Devon and Severn IFCA Annual Research Plan 2018-2019

Work-stream	Survey type	Project Title	Location	Method	Rationale	Likely time scale	Partners	Lead Contact	Vessel / Shore	Pre survey planning	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	Priority
Crustacean	Species Knowledge	Monitoring Studies of Palinurus	Skerries Bank & Surrounds MCZ/ Bideford to Foreland Pt MCZ	Tagging by fishermen	Monitoring programme to get baseline levels of Crawfish in the MCZ as this species has a recover conservation objective.	2 days tagging and training fishermen	Fishermen	Sarah Clark/ Lauren Parkhouse	Fishing Vessel	Engage with Fishermen - to discuss training and supply of tags and survey forms. Seek potter who operates in Bideford to Foreland Pt MCZ.													2
	Species Knowledge	Survey of Palinurus - Potting and Netting, Diving	District wide	Survey forms	Forms to go out to fishermen to gather evidence on the catches and CPUE if possible of Crawfish across the district. Forms to go out to divers to gather evidence on the location, size and sex of Crawfish across the district.		fishermen, Divers	Sarah Clark/ Lauren Parkhouse	meetings, mail shot	Engage with fishermen to get better information to aid monitoring. Engage with Sea search, dive clubs, fishermen, to get better information to aid monitoring.													2
	Stock Assessment / Bycatch Information	Bycatch from the SW lobster fishery and Celtic Sea and Western Channel Brown Crab Fishery.	Stock level	Analysis of past data and on -board surveys	To identify and analyse the bycatch from the crab and lobster fishery to fill gaps in the MSC fishery improvement plan for this fishery as part of Project UK.	5 days	Plymouth Uni/ Project UK	MSc Student	North Devon fishing vessels	Engage with fishermen to secure on-board surveys for MSc student.													1
Molluscan	Stock Assessment	Salcombe Scallop Assessment	Salcombe Estuary SSSI/ Dart Estuary	On-board surveys	Understanding stock levels	I per week	fishermen	Lauren Parkhouse	fishermen														2
	Stock Assessment	Exe Mussel Survey	Exe Estuary SPA - All beds. Bull Hill and Starcross will be done using the Dutch Wand. Lympstone and Powderham may need to be done with a small grab.	Dutch Wand Method / Hand Grab. Dictaphone for recording data	Annual Survey to assess mussel stocks within the SPA to ensure that there is sufficient resource for the overwintering birds.	2-4 days	NE, Volunteers & Exe Estuary Officer	Katherine Stephenson	intertidal shore survey	Spring tide dates: 16th to 19th April, 28th April to 2nd May 15th May to 18th May 28th May to 30th May													1
	Stock Assessment	Taw Torridge Mussel Survey	Taw Torridge Estuary SSSI	Dutch Wand Method / Dictaphone for recording data. Tin boat for access.	Annual Survey to assess mussel stocks within the SSSI to ensure that there is sufficient resource for the overwintering birds.	4-5 days	NE, volunteers	Kat Stephenson	intertidal shore survey	Spring tide dates: 16th to 19th April, 28th April to 2nd May 15th May to 18th May 28th May to 30th May													1
	Stock Assessment	Exe Cockle Survey	Exe Estuary SPA	0.1m^2 quadrat, grid	Biennial Survey to assess density and distribution of the cockle resource in the Estuary to inform the future development of a fishery.	1-2 days	NE, Volunteers & Exe Estuary Officer	Kat Stephenson	intertidal shore survey	spring tide dates: 9th -11th October													1
	Stock Assessment	Teign Mussel Survey	Teign Estuary	Dutch Wand Method / Dictaphone for recording data.	Survey to assess mussel stocks to inform the development of a hand gathering permit byelaw.	2-4 days	Volunteers, Teign Estuary Officer	Kat Stephenson	intertidal shore survey	Prepare survey plan and assess risk of surveying on The Salty using officer knowledge of tides. Spring tide: 10th to 13th September.													1

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	Stock Assessment	Teign Cockle Survey	Teign Estuary	0.1m2 quadrat, grid	Survey to assess density and distribution of the cockle resource in the Estuary to inform the development of the hand gathering permit byelaw.	2-4 days	Volunteers, Teign Estuary Officer	Kat Stephenson	intertidal shore survey	Prepare survey plan and assess risk of surveying on The Salty using officer knowledge of tides Spring tide 7th to 9th November.													1
