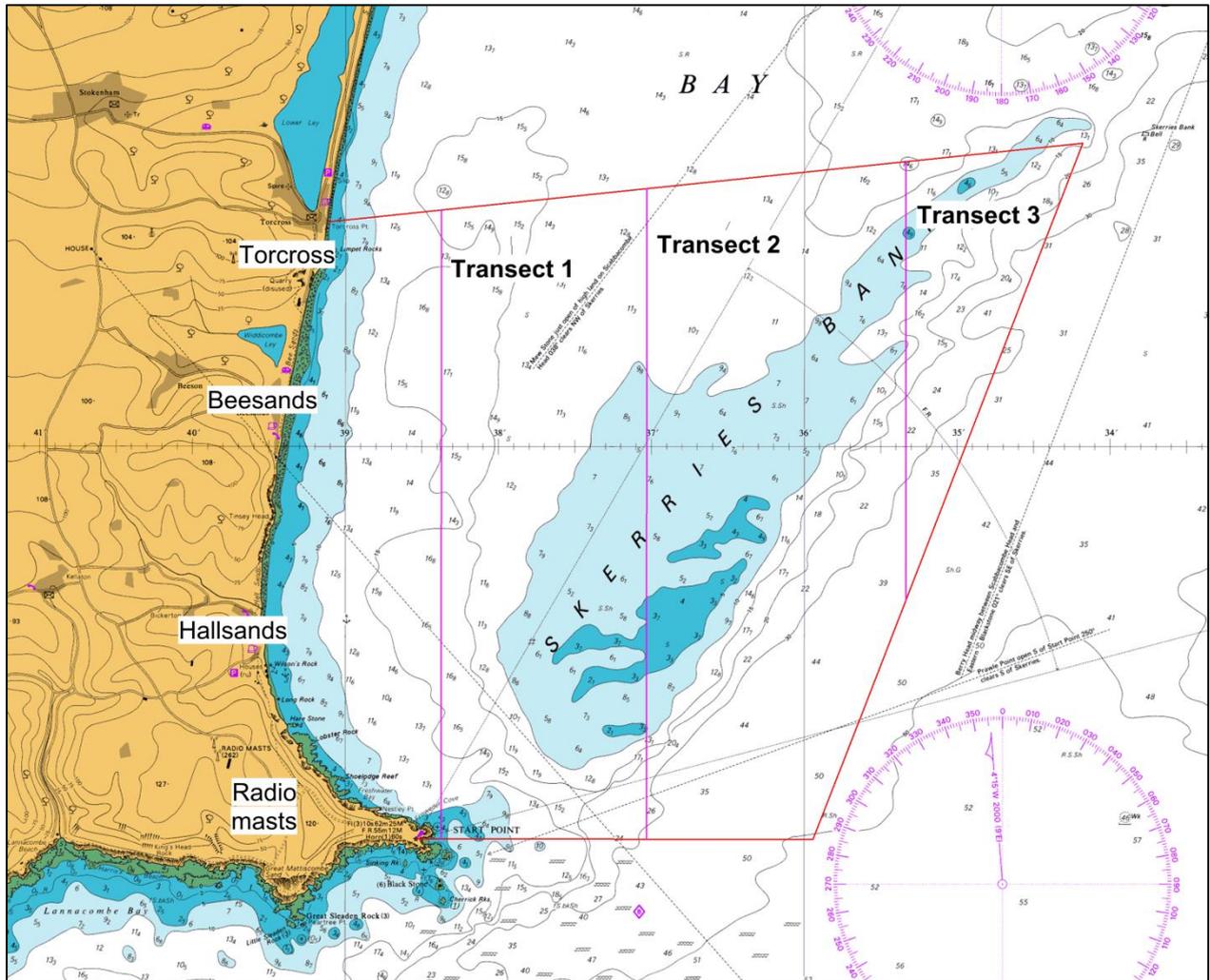


Monitoring plan for pilot Angling Zones



Devon and Severn Inshore Fisheries and Conservation Authority

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1.0 Introduction

1.1 Burnham, Berrow and Brean and the Emsstrom

1.2 The Skerries Bank

The Skerries Bank Angling Zone is situated in the south westerly corner of Start Bay, South Devon. It is situated within the South Devon Inshore Potting Agreement area and as such has been closed to trawling since 1978 (Blyth et al. 2003). It also sits within the Skerries Bank and Surrounds MCZ which is designated for a range of rock, sand and mud habitats.

