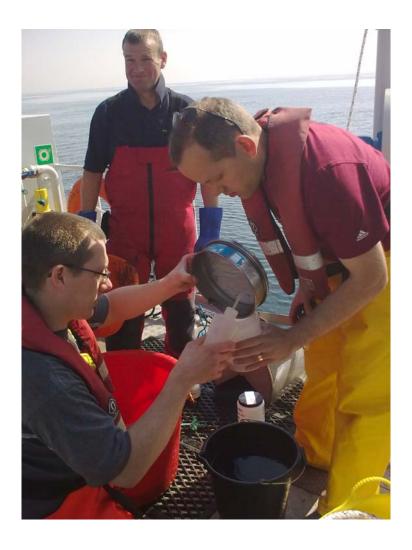
# North Eastern Inshore Fisheries and Conservation Authority



**Strategic Research Plan 2012-2015** 





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Young, T.E., and Wood, J., (2012). North Eastern Inshore Fisheries and Conservation Authority Strategic Research Plan 2012 – 2015. 37pp

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# **Foreword**

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### **Executive Summary**

Since vesting on 1 April 2011, NEIFCA has adopted a number of operational plans which support and inform various core work streams and link to the positive progression of its local and national objectives and overarching organisational aims. One of those plans identified as central to the effective management of the Authority's district was the Strategic Research Plan.

The Authority has clearly demonstrated its commitment to delivering a sustainable well managed marine environment through significant achievements in the first year of the NEIFCA in a wide range of work areas, including the development of the Authority's stock monitoring programmes and its offshore marine survey capabilities. However, many new challenges lie ahead for the Authority in the next few years including; the formal designation of new Marine Conservation Zones, implementation of the European Marine Strategy Framework Directive, and a re-assessment of fisheries management within current European Marine Sites.

In order to address these challenges and ensure the ongoing sustainable management of the marine environment within the district, NEIFCA has developed a formal Strategic Research Plan. This strategy will inform the assessment and monitoring of exploited commercial fish and shellfish stocks, the assessment and mapping of sea bed habitats and marine environmental monitoring work and other research work streams such as the recording and collation of offshore activities.

This Strategic Research Plan sets out the main priorities and objectives for the period 2012 – 2015, building on the positive achievements and successes of the Authority's first year and enabling it to meet on-coming challenges head on.

#### 1. Introduction

North Eastern Inshore Fisheries and Conservation Authority (NEIFCA) is one of ten such Authority's established in October 2010 under provisions contained within the Marine and Coastal Access Act 2009. On 1 April 2011 the Authority assumed full statutory responsibility for managing the exploitation of sea fisheries resources within its jurisdiction.

The Authority currently comprises representatives from the eleven coastal Local Authorities within its area, representing 13 Local Authority members, together with 14 members appointed by the Marine Management Organisation and singular members representing Natural England (NE), the Environment Agency (EA) and the Marine Management Organisation (MMO). The total membership of the Authority is 30 members.

The NEIFCA Strategic Research Plan clearly identifies the key areas that the committee feels are central to delivering empirically based management of the NEIFCA district. This strategy builds on and furthers the strategic environmental assessment work initiated under NEIFCA's predecessor, the North Eastern Sea Fisheries Committee (NESFC). The NESFC was recognised for its forward thinking approach to fisheries management, having developed a sound programme of stock assessment and monitoring that will now be enhanced and broadened under the new Inshore Fisheries and Conservation Authority (IFCA) remit. IFCA's now have a specific framework that helps guide work streams, including a vision, success criteria and high level objectives, allowing a more targeted and long term approach to research planning.

This Strategic Research Plan was developed by the NEIFCA Environmental Team in consultation with the internal Science and Governance Working Group, and approved by the NEIFCA Executive Committee. This long-term plan will help inform and direct the annual research plans that will be published in conjunction with the NEIFCA Annual Plan.

# 1.1 The IFCA Principles

Under provisions contained within the Marine and Coastal Access Act 2009, IFCA's are responsible for the sustainable management of inshore sea fisheries resources within their jurisdictional area. Their statutory duties include the following:

- Seeking to ensure that the exploitation of sea fisheries resources is carried out in a sustainable way;
- Seeking to balance the social and economic benefits of exploitation with the need to protect the marine environment from, or promote its recovery from, the effects of such exploitation;
- Taking any other steps which, in the IFCAs opinion are necessary or expedient for the purpose of making a contribution to the achievement of sustainable development;
- Seeking to balance the different needs of persons engaged in the exploitation of sea fisheries resources in the district; and
- Seeking to further the conservation objectives of Marine Conservation Zones.

### 1.2 The IFCA National Vision

To assist focus on the positive delivery of the above statutory duties, IFCA's have agreed the following national vision which has been adopted by NEIFCA:

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

## 1.3 IFCA Success Criteria and High Level Objectives

To support the positive delivery of the above national vision, IFCA's have agreed a set of success criteria matched with corresponding high-level objectives. The vision, success criteria and high level objectives are designed to assist in the creation of a shared understanding of the aims and objectives of IFCA's, nationally, and focus positive service delivery towards achievement of the national vision.

The following success criteria have been agreed and adopted nationally:

IFCA's have sound governance and staff are motivated and respected;

- Evidence based, appropriate and timely byelaws are used to manage the sustainable exploitation of sea fisheries resources within the district;
- A fair, effective and proportionate enforcement regime is in place;
- IFCA's work in partnership and are engaged with their stakeholders;
- IFCA's make the best use of evidence to deliver their objectives;
- IFCA's support and promote the sustainable management of the marine environment; and
- IFCA's are recognised and heard.

Of the seven specific success criteria, four have a particular resonance with regard to the need for a strategic research plan. These, along with the agreed national high level objectives and associated performance indicators, are summarised in table 1.