	Fishing Activity	Assess the level of fishing effort in the Bristol Channel especially within the Lundy MPA	North Devon/ Lundy MPA	Survey of fishing effort-discussion, returns from fishermen, images from fishing vessel plotters	In order to assess the level of trawling for squid within the Lundy MPA as part of a Monitoring and Control Plan for Lundy MPA	As and when the fishery commences and during the fishing period	Fishermen, NE	Lauren Parkhouse	Shore visits and discussion with fishermen	Contact fishing industry to make them aware of the reporting request to gather information throughout the fishery													1
	Spawning Season	Size of sexual maturity and spawning season for Whelks	North and South Devon	Using the SOP for determining the Sexual maturity of Whelks	On request of the Byelaw and permit sub-committee further samples were taken in December 2017 and January 2018 to try and fill in the gap from the survey in 2015 to determine what the spawning season is to inform any further management of the fishery. Further sampling may be needed.	4 days for laboratory work for samples already taken Potentially more if further surveying is carried out	Fishermen	Katherine Stephenson	shore collection	Arrange picks up with fishermen													1
Bait Collection/ Hand gathering	Fishing Activity	Intertidal Bait Digging on Sea grass	Exe Estuary SPA	sightings, ground surveys. Survey forms to record effort etc. GPS, Binoculars	Bait digging and effort data and where possible amounts collected will inform HRA assessment and future management measures.	Regularly from May to December 2018		Sarah Curtin	Shore visits														1
Boat Surveys	BACI / Recovery from Impact study	Investigate the impact of trawling on the sub-tidal mud feature of the Torbay MCZ	Torbay MCZ	Chartering of Ocean Ecology to undertake Grab sampling / PSA Write up of all results and analysis in report for the IFCA	Recovery study to see if any long term impact has recovered and to assess the impact of winter easterly wind on the subtidal mud habitat.	1 day	Ocean Ecology	Sarah Clark/ Lauren Parkhouse	Tiger Lily/ Ocean Ecology boat														1
	Population Studies - Wrasse fishery	Wrasse Fishery Pot saturation Study	Plymouth Sound & Estuaries EMS	Deployment of go-pros on wrasse pots to film entry and exit behaviour of wrasse to determine the catchability and saturation level of the pots.	Support vessel for pot saturation study / camera deployment.	6 days	MSc student, Plymouth Uni, fishermen	Sarah Curtin	Black Jack as support vessel														1
	Recruitment of Cuttlefish	Trialling different media on the cuttle traps to collect cuttlefish eggs to improve survivability	Torbay MCZ	Trial different media on the traditional cuttle traps that the local fishermen. It is hoped that cuttlefish will lay eggs on this media which can be removed to allow eggs to hatch.	To improve the survivability of cuttle eggs to allow hatching - pots tend to be jet washed off at the end of the season and whilst some fishermen leave pots in the water to allow hatching of the eggs there is often a need to remove the cuttle pots and replace with other fishing gear . If the eggs are found to be laid on the media then this can be removed and left in situ until all the eggs have hatched.		Fishermen, Sussex IFCA	Lauren Parkhouse/Sarah Curtin	Vessel- fishing boat or Black Jack	Liaise with Torbay Fishermen; borrow pots; purchase different media to trial												2
	Gear Impact- Cuttle pots	Impact of pots on seagrass	Torbay MCZ	Deployment of go-pros on cuttlefish pots	This survey will involve placing Go-Pro cameras on cuttlefish pots to investigate how they interact with the seagrass beds in Torbay MCZ.		Fishermen, Sussex IFCA	Lauren Parkhouse/ Sarah Curtin	Vessel- fishing boat or Black Jack	Liaise with Torbay Fishermen; borrow pots; purchase different media to trial													1
	Bass study	I Bass - PhD	Salcombe Estuary, Dart Estuary	Ad hoc maintenance of acoustics receivers	To help facilitate the maintenance of the acoustic receivers to help ensure success of the project		Plymouth Uni/ PhD	Tom Stamp/ Libby West	Black Jack														1

