties and objectives are assessed; proposals for addressing problems are in place.</p>	<p>Staff resources and capability monitored against objectives and duties.</p> <p>Review of Protection team function and structure</p> <p>Development of line management capability</p>

High Level Objective	Outcome	Performance Indicators
<p>1.6 By September 2012, demonstrate that staff are engaged with the objectives of the organisation, can influence the direction and development of the organisation and are free to constructively challenge decisions without reproach.</p>	<p>Contented and motivated staff and members.</p>	<p>Further development of the performance review process</p> <p>Review and introduce processes to support appropriate ways of working</p> <p>Completion of the engagement plan</p> <p>Identify and encourage the development of an appropriate culture for the Authority and its employees</p> <p>Regular line management and monthly staff meetings capture staff suggestions</p>

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Success Criterion 2: Evidence based, appropriate and timely byelaws are used to manage the sustainable exploitation of sea fisheries resources within the district

The decisions to introduce, amend or repeal byelaws are evidence-based, timely, based on appropriate consultation and can be shown to have a positive impact in line with their intended effect to manage, protect and promote the recovery of sea fisheries resources from the effects of exploitation.

High Level Objective	Outcome	Performance Indicators
<p>2.1 By April 2015 demonstrate that:</p> <ul style="list-style-type: none"> key issues likely to impact on the sustainable management of the marine environment in the IFC District are identified and evaluated using the best available evidence and a range of management options is considered; the impacts that different courses of action might have in managing those key issues are thoroughly evaluated; proportionate regulation (for example introducing a legal mechanism such as a byelaw) is used as a last resort; the effectiveness of interventions to improve the delivery of beneficial outcomes is continuously monitored; and there is a clear IFCA Committee process for dealing with agreed interventions quickly, efficiently and effectively, particularly for emergency byelaws 	<p>Agreed policies and processes in place to review and amend byelaws and make new ones as required. Process to decide on the most appropriate management measure to apply to address fisheries and wider sustainability concerns as they arise, including the making of emergency byelaws. Process to assess the effectiveness of management measures in the District.</p>	<p>Annual Strategic Assessment</p> <p>Management measures to be developed in accordance with the with the regulation and Compliance Strategy</p> <p>Use of Regulation and Compliance sub-committee to take decisions on behalf of the Authority</p> <p>Introduction of a process for emergency byelaws</p> <p>Project Inshore' Phase 3 & 4 outputs interpreted to influence stock management actions where appropriate.</p> <p>Continue Crab and Lobster surveys to establish data to support MSFD requirements</p> <p>Initiate research activity to support byelaw review process</p>
<p>2.2 By April 2015, all legacy byelaws have been reviewed and evaluated against current evidence base; redundant and duplicate byelaws have been removed and gaps covered.</p>	<p>By April 2015, all legacy byelaws have been reviewed and evaluated against current evidence base; redundant and duplicate byelaws have been removed and gaps covered. Byelaws meet the management and enforcement goals of IFCA at all times.</p>	<p>Strategic Assessment to be reviewed</p> <p>Undertake 'housekeeping' exercise on all Eastern and North eastern SFC legacy byelaws to:</p> <ul style="list-style-type: none"> Revoke those that are defunct or duplicated Amend those that require change to remain effective Establish a single suite of interim byelaws for the entire district <p>Undertake annual Strategic Assessment</p>

Success Criterion 3: A fair, effective and proportionate enforcement regime is in place

A risk-based enforcement regime is in place, which is in line with the Regulators Compliance Code, legislative requirements, and which makes IFCA's an efficient and fair enforcer, managing the exploitation of sea fisheries resources, using a range of alternative enforcement methods and sanctions whose impact and effectiveness is regularly assessed and continually improved

