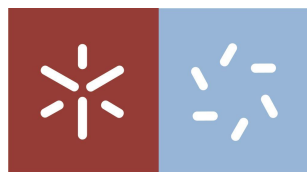




Implementation of Best Practices Manuals according to fishing gear (Action C1)

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May 2017



ACTION C.1: Implementation of Best Practices Manuals according to fishing gear

Introduction

The present action aimed to implement of the Best Practices Manuals developed in Action A.4 in the different fisheries.

The work plan included meetings with Producers Organizations (PO) leaders, PO technical staff, boat captains and crew to present and discuss the Best Practice Manuals and to discuss practical solutions for their implementation. Short questionnaires were handed out to fishers during the meetings held between the project and PO members and in contacts with individual fishers. The aim of these questionnaires was to have a sense of fishers' opinion on the mitigation measures suggested in the Best Practice Manuals.

The trials to evaluate the use of Best Practice Manuals were carried out in the same vessels that implemented mitigation measures (e.g. deterrent devices). The results of the monitoring of these vessels are reported in the deliverable of action C.2.

Methodology

During 2013 and 2014 the implementation of Best Practice Manuals was carried out in meetings with PO leaders, boat skippers and crews. An effort was made to cover the fisheries that had more interactions and accidental by-catch of cetaceans and seabirds (according to results of action A.3) and to go to the main regions where those fisheries operate. In the meetings, MarPro team members with expertise on seabirds, cetaceans and fisheries presented briefly the project, informed fishers about interactions with cetaceans and seabirds in Portuguese fisheries (results of action A.3) and presented the measures and practices recommended in Best Practice Manuals to reduce interactions and accidental by-catches (Annex 1- Example of powerpoints presented in meetings). Presentations were followed by a discussion on interactions and mitigation measures and in the end of meetings participants were asked to fill the questionnaires.

In the executive meeting of 24 January 2014, MarPro partners re-visited the strategy to implement meetings and best practices/mitigation measures in the different fisheries, taking into account the results of actions A.2 and A.3 and the experience gained during 2013. In particular, we realized the difficulty to promote meetings with the artisanal fishery as fishers are not generally organized in associations. Moreover, the artisanal fishery is very diverse in terms of vessel types and gears used and has a large number of fishers spread over the whole coast. Therefore, for artisanal fisheries, we agreed to disseminate and discuss the Best Practice Manuals approaching fishers and skippers individually.

The questionnaires handed out to fishers during the meetings held between the project and PO members and in contacts with individual fishers are presented in Annex 2.

Results

Meetings and individual contacts

The project partners carried out meetings and individual contacts with 361 persons linked to the main Portuguese fisheries during the project, 18 PO representatives and 343 fishers (including skippers and crew members) (Table 1). 15 meetings were organized throughout the country with the participation of 90 PO representatives and fishermen. In these meetings, the project partners presented the Best Practice Manuals and discussed with fishers their implementation in the different fisheries and areas (Table 2, see also photos in annex 3). During 2016 and 2017, the project partners promoted individual (in person) contacts with more than 200 fishers, mainly boat skippers from artisanal fisheries in Peniche/Nazaré and Algarve and from purse seine in Peniche. The meetings and individual contacts were also very useful to identify the major concerns of fishermen and PO leaders regarding cetaceans and seabirds.

Table 1 –Number of PO leaders and fishermen that participated in meetings and in person contacts with the project team.

Fishery	Region	PO Leaders	Fishermen (skippers/crew)	Total by fishery
Purse seine	North	6	22	
	Centre	2	27	
	South	2	21	80
Artisanal	North	4	10	
	Centre	1	218	
	South	1	25	259
Beach Seine	North	1	10	
	Centre	1	10	22
Total		18	343	361

Table 2 – List of meetings and in person contacts with PO leaders and fishermen to present and discuss the Best Practice Manuals.

