

# Strategic Research Plan 2016-2020

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## **INTRODUCTION**

Sussex IFCA conducts research to gather data and information to support the decision making processes of the Authority. This Strategic Research Plan aims to describe a strategic framework that will focus the research functions of Sussex IFCA over the next four years (April 2016 to March 2020). An outcome of this approach will be the ability to identify the resources and capabilities required to fulfil the research requirements. This Strategic Research Plan has been formulated in accordance with the framework provided for IFCA's by the Marine and Coastal Access Act 2009 and guidance provided by Defra.

## **IFCA duties**

The main duties of an IFCA are identified in the Marine and Coastal access Act 2009 (<http://www.legislation.gov.uk/ukpga/2009/23/contents>); Part 6, section 153 (1 & 2) and section 154 (1) whereby:

### **153 Management of inshore fisheries**

- (1) The authority for an IFC district must manage the exploitation of sea fisheries resources in that district.
- (2) In performing its duty under subsection (1), the authority for an IFC district must;
  - (a) Seek to ensure that the exploitation of sea fisheries resources is carried out in a sustainable way,
  - (b) Seek to balance the social and economic benefits of exploiting the sea fisheries resources of the district with the need to protect the marine environment from, or promote its recovery from, the effects of such exploitation,
  - (c) Take any other steps which in the authority's opinion are necessary or expedient for the purpose of making a contribution to the achievement of sustainable development, and
  - (d) Seek to balance the different needs of persons engaged in the exploitation of sea fisheries resources in the district.

### **154 Protection of Marine Conservation Zones**

- (1) The authority for an IFC district must seek to ensure that the conservation objectives of any MCZ in the district are furthered.

## **The IFCA Vision**

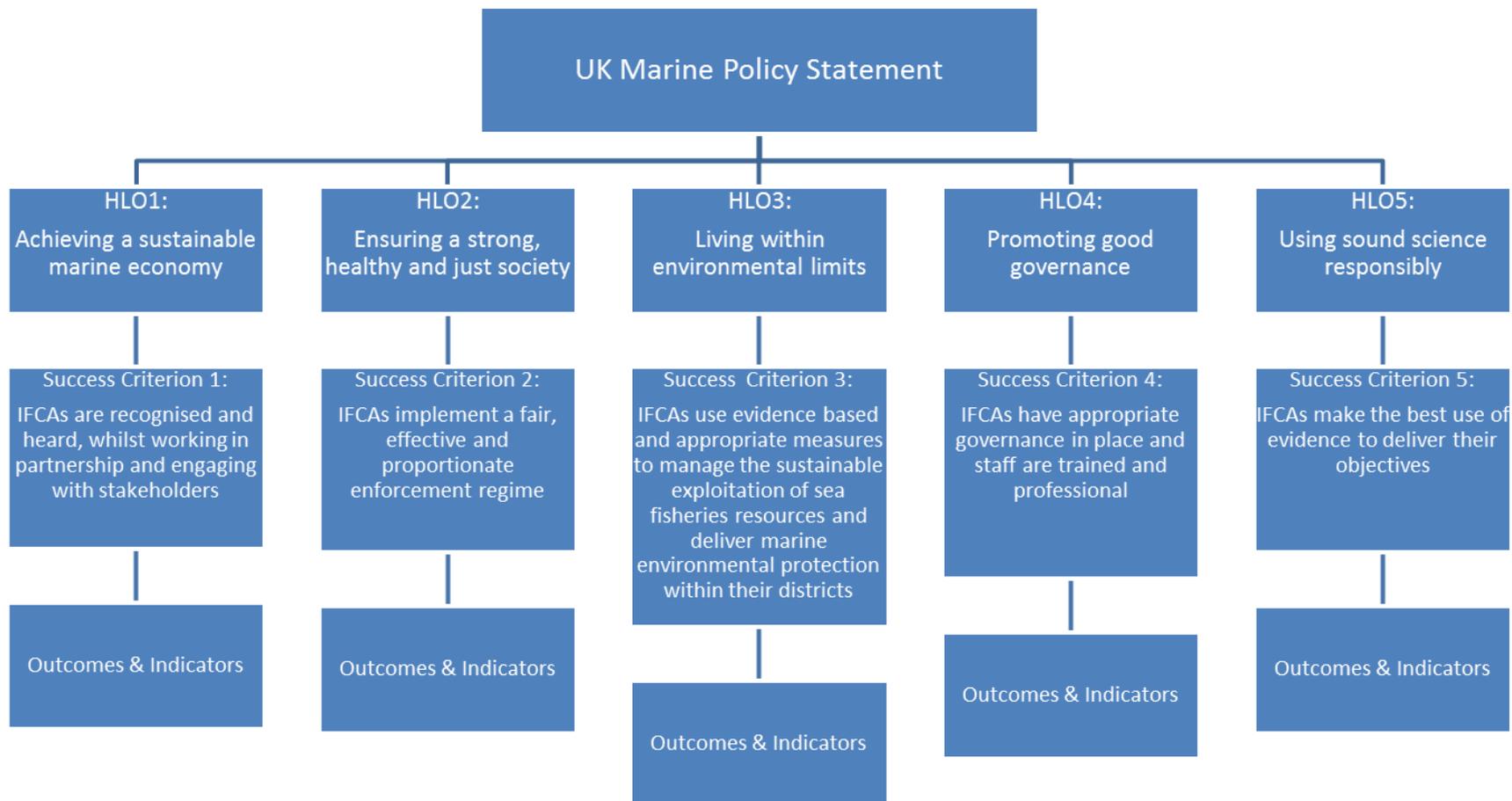
Nationally IFCAs have a shared Vision to 'lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry'.