Commercial static gear fishing in Start Bay and the Inshore Potting Agreement

Fishing boats, primarily operating from Dartmouth and Beesands, fish within the Angling Zone area with many of the small boats using a variety of static gears seasonally depending upon weather conditions and catch rates of different species. Potting predominates (Figure 1) with female brown crab (*Cancer pagurus*) being the main target species but spider crab (*Maja squinado*) and lobster (*Homarus gammarus*) are also important components of the catch (Clark 2008, 2014). Whelks are also fished in the vicinity of Start Bay. Netting takes place seasonally (Figure 2), with different species targeted across different parts of the site (Clark 2015 in preparation, Devon and Severn IFCA 2014b). Close inshore netting for bass and sole occurs whilst further offshore across the Skerries Bank sand banks tangle nets are used to target blonde and small-eyed rays. Effort levels are hard to determine but it is thought that whilst the netting intensity is relatively low, it is an important activity for the fishermen to fall back on when catch rates of crab and lobster are poor, or to supplement income from potting activities. Commercial rod and line fishing for bass also occurs, particularly focusing on the inshore reefs around Start Point.

Recreational Sea Angling in the Skerries Bank area

The Skerries Bank Angling Zone area was designated by Devon and Severn IFCA in September 2014 in recognition of its great importance to recreational sea anglers, both local and visiting. Charter boats operating out of Dartmouth, Salcombe, Brixham and Torquay regularly make trips to the Skerries, primarily targeting plaice on the sand banks from which the Skerries Bank takes its name. Rays are also targeted by the charter boats, but in consultations with the IFCA, were seen as being of secondary importance. Private boats travel to the Skerries Bank Angling Zone area from Dartmouth, Salcombe, Brixham and Torbay. Large numbers of private boats target the Skerries Angling Zone area in the summer months, in particular during the Torbay angling festival. In contrast to the charter boats private boat anglers involved in the D&S IFCA consultation for the Skerries Bank saw plaice and ray as equally important target species from boats within the Angling Zone area. Beaches and rocky marks around Beesands and Hallsands are fished by recreational anglers for plaice, bass, mackerel, flounder, dab, whiting, pout, garfish and pollack.

IFCA duties

IFCAs have a duty to balance the needs of all those exploiting sea fisheries resources in their district (MaCAA 2009) and Devon and Severn IFCA recognises the lack of direct inclusion of the needs of the Recreational Sea Angling (RSA) sector in inshore fisheries management prior to 2011. The IFCA is therefore seeking to develop RSA opportunities within the District. Three pilot Angling Zones were designated to remove or reduce gear conflicts between RSA and commercial static gear sectors to

improve angling opportunities and experiences. Recent publications have highlighted the socio-economic importance of the RSA sector and the relative economic value of fish landed by anglers compared to those landed by the commercial sector (MRAG 2014). However, the socio-economic and heritage value of inshore commercial fishing is also being recognised (GIFS reference) and must be taken into account in the development of management regimes, when such activities are sustainable.