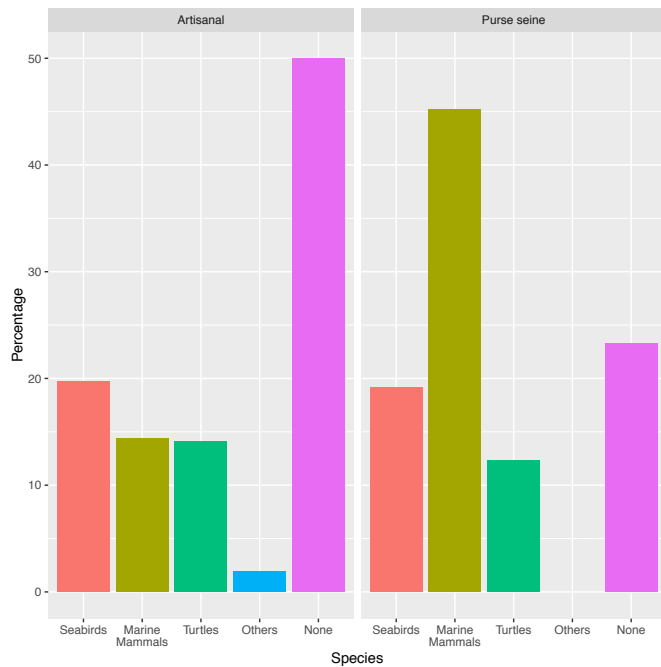
Target public	Meeting place	Sate	Number of participants	Fishery
Leader of the Fishermen Association	Costa da Caparica	30/05/2013		1 Beach seine
Skippers	Costa da Caparica e Fonte da Telha	20/06/2013		4 Beach seine
Skippers	Costa da Caparica e Fonte da Telha	04/07/2013		2 Beach seine
PO leaders	PO SESIBAL (Sines e Setúbal)	22/08/2013		2 Purse seine
Skippers	Costa da Caparica e Fonte da Telha	12/09/2013		4 Beach seine
PO leaders	PO APARA (Aveiro)	05/09/2013		2 Purse seine
PO leaders	IPMA-Algés	19/09/2013		8 Purse seine
PO leaders	PO Centrolitoral (Figueira da Foz)	04/10/2013		1 Purse seine
PO members (skippers)	PO Olhãopescas (Olhão and Tavira)	12/12/2013		11 Purse seine 1 Artisanal
PO members (skippers)	PO Barlapescas (Portimão and Lagos)	13/12/2013		10 Purse seine
Fishermen association (skippers)	AAPSV (Sines)	21/02/2014		10 Artisanal 4 Purse seine
PO members (skippers)	PO Propeixe, Apara and Vianapesca (Matosinhos Aveiro and Figueira da Foz)	07/03/2014		14 Purse seine
Leaders of Fishermen Associations	Vila Praia de Âncora, Castelo do Neiva, Esposende, Vila Chã	17/06/2014		4 Artisanal
Fishermen (PO Vianapesca)	Viana do Castelo	29/10/2014		10 Artisanal
PO representative	CAPA (Peniche)	24/11/2014		1 Artisanal
Skipper	Peniche	30/07/2015		1 Artisanal
Skippers/fishermen		2016		Artisanal
Skippers/fishermen	Mira and Espinho beaches, in person contacts	30/10/2014		10 Beach seine
Skippers/fishermen	Peniche, in person contacts	2015		92 Artisanal
Skippers/fishermen	Peniche, in person contacts	2015		13 Purse seine
Skippers/fishermen	Peniche, in person contacts	2016		66 Artisanal
Skippers/fishermen	Peniche, in person contacts	2016		10 Purse seine
Skippers/fishermen	Algarve, in person contacts	2017		24 Artisanal
Skippers/fishermen	Nazaré, in person contacts	2017		16 Artisanal
Skippers/fishermen	Peniche, in person contacts	2017		33 Artisanal

Questionnaires

Questionnaires were filled mostly by skippers (285 out of 288) and from the artisanal fisheries (246 questionnaires were filled by fishers of artisanal fisheries and 42 questionnaires were filled by purse seiner fishers). In both fleets, fishers reported that different types of animals get entangled in their fishing devices (Figure C.1.1). In artisanal fisheries the most reported species are seabirds (~20%) while in the purse seine fishery marine mammals are the most reported to get entangled (45%). Turtles were reported by both fisheries in similar percentages (14% in the artisanal and 12% in the purse seine). A

great number of artisanal fishers (50%) reported that no animals get entangled in their fishing devices, while in the purse seine fishery only 23% report that no animals get entangled.

Figure C.1.1 – What type of animal gets entangled in the fishing devices?



Some of the practices recommended in the manuals to avoid interactions are already used by fishers (Table C.1.1). Regarding the practice of communicating the presence of dolphins or seabirds to other skippers, a significant difference between these the two fleets was found ($X^2 = 40.327$, $df = 2$, p -value < 0.05). While 45.2% of fishers from the purse seine fleet reported that they already use this measure because they believe that it is efficient, only 8.6% of the fishers from the artisanal fleet implement this measure mainly because they believe its not efficient (46.7%). This is due to the speed of the animals and the fact that the majority of the fishing devices used by them is static. However, 37.5% of fishers from the artisanal fishery reported that they are willing to use it in the future.

Table C.1.1 – Communicate presence of cetaceans/seabirds to other vessels.

Fleet	Answer	Already in use?	Is it efficient?	Willing to use it?
Artisanal	Yes	8.6	53.3	-
Purse seine		45.2	100	-
Artisanal	No	90.6	-	37.5
Purse seine		54.8	-	-

Another avoidance practice in use by the purse seine fishers (21%) is surveillance (Table C.1.2) because they believe it is efficient. They usually use the sonar to detect unusual behaviour of fish schools that are commonly associated with the presence of cetaceans. None of the interviewed artisanal fishers uses this measure. A significance difference between the two fishing fleets was found (X-squared = 82.257, df = 2, p-value < 0.05). The majority of fishers that don't use this measure are willing to use it in the future (66.7% of the purse seine fishers and 25% of the artisanal fishers).

Table C.1.2 - Surveillance of the fishing area to avoid encounters.

Fleet	Answer	Already in use?	Is it efficient?	Willing to use it?
Artisanal	Yes	0.0		-
Purse seine		33.3	100	-
Artisanal	No	99.6	-	25.0
Purse seine		66.7	-	66.7

Regarding the use of pingers (Table C.1.3), a significance difference between the two fishing fleets was found (X-squared = 24.81, df = 2, p-value < 0.05). 9.8% of the purse seine fishers reported to use pingers and from these 33.3% believe that they are not very efficient and 66.7% believe they are. Some of those that don't use this measure yet are willing to use them in the future (77.8%) while others admit that they are not interested in using them. In the artisanal fishery none of the fishers uses this practice but are willing to use it (69.6%) if they don't interfere with captures and some say they would have to be given to them considering the high costs in face of the profit of the fishery.

Table C.1.3 - Use of pingers to minimize cetacean by-catch.

Fleet	Answer	Already in use?	Is it efficient?	Willing to use it?
Artisanal	Yes	0.0		-
Purse seine		9.8	66.7	-
Artisanal	No	98.4	-	69.6
Purse seine		90.2	-	77.8

Only one skipper (0.4%) from the artisanal fishery has ever used streamlines or other measures to deter seabirds, which makes this the least used practice to avoid interactions (Table C.1.4). None of the skippers from the purse seine have ever used this practice but 37.5% are willing to try it out. In the artisanal fleet 30% of the fishers that don't use this measure are willing to try it out.

Table C.1.4 - Use of streamlines to scare seabirds.