## **High Level Objectives and Success Criteria**

IFCAs have a duty in 153(c) of the Marine and Coastal Access Act 2009 to make a contribution towards achieving sustainable development. To assist, the Secretary of State has provided the IFCAs with guidance as to how the authorities are to perform their duties in order to make such a contribution.

The goal of sustainable development is to enable people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life for future generations. The government is committed to sustainable development and has agreed a set of principles that are the basis for sustainable development in the UK. These have been adapted for the marine area as 'High Level Marine Objectives' and have been adopted by the UK administrations.

Each of the High Level Objectives is linked to Success Criteria and these have outcomes and indicators, against which IFCA performance can be assessed.



Research can contribute to all of the Success Criteria, in particular 1, 3 and 5:

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

Outcomes	Indicator	Research actions
The IFCA will maintain and implement an effective communication strategy.	SC1A: The IFCA will maintain a database of stakeholder contacts that will have been reviewed and updated by 31 March each year.	Contribute to contacts database, maintaining up-to-date research contact details.
The IFCA will maintain its website, ensuring public access to current fisheries and conservation information for the District, including management requirements and byelaws. Non-reserved IFCA Committee papers will be published.	SC1B: The IFCA will have completed a review of its communication strategy and implementation plan by 31 March each year.	Contribute to development of communication strategy and implementation.  Ensure research plans and reports are clear, concise and accessible.
The IFCA will contribute to co-ordinated activity at a national level	SC1C: The IFCA will have reviewed its website by the last working day of each month.	Consider how research information can be shared on the website.
The IFCA and its principal partners will have a clear understanding of roles and responsibilities. Memoranda of Understanding with MMO, Natural England, Environment Agency and Cefas will be maintained. Opportunities for greater efficiencies, effective joint working and collaboration will be explored and implemented when feasible.	SC1D: The IFCA will have reviewed its website and ensured it meets the objectives of its communication strategy, by 31 March each year.	Consider how research information can be shared on the website and through other mediums such as social media.
	SC1E: The IFCA will have reviewed all of its Memoranda of Understanding by 31 March each year. There will be a clear plan in place to update MoUs where necessary, to an agreed timescale.	Continue excellent working relationships with a wide range of partner organisations.

