Research Plan

2014 – 2015

Introduction

Kent and Essex IFCA has a statutory duty under the Marine and Coastal Access Act 2009 to promote the sustainable exploitation of sea fisheries resources and to seek to ensure that the conservation objectives for marine protected areas (MPA) are furthered. Research activities within KEIFCA are diverse, ranging from fisheries or MPA feature surveys to fishing activity data gathering and analysis. During 2014-15, research will focus on continued work within European Marine Sites (EMS) and Marine Conservation Zones (MCZ), in addition to specific fisheries projects. Through working closely with a wide variety of organisations and through KEIFCA surveys, we will collect and analyse data to provide evidence for management decisions, for both MPA and fisheries management.

Research activities in 2014-2015

Marine Protected Area Research

There are 13 European Marine Sites (EMS) and 4 new Marine Conservation Zones (MCZs; designated in November 2013) within the KEIFCA district along with several SSSI's and Ramsar sites. With many species and habitat features designated for conservation within these protected areas, it is important that the extent and condition of features along with the impact of fishing is assessed in order to inform management decisions. We will continue working with Natural England (NE) and Cefas to collate feature data and assess the impacts of fishing.

Specific research projects related to MPAs in 2014-2015 include:

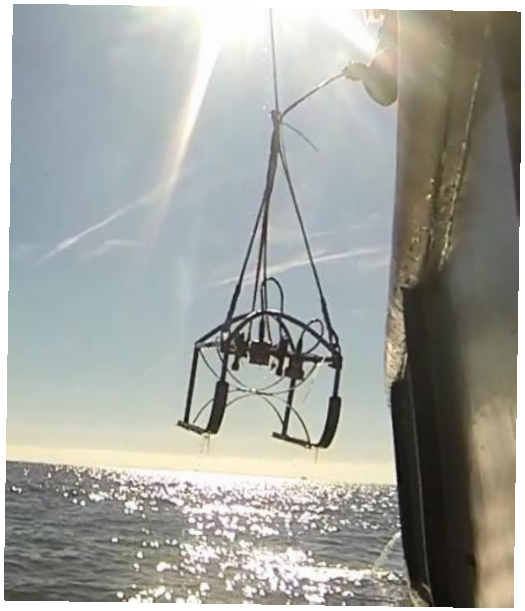
- *Folkestone Pomerania MCZ survey*
  Survey work will be carried out to establish a baseline of feature abundance and extent that can be used to inform and evaluate future management. Underwater video and stills camera footage will be collected and analysed for the percentage cover of key species, taxa or habitats designated as features of the MCZ.

- *Blackwater, Crouch, Roach and Colne MCZ survey*
  Key features of this MCZ are native oysters and native oyster beds. Native oysters will be surveyed, in collaboration with NE, using an experimental oyster dredge to map the abundance and location of native oysters.

- *Impact of fishing on MPA features*
  Information will be gathered on the impacts of various fishing gear and activities on MPA features. Through working closely with the IFCA Technical Advisory Group (TAG), data will be shared nationally and gaps in knowledge identified. Further survey work may be required in 2014-2015 to assess the impact of certain fishing gear and MPA feature interactions.

Fisheries Research

Using a framework of species management plans for the 18 priority species in the KEIFCA district, research for fisheries management in 2014-15 will involve sourcing and analysing available data in addition to targeted surveys to fill data gaps. Forming collaborations with academic researchers will be important to provide the expertise and additional resources required to answer specific questions for stock modelling. Ongoing research includes cockle surveys and stock assessments to set the total allowable catch (TAC) under the Thames Estuary Cockle Fishery Order. Catch return data from the whelk permitting byelaw will continued to be analysed and used along with survey data to model stock levels (in collaboration with Cefas and academic partners).



Fisheries research in 2014-15 will also involve gathering data on fishing activities in the district. Various routes of gathering this information will continue to be used, following on from the fishing activity mapping and informing the future projects running in 2013-14.