Fleet	Answer	Already in use?	Is it efficient?	Willing to use it?
Artisanal	Yes	0.4	100.0	-
Purse seine		0.0		-
Artisanal	No	99.6		30.0
Purse seine		100.0		37.5

In regards to measures that only apply to the purse seine fishery (Table C.1.5):

19% reported that they avoid or even interrupt fishing operations when they sight a group of animals nearby the fishing vessels. All believe that this is an efficient measure. Only 4% of the fishers that don't use this measure reported that they are not willing to use this measure in the future. The remaining 96% didn't reply.

The avoidance of slipping is a practice already in use by 14.3% of skippers. 81% reported that they don't use it and while 8.8% are not willing to use this measure the others didn't reply to this question.

23.8% reported that they interrupt fishing operations to release any entangled animals and believe that either it is an efficient measure (70%), not very effective (10%) or not effective at all (10%). From the skippers that don't use this measure yet, only 6.2% reported that they're willing to try it in the future although 93.8% didn't reply to this question.

Finally, 92.9% of the purse seine skippers don't use stretchers to release cetaceans. Some are willing to use it in the future (15.4%) but others say they're not (2.6%). 66.7% of the skippers that already use this measure state that it is an effective measure.

Table C.1.5 - Results of the questionnaires filled by purse seine skippers.

	Yes	No	NA
Avoid or even interrupt operation when groups of animals are sighted nearby			
Already in use?	19.0	59.5	21.4
Is it efficient?	100		
Willing to use it?		4.0	96.0
Avoid slipping			
Already in use?	14.3	81.0	4.8
Is it efficient?	50.0		50.0
Willing to use it?		8.8	91.2
Interrupt the operation to release entangled animals			
Already in use?	23.8	76.2	0.0
Is it efficient?	70.0	10.0	10.0
Willing to use it?		6.2	93.8
Release cetaceans using a stretcher			
Already in use?	7.1	92.9	0.0
Is it efficient?	66.7		33.3
Willing to use it?	15.4	2.6	82.1

Only 2.6% of the longline fisheries fishers uses measures to avoid the attraction of dolphins or seabirds to the bait and none are willing to use it in the future.

Conclusions

As planned, a broad dissemination and discussion of the Best Practice Manuals with fishermen and PO representatives was accomplished in this action: the meetings and individual contacts had the participation of more than 350 persons (18 PO representatives and 343 boat skippers/fishers) connected to the fisheries that had higher interactions with cetaceans and seabirds. Fishers generally agreed with the practices recommended in the Manuals and either already used them or were willing to follow them in the future. In some cases, fishers provided specific suggestions that will facilitate the practical use of mitigation measures (e.g. pingers).

Annex 1 – Example of powerpoints presented in meetings with fishermen

Annex 2 – Questionnaires

Annex 3 - Pictures: meetings with PO leaders and members (fishers and skippers)



Conservação de espécies marinhas protegidas em Portugal continental

Veleiro
Santa Maria Manuela

Festival dos Oceanos

Marina do parque das
nações

5 de Agosto

21.00 horas



universidade de aveiro
departamento de biologia



Universidade do
Minho



spea

Sociedade Portuguesa
para o Estudo das Aves



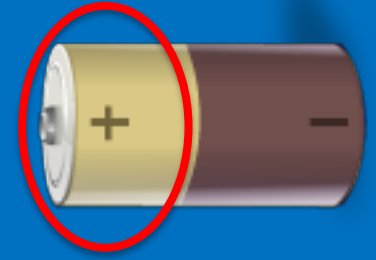
ASSUNTO ?

GOLFINHOS

AVES
MARINHAS



PESCA



GOLFINHOS

AVES
MARINHAS



Indicam onde há peixe

PESCA

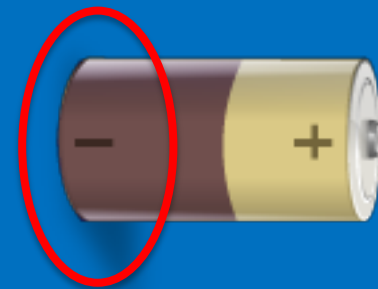


PESCA

Fornece alimento

GOLFINHOS

AVES
MARINHAS



GOLFINHOS

AVES
MARINHAS

Perturbam
Causam prejuízo

PESCA

PESCA

Mata
acidentalmente

GOLFINHOS

AVES
MARINHAS

PORQUE TEMOS QUE NOS PREOCUPAR ?

- Há espécies em perigo de extinção ou a diminuir de forma drástica
- As pescas com impacto nestas espécies começam a ser penalizadas
- No caso do cerco, a certificação do MSC exige que o impacto seja baixo



MARPRO

Avaliar a situação

- Quais as pescarias em que há interferências ?
- Quais as espécies afetadas ?
- Qual o impacto da pesca nas espécies mais sensíveis ?

- Práticas a seguir para evitar a captura acidental
- Dispositivos para afastar os golfinhos e aves marinhas

Corrigir a situação

Com a colaboração dos pescadores



MANUAL DE BOAS PRÁTICAS

Frota de arrasto



MANUAL DE BOAS PRÁTICAS

Frota polivalente



MANUAL DE BOAS PRÁTICAS

Frota de palangre de fundo



MANUAL DE BOAS PRÁTICAS

Arte de Xávega

MANUAL DE BOAS PRÁTICAS - CERCO

para evitar a captura acidental de mamíferos e aves marinhas

VERSÕES A
MELHORAR COM OS
VOSSOS
CONTRIBUTOS

PLANO DA REUNIÃO

- Aves marinhas e interações com a pesca do cerco (Nuno Oliveira, SPEA)
- Mamíferos marinhos e interações com a pesca do cerco (Ana Marçalo, Univ. Aveiro/CESAM)