**Table 1: Summary of High Level Objectives** 

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 reco	overy of sea fisheries resources from	the effects of exploitation.						
High Level Objective	Outcome(s)	Performance indicator(s)						
By April 2015 demonstrate	Agreed policies and processes in	The issues impacting sea fisheries						
that:	place to review and amend	resources within the IFC District have						
<ul> <li>Key issues likely to</li> </ul>	byelaws and make new ones as	been identified, prioritised and, where						
impact on the	required.	appropriate, suitable management plans						
sustainable management	Process to decide on the most	for them put in place by April 2015;						
of the marine	appropriate management	management plans and progress against						
environment in the IFC	measure to apply to address	them are reflected in annual plans and						
District are identified	fisheries and wider sustainability	reports.						
and evaluated using the	concerns as they arise, including							
best available evidence	the making of emergency	All byelaws made after April 2011 meet						
and a range of	byelaws.	the requirements of Defra guidance.						
management options is	Process to assess the							
considered;	effectiveness of management	IFCAs have necessary records and						
The impacts that	measures in the District.	database systems in place to inform						
different courses of		decision-making.						
action might have in								
managing those key								
issues are thoroughly								
evaluated;								
<ul> <li>Proportionate regulation</li> </ul>								
(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.  By April 2015, all legacy byelaws have been reviewed and evaluated against current evidence base; redundant and duplicate byelaws have been removed and gaps	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	The byelaw review and changes are on schedule to meet objectives.  All byelaws made after April 2011 meet the requirements of Defra guidance.
covered.	and enforcement goals of IFCA	
	at all times.	
	ork in partnership and are engaged	
government bodies, other de the work that they do. Throug		O's, recreational users and individuals in rking, IFCAs will deliver the socio-economic
By April 2011, develop	IFCAs and key partners have a	Initial Memorandum of Understandings
Memoranda of Understanding (MoU's) or Service Level Agreements with key partners, including Cefas, Marine Management Organisation, 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.	clear understanding of their roles and joint responsibilities. The production of a comprehensive package of national and local Memoranda of Understanding and/or service level agreements (Service Level Agreements). Efficient and effective partnership working between all relevant parties and each IFCA.	are agreed and adopted by end of April 2011.  Discussions have been held with partner organisations with regard to Service Level Agreements; Service Level Agreements (if required) are agreed and adopted by April 2012.  Identify and discuss with lead local authority requirement for Service Level Agreement by October 2011.  Each Memoranda of Understanding and Service Level Agreement is reviewed annually to ensure effective delivery of objectives as defined in the annual plan; progress against Memoranda of Understanding action plans is reflected in annual reports.
By April 2012, develop a stakeholder engagement and communication strategy with corresponding plans that:	Develop a strategy for engagement with the wider public. Work with other agencies.  Develop website to allow proper	Set-up database of stakeholders from current list by April 2011. Update list every 6 months. Review contacts list annually.

Demonstrate     transparency and a     balanced approach to     dealing with key     stakeholders; and     Enable consideration of     stakeholder views when     making decisions.	engagement with identified and agreed stakeholder groups. Develop database of identified and agreed stakeholder groups that would find it difficult to engage via the website.	Engagement strategy developed by April 2012.  By April 2012 each IFCA to create a website to give access to current information; all regular forms and documents to be provided electronically by April 2013. Website is reviewed and updated monthly.  Develop interpretation boards and presentations to allow greater interaction with stakeholders.
By April 2014, review stakeholder engagement and communication strategy/plans and implement any necessary improvements by April 2015.	Stakeholder and communication strategy/plans are kept up to date.	Reviewed stakeholder and communication strategy/plans and stakeholder database completed by April 2014.
Success Criterion 5: IFCAs m	ake the best use of evidence to del	iver their objectives
recorded by others (including and Cefas), will have access to inshore fishing and the moderate High Level Objective  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	the Marine Management Organisa	eeking and sharing those generated and ation, Environment Agency, Natural England I and socio-economic information relating et delivery of their duties.  Performance indicator(s)  By April 2012, committee to sign off strategic research plan, which has undergone consultation, covering the period until April 2015.  Research plan is published each year.  Previous year's research report published each year.  IFCA annual report to demonstrate how evidence has been used in decision-making processes.
legislation.  By April 2012, have an agreed action plan of how key, mutually beneficial information will be shared between IFCAs and with key delivery partners to improve efficiency and the delivery of beneficial outcomes.	IFCAs provide relevant information to and have access to relevant information from key delivery partners.	By April 2012 develop and agree Memoranda of Understanding's with delivery partners and review annually.  IFCA representative to take part in annual IFCA scientific conference.  IFCA representative to proactively be involved in relevant evidence networks to share best practice, e.g. Technical Advisory Group.

		1
By April 2013, demonstrate	IFCAs have the technical	IFCA annual plan and report demonstrate
that there is the in-house capability to collect,	capability to collect, analyse, interpret and manage evidence.	use of evidence, resources and capability as per strategic research plan.
analyse and interpret	IFCAs have personnel within the	as per strategie researen piani
evidence to inform	organisation with appropriate	Seek appropriate peer review of research
management policy decisions and meet the	skills to ensure that management decisions make	reports [prior to publication].
minimum requirements	the best use of available	IFCA annual plans and reports, including
laid out in government	evidence.	research plans and reports, are published
guidance on evaluation		online on the IFCA and Technical Advisory
and monitoring.		Group websites.
By April 2014, review	Knowledge sharing plans and	Develop knowledge sharing plans and
evidence and knowledge	procedures are effective and	procedures by April 2014.
sharing procedures and implement any necessary	appropriate.	Knowledge sharing plans are reviewed
improvements by April		and amended annually.
2015.		management of the monine environment

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

IFCAs 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, IFCAs 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(s)	Performance indicator(s)
By April 2012, with partner	Shared objectives for	Identify where there are shared
organisations (such as the	management of the marine	objectives in managing the marine
Marine Management	environment have been	environment with partner organisations
Organisation, Environment	identified with partner	by April 2012 and identify how these
Agency and Natural	organisations and IFCAs meet	impact on IFCAs objectives.
England) develop shared	their own objectives in	
objectives for the	conjunction with others, where	Shared objectives are set out in annual
sustainable management	possible.	plans.
of the Districts marine		
environment and ensure		Progress of shared objectives reported
that they are reflected in		on, in annual reports.
annual plans.		
By April 2013, develop and	Raised awareness of IFCAs work	Plans and processes for raising awareness
implement action plans for	allows marine and coastal users	of IFCAs work in place by April 2013.
communicating and	to be better able to engage with	
educating coastal	the sustainable management of	Examples of engagement set out in
communities about	the marine environment.	annual reports.
sustainable management		
of the marine		Feedback from relevant stakeholders
environment.		regarding the effectiveness of
		engagement is routinely sought.
By April 2015, demonstrate	IFCAs are aware of and adopt	The issues impacting sea fisheries
adoption of the principles	the principles of best practice in	resources within the IFC District have
of best practice in	sustainable management of the	been identified, prioritised and, where
sustainable management	marine environment for the	appropriate, suitable management plans
of marine environment for	District.	for them put in place by April 2015;
the District, as exemplified	IFCAs are adopting the	management plans and progress against

