Fisheries in EMS
Monitoring and Control Plan for Amber and Green risk categories

European Marine Site: Plymouth Sound and Estuaries SAC

D&S IFCA MCP ID	D&S IFCA HRA ID	Fishing Activity	Feature(s)	Sub-feature(s)
MCP_UK0013111_AJ24_2018; MCP _UK0013111_AJ25_2018; MCP _UK0013111_AJ26_2018; MCP _UK0013111_AJ28_2018; MCP _UK0013111_AJ27_2018	HRA_UK0013111_AJ24; HRA_UK0013111_AJ25; HRA_UK0013111_AJ26; HRA_UK0013111_AJ28; HRA_UK0013111_AJ27	Gill nets; Trammels; Entangling; Drift nets (demersal); Drift nets (pelagic)	Allis shad	N/A
MCP_UK0013111_AJ33_2018	HRA_UK0013111_AJ33	Purse Seine	Allis shad	N/A
MCP_UK0013111_AJ34_2018	HRA_UK0013111_AJ34	Beach Seine/ring-nets	Allis shad	N/A

Iteration 1.1: July 2019

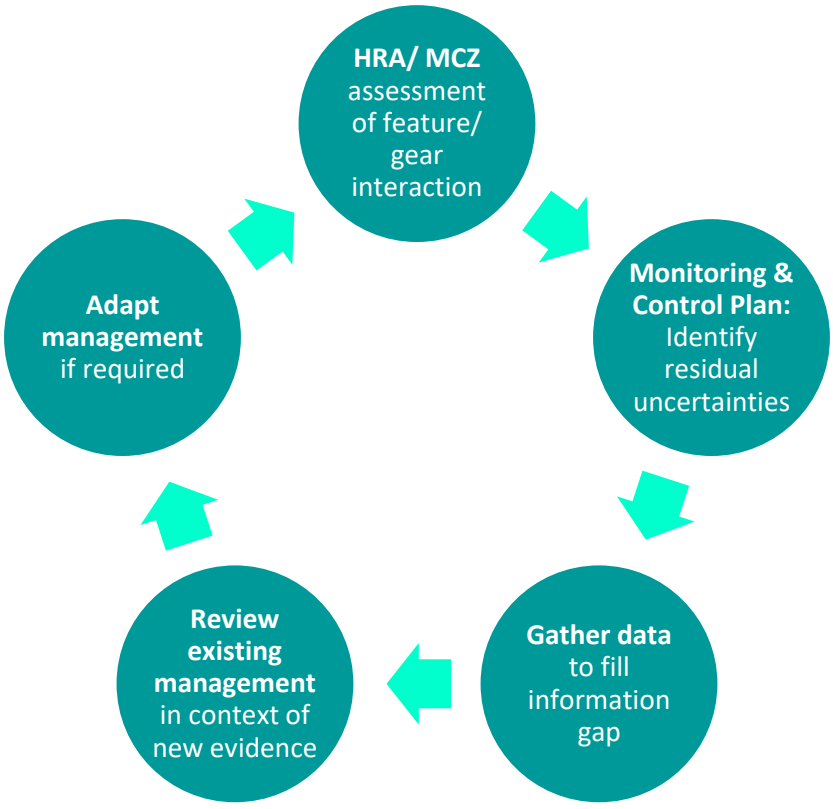
Contents

Iteration	Dates	Author/ Reviewer	Comments
1	January 2019	Libby West	
1.1	July 2019	Sarah Clark	QA'ing.

1.0 Introduction

Devon and Severn IFCA is committed to an Ecosystem Approach. Adaptive management is seen as a key tool for effectively implementing the Ecosystem Approach (Farmer et al. 2012). Adaptive management acknowledges the high levels of uncertainty in natural systems and the difficulties of making decisions based on this uncertainty. It provides a framework for a flexible and pragmatic approach to marine management, allowing sustainable development whilst adapting management and policies to respond to new information.