Outcomes	Indicator	Research actions
	SC1F: By 31 March each year, the IFCA will have participated appropriately, proportionately and at the right level of delegation, in regional and national fisheries and conservation activity identified in the annual plan.	<p>Actively participate in external meeting group partnerships.</p> <p>Influence decision makers with regard to prioritising sustainable fisheries and protection of the marine environment.</p> <p>Advise decision makers on blue growth agenda, marine recreation, sustainable tourism and aquaculture using our evidence.</p> <p>Develop responses and respond to consultations on significant plans and licences using best available evidence.</p>

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

Outcomes	Indicator	Research actions
<p>The IFCA will identify issues likely to affect sustainable management of the marine environment in the IFCA District, undertake risk assessment and gap analysis, review appropriateness of existing measures, evaluate management options, and develop and implement proportionate marine management solutions</p> <p>The IFCA will support implementation of a well-managed network of marine protected</p>	SC3A: The IFCA will record site-specific management considerations for Marine Protected Areas and report progress to the Authority.	<p>Conduct research to support site-specific MPA management, working with partners where appropriate.</p> <p>Ensure research findings are clear, concise and accessible to stakeholders.</p> <p>Adhere to reporting mechanisms for MPAs and report back to the Authority meetings.</p>

Outcomes	Indicator	Research actions
<p>areas by: developing a range of criteria-based management options; implementing management measures to ensure that inshore fisheries activities comply with the Marine and Coastal Access Act 2009 and the revised approach to managing commercial fisheries in European Marine Sites; and that local management contributes to delivery of targets for the Marine Strategy Framework Directive, Water Framework Directive and Marine Plans.</p> <p>The IFCA will develop Fisheries Management Plans for priority species where appropriate. Shared objectives will be developed with identified partners; actions identified and best practice reflected so that management makes a contribution to sustainable development.</p>	SC3B: The IFCA will publish data analysis and evidence supporting new management measures, on its website.	Ensure research findings are clear, concise and accessible.
	SC3C: Management information (e.g. sampling and/or survey results) will be collected periodically after new management measures have been implemented, to demonstrate the extent of effectiveness of the intervention.	Conduct monitoring research.
	SC3D: The IFCA will have developed a range of criteria-based management options that are explained to stakeholders through the IFCA website, and reviewed by 31 March each year.	Use best available evidence to support management and ensure research is clear, concise and accessible.
	SC3E: New IFCA management measures selected for development and implementation are delivered within agreed timescales.	Ensure research aligns with management timescales.
	SC3F: The IFCA will include shared agreed objectives and actions from Fisheries Management Plans in its own Annual Plan, which will be published by 31 March each year.	Develop Fisheries Management Plans. Gather extant information. Identify knowledge gaps. Develop research to fill gaps.
SC3G: Progress made in relevant Fisheries Management Plan areas, including Maximum Sustainable Yield commitments, will be noted in the IFCA's Annual Report.	Inform significant developments with regard to sustainable fisheries management and the protection of the marine environment.	

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

Outcomes	Indicator	Research actions
<p>A strategic research plan that contributes to greater understanding of the marine environment and delivery of cost-effective management of sea fisheries resources</p> <p>Standard Operating Procedures describe how data is captured and shared with principal partners</p> <p>A list of research databases held by the IFCA and the frequency of their review</p> <p>Non-confidential meta-data collected through the IFCA research programme should be recorded in a database available to the marine research community</p>	<p>SC5A: The IFCA will demonstrate progress that has made towards identifying its evidence needs by publishing a research plan each year.</p>	<p>Create and publish a strategic four year and annual research plans.</p> <p>Maintain evidence collection capability.</p> <p>Conduct research across a wide range of marine subjects.</p>
	<p>SC5B: The IFCA will publish a research report annually that demonstrates how evidence has supported decision making.</p>	<p>Create and publish an annual research report.</p> <p>Ensure research findings are clear, concise and accessible.</p> <p>Use evidence to inform IFCA decision making and influence others decision making.</p>
	<p>SC5C: The IFCA's contribution to TAG and progress that has been made towards a national evidence needs programme will be recorded in the IFCA's Annual Report.</p>	<p>Support the IFCA Technical Advisory Group (TAG) and its work streams, including development of cross-organisational Standard Operating Procedures.</p> <p>Describe in the Annual Report the contribution towards building a national evidence needs programme.</p> <p>Share metadata on MEDIN and share data with project partners and others on request.</p>

## **RESEARCH THEMES AND SUB-THEMES**

With regards to the main duties of the IFCAs and building on the successes of the first Strategic Research Plan (2012-15), three key themes were established to be the focus of research for 2015-19. This Strategic Research Plan, 2016-2020, has been created to be in step with the IFCA Four Year Plan. The same three key research themes have been retained. These are: sustainable marine resource exploitation, ecosystem interactions and socio-economics.