using tools such as	principles of the UK's Marine	them are reflected in annual plans and
Strategic Environmental	Policy Statement and marine	reports.
Assessments.	plans.	
		Examples of proactive involvement in
		relevant networks to share best practice
		are reported in annual reports.
		The impact of the Marine Policy
		Statement and the process of marine
		planning on IFCAs work are assessed and
		addressed annually from April 2011.
By April 2015 at the latest,	IFCAs are working in partnership	Assessment of the condition of marine
but showing progress from	with key delivery bodies to	protected areas by statutory bodies,
April 2011, demonstrate	enable marine protected areas	where available, have been taken into
adoption of minimum	within their Districts to be	account when developing suitable
standards (for example in	managed sustainably.	management plans.
line with government		
guidance on sustainable	IFCAs are delivering the	IFCAs can demonstrate effective
development) and a	principles of sustainable	representation on relevant management
precautionary approach for	development, as set out in	boards/steering groups.
the management and	Government guidance.	
protection of sites of		IFCAs can demonstrate delivery of the
special scientific interest,		principles outlined in Government
national nature reserves,		guidance on sustainable development.
Ramsar sites, European		
marine sites, and/or		
Marine Conservation		
Zones within the IFC		
District.		

# 1.5 Annual Plan & Reporting

NEIFCA is required to prepare and publish Annual Plans, which provide a 'road map' for the forth coming year linking the national IFCA vision, high level objectives and success criteria to local strategic objectives and performance indicators. The Authority then measures the success of implementing this plan through Annual Reporting. The plan also highlights how the training and development of the Authority's Officers and members is integrated to the successful achievement of its own local performance indicators and objectives and ultimately positive delivery of the national vision. The plan details the key policies and strategies which guide the Authority's work streams and are central to its successful implementation during the year ahead.

This research strategy highlights the next three years of NEIFCA research priorities. Each year an annual research plan will be defined, with an associated timeline of activities, and will be annexed to the Authority's Annual Plan.

# 2. Research Resources and Capabilities

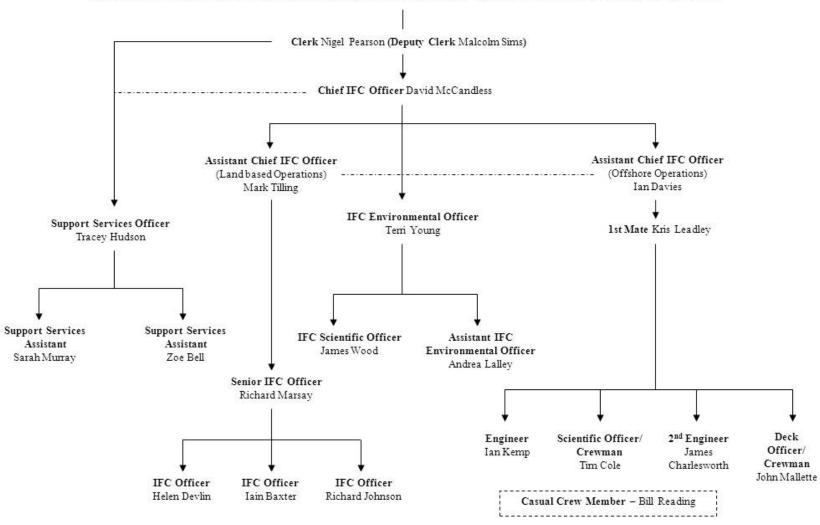
## 2.1 North Eastern IFCA Staff

The Authority is a direct employer having an establishment comprising a Chief Inshore Fisheries & Conservation Officer (IFCO), Assistant Chief IFCO (Land based), Assistant Chief IFCO (Offshore), four shore based IFC Officers, five offshore IFC Officers, an IFC Environmental Officer (EO), an Assistant IFC Environmental Officer and a IFC Scientific Officer (SO).

Clerkship, secretarial, administrative, financial, human resources and legal functions are undertaken by the East Riding of Yorkshire Council - one of the member Authorities.

# **NEIFCA Organogram**

# NORTH EASTERN INSHORE FISHERIES AND CONSERVATION AUTHORITY



## 2.2 North Eastern IFCA Vessels and Equipment

Under the 2011 North Eastern Inshore Fisheries and Conservation Authority Commencement Order all resources, including staffing, were transferred from its predecessor organisation, North Eastern Sea Fisheries Committee.

### 2.2.1 Vessels

#### The North Eastern Guardian III



The North Eastern Guardian III (NEG III) is a 26m-patrol boat, (built and delivered November 2007), capable of a top speed of 26 knots and equipped with the latest electronic navigation systems and marine survey and monitoring equipment.

**Bravo 1** 



The NEGIII carries a 6.4 metre RIB capable of speeds up to 30 knots. The RIB is primarily used for supporting offshore enforcement operations, but is also available to support scientific survey work, such as side scan sonar.

**Humber Protector** 



programme.

The Authority also operates a 6.5 metre land-based RIB which is capable of achieving a speed of 40 knots. The RIB is specifically designed to enhance land-based enforcement operations and is also used to support the Authority's scientific and environmental

## 2.2.2 Survey Equipment

- YSI multi-functional sonde
- Seabotix LBV 300 series ROV
- Tritech towfish side scan sonar (2<sup>nd</sup> generation)
- Starfish side scan sonar
- Delta vision 500ft drop down camera
- Waterproof Peli case with inbuilt 8" monitor, SD recorder and GPS data overlay
- Sea viewer drop down camera
- Sea-Trak GPS video overlay
- 3 x RF concepts drop down cameras
- Olex sea bed mapping system
- WASSP Multibeam sonar with Olex interface
- Roxann Acoustic Ground Discrimination System
- Van veen grab
- 3m beam trawl
- 2 x beach seine nets
- Bass Hi-lift trawl
- Small otter trawl
- Survey parlour pots
- Waterproof Panasonic Toughbook laptop i5
- Rigiflex inshore / estuarine survey boat
- 3 x Newhaven spring toothed scallop dredges
- 3 x scallop envirodredges

## 2.2.3 Miscellaneous

- Wet laboratory
- Sieves
- Scales
- Digital USB Microscope
- Digital callipers
- Mapinfo GIS platform
- SonarTRX
- Coda Octopus

### 2.3 North Eastern IFCA Partners

The NEIFCA, and its predecessor NESFC, developed an excellent track record of working collaboratively with partner organisations, including academic institutions. These links allow for the expertise that exists within such institutions to be accessible and to provide opportunities for undergraduates and postgraduates to work on projects beneficial to the Authority. Officers will strengthen or create links with external institutions and meet to exchange project ideas on a regular basis.