Monitoring and Control Plans (MCPs) are being developed by D&S IFCA for certain gear-feature interactions in Marine Protected Areas (MPA) where Habitat Regulations Assessments (HRAs) for European Marine Sites (EMS) or Marine Conservation Zone (MCZ) assessments find uncertainties in the scientific and/or fishing effort evidence. They will provide information on what monitoring will be undertaken, how this new information will be used, the timeframes for data collection and review of any current assessments. Crucially MCPs will identify suitable management mechanisms, should they be required following the outcomes of the data collection. The adoption of a permitting byelaw system by D&S IFCA allows for true adaptive management which can respond effectively when risks are identified.



The Monitoring and Control Plan should be read in conjunction with the original MPA assessment for which it was identified as being necessary.

2.0 Residual Uncertainties

2.1 Uncertainties Around Fishing Effort

Drift netting was reported as occurring at a medium level in Plymouth Sound, with several small dories having been witnessed targeting herring. Gill, trammel and entangling nets were thought to be occurring at a low level. The HRAs were written prior to the D&S IFCA netting permit byelaw being made, so at the time there was no formal way of communicating with those involved in netting activities at the time.

Ring-netting falls under the mobile-gear permit byelaw, which was already in place at the time the HRA was completed, so more detailed information was available (See Appendix 1 – Permit Annex 4 Chart). The HRA for ring-netting found netting to occur at a low level in Plymouth Sound and described the number of vessels involved in the fishery and their seasonal fishing pattern.

In their formal advice Natural England accepted the conclusions of the HRAs, but suggested that effort levels within the site are monitored into the future and an increase in netting levels should trigger a review of the HRA.

2.2 Uncertainties Around Gear-Feature Interaction

Some uncertainty was identified around the levels of shad bycatch in the HRAs and in the subsequent advice from Natural England. Little evidence exists of bycatch rates in different kinds of net and ring-net fisheries.

3.0 Monitoring Requirements

3.1 Fishing Effort Monitoring

In March 2018 the D&S IFCA's Netting Permit Byelaw came into force. This gives D&S IFCA a direct ability to monitor the number of permits issued in the Plymouth area. However, the permits do not automatically define who fishes inside, or in close proximity to the European Marine Site. See Appendix 1 – Permit Annex 2 Charts showing the closing lines for netting in the Plymouth Sound EMS under the Netting Permit Byelaw.

In August 2018, D&S IFCA updated the mobile gear permit application to specifically ask fishers what type of mobile gear they are fishing with, so that ring-netting can be more clearly identified. D&S IFCA will monitor ring-netting effort levels by reviewing the number of permits issued for ring- netting, and through direct liaison with permit holders where necessary.

3.2 Gear-Feature Interaction Monitoring

Natural England simply requested a bycatch reporting scheme to be set up, where fishermen will self-report bycatches of shad. D&S IFCA is in the process of developing this and will roll this out in 2019. However, D&S IFCA may also collect additional information on shad bycatch from the ring-net fisheries, where possible.

Some semi-quantitative catch observations will be made on ring-netting vessels in Plymouth Sound. Discussions are currently underway with the relevant companies and individuals as to how these can be undertaken with minimum disruption to the current fishing operations. D&S IFCA is also looking into current observer effort as Cefas reportedly have some coverage of this fishery which may provide extra information which can inform the gear-feature interaction monitoring.

4.0 Trigger points

4.1 Fishing Effort Triggers

For ring-netting vessels the baseline number of vessels is four. These vessels currently only occasionally fish in Plymouth Sound, due to recent low catches of herring and the herring only moving inshore for brief periods. Vessels also targeted sardines/pilchards but few fish have been seen on the Plymouth Sound EMS. If any additional vessels join the fishery, a review of the HRA should be triggered.

For the other types of netting included in the Monitoring snd Control Plan, the number of netting permits for vessels, who list Plymouth in as their homeport in 2019, will be used to set a baseline and identify trigger points. However this number does not denote the number that actually fish with nets within the Plymouth Sound EMS. Additional evidence will be collected in the form of a survey of permit holders based in Plymouth to attempt to ascertain which of those vessels actually fish within Plymouth Sound, the type of gear they used, the seasonality of their fishing and the regularity of their activities within the Sound. This will be used as supplementary baseline evidence to set trigger points.

Future reviews of netting effort in the Plymouth Sound EMS should take place every three years on a timescale that allows the results to inform the triennial review of the netting permit byelaw permit conditions, unless information from elsewhere (e.g. officer observations, information from fishermen or the public) suggests trigger points have been reached before the three-year review is due.