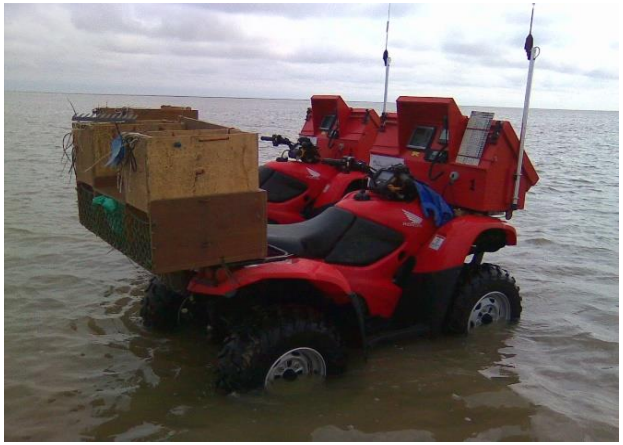
- *Whelk research*
  Information on whelk reproductive biology, abundance and distribution is needed to manage the stock sustainably. KEIFCA will work with academic partners, postgraduate students and Cefas to survey and characterise populations. Whelk catch return data submitted under the KEIFCA whelk permitting byelaw will continue to be analysed and fishing effort assessed. Continued stakeholder engagement will be an important factor in ensuring successful management.

- *Cockle fishery stock assessment*
  Under the Thames Estuary Cockle Fishery Order, KEIFCA has been regulating commercial cockle fishing in the area covered by the fishery order since 1994. The TAC is set by KEIFCA every year based on stock surveys carried out using ATVs in the intertidal area and from sea using a Day grab deployed from 'Tamesis' to sample subtidal cockle populations. These ongoing surveys will continue in 2014-2015.

- *Fishing Activity Mapping*
  Since 2008, all sightings of fishing gear and vessels, including their location, fishing activity and gear used, has been recorded by officers during routine patrols. This provides spatial distribution of fishing effort and intensity which can be used to inform management decisions for fisheries and MPAs and will also be useful for assessing the impact of planned developments on fisheries.

- *Informing the Future*
  For over a year, the fisheries liaison officer in Kent has been gathering data provided by fishermen in the form of questionnaires. This includes a range of data from fish stocks and weather conditions to market prices and is collated and analysed by KEIFCA. Data is owned by the fishermen but can also be used by KEIFCA to inform management decisions or planned projects. In 2014-2015, informing the future will continue to work with the fishing community in Kent but will also seek to find fishing liaison officers to introduce the project to Essex.

Resources



Vehicles

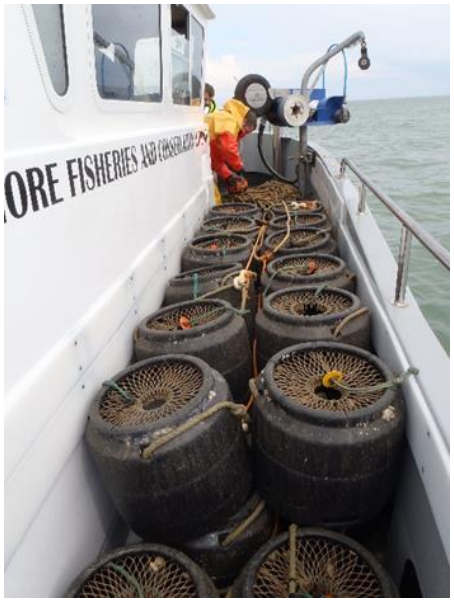
KEIFCA owns a Ford Fiesta van, based at Ramsgate which is 7 years old as well as a Toyota Hilux truck based at Brightlingsea, which is 18 months old. The vehicles are used to help transport key equipment around the district as well as undertake shore patrols.

The Authority also owns 2 'Sand Survey' Honda 420cc All-Terrain Vehicles (ATV) that are based at Shoeburyness and are used for quarterly cockle surveys on the Maplin Sands. They are fitted with plotters, marine radios, GPS and a range of safety and survey equipment.

Vessels

KEIFCA has two fishery patrol vessels. The 'Ken Green' is based in Ramsgate and has a crew of 4. The vessel came into service in 2000, is a 16m monohull fast patrol vessel, and carries a RIB which can be launched from its ramp in various sea conditions to undertake boardings at sea. The Marine Coastguard Agency has previously advised the Authority that the 'Ken Green' should have a crew of 4 when operating the Rigid Inflatable Boat (RIB). This confirms the manning levels as specified in the Health and Safety Policy instituted and agreed by the K&ESFC in 2000. In addition to acting as the primary enforcement vessel, the 'Ken Green' can also serve as a platform for underwater camera and video surveys.