High Level Objective	Outcome	Performance Indicators
<p>3.1 Demonstrate the use of a transparent, risk-based enforcement framework that meets the minimum standard set out in government guidance and is continuously reviewed and improved.</p>	<p>Develop and review annually an enforcement framework that is compliant with government best practice.</p>	<p>Implementation of the Regulation and Compliance Strategy</p> <p>Introduction of Enforcement Risk Register</p> <p>Continued development of Tasking and Co-ordinating Group (TCG) to manage operational activity</p> <p>Enforcement activity data is compiled in a standard format and provided to the National Inshore Marine Enforcement Group (NIMEG) and published on each IFCA website and nationally in the AIFCA website.</p> <p>Engagement with partners nationally (via NIMEG) to develop a means to capture, record, evaluate and disseminate intelligence which is compatible with partner organisations</p>
<p>3.2 Develop and apply a code of conduct for inspections that aligns IFCA activity and procedures with national standards.</p>	<p>IFCA officers conduct professional inspections in a manner consistent with inspections conducted by other enforcing authorities throughout England.</p>	<p>An ethical Code of Conduct for all IFCOs is developed and published</p> <p>The Code of Conduct is reflected in annual performance appraisal processes in each IFCA</p> <p>All new officers achieve accreditation</p> <p>Number of existing officers who achieve accreditation</p> <p>Continuous professional development through regular refresher training</p>

Success Criterion 4: IFCA's work in partnership and are engaged with their partners

IFCA's will work across boundaries, engaging effectively with local and central government, other government bodies, other delivery bodies, industry and other NGOs, recreational users and individuals in the work that they do. Through this partnership approach to working, IFCA's will deliver the socio-economic and environmental outcomes they were created under the Marine and Coastal Access Act to deliver

High Level Objective	Outcome	Performance Indicators
<p>4.1 By April 2011, develop Memoranda of Understanding (MoUs) or Service Level Agreements with key partners, including Cefas, MMO, Natural England and the Environment Agency, that outline agreed ways of working and sharing information and, by April 2012, demonstrate that they are being utilised. Consideration should be given to having a Service Level Agreement with a lead local authority within the IFC District.</p>	<p>IFCA's and key partners have a clear understanding of their roles and joint responsibilities.</p> <p>The production of a comprehensive package of national and local Memoranda of Understanding (MOUs) and/or service level agreements (SLAs).</p> <p>Efficient and effective partnership working between all relevant parties and each IFCA.</p>	<p>Memoranda of Agreement/Understanding have been agreed with NE/EA/MMO/Cefas. Effectiveness to be reviewed</p> <p>MoUs/MOAs/SLAs with NCC, LCC, ACPO, WNNCEMS, KEIFCA, NEIFCA, AIFCA developed. Effectiveness to be reviewed</p> <p>SLAs to deliver EHO/DSP sampling on behalf of regional district councils to be delivered</p>
<p>4.2 By April 2012, develop a stakeholder engagement and communication strategy with corresponding plans that:</p> <ul style="list-style-type: none"> • demonstrate transparency and a balanced approach to dealing with key stakeholders; and • enable consideration of stakeholder views when making decisions. 	<p>Develop a strategy for engagement with the wider public. Work with other agencies.</p> <p>Develop website to allow proper engagement with identified and agreed stakeholder groups.</p> <p>Develop database of identified and agreed stakeholder groups that would find it difficult to engage via the website.</p>	<p>Communication and Engagement Strategy agreed by Planning and Communications Sub-Committee</p> <p>Stakeholder and communication strategy/plans to be reviewed as required</p> <p>Continue communication via electronic means</p> <p>Development of new website format including access to forms and documents ongoing with training provided to relevant members of staff</p>

Success Criterion 5: IFCA's make the best use of evidence to deliver their objectives

IFCA's, by acquiring and sharing their own internal data and by seeking and sharing those generated and recorded by others (including the MMO, Environment Agency, Natural England and Cefas), will have access to the necessary scientific, statistical and socio-economic information relating to inshore fishing and the marine environment to enable effective delivery of their duties.