4.2 Gear-Feature Interaction Triggers

Baseline data will be collected in 2019 to inform future Monitoring and Control Plan trigger points. However, in the interim any large single bycatch events (>10 fish) or regular small bycatch of shad should trigger an HRA.

Table 1. Monitoring activities and trigger points

Monitoring activity	Gear types	Trigger	Action	Management mechanism (if required)
Effort monitoring	Gill nets; Trammels; Entangling; Drift nets (demersal); Drift nets (pelagic)	Use 2019 data collection as a baseline and set triggers following this data collection.	1. Monitor fishery via number of permits issued to static net vessels operating in Plymouth Sound 2. Send out questionnaire to vessels with netting permit fishing out of Plymouth to request more information on netting effort and location in Plymouth Sound	Netting permit byelaw
Effort monitoring	Purse Seine	Use 2019 data collection as a baseline and set triggers following this data collection.	1. Monitor fishery via number of permits issued to purse seine vessels operating in Plymouth Sound 2. Send out questionnaire to vessels with netting permit fishing out of Plymouth to request more information on netting effort and location in Plymouth Sound	Netting permit byelaw
Effort monitoring	Beach Seine/ring nets	Any increase from 4 ring netting vessels should trigger a review of the HRA for this activity.	1. Monitor fishery via number of permits issued to ring-netting vessels operating in Plymouth Sound 2. Consider utilising mobile gear permit byelaw ability to request additional data from fishermen. Catch reporting, location reporting etc.	Netting permit byelaw/ mobile gear permit byelaw
Bycatch (shad) reporting	All netting types	Baseline data will be collected in 2019 to inform future Monitoring and Control Plan trigger points. However, any large single bycatch events (>10 fish) or regular small bycatch events of shad should trigger an HRA.	1. Targeted observations of ring-netting activities in Plymouth Sound in 2019 2. Set up bycatch reporting scheme for other net fisheries, as requested by Natural England	Netting permit byelaw Mobile gear permit byelaw

5.0 Management Mechanisms

Devon and Severn IFCA is working towards a system where all fisheries activities are managed by permit byelaws. Those introduced so far are:

Permit based byelaws introduced to date include:

- Mobile Fishing Permit Byelaw
- Potting Permit Byelaw
- Diving Permit Byelaw
- Netting Permit Byelaw

Permit based byelaws provide scope for both fixed and flexible management measures via the conditions of use within the permits issued to fishers. The scope of the flexible conditions includes catch, gear, spatial and temporal restrictions. D&SIFCA has a duty to review all of the flexible conditions (per byelaw) at least every three years but can review conditions within a shorter time period as considered necessary (for example following an HRA review triggered by a Monitoring Control Plan).

Permit-based byelaws allow separation of different users (fishers) or slightly different types of fishing activity managed by a single byelaw. Separation is achieved by the issue of separate categories of permits dependent on the activity being managed. The permit byelaws often separate commercial fishers and recreational fishers, with the permit's conditions of use proportionate to their needs. By permitting fishers, D&S IFCA has a very direct way of monitoring effort. The permitting byelaws also allow for D&S IFCA to request any additional information for the management of the fishery.