Developing the Angling Zone

Extensive consultations with the local commercial fishing industry, charter boats and recreational sea anglers resulted in the development of a voluntary code of conduct for the area (Devon and Severn IFCA 2014, APPENDIX A) which aims to cap current commercial netting and longlining effort to preserve the importance of the area to anglers (Devon and Severn IFCA 2014). During the consultation process many common themes were raised by both the angling and inshore static gear fleet, including concerns regarding non-compliance with the no-trawl zone and the threat to fishing opportunities posed by larger static gear (netting) boats entering the area. Both sectors believed sustainability was important and saw themselves as custodians of the marine environment. Despite this anglers would like to see further netting restrictions within the Angling Zone, including an area of close inshore at Beesands being closed to fishing, and further netting restrictions to reduce effort on rays on the Skerries Banks. Questions therefore remain regarding the usage of the site by both sectors and Devon and Severn IFCA will be monitoring the Angling Zones closely to assess the success of the voluntary codes of conduct and investigate additional management needs..

In order to gain impartial evidence to support future management decisions regarding the Skerries Bank Angling Zone, greater effort will need to be placed in the monitoring of this site. Whilst the impact of Angling Zones will be monitored at all three sites, work will focus upon the Skerries Bank Angling Zone. This site was the most complex of three pilot Zones to implement due to its dual importance to both commercial and recreational interests (Reference). In order to monitor the impacts of implementing small-scale spatial management to benefit the recreational sea angling (RSA) sector and to aid in the development of management measures at the site four key topics will need to be addressed:

1. Usage
2. Compliance
3. Perceptions
4. Wider benefits

2.0 Usage and compliance

2.1 Burnham, Berrow and Brean and the Emsstrom

2.2 The Skerries Angling Zone

During the face-to-face consultations for the Skerries Bank Angling Zones it became apparent that current information relating to use of the site by different sectors was not available at a high enough resolution to support fine-scale spatial and temporal fisheries management. Therefore management measures could only be brought in where there was agreement between sectors. Where disparate information regarding the level, timing, location or impact of activities was received by the IFCA from the different sectors, it was not possible to refer to robust evidence in order to guide the decision making process.

The monitoring plan at the Skerries Bank will therefore focus upon collecting detailed information to aid future decision by D&S IFCA relating to fisheries management within the Angling Zone. This information gathering will take the form of boat-based surveys, shore-based surveys and commercial activity logs to improve the IFCA's understanding about the level, location and timing of fisheries activities within the pilot Angling Zone area.

A boat-based survey will take place twice per week from April/May 2015 which will look at the number, location and activity undertaken by boats working within the Angling Zone area. Through close working with the team who developed the Sea Angling 2012 protocol at Cefas a sampling frame has been developed based upon getting an even sampling coverage over days of the week and times of day. This will allow the IFCA to understand how weather, season and time of year affect the numbers of private angling and charter boats using the Skerries Angling Zone. At-sea interviews with angling boats will help determine the wider socio-economic importance of angling on the Skerries Bank to the local area.

During these boat surveys officers will also collect information on any commercial fishing observed, but the primary method of data collection regarding commercial activity will be gained through activity logs kept by boats working in the area. Boat based surveys will also monitor compliance with the Angling Zone code of conduct by checking whether bag limits for anglers are being adhered to and whether commercial gear being fished adheres to the code of conduct. The commercial activity recording logs will be monthly activity diaries which collect information on which gear types were fished, which species were targeted, and which areas were fished. Shore and boat based recording of commercial activity will also take place, as will officer checks of fishing gear to corroborate information recorded in log books.

Shore-based surveys will focus upon Hallsands and Beesands beaches and will be based around interviews with anglers regarding their use of the site. Further socio-economic data will also be collected during shore based surveys.

Any direct observations of non-compliance with the code of conduct will be logged, as will anecdotal reports. Interviews at sea and on land will include sections on compliance and on the level of knowledge of the Angling Zone and code of conduct.

2.0 Perceptions & Wider Impacts - The Skerries Bank Angling Zone Socio-Economic Case Study

Conflict between the RSA sector and the commercial fishing industry occurs in two primary forms; the first being direct conflict between gear types (e.g. angling vs. nets), which the Angling Zone primarily addresses and perceived wider concerns regarding one sectors impact on fish stocks harming the environment and/or reducing availability of fish to the other sector. These beliefs run in both directions and collecting data to compare the relative impacts of each sector on the environment would be extremely difficult. This will be addressed to some extent with the ray tagging project described in the next section.