High Level Objective	Outcome(s)	Performance Indicators
<p>5.1 By April 2012, put procedures, plans and appropriate records systems in place that demonstrate that the best available, quality-assured evidence, whether acquired in house or externally, is used appropriately in decision-making at all levels. These procedures, plans and records systems must meet minimum standards as set out in government guidance and EU legislation.</p>	<p>IFCA's are provided with accurate and timely evidence-based information upon which to base their management decisions and the reasons for decisions are clear, transparent and communicated effectively.</p>	<p>Annual (2015/2016) Environment and Research Plans developed by officers and presented to P&C Sub-Committee</p> <p>Annual Environment and Research Plans published on Authority's website</p> <p>The 2014/15 report will be published at the end of April 2015 and will provide the detail of research activities conducted last year along with recommendation for management action and/or future work.</p>
<p>5.2 By April 2012, have an agreed action plan of how key, mutually beneficial information will be shared between IFCA's and with key delivery partners to improve efficiency and the delivery of beneficial outcomes.</p>	<p>IFCA's provide relevant information to and have access to relevant information from key delivery partners.</p>	<p>During 2015/16 Authority Research and Environment staff continued to participate in a variety of scientific fora. All Authority Research and Environment Staff participated in the IFCA Technical Advisory Group conference. Similar participation will continue</p> <p>Eastern IFCA Senior Research Officer to continue leading role in Technical Advisory Group.</p> <p>Eastern IFCA Research & Environment Officers to continue to provide information and training in specialist fields to others to forward the development of best practice</p> <p>2015-2016 Annual Plan published on Eastern IFCA website</p> <p>2015/2016 Environment and Research Plans published on Eastern IFCA website and circulated with TAG</p>
<p>5.3 By April 2013, demonstrate that there is the in-house capability to collect, analyse and interpret evidence to inform management policy decisions and meet the minimum requirements laid out in government guidance on evaluation and monitoring.</p>	<p>IFCA's have the technical capability to collect, analyse, interpret and manage evidence.</p> <p>IFCA's have personnel within the organisation with appropriate skills to ensure that management decisions make the best use of available evidence.</p>	<p>Peer review process established through regular cross pollination of information and best practice between all IFCA's, Cefas and other partner agencies.</p>

High Level Objective	Outcome(s)	Performance Indicators
5.4 By April 2014, review evidence and knowledge sharing procedures and implement any necessary improvements by April 2015.	Knowledge sharing plans and procedures are effective and appropriate.	Revised data management system in place. Knowledge sharing protocols explored with partner agencies

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Success Criterion 6: IFCA's support and promote the sustainable management of the marine environment

IFCA's will deliver responsive and flexible management of sea fisheries resources to meet local needs, in line with the legislative frameworks and guidance set by Central Government and others, such as the Marine Policy Statement (in place from Spring 2011) and subsequent Marine Plans. In doing this, IFCA's will be able to show that they are having a positive impact, leading to more sustainably exploited sea fisheries resources in their districts.

High Level Objective	Outcome	Performance Indicators
<p>6.1 By April 2012, with partner organisations (such as the Marine Management Organisation, Environment Agency and Natural England) develop shared objectives for the sustainable management of the District's marine environment and ensure that they are reflected in annual plans.</p>	<p>Shared objectives for management of the marine environment have been identified with partner organisations and IFCA's meet their own objectives in conjunction with others, where possible.</p>	<p>Review MoU developed with Kent and Essex IFCA regarding management of the River Stour</p> <p>Monitor MoU developed with North Eastern IFCA regarding respective roles in the Humber EMS</p> <p>Chair NIMEG; Attendance at MMO TCG</p> <p>EIFCA/MMO Shared objectives reflected in MoU and reviewed at monthly tactical control group meetings</p> <p>Shared objective included in annual Report</p> <p>Develop vessel sharing plans with EA/MMO</p>
<p>6.2 By April 2013, develop and implement action plans for communicating and educating coastal communities about sustainable management of the marine environment.</p>	<p>Raised awareness of IFCA's work allows marine and coastal users to be better able to engage with the sustainable management of the marine environment.</p>	<p>Communications and Engagement Strategy delivered</p> <p>Outreach and education events scheduled</p> <p>Examples of engagement to be included in the 2014/15 Annual Report</p> <p>Community meetings scheduled as required</p>
<p>6.3 By April 2015, demonstrate adoption of the principles of best practice in sustainable management of marine environment for the District, as exemplified using tools such as Strategic Environmental Assessments.</p>	<p>IFCA's are aware of and adopt the principles of best practice in sustainable management of the marine environment for the District. IFCA's are adopting the principles of the UK's Marine Policy Statement and marine plans.</p>	<p>Gather information to deliver fisheries management measures for designated 'amber and green' features in European Marine Sites within the mandated timeframe;</p> <p>Review district fisheries strategic assessment</p>