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Finfish Surveys	Flying Array on Cefas Endeavour	Trialling use of Flying Array in different habitats to assess scallop stocks	Mid Channel/ Eastern Channel	Flying Array	Cefas wish to trial the flying array from the SV Endeavour as this vessel can maintain a constant slow speed to keep the array flying. They have been impressed by the system. Currently they use a drop down video and stills camera so this is trialling an alternative method. This trial will determine whether the array can be used in scallop stock assessment surveys.	5 days	Cefas	Lauren Parkhouse/ Andy Lawler	Cefas Endeavour	Cefas to do this. Prep camera and equipment for use												2
	Habitat mapping	Sabellaria mapping	Severn Estuary	ARIS Sonar camera	Mapping extent of Sabellaria as part of PhD with Swansea Uni & Ocean Ecology	4 days	PhD student/ Ocean Ecology/ Swansea University	Libby West/ PHD Robyn Jones/ Ross Griffin	Ocean Ecology vessel														2
	Habitat/ feature mapping	Ground truthing of Tranche 2 features/habitats	Bideford Bay to Foreland Point MCZ / Hartland Point to Tintagel MCZ	Sidescan, flying array, sonar camera, grabbing	Ground Truthing /baseline monitoring of HOCI and FOCI to better inform the extent and presence of those features and access fishing interactions and impacts.	10 days	CIFCA/ NE/ EA	Lauren Parkhouse	Severn Guardian,														1
	Species Knowledge	Bass PhD survey work	District wide coast and estuaries. Initially Steart Realignment area.	Fyke nets, seine nets,	To inform life cycle, movement, and management of the species - this survey will focus on juvenile bass.	3 years	PhD student, Plymouth University, fish specialists, Cefas	Libby Ross	Shore visits														1
	Species Knowledge	Bass PhD survey work	Dart, Salcombe, Taw Torridge estuaries	Tagging	Use of Estuaries as Nursery areas different age classes of Bass	12 days	Plymouth University - Thomas Stamp	Libby Ross	shore														1
	Species Knowledge	Regional Management Plans for Bass	District	Possibly data storage tagging; juvenile surveys	Data collection to inform regional management	10 days	Cefas	Libby West/ Victoria Bendall	vessel/ shore														2
	Species knowledge	Wrasse on- board surveys	Plymouth Sound & Estuaries		Fully document fishery - to inform further management of wrasse fishery.	36	Fishing industry	Sarah Curtin	fishing vessels														1
	Bycatch knowledge	Shad Monitoring & Control Plan	Plymouth Sound &Severn Estuary	Catch/landing observations. Potential for on-board surveys to sub-sample catches.	HRA outcome - monitoring bycatch of shad	10 surveys in Plymouth, ad hoc surveys in the Severn Estuary.	Fishing industry/ ring netters/ - Interfish in Plymouth Sound & commercial and recreational netter on the Severn	Libby West / Mat Mander	Plymouth Ring Netters	Flyers to be produced for information/education purposes														1
	Species Knowledge Nursey Function & Role of Severn Estuary	Sole	Berrow	Push net	Ecosystem Based Fisheries Management - Nursery Function & Role of Severn Estuary	I day per month	Plymouth Uni	Libby West/ Ben Ciotti	Shore														2
	Ecosystem Based Management - species & ecosystem information gathering	Bristol Channel Herring Project- Breaking down barriers to regional fish stocks.	North Devon Pioneer Programme	Genetics, otoliths, Morphometrics, Habitat mapping. Investigation market opportunities and improvements.	Ecosystem Based Fisheries Management - Stock identification & nursery areas & combination anthropogenic impacts.		Fishing Industry, Plymouth Uni, Cefas, Pioneer SG, Blue Marine	Libby West/ Chrissie Ingle/ Morven Roberts, Adam Rees	Shore/ vessel															1

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	Side scan sonar/ fishery stock assessment data gathering	Elasmobranchs	Bristol Channel	Side scan/ on-board surveys/ fishermen self sampling	Improving knowledge of elasmobranchs in the Severn Estuary.		Cefas, Blue Marine	Libby West/ Stuart Hetherington, Morven Robertson, Adam Rees															1
	Estuary Habitat Usage	Use of Sabellaria by Finfish.	Severn Estuary	Fyke, seine, tangle nets	Ecosystem Based Fisheries Management . Project will increase the evidence base for the function of the Severn Estuary as a fish nursery area and adult use of essential fish habitats.		Swansea Uni & Ocean Ecology/ Natural England	Libby West / Robyn Jones PhD student	Vessel & Shore															2