



Annual Research Plan

2015-2016



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This document can also be viewed online at www.nifca.gov.uk

1. Introduction

Northumberland Inshore Fisheries and Conservation Authority (NIFCA) is one of the ten Inshore Fisheries and Conservation Authorities in England created under Section 150 of the Marine and Coastal Access Act 2009 (MaCAA, 2009) providing inshore fisheries and conservation management. The NIFCA was fully vested on 1st April 2011 and its district extends along the East Coast of England. The NIFCA District encompasses the rivers in the district up to the national tidal limit as well as the estuarine and coastal waters around Northumberland, from a line drawn through the centre of the River Tyne to the Scottish border out to 6 nautical miles from baselines. The NIFCA district neighbours the North Eastern IFCA district to the south and with Scottish waters to the north.



The Authority's district contains both EU and UK Marine Protected Areas, including Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs), Special Areas of Conservation (SACs), and Ramsar sites, National Nature Reserves as well as a Marine Conservation Zone (MCZ). NIFCA will need to develop management measures for these sites.

The IFCA Vision is a shared vision for all IFCAs where we "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".

This Annual Research Plan sets out the research projects and work priorities for NIFCA between May 2015 and May 2016. The research will be based on the priorities outlined in the NIFCA Annual Plan 2014-2015. There were five main areas of focus detailed in the annual plan and these are:

- The development of Marine Protected Area management plans
- Fishing activities and European Marine Sites: Bait Digging, Potting and Netting
- Marine Conservation Zones
- The long term sustainability and management of shellfisheries within the district
- The assessment and development of recreational sea angling (RSA) within the district.

This research plan has been produced to outline the research activities needed to be undertaken to collect data to inform these work priorities and to provide a sound evidence base to aid the Authority in its decision making process both in terms of achieving successful and sustainable management and a protected marine environment.

2. Research Resources and Capabilities

Northumberland IFCA Environment Team

Northumberland IFCA has 14 members of staff including a Chief Executive Officer, Chief Officer, 2 Deputy Officers, an Environment & Scientific Officer, 5 IFCO's and 4 Office staff.

The Members of the Environmental team are:

Deputy Chief Officer (Environmental)

Jon Green jon.green@nifca.gov.uk

Environmental & Scientific Officer

Sally Stewart-Moore Sally.Stewart-Moore@nifca.gov.uk

Environmental & Scientific Officer – position vacant (recruitment process underway)

Each member of the environment team brings a variety of qualifications, specific skills, expertise and experience in conducting research and have the capability to collect, analyse and interpret a wide range of scientific and research data. All have a background in marine biology and bring wide ranging expertise from habitat mapping to underwater video analysis to management of shellfisheries, developing MPA management plans, stock assessments and appropriate assessments. Officers sit on a variety of focus and working groups in particular relating to national committees and IFCA Technical Advisory Group (TAG). Both enforcement and environmental IFCOs will work together to ensure that research priorities outlined in this plan will be delivered. Strong working relationships have been developed with academic institutions in the district, in particular the School of Marine Science and Technology at Newcastle University, which have proved to be very beneficial and researchers, students and interns work with the NIFCA officers to help deliver certain aspects of the research work undertaken.

2.1 Northumberland IFCA Research Equipment

Northumberland IFCA has a variety of equipment which may be utilised to undertake research to fulfil the work priorities outlined in this plan. Officers are skilled in a range of survey methodologies and analytical and reporting skills. Details of the equipment including vessels available to undertake research can be found in Table 1 below

Item Description	Brief Description of Use
<p>Patrol Vessel- St.Aidan</p> 	<p>Built in 2014/2015 at Goodchild Marine, Great Yarmouth. 16m GRP, Catamaran, Top Speed 23knts.</p> <p>Multi-Purpose, Enforcement/Survey Vessel, Designed to carry a 5.3m Rigid Inflatable Boat (RIB) on the stern, which can be quickly deployed via the 'A' frame.</p> <p>With RIB taken off the vessel 'A' frame can be used to carryout grab-sampling, trawling and towing of multi beam equipment. Also on-board starboard side a 1.5 ton pot hauler. Small wet-lab situated at the back of the wheelhouse.</p> <p>Electronics include Olex, WASSP Multi Beam, Nav-net and 2 computer stations.</p>
<p>5.3m Ribcraft on-board RIB 'T T St Aidan'</p>	<p>Multi-purpose RIB can be used for enforcement, boarding's and fishing gear inspections. Also used for close inshore survey work, towing a Starfish, Side-scan Sonar, 'V' Notching.</p>
<p>7m Shore Rib Bravo 1 (towed by Authority Landrover)</p> 	<p>Can be used for both enforcement and survey work. Capable of being launched at various sites throughout the Authority's District. Similar to the On-board RIB it can be used for close inshore survey work, towing a Starfish, Side-scan Sonar, 'V' Notching. Main role is enforcement, boarding commercial and recreational boats, inspection of fishing gear.</p>
<p>1 estuary survey seine net</p>	<p>Beach seine net surveys for juvenile fish</p>
<p>Inflatable flat bottom boat with outboard engine</p>	<p>Used for estuary surveys</p>
<p>2 double "D" estuary survey fyke nets</p>	<p>Used for juvenile fish surveys.</p>
<p>75 metre umbilical surface cable and a stainless tow cable</p>	<p>Mapping reef features in district-ground truthing</p>
<p>180 metre umbilical surface cable</p>	<p>Mapping reef features in district-ground truthing</p>
<p>Starfish 452F sidescan and 50 metre tow cable</p>	<p>Mapping Sea bed features in district-ground truthing</p>