Each theme has been divided into three or four sub-themes. These sub-themes reflect the focus of their respective themes and provide direction for specific projects. The aim of the sub-themes is to describe broad areas which will be the focus of research over the next four years. These have to be focussed enough to help direct research in priority areas but broad enough to adapt to changing work streams over what is likely to be a challenging and changeable period.

	<b>Theme 1 Sustainable marine resource exploitation</b>	<b>Theme 2 Ecosystem interactions</b>	<b>Theme 3 Socio-economics</b>
<b>Sub-theme 1</b>	Fisheries biology data	Marine Protected Areas	Fisheries value
<b>Sub-theme 2</b>	Intertidal resource gathering	Habitats	Archaeology
<b>Sub-theme 3</b>	Fishing activity	Small fish monitoring	Community engagement
<b>Sub-theme 4</b>		Anthropogenic	

## **THEME 1: SUSTAINABLE MARINE RESOURCE EXPLOITATION**

Research under this theme involves the gathering of information on the biology of the species being exploited and information on the type and amount of activity. This information is necessary to provide evidence to help inform management decisions regarding the sustainable exploitation of marine resources.

### **Sub-theme 1.1: Fisheries biology data**

Biological information could include size/age at maturity, fecundity, reproduction, habitat, feeding, growth rate, spatial/seasonal distribution or sensitivity. Research under this activity could also include projects looking at landings data – amount caught, location, method, gear, soak time – as well as data that could help inform the condition of the stock.

### **Sub-theme 1.2: Intertidal resource gathering**

There is limited information on the level of commercial or recreational exploitation of intertidal resources, so projects under this activity will focus on gathering data on the amount, type and location of activities, as well as the effects that exploitation may have on the species.

### **Sub-theme 1.3: Fishing activity**

Knowing the amount, time and location of different types of fishing activity is useful for the management of those activities. The distribution of fishing activity can be linked to the species which that particular activity targets, which can help inform biological information such as preferred habitat or migratory behaviour. Fishing activity can be used to help inform management in Marine Protected Areas; the potential impact of exploitation on a conservation feature or the potential socio-economic impacts of management.

## **THEME 2: ECOSYSTEM INTERACTIONS**

Research will focus on providing the evidence to inform management decisions on how anthropogenic interactions are affecting the ecosystem in which marine resources exist. Ecosystem interactions is the largest and most diverse of the three themes, reflecting the importance and resource allocation to several high priority work streams under this theme, in particular Marine Protected Areas.

### **Sub-theme 2.1: Marine Protected Areas**

Marine Protected Areas is an umbrella term for a number of official designations, all of which aim to protect vulnerable marine habitats and species. Two designations of particular importance are Marine Conservation Zones and European Marine Sites. Research provides evidence to support management which furthers the conservation objectives of a site and aims to balance the social, environmental and economic benefits. Collaboration and consultation is essential to ensure that best available knowledge and evidence is used and that all points of view are considered.

### **Sub-theme 2.2: Habitats**

Marine seabed habitats are a major component of the ecosystem and interactions occur with species, physical parameters and anthropogenic actions. Understanding species use of habitats and the distribution of these habitats is essential for managing the marine environment. However, developing accurate useful maps can be challenging in such a dynamic changeable environment. Partnership working makes the most of local knowledge, expertise, resources and data.

### **Sub-theme 2.3: Small fish monitoring**

The fish populations of the UK, together with the fisheries they support, are of enormous environmental, social and economic value. The value this sub-theme is not only in the data collected, that can inform management decisions in relation to statutory drivers such as the Water Framework Directive and in monitoring Marine Protected Areas, but also in the mutual benefit of partnership working and the sharing of resources and data.

### **Sub-theme 2.4: Anthropogenic**

This sub-theme covers a range of anthropogenic interactions such bycatch and endangered, threatened or protected species. A wide range of interactions need to be understood to ensure that fisheries and the marine environment are sustainably managed.

### **THEME 3: SOCIO-ECONOMICS**

The social and economic benefits of fisheries and the marine environment can be varied and sometimes difficult to assess. Economic data is often of a sensitive nature but is necessary to assess the impact of management on stakeholder's livelihoods. Society and personal benefits can be more difficult to quantify but should be considered and often align with other objectives.