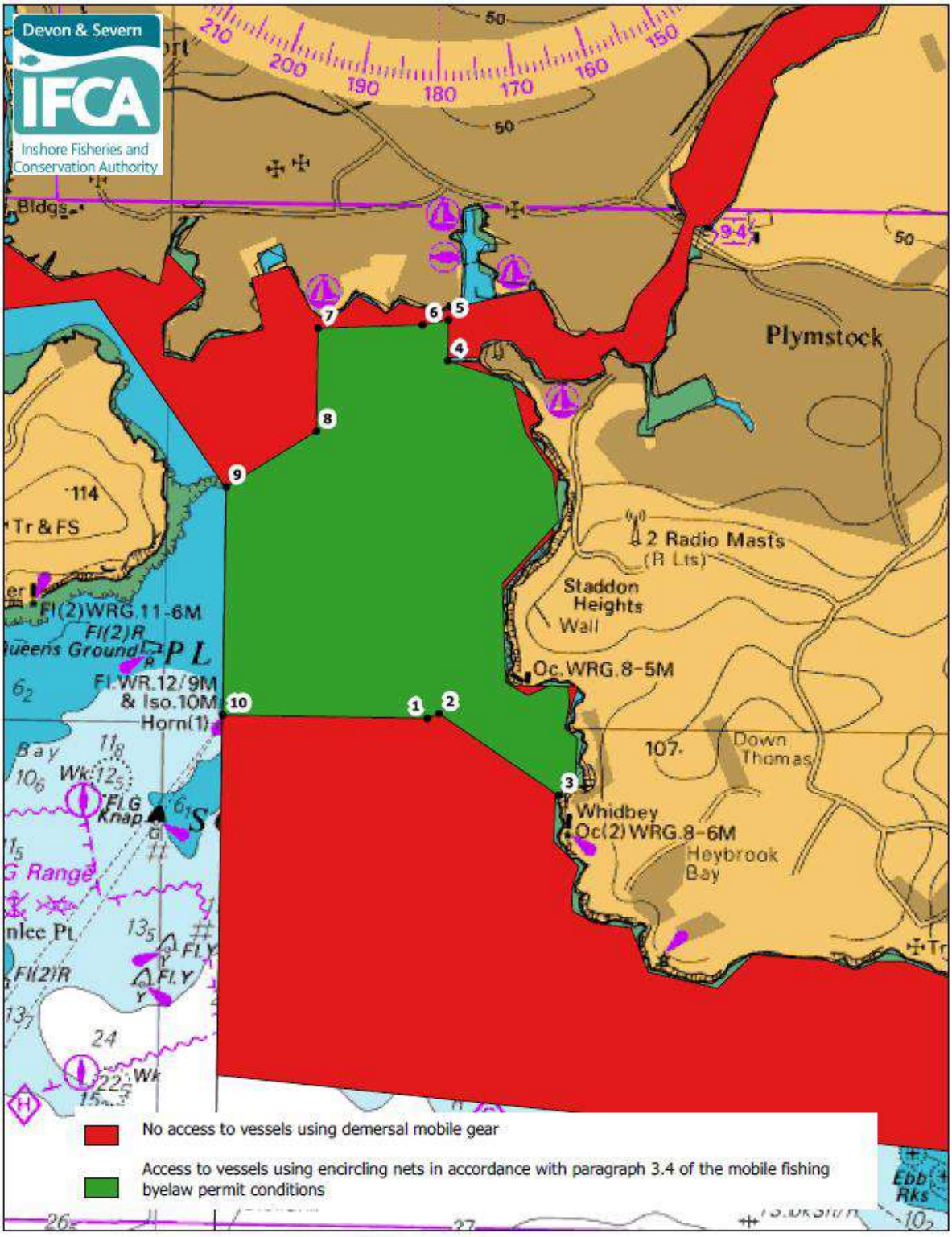
The permit byelaw system can therefore fully accommodate the adaptive management approach being outlined by this Monitoring and Control Plan.

Table 2. HRA audit trail and summary of outcomes and advice for gear interactions with the Allis shad feature of Plymouth Sound and Estuaries EMS