<p>Surface box for camera, 7 inch LCD video screen, GPS overlay, Lynn Hawk video enhancer (with own power source), Pinnacle dazzle H.D. screen capture, Getac fully rugged laptop with 1 terabyte additional storage.</p> 	<p>Mapping reef features in district</p>
<p>1 GoPro black edition HD camera in Sea Pro housing, LED light source, 2 X laser scalars live video feed.</p> 	<p>Mapping reef features in district</p>
<p>1 GoPro black edition HD camera</p>	<p>Mapping reef features in district</p>
<p>1 Sony HDR XR260 8.9 megapixel in SeaPro housing frame with LED light and 2 X laser scalars, towing system, live video surface feed.</p>	<p>Mapping reef features in district</p>
<p>1 Panasonic HCX920 20.4 HD mega-pixel camera in SeaPro housing</p>	<p>Mapping reef features in district</p>
<p>1 0.1m² Day grab</p>	<p>Ground truthing seabed in the district</p>
<p>1 0.1m² van Veen grab</p>	<p>Ground truthing seabed in the district</p>
<p>Furuno WASSP Multibeam sonar 120° swath width</p>	<p>Broadscale seabed classification and mapping in the district</p>
<p>YSI Pro Plus water meter with temperature, pH, dissolved oxygen and salinity sensors.</p>	<p>Assessing physical and chemical characteristics of water throughout district</p>

3. Research and Environmental Projects for 2015-2016.

Task	Area	Frequency	Resource Requirements	Potential for Collaborative Work	Additional Resource Requirements
Core Work					
Mussel Surveys	Fenham Flats located in Lindisfarne SPA/SSSI.	-Annual in March	-NIFCA Officers (Enforcement/Environmental) -Land rover -Sieves	-Natural England -Environment Agency -EMS Officer	Additional travel for volunteers and staff.
	Blyth Estuary located in Northumberland Shore SSSI	-Monthly survey	-1m ² sediment corer -Fork/trowel -'Dutch wand' -Handheld GPS -Vernier calipers -Electronic weighing scales -Buckets		
Lobster stock assessment	Throughout NIFCA district	Survey 4 boats every month for the next year. (2014-2016)	-NIFCA Officers -Participating fishermen	-Newcastle University	
Lobster population genetics	Throughout NIFCA district	Survey 4 boats every month for the next year. (2014-2016) (as above)	- NIFCA Officers - Participating fishermen	- Manchester University	
Fish surveys	Aln Estuary: Lower part of the Aln estuary, parallel to Alnmouth	Bi-Annual in May/June & September/October to correspond to migration and spawning seasons	-NIFCA officers -Fyke Nets (x2) -Seine nets -NIFCA boat -Water meter	-Natural England -The Rivers Trust -Environment Agency -Local stakeholders -Volunteers -Newcastle University	

	Druridge Bay beach	Monthly survey to assess juvenile populations			
Beached bird survey	Druridge Bay beach	Monthly surveys of beach for beached birds (combined with fish surveys above)	- NIFCA officers	- North east England beached bird survey	
Recreational Sea Angling	Throughout NIFCA district	Survey recreational anglers	-NIFCA officers -GIS software -Survey forms	-Newcastle University -Cefas -Natural England -Local angling groups	
EMS Review-Amber sites					
Assessment of netting activity – all sites	Throughout the NIFCA District-concentrate on hot spots and where netting is known to occur.	Gathering historic data from NIFCA monthly returns and also undertaking questionnaire with local fishermen	-NIFCA officers -NIFCA boats	-Natural England -Environment Agency -National Trust -Wildlife trust -RSPB	
Assessment of bait collection activity including crabs – all sites	-Throughout the Berwickshire and North Northumberland Coast SAC. -Officers collecting information on bait collection throughout Northumberland	-An MPhil student at Newcastle University will be assessing the activity for the next year. -NIFCA officers collecting data on bait collection activities whilst on shore patrol	The student may use NIFCA personnel for knowledge if they choose.	-Natural England -The fishing industry -NIFCA	

Assessment of potting	Throughout the Berwickshire and North Northumberland Coast SAC on subtidal reef.	PhD student at Newcastle University completing this work for the next 3 years. Assessments will take place mostly throughout the summer.	The student may use the NIFCAs boats and equipment for assessing impacts on reefs if required.	-Natural England -Other IFCAs	
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4. Partnership Working

The Research and Environmental Projects outline the key pieces of work that will be taking place within Northumberland throughout the course of this year. Partnership working is crucial for the effectiveness for all IFCA's. Key partner organisations for the NIFCA's research and environment team include our funding authorities-Northumberland County Council and North Tyneside County Council-The Marine Management Organisation, Natural England, The Centre for Environment, Fisheries and Aquaculture Science (Cefas), the Environment Agency, local biodiversity partnerships, and wildlife NGOs including the Royal Society for the Protection of Birds and the Wildlife Trusts. In addition, the NIFCA benefits from collaborating with other relevant authorities on the management groups for the European Marine Sites within the district.

5. References

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