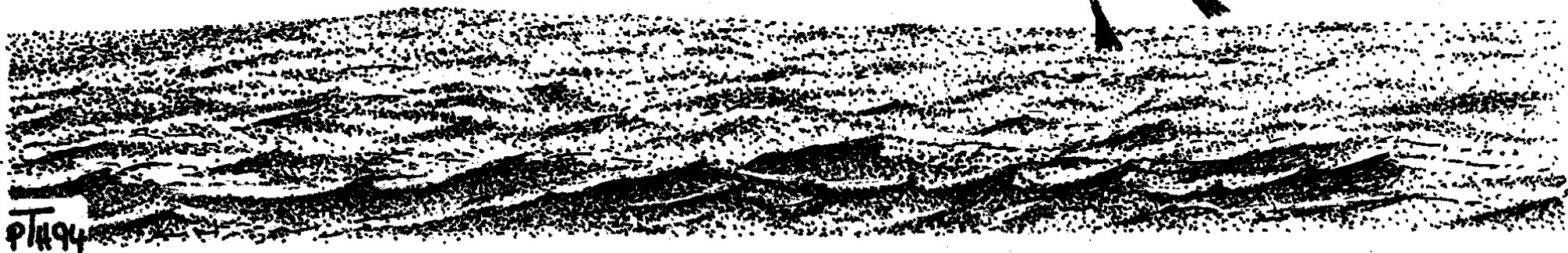
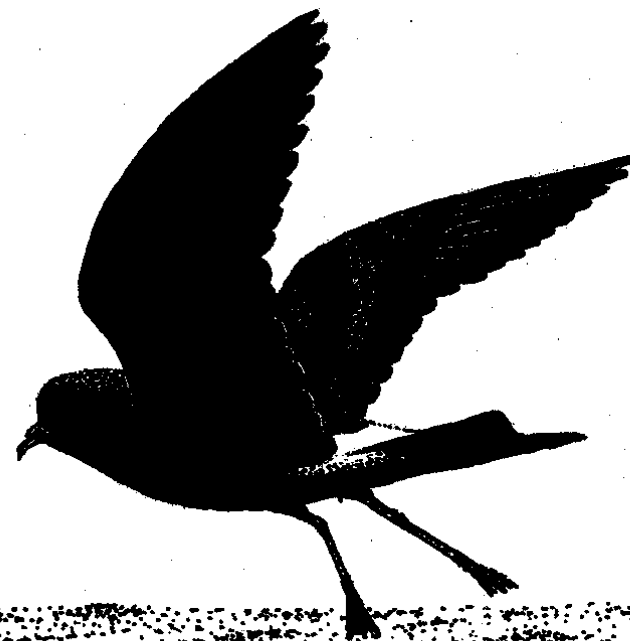
Intervalo para café (15:30-16:00 h)

- Manual de Boas Práticas para a pesca do cerco
- Preenchimento de questionário e encerramento da reunião

foto: Diana Feijó

Muito obrigada
pela atenção





Aves marinhas e interações com a pesca do cerco e polivalente

Nuno Oliveira | SPEA



LIFE09 NAT/PT/000038

Aves marinhas e pescadores, o que têm em comum?

- Passam a maior parte da sua vida no mar
- Grandes viajantes que percorrem dezenas ou mesmo centenas de milhas por dia
- Procuram peixe para se alimentarem ou alimentarem as suas famílias



RSPB-images

Espécies de aves marinhas mais comuns



Espécies de aves marinhas mais comuns

Corvo-marinho / Galheta



O que foi feito até agora? 2010 - 2013

Inquéritos a mestres de pesca

- 329 inquéritos
 - 49 a mestres do cerco
 - 244 a mestres da polivalente
- Características da frota
- Espécies de pescado capturadas
- Quais as principais espécies de aves capturadas acidentalmente
- Principais problemas identificados pelos pescadores
- O que fazem para evitar as interações

Observadores a bordo

- 574 dias de embarque = 1300 lanços de pesca
 - 190 dias a bordo de cercadoras
 - 163 dias a bordo de polivalentes



Os resultados para o Cerco

- Estima-se que 2.000 a 26.000 aves sejam capturadas por ano só na pesca do cerco em Portugal;
- As principais espécies capturadas acidentalmente são a gaivota, a pardela-balear e o alcatraz;
- A mortalidade é de 50%;
- 30 pardelas observadas mortas nos embarques do cerco
- A principal causa de morte – afugamento durante o fecho do cerco



Os resultados para a polivalente

- Dificuldade em aferir os valores para toda a frota devido às diferenças nos períodos de utilização de cada arte ao longo do ano
- As principais espécies capturadas acidentalmente são o alcatraz, gaivotas, torda-mergulheira, cagarra, pardela-balear, negrola, corvo-marinho e airo.
- 6 alcatraz capturados mortos nos embarques de pequenos palangreiros e 11 em redes
- O alcatraz tenta capturar o isco do anzol quando o aparelho é largado – principalmente no Outono



Mike Langman (rspb-images.com)



Pedro Geraldès



Nuno Oliveira

A solução?