Nationally, relationships will be strengthened between the Environment Agency, the Marine Management Organisation, Natural England and Cefas, in order to identify opportunities for collaboration, the collation and dissemination of data and adoption of best practices.

The Technical Advisory Group (TAG), comprised of IFCA Environmental/Technical Officers and members of the MMO, NE, EA and Cefas, provides a mechanism for developing these links and strengthening relationships. Furthermore, the group allows for standardisation of best practice between IFCA's and national bodies with regards to research, encouraging the sharing of information and non-duplication of effort. NEIFCA officers have been a part of this since its inception and will continue its involvement.

National workshops and conferences are also recognised as valuable opportunities to strengthen the knowledge base and experience of NEIFCA Officers. The Chief Officers Group and the TAG are currently exploring future options for the provision of a scientific conference and workshop.

## 3.1 Strategic Environmental Assessment

Strategic Environmental Assessment (SEA) is a statutory process which aims to provide high level protection of the environment. It seeks to ensure the integration of environmental considerations in the preparation and adoption of plans and programmes, with a view to promoting sustainable development. During 2008, NESFC commissioned a consultant, Mott MacDonald, to pilot this process for assessing the environmental impacts of the current shellfish management programme within its district. This was the first time

both in the UK and Europe that the SEA process had been developed for a fisheries management regime, although similar processes are used in America and Australia.

The outputs were two fold. An Environmental Report, outlining the status and impact of management against a number of environmental factors and; a Generic fisheries SEA framework that will allow for SEA to be completed on another fishery.

This methodology now forms the foundation of the Authority's fisheries management regime for shellfish. The Output of SEA depends on high quality data and implementing and monitoring of new management feeds directly back into the SEA process in order to assess it success in broader terms.

#### 3.1.1 Shellfish

This work area, initially developed by the NESFC and ultimately handed over to the IFCA, has provided the foundation for the consultation and in turn, creation of management options for the shellfisheries within the IFCA district. The next stage of the process in terms of re-visiting the SEA will be to re-appraise the management of the fishery based upon best available evidence.

### 3.1.2 Whitefish

The Authority has committed to the application of the SEA process to the Authority's whitefish fisheries. The objectives of this research strategy will feed directly into this area as with the aforementioned Shellfish SEA. Once assessed any measures identified to improve the sustainability of whitefish species and increase the viability will be evidence based.

#### 4. Research Priorities 2012 - 2015

This strategy outlines core NEIFCA research priorities which may be supplemented with additional projects through external funding streams. Particular areas for development will be informing the Authority's management of whitefish and research on the socioeconomic parameters of the NEIFCA fisheries. The research plan will be subject to revision as required.

# 4.1 Research Summary 2012-2015: Core Activities\*

	Theme 1: Stock Monitoring									
	Project	Project Description	Time Period	SEA Condition	Monitoring Systems	Success Criteria				
Shellfish	Lobster	Stock assessment	Annual		DEFRA Returns / Quayside / Offshore	2; 5; 6				
	Edible Crab	Stock assessment	Annual		DEFRA Returns / Quayside / Offshore	2; 5; 6				
	Velvet Crab	Stock assessment	Annual		DEFRA Returns / Quayside / Offshore	2; 5; 6				
	Whelk	Baseline assessment	2013- 2015		DEFRA Returns / Quayside / Offshore	2; 5; 6				
	Cockle	Stock assessment	Annual		Site specific monitoring	2; 5; 6				
	Scallop	Baseline assessment	2012-2015		DEFRA Returns / Quayside / Offshore	2; 5; 6				
	Nephrop	Baseline assessment	2012-2015	N/A	DEFRA Returns / Quayside / Offshore	2; 5; 6				
	Mussels	Stock assessment	Annual		Site specific monitoring	2; 5; 6				
	Brown Shrimp	Baseline assessment	2012-2015		EU logbook	2; 5; 6				
Finfish	Sea Bass Intertidal	Stock assessment	Annual		NEIFCA Returns / Quayside	2; 5; 6				
	Sea Bass Subtidal	Stock assessment	Annual		NEIFCA Returns / Quayside	2; 5; 6				
	Sole Intertidal	Stock assessment	Annual	TBD	NEIFCA Returns	2; 5; 6				
	Estuarine Fish Surveys	Baseline assessment	2012-2015	TBD	Site specific monitoring	2; 4; 5; 6				

Project	Project Description	Time Period	SEA Condition	Monitoring Systems	Success Criteria			
Finfish Monitoring Baseline assessment		2012-2015 TBD		EU logbook / Spawning and Nursery Area Identification	2; 5; 6			
Theme 2: Ecosystem Based Management								
Flamborough Head NTZ  Conservation / Monitoring  2011-2015  N/A  Independent monitoring strategy  2; 3; 4; 5								
European Marine Sites	Conservation / Monitoring	As required	N/A	Site specific strategy	2; 3; 4; 5; 6			
Marine Conservation Zones	Conservation / Monitoring	As required	N/A	Site specific strategy	2; 3; 4; 5; 6			
Prohibited Trawl Areas	Conservation / Management	As required	N/A	Site specific strategy	2; 3; 4; 5; 6			
Habitat Mapping	Ecosystem Based Management	Annual	N/A	Broad scale and targeted site specific	5; 6			
Environmental Parameter Monitoring	Monitoring	Ongoing	N/A	Monthly site specific	5; 6			
	Theme 3	: Environmental Pro	ojects					
GIS layer development	Management	2013 - onwards	N/A	Overlay development of sightings / species / gear types / habitat	2; 3; 4; 5; 6			
Livelihood Diversification Scoping Study	Socioeconomic	TBD	N/A	TBD	4; 5; 6			
Economic Analysis of Total Value Chain	Socioeconomic	TBD	N/A	TBD	4; 5; 6			
Fisheries Local Action Group	Socioeconomic / Management	2012-2015	N/A	Assistance in development and delivery of Holderness FLAG	4; 5; 6; 7			
CEFAS Sea Angling 2012	Conservation / Socioeconomic	2012-2013	N/A	Survey questionnaires	4; 5; 6; 7			
Data Management	Management	2012-2015	N/A	In-house data holdings / MEDIN	2; 3; 4; 5; 6			