'Tamesis', a 12m catamaran, which is partially EU grant funded, came into service in 2011. This vessel is based at Brightlingsea, and has a standing crew of two which is supplemented by the Essex shore officer post to make a mustered crew of 3, and can undertake enforcement, monitoring and survey duties. The vessel also carries a RIB for boarding (when this is in use the vessel will carry a crew of 4 utilising either the Project Officer or Lead Scientific and Conservation Officer). She is fitted with pot and fixed net haulers and has a winch, rated to 900 kgs, capable of deploying drop and towed equipment. An Olex system is also fitted to both vessels for seabed mapping.



Equipment

In addition to vehicles and boats, KEIFCA has a variety of equipment for sampling benthic habitats and organisms including a 0.1m^2 Day grab, a VideoRay Pro3 remote operated vehicle (ROV), GoPro Hero3 HD cameras with waterproof housing, a camera sled frame, a selection of sieves and riddles and an on-deck survey table. Fisheries specific research equipment includes an oyster dredge and 50 experimental whelk pots.

Data Analyses

Three officers are trained in MapInfo GIS software with the secondary duty of the Kent-based IFCO to create maps and manage the day-to-day running of GIS databases and associated datasets. The LSCO and the KPVFM have both attended training in EUNIS biotope mapping and underwater camera survey techniques which will used in upcoming surveys for MPAs. Further research skills training in 2014-2015 will include acoustic survey techniques and analysis.

Delivery of Priorities

The tables that follow are organised into the nationally agreed success criteria and provide a detailed description of the work plan and timelines for the year from April 2014 using the actions set out in the annual plan 2014/2015.

CIFCO Chief IFCO

ACIFCO Assistant Chief IFCO

LSCO Lead Scientific & Conservation Officer

AA Admin Assistant

KPVFM Kent-based Patrol Vessel First Mate *(*Survey/ Education)*

KSIFCO Kent-based Shore IFCO *(*Research/MPA support)*

ESIFCO Essex-based Shore IFCO *(*Angling)*

PO Essex-based Project Officer/IFCO

KIFCO/M Kent-based IFCO *(*GIS/Mapping)*

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

Success Criteria *High Level Objective*	**Action**	**Task**	**Lead member of staff**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**
2 *2.1*	**2C)** *European Marine Site work stream:* Undertake Habitat Regulation Assessments to rationalise the need for management to protect the designated features of European Marine Sites. ***(SHARED OBJECTIVE: DEFRA, MMO and NE)***	Undertake tests of Likely Significant Effect	**LSCO** KSIFCO												
		Work with Natural England to collate and gather data where necessary on feature extent and condition	**LSCO** KSIFCO												
		Undertake Appropriate Assessments	**LSCO** KSIFCO												

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

Success Criteria *High Level Objective*	**Action**	**Task**	**Lead member of staff**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**
5 *5.3*	**ONGOING ACTION: 5C)** Cockle and mussel surveys from land and sea; Undertaking Appropriate Assessment surveys, Analysing cockle data, producing, Survey Management, getting gear, maintaining gear etc. collating & sending cockle reports	Arrange and undertake shore cockle surveys	**LSCO**												
		Arrange and undertake sea cockle surveys	**LSCO**												
		Submit appropriate assessment and compile cockle report	**LSCO**												
		Undertake cockle survey vehicle maintenance	**KPVFM**												
5 (2,6) *5.2* *5.3* *2.1* *6.3* *6.4*	**ONGOING ACTION 5D)** To maintain and update partner data agreements (MoU or other forms of agreements) to inform management policy decisions and demonstrate that the best available quality-assured evidence is used appropriately in decision making.	Maintain and update data strategy and MoU with partner organisations where necessary.	**LSCO**												
		Work where possible to MEDIN standards using IFCA TAG to keep informed of current MEDIN requirements and process.	**LSCO**												
		Maintain GIS capability and review GIS data storage and handling.	**KIFCO/ M**												
5 (2,3) *5.2* *2.1* *3.1*	**ONGOING ACTION: 5E)** Fishing Activity Mapping	Collect and compile the Fishing Activity Mapping data layer so that it can be used to inform management and policy decisions.	**LSCO** KIFCO/M												