Pescadores

+

Investigadores



=



Menos aves marinhas capturadas

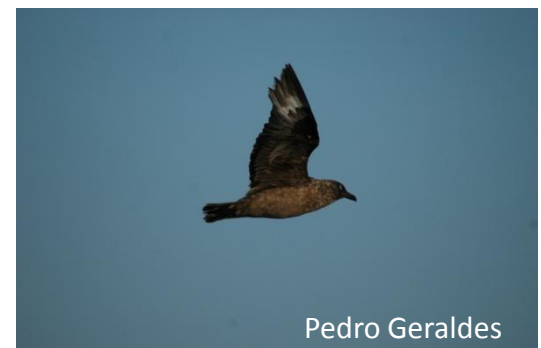
Menos tempo despendido a recolher as aves da arte

Menos custos

Todos ficam a ganhar

Próximos passos

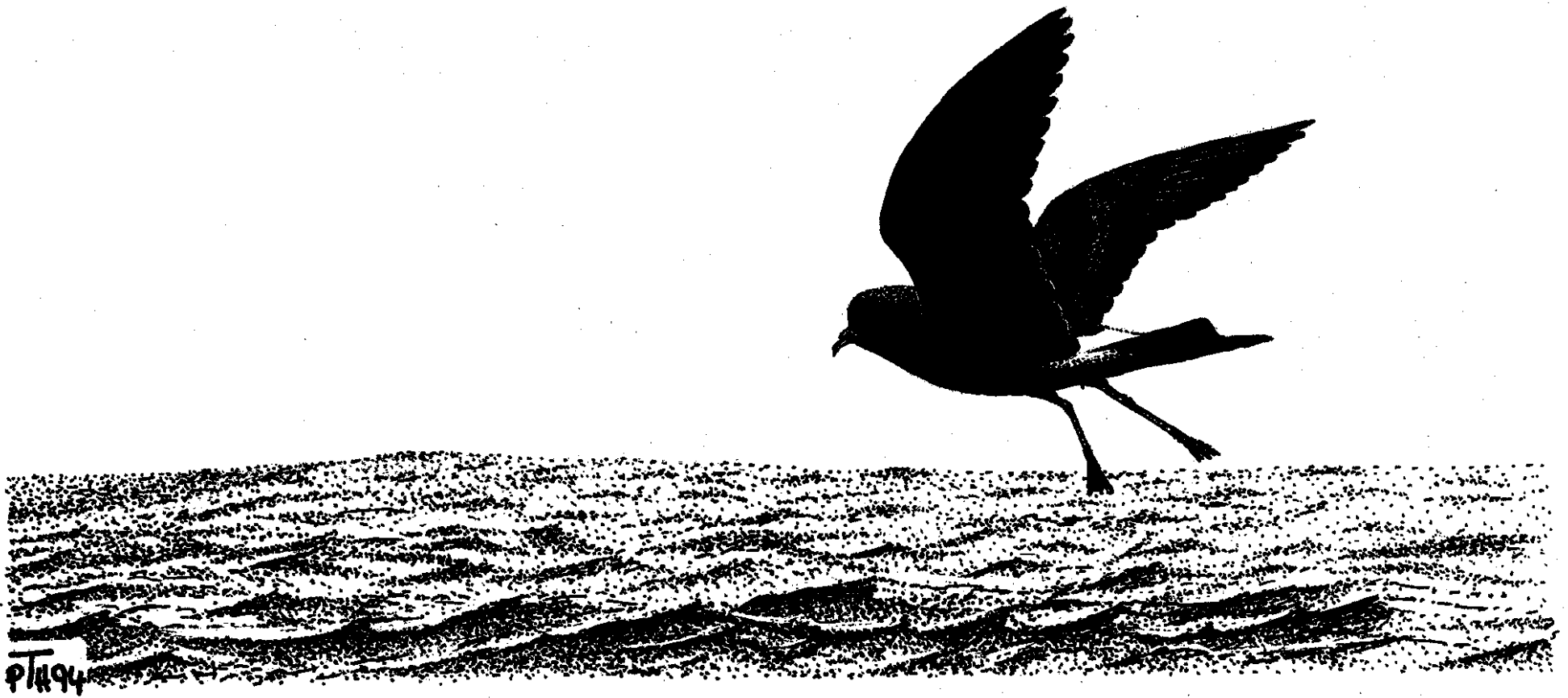
- Trabalhar em conjunto com os pescadores para encontrar soluções práticas que beneficiem ambas as partes
- Implementar o código de boas práticas e os manuais, e recolher informação dos pescadores para os melhorar
- Testar e implementar medidas que permitam reduzir o número de aves marinhas capturadas nas artes
 - Medidas operacionais
 - Alterações à arte
 - Alertar os outros pescadores
 - Comunicação com os técnicos do MarPro



Muito Obrigado

- Pela vossa disponibilidade e contribuição ao longo destes últimos anos,
- Pela vossa presença aqui,
- O vosso apoio e ajuda é fundamental para a redução das capturas acidentais e para a manutenção de um mar saudável!





21 fevereiro de 2014 | Nuno Oliveira | nuno.oliveira@spea.pt

www.spea.pt

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Manual de boas práticas das pescas



Ana Marçalo

OBJETIVOS E COMPONENTES DE UM MBP

MODIFICAÇÃO DE PRÁTICAS/OPERAÇÕES DE PESCA



PESCA SUSTENTÁVEL/RESPONSÁVEL



RESOLVER PROBLEMAS COM ESPÉCIES PROTEGIDAS
(CETÁCEOS/AVES MARINHAS/TARTARUGAS)

CONSERVAÇÃO

Diminuição das interações e mortalidade dos animais



SOCIO-ECONÓMICO

Facilitar os pescadores:
Evitar perdas de tempo e perdas económicas (danos nas artes e perdas de captura)

AÇÃO VOLUNTÁRIA DO SETOR/PESCADORES

SUSTENTABILIDADE DAS PESCAS PORTUGUESAS



MANUAL DE BOAS PRÁTICAS



1ª Fase (2010-2012) - PREPARAÇÃO

1. Detecção dos principais problemas - observações a bordo e inquéritos (2010-2012)
2. Proposta de dispositivos de mitigação (medidas que diminuam problemas ou conflitos com espécies protegidas) ou alteração de manobras de pesca (2011-2012)
3. Apresentação de um documento esboço aos mestres e setor e obtenção do seu parecer ou aprovação (2012)

2ª Fase (2013-2015)- PROMOÇÃO, DIVULGAÇÃO E IMPLEMENTAÇÃO

1. Distribuição, reuniões com o setor
2. Obtenção de feedback do pescadores: resultados da implementação de medidas de diminuição de conflitos entre espécies protegidas e as pescas

MANUAL DE BOAS PRÁTICAS POLIVALENTE



© MarPro

Cortina para aves similar às linhas espantadoras de aves, com raio de alcance é mais pequeno, pode ser constituída por uma a três varas que têm presas verticalmente fitas de várias cores. Estas varas podem ter entre 2 a 3 metros e podem ser colocadas no barco na zona de largada lateral ou então na zona de atalagem do palangre (popa ou lateral) quando é frequente a remoção de peixe durante a recolha do palangre para bordo.