Project	Project Description	Time Period	SEA Condition	Monitoring Systems	Success Criteria
Regulatory Impact Assessments	Socioeconomic / Management	2012-2015	N/A	In-house reports / desk based research	2; 3; 4; 5; 6
Project Inshore	Conservation / Management	2012-2013	N/A	Working with Project Inshore team	2; 3; 4; 5; 6

<sup>\*</sup>Subject to revision

# 4.2 Research Theme 1 – Stock Monitoring

Research theme 1							
Lobster stock assessment		Current SEA condition				Project Details	
Monitoring Systems		Outputs					Provides information for annual stock assessment report
1. Quayside →		Recruit and Industry of	atch repres	entation			Informs stock primary reference points (measureable)
2. Offshore →		Pre-recruit, recruit an	d bycatch re	presentat	ion		Informs stock secondary performance indicators (monitored)
3. DEFRA Returns →		Catch, effort and ICES rectangle information					Addresses SEA and MSC environmental objectives
			-				
Resources		Project Delivery					Project Outcomes 2012-2015
		Lead	Q1	Q2	Q3	Q4	Improve stock condition to sustainable position
Quayside* - 48 days per annum	$\rightarrow$	Environmental	*	*	*	*	Identify weaknesses in stock structure and harvest regime
Offshore** - 30 days per annum	$\rightarrow$	Offshore	*	*	*	*	Maximise recruitment
DEFRA Returns input	$\rightarrow$	Admin * * * * *				Increase spawning stock biomass	
Report Production	$\rightarrow$	Environmental * *					Reduce discards
		Success Criteria:	2; 5; 6.				

<sup>\*</sup>Quayside and \*\*Offshore monitoring assesses a range of species captured by the static pot fishery and the commitments are grouped throughout theme 1

Research theme 1						
Edible Crab stock assessment	Current SEA condition					Project Details
Monitoring Systems	Outputs					Provides information for annual stock assessment report
1. Quayside	Recruit and Industry ca	atch represe	entation			Informs stock primary reference points (measureable)
2. Offshore	Pre-recruit, recruit, by	catch and d	liscard rep	resentatio	า	Informs stock secondary performance indicators (monitored)
3. DEFRA Returns	Catch, effort and ICES	rectangle ir	nformation	1	Addresses SEA and MSC environmental objectives	
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Improve stock condition to sustainable position
Quayside* - 48 days per annum	Environmental	*	*	*	*	Identify weaknesses in stock structure and harvest regime
Offshore** - 30 days per annum	Offshore	*	*	*	*	Maximise recruitment
DEFRA Returns input	Admin	*	*	*	*	Increase spawning stock biomass
Report Production	Environmental	*	*			
	Success Criteria:	2; 5; 6.				

Research theme 1						
Velvet Crab stock assessment	Current SEA condition					Project Details
Monitoring Systems	Outputs					Provides information for annual stock assessment report
1. Quayside	Recruit and Industry ca	atch represe	entation			Informs stock primary reference points (measureable)
2. Offshore	Pre-recruit, recruit, by	catch and d	liscard rep	resentation	า	Informs stock secondary performance indicators (monitored)
3. DEFRA Returns	Catch, effort and ICES	rectangle ir	nformation		Addresses SEA and MSC environmental objectives	
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Improve stock condition to sustainable position
Quayside* - 48 days per annum	Environmental	*	*	*	*	Identify weaknesses in stock structure and harvest regime
Offshore** - 30 days per annum	Offshore	*	*	*	*	Maximise recruitment
DEFRA Returns input	Admin	*	*	*	*	Increase spawning stock biomass
Report Production	Environmental	*	*			
	Success Criteria:	2; 5; 6.				

Research theme 1						
Whelk baseline assessment	Current SEA condition					Project Details
Monitoring Systems	Outputs				Provides information for annual stock assessment report	
1. Quayside	Recruit and Industry ca	atch represe	entation		Informs stock primary reference points (measureable)	
2. Offshore	Pre-recruit, recruit, de	nsity, as by	catch only		Informs stock secondary performance indicators (monitored)	
3. DEFRA Returns	Catch, effort and ICES	rectangle ir	nformation	l	Allows development of long term monitoring systems	
Resources	Project Delivery				Project Outcomes 2012-2015	
	Lead	Q1	Q2	Q3	Q4	Improve stock condition to sustainable position
Quayside* - 48 days per annum	Environmental	*	*	*	*	Identify weaknesses in stock structure and harvest regime
Offshore** - 30 days per annum	Offshore	*	*	*	*	Maximise recruitment
DEFRA Returns input	Admin	*	*	*	*	Increase spawning stock biomass
Report Production	Environmental	*	*			
	Success Criteria:	2; 5; 6.				

Research theme 1						
Scallop baseline assessment	Current SEA condition					Project Details
Monitoring Systems	Outputs				Provides information for annual stock assessment report	
1. Quayside	Recruit and Industry ca	atch represe	entation		Informs stock primary reference points (measureable)	
2. Offshore	Pre-recruit, recruit, by	catch and d	iscard rep	resentation	Addresses SEA and MSC environmental objectives	
3. NEIFCA Returns	Catch, effort and ICES	rectangle in	nformation			Allows development of long term monitoring systems
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Identify frequency, abundance and location of fishery
Quayside* - 48 days per annum	Environmental	*	*	*	*	Maximise recruitment
Offshore - TBC	Offshore					Identify frequency, abundance and location of fishery
EU logbook returns - TBC	Admin					
Report Production					*	
	Success Criteria:	2; 5; 6.				

Research theme 1						
Nephrops baseline assessment	Current SEA condition					Project Details
Monitoring Systems	Outputs					Provides information for annual stock assessment report
1. Quayside	Recruit and Industry c	atch repres	entation		Informs stock primary reference points (measureable)	
2. Offshore	Pre-recruit, recruit, by	catch and d	liscard rep	resentatio	Addresses SEA and MSC environmental objectives	
3. DEFRA Returns	Catch, effort and ICES	rectangle ir	nformation	1	Allows development of long term monitoring systems	
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Identify frequency, abundance and location of fishery
Quayside* - 48 days per annum	Environmental	*	*	*	*	Identify weaknesses in stock structure and harvest regime
Offshore** - 30 days per annum	Offshore	*	*	*	*	
DEFRA Returns input	Admin	*	*	*	*	
Report Production	Environmental	*	*			
	Success Criteria:	2; 5; 6.				