Success Criteria *High Level Objective*	**Action**	**Task**	**Lead member of staff**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**
5 (6) *5.1*	**ONGOING ACTION 5F)** Write annual KEIFCA research report 2013-14 and annual research plan 2014-2015	Write annual research report 2013-2014	**LSCO**												
		Write annual research plan 2015-2016	**LSCO**												
5 (4,7) *5.3* *4.2* 7.2	**ONGOING ACTION 5G)** Run the Informing the Future (ItF) project	Continue running ItF project with local fishermen in Kent	**KSIFCO** LSCO												
		Consult with Essex fishermen to establish Fishery Liaison Officers	**KSIFCO** LSCO												
		Report summarised information back to the communities and to KEIFCA quarterly meetings and use to update species management plans.	**KSIFCO** LSCO												
5 (6) *5.1* *5.3* *6.3*	**5H)** Undertake Whelk research project that evaluates methods of assessing Whelk stocks in KEIFCA district.	Work with CEFAS, local fishermen and any other partner organisations to develop whelk stock assessment methodology	**LSCO** KPVFM												
		Further develop whelk catch return data analysis	**LSCO** AA												
		Work with academic partners to define a survey plan and secure funding sources	**LSCO**												
5 (6) *5.1* *5.3* *6.3* *6.4*	**5I)** *Marine Conservation Zone work stream:* Work with partners to deliver a project that assesses oyster habitat and oyster stocks in the Blackwater, Crouch, Roach and Colne Estuaries MCZ	Apply for funding with partners.	**PO** LSCO												
		Work with partners to deliver project and write-up project.	**PO** LSCO												

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

Success Criteria	Action	Task	Lead member of staff	April	May	June	July	August	September	October	November	December	January	February	March
6 (2,5) *6.3* *2.1* *5.1* *5.3*	**ONGOING ACTION: 6A)** To develop and review species management plans for key 18 species in the district.	Gather data, identify data gaps and update species management plans	**LSCO** ESIFCO												
		Integrate findings and suggestions from 'Project Inshore' into species management plans	**LSCO** ESIFCO												
		Work with partners to establish plans to undertake research and secure funding to fill data gaps.	**LSCO** CIFCO												
6 (5) *6.4* *5.1*	**ONGOING ACTION 6C)** Develop and implement MPA reporting system, using KEIFCA GIS data layers to feed in data to MPA working groups.	Set up simple reporting documents/GIS data layers that communicate our information to IFCA members and other key marine managers.	**LSCO** KIFCO/M												
6 (5) *6.1* *6.4* *5.1*	**6D)** *MPA network work stream:* Work with partners to establish baselines of data related to designated features within European Marine Sites and Marine Conservation Zones and fishing activity within those areas ***(SHARED OBJECTIVE: DEFRA, MMO and NE)***	Meet with NE and other statutory bodies to review information concerning the condition and extent of protected features of MPAs – gap analysis	**LSCO** KSIFCO												
		Work with partners to identify the impact of local fishing activities in each MPA	**LSCO** KSIFCO												

Success Criteria	Action	Task	Lead member of staff	April	May	June	July	August	September	October	November	December	January	February	March
6 (5) *6.1* *6.4* *5.1*	**6D)** *MPA network work stream:* Work with partners to establish baselines of data related to designated features within European Marine Sites and Marine Conservation Zones and fishing activity within those areas ***(SHARED OBJECTIVE: DEFRA, MMO and NE)***	Undertake a survey of Folkestone Pomerania MCZ to establish a baseline abundance and extent of features	**LSCO**												
6 (1,5) *6.1* *6.4* *1.5* *5.1* *5.3*	**6G)** Work with NE and TAG to train staff in undertaking Habitats Regulations Assessments for Marine Protected Areas	KEIFCA officers work through TAG to share best practice in completing HRAs.	**LSCO** KSIFCO												
		KEIFCA officers work to agreed national timescales to undertake HRAs on MPAs in KEIFCA district.	**LSCO** KSIFCO												
		Attendance at TAG working groups/training days and meetings.	**LSCO** KSIFCO												