		<p>Deliver WFO duties</p> <p>Continued active engagement with regional marine licensing and development initiatives including attendance and, where requested, chairmanship of Commercial Fisheries Working Groups</p> <p>Conduct duties as Statutory consultee on marine licensing and planning applications</p>
<p>6.4 By April 2015 at the latest, but showing progress from April 2011, demonstrate adoption of minimum standards (for example in line with government guidance on sustainable development) and a precautionary approach for the management and protection of sites of special scientific interest, national nature reserves, Ramsar sites, European marine sites, and/or Marine Conservation Zones within the IFC District.</p>	<p>IFCAs are working in partnership with key delivery bodies to enable marine protected areas within their Districts to be managed sustainably. IFCAs are delivering the principles of sustainable development, as set out in Government guidance.</p>	<p>Liaison with Natural England for up-to-date information on condition of MPA features</p> <p>Habitats Regulations assessment undertaken by Eastern IFCA for Wash Fishery Order fisheries</p> <p>Maintain active role as lead authority for the WNNCEMS and employ the WNNCEMS Project Manager</p> <p>Maintain active role as member of the Stour & Orwell Estuaries Management Group</p> <p>Maintain active role as member of the Humber Estuary Relevant Authorities Group</p> <p>Maintain active role on Regional coastal forums</p> <p>IFCA developing ISO 14001 compliant Environment Management System, including training staff for auditor roles.</p> <p>Utilise and apply Defra guidance for IFCAs on sustainable development</p>

Success Criterion 7: IFCA's are recognised and heard

Each IFCA, and IFC authorities as a group, have a vision and plan for future management of inshore fisheries and conservation. This will help them to be a recognised "brand", managing their public voice so that they are respected and trusted for the expertise they offer

High Level Objective	Outcome	Performance Indicators
<p>7.1 By April 2012, demonstrate ability to effectively engage with Local and Central Government and key partner organisations at a national level, to the benefit of IFCA's as a whole.</p>	<p>The IFCA's create an Association to represent their interests on a national and collective basis.</p> <p>The production of a comprehensive package of national and local Memoranda of Understanding (MOUs) and/or service level agreements (SLAs).</p> <p>Efficient and effective partnership working between all relevant parties and each IFCA.</p>	<p>EIFCA CEO directorship of AIFCA</p> <p>Chairman attendance at AIFCA members forum</p> <p>CEO attendance at quarterly Chief Officers Group meetings</p> <p>Maintain partnerships at local, regional, national and international level.</p>
<p>7.2 By April 2013, develop a strategy and corresponding action plan for promotion of the work of IFCA's and the benefits that they offer to the local community, and demonstrate implementation of the action plan by April 2015.</p>	<p>A strategy and corresponding action plan for the work of IFCA's is delivered by 2013.</p> <p>Promotional/Communications plans developed by each IFCA as a part of a "listening and learning policy".</p> <p>Each IFCA annual report contains evidence and information on progress of the IFCA in delivering the promotions strategy.</p> <p>IFCA staff fully trained to promote the aims and objectives of the authority.</p>	<p>Communication and Engagement Strategy written to reflect Mackman Group benchmarking study recommendations</p> <p>Execute Outreach programme for 2015-16 targeting educational establishments as a priority</p> <p>Area IFCO role maintain high profile "first point of contact" in relevant communities</p> <p>Include a public engagement section within the 2014-2015 Annual Report</p> <p>Continue Community engagement meetings</p> <p>Other engagement opportunities identified, resourced and attended</p> <p>Social media interactions and website content refreshed and maintained for relevance</p>