Research theme 1						
Cockle stock assessment	Current SEA condition					Project Details
Monitoring Systems	Outputs				Provides information for annual stock assessment report	
1. Site specific	Shell length, shell wid	th, sample	wet weigh	t	Addresses SEA and MSC environmental objectives Allows development of long term monitoring systems Estimate of site KG and density	
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Improve stock condition to sustainable position
Site specific - 4 days per annum Biometrics - 2 days per annum Report production	Environmental Environmental Environmental		*		* Maximise recruitment * Increase spawning stock biomass	
	Success Criteria:	2; 5; 6.				

Research theme 1						
Mussel stock assessment	Current SEA condition					Project Details
Monitoring Systems	Outputs				Provides information for annual stock assessment report	
1. Site specific	Shell length, shell widt	:h, sample	wet weigh	t	Addresses SEA and MSC environmental objectives Allows development of long term monitoring systems Estimate of site KG and density	
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Improve stock condition to sustainable position
Site specific - 4 days per annum Biometrics - 2 days per annum Report production	Environmental Environmental Environmental		*		*	Identify weaknesses in stock structure and harvest regime Maximise recruitment Increase spawning stock biomass
	Success Criteria:	2; 5; 6.	1	1	ı	

Research theme 1							
Brown Shrimp baseline assessment	Current SEA condition					Project Details	
Monitoring Systems	Outputs				Provides information for annual stock assessment report		
1. EU logbook	Catch, effort and ICES	rectangle ir	nformation		Informs stock primary reference points (measureable) Addresses SEA and MSC environmental objectives Allows development of long term monitoring systems		
Resources	Project Delivery					Project Outcomes 2012-2015	
	Lead	Q1	Q2	Q3	Q4	Identify frequency, abundance and location of fishery	
Information Input - 2 days per annum	Admin	*				Identify weaknesses in stock structure and harvest regime	
Report production	Environmental	*					
	Success Criteria:	2; 5; 6.	ı	1	ı		

Current SEA condition					Project Details
Outputs				Provides information for annual stock assessment report	
Recruit and Industry ca	atch represe	entation		Informs stock primary reference points (measureable)	
Catch, effort and ICES r	rectangle ir	nformation	1	Informs stock secondary performance indicators (monitored)	
					Addresses SEA and MSC environmental objectives
				Allows development of long term monitoring systems	
Project Delivery					Project Outcomes 2012-2015
Lead	Q1	Q2	Q3	Q4	Identify weaknesses in stock structure and harvest regime
Environmental	*		*	*	Maximise recruitment
Environmental	*				Increase spawning stock biomass
per annum Environmental * Environmental *					
Success Criteria:	2: 5: 6				
	Outputs  Recruit and Industry ca Catch, effort and ICES I  Project Delivery  Lead  Environmental  Environmental	Outputs  Recruit and Industry catch represe Catch, effort and ICES rectangle in Project Delivery  Lead Q1  Environmental *  Environmental *  Environmental *	Outputs  Recruit and Industry catch representation Catch, effort and ICES rectangle information  Project Delivery  Lead Q1 Q2 Environmental Environmental Environmental Environmental	Outputs  Recruit and Industry catch representation Catch, effort and ICES rectangle information  Project Delivery  Lead Q1 Q2 Q3  Environmental * *  Environmental *  Environmental *	Outputs  Recruit and Industry catch representation Catch, effort and ICES rectangle information  Project Delivery  Lead Q1 Q2 Q3 Q4  Environmental * * *  Environmental *

Research theme 1						
Sea bass (subtidal) stock assessment	Current SEA condition					Project Details
Monitoring Systems	Outputs				Provides information for annual stock assessment report	
1. Quayside	Recruit and Industry ca	atch represe	entation		Informs stock primary reference points (measureable)	
2. NEIFCA Returns	Catch, effort and ICES i	rectangle ir	nformation		Informs stock secondary performance indicators (monitored)	
					Addresses SEA and MSC environmental objectives	
						Allows development of long term monitoring systems
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Identify weaknesses in stock structure and harvest regime
Quayside - 8 days per annum	Environmental	*		*	*	Maximise recruitment
NEIFCA returns - 2 days per annum	Environmental	*				Increase spawning stock biomass
Report production	Environmental				*	
	Success Criteria:	2; 5; 6.				

Research theme 1						
Sole net (intertidal) stock assessment	Current SEA condition	TBD			Project Details	
Monitoring Systems	Outputs				Provides information for annual stock assessment report	
1. Quayside	Recruit and Industry ca	tch represe	entation		Informs stock primary reference points (measureable)	
2. NEIFCA Returns	Catch, effort and ICES r	ectangle in	nformation		Informs stock secondary performance indicators (monitored)	
				Addresses SEA and MSC environmental objectives		
		Allows development of long term monitoring systems				
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Improve stock condition to sustainable position
Quayside - 8 days per annum	Environmental	*		*	*	Identify weaknesses in stock structure and harvest regime
NEIFCA returns - 2 days per annum	Environmental	*				Maximise recruitment
Report production						Increase spawning stock biomass
	Constant Criteria	2.5.6				
	Success Criteria:	2; 5; 6.				

Research theme 1									
Estuarine Fish Surveys		TBD			Project Details				
Monitoring Systems	Outputs				Provides information for annual stock assessment report				
TBC	Pre-recruit, recruit, by	catch and d	iscard rep	resentatio	Informs stock primary reference points (measureable) Addresses SEA and MSC environmental objectives Allows development of long term monitoring systems				
Resources	Project Delivery					Project Outcomes 2012-2015			
	Lead	Q1	Q2	Q3	Q4	Improve stock condition to sustainable position			
Surveys - TBC	Environmental	*			*	Identify weaknesses in stock structure and harvest regime			
Report production	Environmental	*				Maximise recruitment Increase spawning stock biomass			
	Success Criteria:	2; 4; 5; 6.							