Lançamento Lateral: Tem a vantagem de quando o lançamento da linha é feito para a frente e próximo do barco, garante que quando a linha passa a popa do barco já está a uma profundidade que dificulta a captura do isco pela aves. Esta técnica pode ser reforçada com o uso de uma cortina para aves.

Utilização de isco tingido: O objectivo desta medida é mascarar o isco e torná-lo menos visível para as aves. Tal processo é conseguido emergindo a lula ou o peixe descongelado em corantes alimentícios, os corantes azuis são os mais eficazes.

Utilização de isco descongelado: O isco descongelado tende a afundar-se mais rapidamente. Opte por deixar descongelar o isco antes de o usar.

Se operar numa zona onde as capturas acidentais são elevadas, pode implementar alterações nas artes de pesca ou usar sistemas de alerta que aumentam a detecção das artes de pesca.

MANUAL DE BOAS PRÁTICAS

Frota polivalente

- Comunicar e registar em detalhe todas as situações de captura acidental.
- Actuar voluntariamente é evitar a imposição de regras desnecessárias.
- A sustentabilidade da pesca polivalente em Portugal só pode ser conseguida com o apoio dos pescadores.
- Para melhorar este Manual é fundamental ter a opinião dos profissionais do sector sobre a eficácia das práticas recomendadas e continuar a recolher dados sobre capturas acidentais.
- Se capturar acidentalmente mamíferos, aves ou tartarugas marinhas informe a sua OP ou contacte directamente o projecto MarPro através da página da Internet <http://marprolife.org/> ou do facebook <https://www.facebook.com/marprolife>



www.marprolife.org
LIFE07 NAT/PT/00018

Parceiros: Universidade de Aveiro, Universidade do Minho, Sociedade Portuguesa para o Estudo das Aves (SPEA), Instituto Português do Mar e da Atmosfera (IPMA), Instituto de Conservação da Natureza e das Florestas (ICNF)

Coordenação



Se necessitar de apoio técnico ou se quiser colaborar em ensaios piloto de medidas de mitigação contacte o projecto MarPro.



Golfinhos, baleias, focas, aves e tartarugas marinhas são espécies não-alvo da pesca, por vezes capturadas acidentalmente e devolvidas ao arrem, mortas ou feridas. Esta captura acidental é um problema global das pescas que resulta em desperdício de tempo e dinheiro para as frota de pesca.

O sector da pesca pode contribuir para diminuir as capturas acidentais de espécies ameaçadas, trabalhando em colaboração com as entidades e organizações de investigação pesqueira e de conservação da natureza. As soluções postas em prática voluntariamente pelos pescadores são as que melhores resultados produzem.

Para garantir a sua sustentabilidade, a pesca polivalente deve cumprir práticas que evitem a morte acidental de mamíferos, aves e outros animais marinhos que estão em declínio ou ameaçados de extinção.

Reduzindo as interações com estes animais evitam-se também as perturbações para a própria pesca, seja por danos nas artes de pesca e no pescado capturado, seja pelo tempo acrescido em manobras para libertar os animais presos na rede.

O que não devo fazer?

- Não usar palangres flutuantes, aborados ou derivantes.
- Não usar redes aboradas ou alvoradas, nem redes semi-derivantes.

Artes de emalhar

- Utilização de sistemas acústicas nas redes (pingers) para alerta de estôzeas, no mínimo 1 pinger a cada 100 m de rede.
- Antes de largar ou alar a rede, deixar cair um cabo com 1 pinger próximo da rede para alertar os animais.
- Utilização de redes acústicas, mais facilmente detectáveis pelo somar dos estôzeos.

4) Cortina para aves
 5) Lançamento lateral com cortina para aves
 6) Pingers em redes de emalhar/tresmalho
 7) Detalhe da forma de colocação de pingers

Artes de palangre demersal

Aumento de peso no palangre para afundamento mais rápido: adicionar pesos na linha que possui o anzol, de forma a que o isco se afunde rapidamente. Os pesos podem estar integrados na linha (mais dispendiosos).

Largada do palangre através de um funil submerso: a largada da linha de palangre faz-se através de uma estrutura metálica amovível em forma de tubo afunilado que tem uma das extremidades 1 a 2 metros abaixo da linha de água.