However when considering appropriate management IFCA's must also be mindful of their wider remit which is reflected in the IFCA vision:

'Inshore Fisheries and Conservation Authorities 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'

Therefore the IFCA has a requirement to also take socio-economic factors into account when managing the marine environment. Recent reports have highlighted the significant socio-economic importance of both the RSA sector (Sea Angling 2012) and the inshore commercial fleet (GIFS 2014). Therefore in order to understand the appropriate management of the area, the IFCA also needs to understand the wider impacts of both sectors on tourism, heritage value and sense of place.

The IFCA is therefore seeking to progress this aspect of the monitoring with a partnership approach and is currently in discussion with the University of Greenwich regarding the development of the RENEW project, as potential partners in a developing Intereg project looking at socio-economic aspects of coastal communities. Research themes that the IFCA would like to explore within the RENEW framework are still in development but initial aims and objectives include:

- To understand the relative potential of local inshore fisheries and recreational sea angling for delivering sustainable growth and jobs in the Devon and Severn IFCA district, specifically in the vicinity of Start Bay, South Devon
- To understand better the shared interests (sustainable fisheries, blue growth, sense of place, heritage value) of SFF and recreational sea angling
- To understand the role that recreational sea angling plays in fisheries towns in transition
- To work towards a governance model which includes both inshore commercial fisheries and recreational sea angling in order to maximise the development potential of inshore sustainable fisheries.
- To raise public awareness about the social and cultural importance of both inshore commercial fisheries (SSF) and recreational sea angling and the shared interests of two (sometimes) disparate sectors

The Skerries Bank Angling Zone Ray Tagging Project outline

Background

During the consultation process the IFCA received conflicting opinions on the effect of commercial netting for rays on RSA fishing activities. The difference in opinion was particularly interesting because it actually occurred within the RSA sector. Whilst angling charter boats felt there was no adverse effect of commercial netting for rays on the Skerries on their own fishing activities, representatives of shore and private boat anglers believed that commercial netting activities decreased their own angling opportunities and experiences (ray were fewer or absent after netting of certain areas). This contradictory information, combined with a lack of evidence on the subject hampered the IFCA's ability to determine whether introducing management measures was necessary in order to conserve and improve angling activities on the Skerries.

In order to better understand the links between different fishing activities on the Skerries Bank Devon and Severn IFCA are developing a tagging programme, using simple Peterson Disc tags which will look at the fate of rays which have been caught and released by anglers on the Skerries Bank Angling Zone.

- Licensed officers will accompany charter or private boat trips which are targeting rays within the Skerries Bank Angling Zone.
 - Rays which would be released under normal angling conditions will be tagged with Peterson Disc tags and the detail of each tag recorded (location that the ray was caught and released, tag number, ray species, sex, length etc)
 - The commercial sector will be encouraged to return tags to the IFCA along with information on the location of recapture. A reward will be made available when tags and associated information are returned to the IFCA.
 - The recreational sector will be encouraged to record the details of any tagged rays caught, including the location that the ray was recaptured, its length and condition when caught and whether or not it was released or retained.
 - The database of tagged and recaptured rays will help to determine survival rates of released rays and interactions between the recreational angling sector and various ray fisheries (e.g. netting within the Skerries Bank Angling Zone, trawling and netting and longlining activities outside the zone) which may inform future management decisions in South Devon.
- Resources needed
 - Boat time – joining charter boat trips/ private boat trips or chartering boats
 - Officer time
 - Peterson disc tags
 - Tagging equipment
 - Publicity materials
 - Reward fund
 - Outputs
 - Justification
 - Opportunities for joint working

References

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Appendix A – Boat based survey methodology

Appendix B – Boat based site form

Appendix C-Boat-based interview forms

Appendix D- Shore based survey methodology

Appendix E – Shore based site form

Appendix F-Shore based interview form

Appendix G –Commercial activity log

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