Research theme 1						
Finfish Monitoring						Project Details
Monitoring Systems	Outputs				Provides information for annual stock assessment report	
1. EU logbook	Catch, effort and ICE	S rectangle in	nformation		Informs stock primary reference points (measureable)	
2. Offshore	Pre-recruit, recruit, I	bycatch and d	liscard repi	resentatio	Addresses SEA and MSC environmental objectives Allows development of long term monitoring systems	
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Improve stock condition to sustainable position
Information input - TBC	Admin	*	*	*	*	Identify weaknesses in stock structure and harvest regime
Offshore sampling - TBC	Offshore					Maximise recruitment
						Increase spawning stock biomass
	Success Criteria:	2; 5; 6.			1	

# 4.3 Research Theme 2 – Ecosystem Based Management

Research theme 2						
Flamborough Head No Take Zone						Project Details
Monitoring Systems	Outputs				Provides information for annual stock assessment report	
1. Offshore shellfish monitoring	Pre-recruit, recruit, by	catch and d	iscard rep	resentatio	Informs stock primary reference points (measureable)	
2. Mussel stock monitoring	Pre-recruit, recruit, de	nsity and b	ed size		Addresses SEA and MSC environmental objectives	
					Allows development of long term monitoring systems	
Activities	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Improve stock condition to sustainable position
Offshore shellfish monitoring - 1 day	Environmental		*	*		Identify weaknesses in stock structure and harvest regime
Mussel stock monitoring - 2 days	Environmental		*			Maximise recruitment
Report Production	Environmental * *					Increase spawning stock biomass
	Success Criteria:	2; 3; 4; 5; 6	<u> </u> 5.			

Research theme 2						
European Marine Sites					Project Details	
Monitoring Systems	Outputs				To carry out an appropriate assessment of fishing gear	
1. Appropriate Assessments	Impact assessment of	gear types			interactions with designated features within protected areas.	
2. Management Group Meetings	Management recommo	endations				
3. Responsive monitoring /research	As required					
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Environmental impacts identified
Desk based research - TBD	Environmental	*	*	*	*	Responsive monitoring/research plans implemented
Report production	Environmental			*	*	Appropriate management measures introduced
NEIFCA representation - 12 days	Environmental	*	*	*		
	Success Criteria:	2; 3; 4; 5; 6				

Research theme 2						
Marine Conservation Zones					Project Details	
Monitoring Systems	Outputs					To carry out an appropriate assessment of fishing gear
1. Appropriate Assessments	Habitat maps				interactions with designated features within protected areas.	
2. Offshore surveying	Monitoring of designat	ed feature:	S			
3. Management Group Meetings	Report					
4. Responsive monitoring /research	As required					
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Environmental impacts identified
Desk based research - TBD	Environmental	*	*			Responsive monitoring/research plans implemented
Offshore surveys - WASSP - TBD	NEG/Environmental		*	*		Appropriate management measures introduced
Report Production	Environmental	*				
NEIFCA Representation - TBD	Environmental	*	*	*		
	Success Criteria:	2; 3; 4; 5; 6	j			

Caveat: The overall role of IFCA's with regards to MCZ's has not yet been finalised. Therefore this research stream is likely to change to accommodate a more defined role.

Research theme 2						
Prohibited Trawl Areas					Project Details	
Monitoring Systems	Outputs				AGDS surveys to monitor habitat recovery of the sea bed	
1. WASSP	High resolution habita	t maps			within prohibited trawl areas.	
2. Camera sled	Ground truthing and in	nagery of se	ea bed			
3. Responsive monitoring /research	As required					
	Report					
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Responsive monitoring/research plans implemented
Offshore surveys - 6 days per annum	NEG III		*			
Analysis - 12 days per annum	Environmental			*		
Report production	Environmental				*	
	Success Criteria:	2; 3; 4; 5; 6	j.			

Research theme 2						
Habitat Mapping					Project Details	
Monitoring Systems	Outputs				To develop maps of benthic habitats within the district. To	
1. WASSP system	Habitat maps - District/	targeted			assess baseline condition of MCZ designated features and	
3. Sidescan sonar	Habitat maps - targeted				develop and implement a monitoring plan. Existing data	
4. Camera sled	Ground truthing					from external sources will be identified and utilised where
						possible.
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Baseline habitat maps developed indicating
Offshore surveys - 20 days	NEG/Environmental		*	*		extent/health/condition.
Ground truthing - 10 days	NEG/Environmental		*	*		Features of interest identified.
Analysis	Environmental	*			*	Monitoring plans implemented.
Report production	Environmental	*			*	
	Success Criteria:	5; 6.				

Research theme 2						
Environmental Parameters						Project Details
Monitoring Systems	Outputs					Monthly offshore sampling at eight sites within the district,
1. Sonde	Longterm data sets of s	salinity, ter	nperature,	, disolved	oxygen,	using a portable sonde, to monitor oceanographic
	turbidity and specific o	onductivity	<b>y</b> .		parameters.	
	Data analysis					
	Report					
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Long term monthly/annual trends in environmental
Sample collection - 12 days per annum	NEG III	*	*	*	*	conditions to provide indicators of progress in achieving good
Data analysis - 5 days per annum	Environmental	*			*	environmental status by 2020 (Marine Strategy Framework
Report production	Environmental	*			Directive).	
	Success Criteria:	5; 6.				

# 4.4 Research Theme 3 – Environmental Projects

Research theme 3						
GIS Layer Development					Project Details	
Monitoring Systems	Outputs				Overlay of maps to conduct management gap analysis.	
1. Map info	Data layers for manage type, species range, p Report			g effort, ha		
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Spatial representation of key information throughout the
Data management - 20 days	Environmental	*	*	*		district.
Map creation - 20 days	Environmental		*	*		Spatial analyses capabilities developed.
Gap analysis - 10 days	Environmental		*	*		
Report production - 10 days	Environmental			*		
	Success Criteria:	2; 3; 4; 5; 6.	•			

Research theme 3						
Livelihood Diversification Scoping Study						Project Details
Monitoring Systems	Outputs					To identify environmentally sustainable avenues for
1. Socioeconomic study	Socioeconomic analysi	s of NEIFC	A district		enhancing income diversification for the Authority's fishing	
2. Analysis of development opportunities	Idenitification of poter	ntial altern	ative liveli	hoods	communities.	
3. Consultation	Report and recommen	dations				
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Increased social resilience against future challenges to the
Data harvesting	Environmental	*	*	*	*	inshore fishing fleet.
Consultation	Environmental	*			*	
Report development	Environmental	*				
I and the second		I	1	1	1	