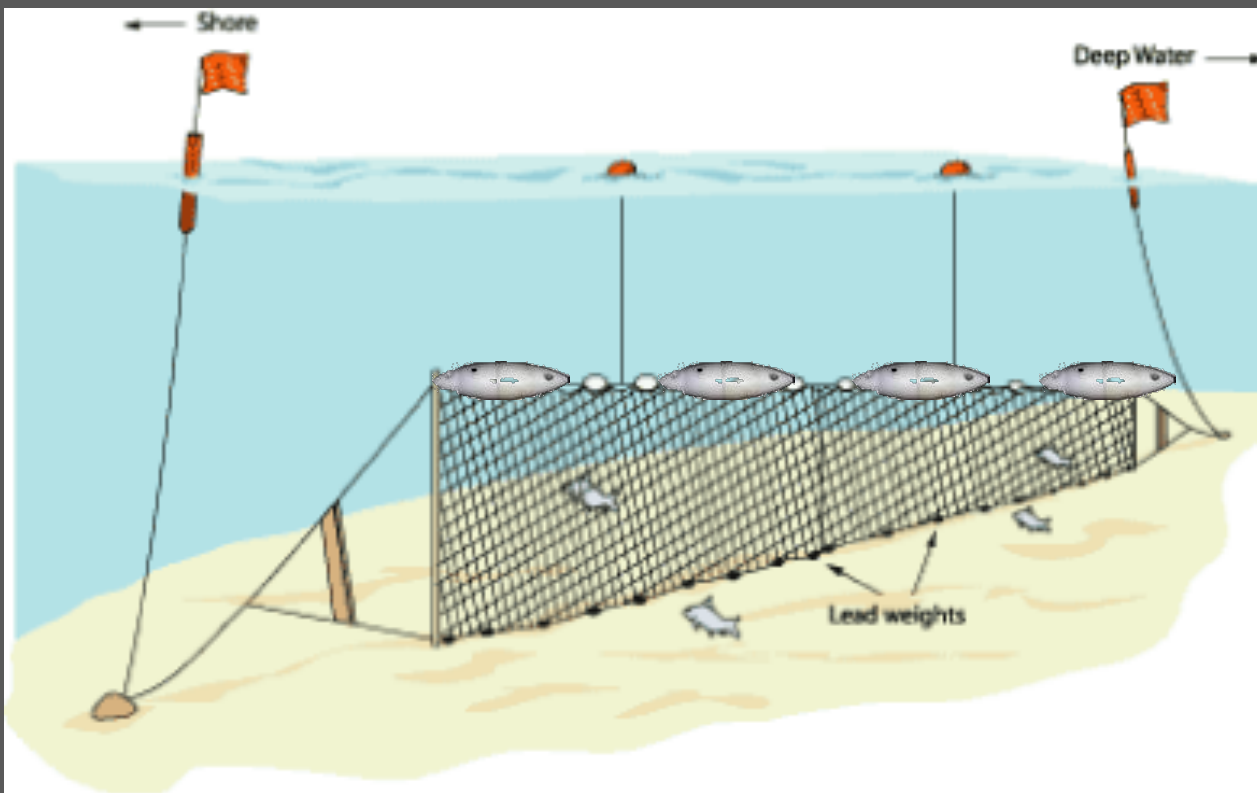
Linha Espantadora de Aves são segmentos de cabo com fitas coloridas que são largados de um ponto alto próximo da popa à medida que o barco larga o palangre. Cada linha está presa a uma bóia, criando uma barreira visual à passagem das aves na zona onde o palangre está a ser lançado, ou seja onde o palangre está próximo da superfície; usado em embarcações de grandes dimensões que lançam o palangre pela popa.

MBP da pesca POLIVALENTE

Boas práticas e mitigação

ARTES DE EMALHAR

- Utilização de sistemas acústicos nas redes para alertar cetáceos da presença da rede