D&S IFCA interaction ID	Specific gear types	Progress	NE advice reference	IFCA HRA Conclusion	NE advice summary
HRA_UK0013111_AJ36	Fyke & stakenets	Formal advice received 18/07/16	189126	TLSE no significant effect. Not occurring or very low level.	Accept HRA conclusions with no further action recommended.
HRA_UK0013111_AJ24; HRA_UK0013111_AJ25; HRA_UK0013111_AJ26; HRA_UK0013111_AJ28; HRA_UK0013111_AJ27	Gill nets; Trammels; Entangling; Drift nets (demersal); Drift nets (pelagic)	Formal advice received 06/09/16	189111; 189112; 189912 &194070	TLSE no significant effect. Not occurring or very low level.	1. We advise that effort levels of netting within the site are monitored into the future as we feel this potentially poses the biggest risk of shad bycatch. If netting levels increase above the low level currently suggested within the HRA, we feel that this should trigger a reassessment. Our understanding is that your proposed netting permit bylaw will provide a suitable mechanism for you to adequately monitor the effort levels occurring within the site. 2. There is some uncertainty around the level of shad bycatch. Although it is thought to be very low, this is based in part on a lack of reports that it is occurring. We suggest there would be real benefit in introducing a shad bycatch reporting scheme in the site. This would allow bycatch to be better understood and should any future management be required, specifically targeted to the activities / locations / seasons where bycatch is occurring.
HRA_UK0013111_AJ33	Purse Seine	Formal advice received 06/09/16	189111; 189112; 189912 &194070	TLSE no significant effect. Not occurring or very low level.	As above.
HRA_UK0013111_AJ34	Beach Seine/ring nets	Formal advice received 06/09/16	189111; 189112; 189912 &194070	TLSE no significant effect. Low effort and no reports of bycatch. Possible management via the mobile gear permit byelaw if effort increased.	As above.
HRA_UK0013111_AJ29; HRA_UK0013111_AJ30	Longlines (demersal); Longlines (pelagic)	Formal advice received 06/09/16	189111; 189112; 189912 &194070	TLSE no significant effect. Occurring at very low level.	NE accept conclusions of TLSE. Only feedback received related to netting.
HRA_UK0013111_AJ31; HRA_UK0013111_AJ32	Handlines/ rod & gurdy, Jigging and trolling	Formal advice received 06/09/16	189111; 189112; 189912 &194071	TLSE no significant effect. Not occurring or very low level.	NE accept conclusions of TLSE. Only feedback received related to netting.

Appendix 1 – Charts Associated with Permit Conditions

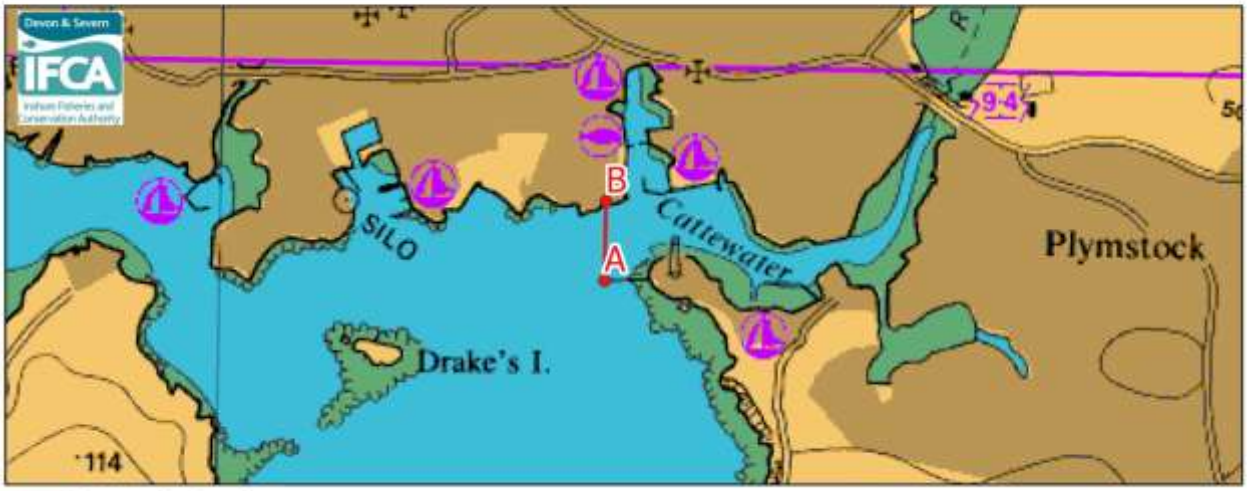
Annex 4a Plymouth Sound and Estuaries - Access to vessels using encircling nets in accordance with paragraph 3.4 of the mobile fishing byelaw permit conditions



Annex 2 Chart of River Tamar closing line - No access for the use of nets other than a seine net in accordance with paragraph 3.2 of the Netting Permit Conditions

Estuary closing line

Annex 2 Chart of River Plym closing line - No access for the use of nets other than a seine net in accordance with paragraph 3.2 of the Netting Permit Conditions



Estuary closing line

References

Farmer, A., Mee. L., Langmead, O., Cooper, P., Kannen, A., Kershaw, P. and Cherrier, V. 2012. The Ecosystem Approach in Marine Management. **EU FP7 KNOWSEAS Project. ISBN** 0-9529089-5-6