#### **Sub-theme 3.1: Fisheries value**

Knowledge about the economic value of fisheries can be useful in understanding the value of the fishery to coastal communities and the impact of management measures. There is potential to promote expanding or local market opportunities and to support fishers in developing new fisheries. Data collected by IFCA and other organisations can be used to assess the value of particular fisheries.

#### **Sub-theme 3.2: Archaeology**

The seas around the UK contain an immense wealth of archaeological sites. It is not uncommon for users of the marine environment to discover artefacts and it is responsible for Sussex IFCA to play a role by engaging in marine archaeology.

#### **Sub-theme 3.3: Community engagement**

It is essential when gathering data, developing management and ensuring compliance that there is a good working relationship with stakeholders. This could involve sharing data, engaging with social media, attending community events and providing educational opportunities.

## **PRIORITISATION TOOL**

A prioritisation tool was developed to assist in the prioritisation of projects to better manage workloads with limited time and resources. All projects which involved a DEFRA level regulation, legislation or directive were given a high prioritisation. All projects that were to gather information on a species, habitat or activity that had a high risk of environmental damage or were highly likely to be detrimental to the sustainability of a fishery or the data was of high value were also given a high prioritisation. Projects which involved a Sussex IFCA regulation and had a low or medium environmental risk/data value were given a medium prioritisation. Projects which were not associated with either DEFRA or IFCA regulations and had a low environmental risk or low data value were assigned a low prioritisation and would be allocated the least time and resources.

	Low environmental risk/data value	Medium environmental risk/data value	High environmental risk/data value
DEFRA regulation/legislation/directive	High	High	High
SxIFCA regulation/legislation	Medium	Medium	High
No (or non-DEFRA/IFCA) regulation	Low	Medium	High

## **RESEARCH PROJECTS**

There are fifty five projects or work streams, indicated below under relevant themes and sub-themes. Some of these are ongoing work which will continue across the four year period, whereas others are discrete projects which will take place within the financial year indicated. Each project or work stream has an associated estimated annual cost, time (person/days) and resource burden as indicated below. This section of the Strategic Research Plan will be updated annually. Further information about specific projects can be found in the relevant Annual Research Plans. The progress made on each project will be described in the Annual Research Reports.

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fisheries biology data	Lobster sampling				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Measuring lobsters onboard and in port, opportunistic sampling as part of compliance duties, in support of shellfish permit byelaw (cost and time in addition to that associated with compliance duties)		Cefas	<£50	5	Compliance equipment, data entry	Medium

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fisheries biology data	Whelk sampling				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Measuring whelks onboard and in port, opportunistic sampling as part of compliance duties, in support of shellfish permit byelaw		TBC	<£50	20	Compliance equipment, data entry/analysis	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fisheries biology data	Cuttlefish eggs				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Investigating options for improving the survival of eggs during cuttlefish potting		Fishermen, University of Brighton	<£500	20	Literature search, egg laying material, data entry/analysis	Medium

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fisheries biology data	Shellfish permit monitoring				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Collation and analysis of catch return data from shellfish permit holders		Fishermen	<£50	15	Data entry and analysis	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fisheries biology data	Oyster stock monitoring				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Monthly sampling by EHOs, Apr/Jul/Oct/Nov length-frequency with EHOs, stock assessment pre-season, CPUE monitoring during season (November), fishers catch data		Chichester District Council, Havant Borough Council, oyster fishermen (CHOPI)	<£500	30	Measuring equipment, GPS, fishing vessel, FPV	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fisheries biology data	Species specific management plans				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Management plans for priority species, including reference to Maximum Sustainable Yield		TBC	<£50	50 to set up then 10 (per species)	Desk based	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fisheries biology data	Anglers' catches				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Furthering understanding of recreational angling activity, implementation of Angling Strategy and the Sussex Recreational Sea Angling (RSA) Partnership		Anglers, Cefas, Substance	<£500	40	Data analysis, partner coordination	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fisheries biology data	Minimum conservation reference sizes management				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Developing management which defines the minimum conservation reference size of key species within the Sussex IFCA District to ensure that species have a chance to breed before being caught.		Fishers	<£500	25	Data analysis, consultation	Medium