Research theme 3						
Economic Analysis of Value Chain		Project Details				
Monitoring Systems	Outputs				To analyse the distribution of benefits in the value chain to	
1. MMO RBS returns	First sale value datase	t for key co	mmercial f	isheries	inform management and policy decisions.	
2. Retail price index	End sale value dataset	for key con	nmercial fi	sheries		
3. UKFEN	Processing value datas	et				
4. Metadata	Report					
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Improved knowledge of value chain economics.
Desk based research - 80 days	Environmental	*	*	*	Identify areas of maximising economic returns for the NEIFCA district fisheries.	
	Success Criteria:	4; 5; 6.	•			

Research theme 3						
Fisheries Local Action Group					Project Details	
Monitoring Systems	Outputs					
1. Assist partner project development	Improved reputation of	of IFCA, som	ne projects	address si	uccess critera	Supporting EFF axis 4 regional FLAG group
2. Attend Board meetings	Provide advice and gui	idance on p	rojects			
3. Attend fisheries sub-group meetings	Provide advice and gui	idance on p	rojects			
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	
Grouped 20 days per annum	Environmental	*	*	*	*	Successful delivery of FLAG projects and funding by 2015
	Success Criteria:	4; 5; 6; 7.				

Research theme 3						
CEFAS Angling 2012					Project Details	
Monitoring Systems	Outputs					The Angling 2012 project is a collaboration between the
1. Questionnaire	Dataset for NEIFCA dis	trict			MMO, CEFAS and IFCA's to determine what fish are being	
2. Project steering group	Monthly reporting to C	EFAS			caught by anglers and the importance of this sport to	
	Annual research repor	t			businesses around the coast of England.	
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Improved scientific understanding of inshore fish stocks and
Survey - 48 days per annum	Environmental	*	*	*	*	more effective representation of the sea angling community
Report production	Environmental	*	*	*	*	in decision making.
Administration - 15 days per annum	Environmental * * * *					
	Success Criteria:	4; 5; 6; 7.				

Research theme 3						
Data Management						Project Details
Monitoring Systems	Outputs					To adopt best practices in the management of NEIFCA data
1. In-house assessment	Data catalogue				holdings through the standardising of storage and metadata	
2. Metadata development	Metadata standardised	d for data h	oldings		protocols. The sharing of data through engagement with the	
3. MEDIN / DASHH	Online representation	of NEIFCA	data and r	eports	MEDIN online database.	
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Up to date catalogue of NEIFCA data holdings.
Data sorting	Environmental	*	*	*	*	Up to date and standardised metadata.
Metadata development and upload	Environmental	*	*	*	*	Contribution to the MEDIN network through the upload of
Ongoing maintenance	Environmental * * * *					metadata on NEIFCA data holdings.
	Success Criteria:	2; 3; 4; 5; 6				

Research theme 3						
Regulatory Impact Assessments						Project Details
Monitoring Systems	Outputs				To identify potential impacts, both positive and negative, to	
1. Data gathering and analysis	Evidence based needs	analysis			inform regulatory process.	
2. Examination of literature	Literature review on p	otential so	cial, econo	mic and		
3. Options development and Assessment	environmental impact	S				
4. Consultation						
Resources	Project Delivery					Project Outcomes 2012-2015
	Lead	Q1	Q2	Q3	Q4	Scientifically sound and appropriate byelaw making to
Desk based study	Environmental	*	*	*	*	support the sustainable management of the NEIFCA district
Consultation	Administration	*	*	*	*	fisheries.
	Success Criteria:	2; 3; 4; 5; 6	j			

Research theme 3						
Project Inshore						Project Details
Monitoring Systems	Outputs				Proactively engage with the Project Inshore team to assess	
1. Fishery analysis	The development of management recommendations to aid in				the state of inshore fisheries within the NEIFCA district,	
2. MSC pre-assessment gap analysis	the sustainable management of the NEIFCA district.				through the pre-assessment stage of the MSC certification	
3. Sustainability review					standards.	
Resources	Project Delivery				Project Outcomes 2012-2014	
	Lead	Q1	Q2	Q3	Q4	NOTE: The Authority's management regime will remain
Data provision	Environmental	*	*	*	*	grounded in the SEA process. However, it is recognised that synergies exist between the two processes and therefore, NEIFCA will consider Project Inshore outputs in relation to the SEA.
	Success Criteria:	2; 3; 4; 5; 6	i			

### 5. Data Management

### 5.1 Data Storage

All raw data gathered from the Authority's district is stored electronically in spreadsheet and database format enabling ease of manipulation, import into other programmes and statistical analysis. There is a need to conduct an assessment of the Authority's data holdings in order to catalogue and structure the files in a coherent system.

Spatial data is stored in shape file format for presentation and analysis in the GIS platform MapInfo. This is a developing work stream that aims to generate key data layers that present information related to the Authority's district, such as management regimes, fishing effort, habitat types and commercial species ranges.

### 5.2 Data Sharing

Data sharing is a key objective within the IFCA success criteria. The TAG has been leading on examining ways of sharing meta-data within the framework of the Marine Environmental Data & Information Network (MEDIN). NEIFCA will utilise and contribute to the network through the development and upload of metadata on NEIFCA data holdings. A report will be made to the Authority when this work stream reaches a suitable stage in its development.

While the sharing of data is encouraged, NEIFCA is mindful of the need to act prudently with regards to data protection. The sharing of data with external parties is subject to review, and may require a memorandum of understanding containing terms and conditions on how the data can be used.

#### 5.3 Data Dissemination

NEIFCA are constantly generating new datasets through its stock assessment and monitoring programmes. This data is analysed using the statistical programme 'R', and deductions made on the health of the Authority's fisheries. The data is presented in report format and disseminated to Authority members, key partners and the general public on the Authority's website.

# 6. Funding

Financial sources for funding the scientific research of the Authority are mainly derived from central proceeds. In addition to this, NEIFCA has a good track record of developing and collaborating on externally funded projects. The North Sea is a particularly busy area with extensive offshore development, such as oil and gas exploration and storage, ports and navigation, dredging and disposal and offshore wind farms to name a few. A horizon scanning exercise will be conducted to assess the potential for generating external funding streams, with a view to identifying areas of research that will assist offshore developments in minimising impacts on the marine environment. NEIFCA will ensure that any future project development directly feeds into the Scientific Research Plan and the high level objectives of the IFCA.