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Intertidal resource gathering	Gathers activity				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Location and activity of intertidal resource gathers, whole district, including crab tiling		Currently just in MPAs, could be developed further for whole district	<£50	20	Data entry/analysis, partner coordination	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fishing activity	Fishing vessel effort				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Location and activity of fishing vessels at sea as part of compliance duties, creating effort maps (activity corrected for patrol effort)		Cefas	<£50	10	Data entry, GIS	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fishing activity	iVMS				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Supporting development and implementation of iVMS		MMO, fishermen	<£50	5	Attending meetings, liaison	Medium

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fishing activity	Netting activity				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Location and intensity of netting, catch per unit effort, environmental impacts, value of fishery, to support new management measures		Fishermen	<£500	50	Analysing existing data, GIS, onboard vessels, landings data, interviews	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Sustainable marine resource exploitation	Fishing activity	Trawling activity				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Location and intensity of trawling, catch per unit effort, environmental impacts, value of fishery, to support management		Fishermen	<£500	50	Analysing existing data, GIS, onboard vessels, landings data, interviews	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Commercial landings data				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Requesting data from MMO and other suitable sources, for specific species or fishing gears in Marine Protected Areas		MMO	<£50	10	Data analysis	Medium

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Floy ID tagging – black seabream				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Attaching ID tags to black seabream to understand broad scale movement and angling activity, since 2013		Charter angler skippers, recreational sea anglers, Cefas, IFM	£250	40	Tagging equipment, advice/support, data entry/analysis, reporting	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Anglers' activity – black seabream				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Volunteer log sheets and at sea/in port inspections to gather catch and biological information, mainly April-June		Charter angler skippers, recreational sea anglers	<£500	80	Measuring equipment, questionnaires, data entry/analysis	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Kingmere MCZ management monitoring				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Ongoing monitoring of Kingmere MCZ management, including elements of Anglers' Activity and Fishing Vessel Effort projects		Natural England, Lafarge Tarmac & Cemex, anglers, fishermen	<£500	30 - 50	Measuring equipment, questionnaires, data entry/analysis	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Beachy Head West MCZ management development				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Development of Beachy Head West MCZ management, including analysis of existing data and identifying information gaps		Natural England, stakeholders	<£500	35	Data entry/analysis, partner coordination	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Beachy Head West MCZ management monitoring				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Ongoing monitoring of Beachy Head West MCZ management, may include elements of Intertidal Resource Gathering project		Natural England, stakeholders	<£500	20	Data entry/analysis, partner coordination	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Pagham MCZ and EMS management development				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Conducting HRAs and developing Pagham MCZ and EMS management, including analysis of existing data and identifying information gaps, consultation with stakeholders		Natural England, stakeholders	<£500	70	Data analysis, GIS	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Pagham MCZ and EMS monitoring				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Ongoing monitoring of Pagham MCZ and EMS management		Natural England, stakeholders	<£500	15	Data analysis, partner coordination	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Utopia MCZ management development				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Development of Utopia MCZ management, including analysis of existing data and identifying information gaps		Natural England, stakeholders	<£500	70	Data analysis, GIS	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Utopia MCZ monitoring				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Ongoing monitoring of Utopia MCZ management		Natural England, stakeholders	<£500	15	Data analysis, partner coordination	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Offshore Overfalls MCZ management development				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Supporting the MMO in the development of management for Offshore Overfalls MCZ		MMO, Natural England, stakeholders	<£500	45	Data analysis, GIS	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Selsey Bill and the Hounds MCZ management development				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Development of Selsey Bill and the Hounds MCZ management, including analysis of existing data and identifying information gaps		Natural England, stakeholders	<£500	40	Data analysis, GIS	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Beachy Head East MCZ management development				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Development of Beachy Head East MCZ management, including analysis of existing data and identifying information gaps		Natural England, stakeholders	<£500	40	Data analysis, GIS	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Rye Bay MCZ management development				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Development of Rye Bay MCZ management, including analysis of existing data and identifying information gaps		Natural England, stakeholders	<£500	40	Data analysis, GIS	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Solent EMS management development				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Conducting HRAs and developing management to ensure fishing activities are not damaging to designated features		Natural England, stakeholders	<£500	70	Data analysis, GIS	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Oyster dredging impacts study				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Collaborative project to understand the impact of oyster dredging on EMS features in Chichester Harbour		Southern IFCA, Natural England, Environment Agency, National Oceanography Centre	<£100	10	Video equipment	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Solent EMS monitoring				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Ongoing monitoring of EMS management, may include seagrass and subtidal habitat surveys, and elements of the Oyster Stock Monitoring project		Natural England, stakeholders	<£1000	20	Video/ intertidal survey/ stock monitoring equipment	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Dungeness, Romney Marsh and Rye Bay EMS management development				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Conducting HRAs and developing of management to ensure fishing activities are not damaging to designated features		Natural England, stakeholders	<£500	70	Data analysis, GIS	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Dungeness, Romney Marsh and Rye Bay EMS monitoring				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Ongoing monitoring of EMS management, may include elements of Intertidal Resource Gathering project		Natural England, stakeholders	<£500	20	Data entry/analysis, partner coordination	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Non-commercial activities in EMS				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Conducting Habitat Regulation Assessments on non-commercial fishing activities in EMSs		Natural England, stakeholders	<£500	55	Data entry/analysis, partner coordination	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Intertidal resource gathering				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Location and activity of intertidal resource gatherers in Marine Protected Areas		Brighton seafront patrol, Rye Harbour Nature Reserve, Chichester Harbour Conservancy	<£100	12	Data entry/analysis, GIS, partner coordination	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Marine Protected Areas	Anchoring impacts on sensitive habitats				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Location, intensity and impact of vessels anchoring on sensitive habitats such as rocky reef and seagrass		Natural England, stakeholders	<£500	40	Vessel observations, questionnaires, data entry/analysis	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Habitats	Interactive habitat map				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Development of a publically accessible map that highlights the important diversity and environmental value in the coastal waters of Sussex		Biodiversity Records Centre, Wildlife Trust, Wessex Archaeology, divers, Natural England, Environment Agency, UKHO, CCO, HFPS	£3000-5000	40	Video collection/editing, GIS, public engagement	Medium

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Habitats	Habitats and fishing activity interactions				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Analysis of the interaction between habitats, species and fisheries, to support management		University of Brighton	<£100	25	Desk based, GIS	Medium

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Habitats	Assessing natural capital				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Analysis of the natural capital and ecosystem services provided by seabed habitats in Sussex coastal waters		University of Brighton, SxBRC, others TBC	£10,000 - £100,000	75	Desk based, GIS	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Small fish monitoring	Chichester Harbour small fish survey				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Seine net and beam trawl, three sites (three days), twice a year, since 2010, Sparsholt partnership; seine net, two sites, once a year		Chichester Harbour Conservancy, Sparsholt College	<£500 CHC: £2400	20	Fish survey equipment, CHC vessels, data entry/analysis	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Small fish monitoring	Medmerry small fish survey				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Seine and fyke, five locations (two days), twice a year, every year, since 2014, funding from Environment Agency until 2018		Environment Agency, RSPB, other partners	<£500	15	Fish survey equipment, data entry/analysis, reporting	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Small fish monitoring	Rye small fish survey				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Seine net on Rye beach (one day) three times a year, beam trawl in Rye Bay once a year, since 2013		Rye Harbour Nature Reserve, Environment Agency, other partners	<£500	15	Fish survey equipment, FPV, data entry/analysis, reporting	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Anthropogenic	Netting bycatch – birds and cetaceans				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Collection of information to further understanding of amount of bird and cetacean bycatch and ways to reduce it, may link to Netting Activity project		RSPB, fishermen, others TBC	<£500	5	Meetings, liaison, data analysis, questionnaires	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Anthropogenic	Bycatch - seahorses				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Collection of information to further understanding of the number of seahorses caught, where and how, and survivability, may link to Trawling Activity project		Natural England, University of Brighton, Sealife Centre, fishermen	<£500	20	Meetings, data analysis, questionnaires	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Anthropogenic	Marine plastic litter				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Working with fishing industry and other marine users to reduce amount of plastic litter going into and remaining in the sea. Reducing input, raising awareness, impacts, hotspots, shoreside facilities, collection, solutions.		Fishermen, Environment Agency, councils, port authorities, Universities, Marine Conservation Society	<£1000	25	Meetings, data collection, public awareness	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Anthropogenic	Climate change				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Identify species and habitats that are vulnerable to climate change impacts (increased storms, sea level rise, increased pH/CO <sub>2</sub> /temperature), potentially collect physical and biological data to monitor changes, predict potential impacts, threats and opportunities, develop strategies for resilience and adaptability.		TBC	£1000-10000	40	Physical parameters monitoring equipment, data analysis	Medium

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Anthropogenic	Environmental policy				
Description		Partners	Cost	Time	Resources	Priority
Develop an environmental policy which considers the Authority's impact on the environment and how to reduce it.		University of Brighton, Carbon Trust, WRAP	£1000-5000	30	Data analysis, staff consultation	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Anthropogenic	Clear Seas				
Description		Partners	Cost	Time	Resources	Priority
Production of leaflets, posters and other materials to promote good practice recommendations to boat/coastal users about looking after their local marine environment.		Environment Agency, ports/harbours/marinas, Hastings FLAG	£7000	40	Leaflets, posters, promotional material	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Ecosystem interactions	Endangered, threatened or protected species	Elasmobranch evidence				
Description		Partners	Cost	Time	Resources	Priority
Research to provide evidence for management measures which will protect vulnerable sharks and rays.		TBC	£1000-10000	50	Gap analysis, evidence collection	Medium

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Fisheries value	Value of marine environment and fisheries				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Analysing the economic value of fisheries and the marine environment, hot spots/trends, first sale and wider economy, quality of current data recording procedures, impact of management, resilience to change, pressure to conduct illegal activity		MMO, Sea Fish, fishermen, Universities	<£50	20	Data analysis, literature search	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Fisheries value	Cost benefit analysis of Chichester Harbour shellfish				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Assessing the cost-benefits of the shellfish fisheries in Chichester Harbour supporting improvements in water quality		Environment Agency, New Economics Foundation	£10000	15	Data analysis, reporting	Medium

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Archaeology	FIPAD2				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Fishing industry protocol for archaeological discoveries and historic environment fisheries liaison support.		Wessex Archaeology, Historic England	<£50	5	Liaison, sharing information	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Archaeology	Understanding Fishermen's Fasteners				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Using multibeam and video cameras to further understanding of sites of potential archaeological significance, funding from Historic England		Fjord, Historic England	£12,500	40	Multibeam and video survey, reporting	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Community engagement	Planning and reporting				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Production of an annual research plan which describes the research planned for the financial year and an annual report which details the work undertaken on those projects described in the annual plan		All project partners	<£50	10	Strategic plan, project reports	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Community engagement	Groups and forums				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Participation in various groups and forums, sharing knowledge, best practice and coordinating research		Other IFCA's, Natural England, Defra, Environment Agency, Wildlife Trust, local organisations and authorities	<£500	20	Meetings, teleconferences emails	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Community engagement	Data sharing				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Sharing data with local and national schemes and organisations, ensuring IFCA data is accessible, making best use of others' data		Other IFCAs, Natural England, Defra, MEDIN, Biodiversity Records Centre	<£50	10	Data management	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Community engagement	Website and social media				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Preparing material to be shared on the website and social media, in addition to project reporting, keeping website up to date		Project partners	<£50	15	Creative media, maps, photos, video clips, clear concise reports	High

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Community engagement	Consultations and enquiries				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Responding to consultations and enquiries from other organisations and the public		Various	<£50	5	Data analysis, reporting	Medium

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Community engagement	Events				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Attending various events such as fairs and festivals, ensuring IFCA's are seen, heard and recognised, preparing material for public engagement		Various	<£500	10	Engagement materials	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Community engagement	Students and Universities				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Engagement with local universities to maximise collaborative working where research priorities align		Various universities	<£100	5	Meetings/ emails to keep up to date with ongoing research	Low

Theme	Sub-theme	Project/work stream	2016-2017	2017-2018	2018-2019	2019-2020
Socio-economics	Community engagement	Volunteers				
<b>Description</b>		<b>Partners</b>	<b>Cost</b>	<b>Time</b>	<b>Resources</b>	<b>Priority</b>
Engagement with volunteers from a range of backgrounds to support research		Local universities/colleges	<£1000 for expenses	15 for supervision	Supervision, desk/computer	Low