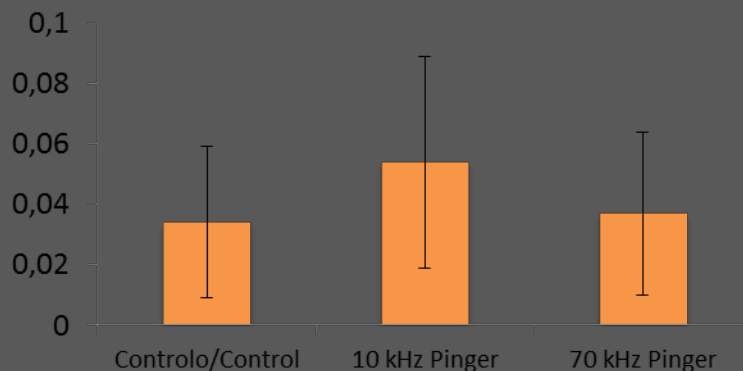
MBP da pesca POLIVALENTE

Boas práticas e mitigação

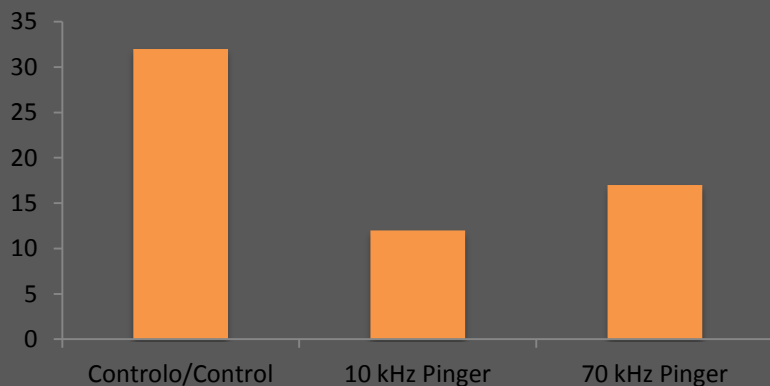
ARTES DE EMALHAR

- RESULTADOS PRELIMINARES - PROJETO SAFESSEA 2010

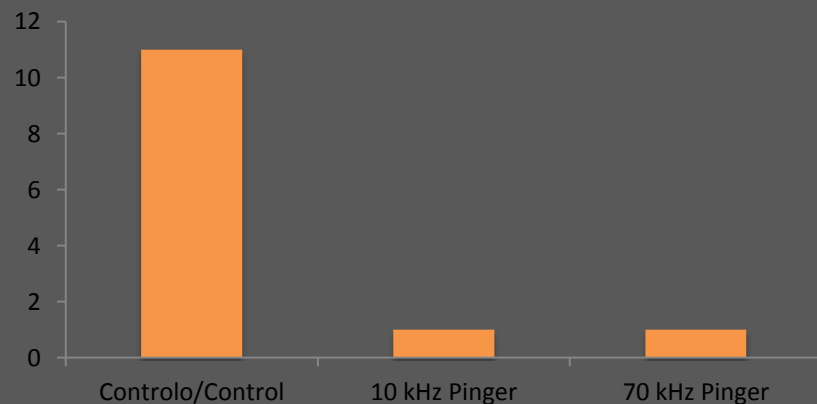
CPUE



Eventos com interação



Eventos com captura



MBP da pesca POLIVALENTE

Boas práticas e mitigação

Cortina para aves



ARTES DE PALANGRE DEMERSAL

- Aumento de peso no palangre - isco afunda mais rapidamente
- Cortina para aves
- Linha espantadora de aves
- Largada através de funil submerso
- Lançamento lateral
- Utilização de isco tingido - mascarar/tornar menos visível
- Utilização de isco descongelado - afunda mais rapidamente

Lançamento lateral com linha espantadora de aves



MBP da pesca POLIVALENTE

Boas práticas e mitigação

O QUE NÃO DEVO FAZER:

ARTES DE EMALHAR/PALANGRE DEMERSAL

- NÃO USAR REDES/PALANGRES ABOIADOS OU ALVORADOS, NEM REDES SEMI-DERIVANTES
- CUMPRIR COM A LEGISLAÇÃO
 - Tamanho (altura e comprimento) das sacadas
 - Número de sacadas permitido
 - Distância entre sacadas
 - Áreas de atuação
 - Malhagem
 - Tempos de calagem

MBP da pesca POLIVALENTE

Boas práticas e mitigação

Se tiver uma ave ou uma tartaruga ferida ou debilitada:

- Pode optar por trazer esse animal para terra para ser reabilitado.
 - Contactar a Capitania Local que posteriormente tratará de entrar em contacto com uma equipa de resgate e reabilitação que se deslocará ao porto para recolher o animal.
- Os animais devem ser acondicionados num local calmo e onde não haja risco de se ferirem ainda mais.

MBP da pesca do cerco (boas práticas e mitigação)



COMO OS PESCADORES PODEM CONTINUAR A CONTRIBUIR E A AJUDAR:

- Aplicação de medidas sugeridas nos manuais de boas práticas
 - Atuar voluntariamente é uma forma de se resolver o problema sem imposições desnecessárias
 - Registrar coordenadas aonde aconteceu a captura acidental e comunicar a um técnico do MARPRO em terra ou à sua OP

**A SUSTENTABILIDADE DA PESCA SÓ PODE SER CONSEGUIDA
COM O APOIO DOS PESCADORES - COLABORE E CONFIE EM NÓS**

<http://marprolife.org>

PRÊMIO LIFE+ MARPRO

ABERTURA DO
CONCURSO

PREVISTA MARÇO 2014



IDEIAS INOVADORAS PARA REDUZIR A CAPTURA
ACIDENTAL NAS ARTES DE PESCA

CETÁCEOS E AVES MARINHAS





OBRIGADA A TODOS
OBRIGADA POR CONFIAREM EM NÓS



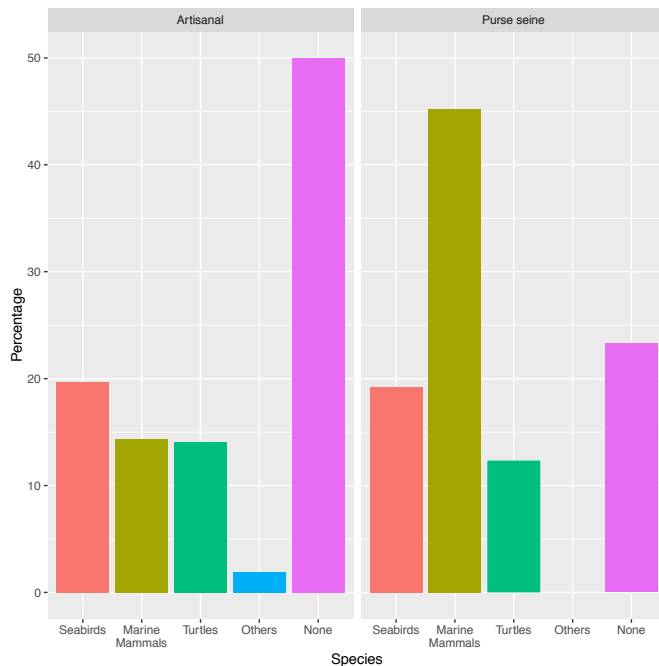

MARPRO
Conservation of marine protected species
in mainland Portugal

ACTION C.1: Implementation of Best Practices Manuals according to fishing gear

Short questionnaires were handed out to fishers during the meetings held between the project and PO members. The aim of these questionnaires was to have a sense of fishers' opinion on the mitigation measures suggested in the Best Practice Manuals. In this report data collected during 2016 was added. Questionnaires were filled mostly by skippers (285 out of 288) and from the artisanal fisheries (246 questionnaires were filled by fishers of artisanal fisheries and 42 questionnaires were filled by purse seiner fishers).

In both fleets, fishers reported that different types of animals get entangled in their fishing devices (Figure C.1.1). In artisanal fisheries the most reported species are seabirds (~20%) while in the purse seine fishery marine mammals are the most reported to get entangled (45%). Turtles were reported by both fisheries in similar percentages (14% in the artisanal and 12% in the purse seine). A great number of artisanal fishers (50%) reported that no animals get entangled in their fishing devices, while in the purse seine fishery only 23% report that no animals get entangled.

Figure C.1.1 – What type of animal gets entangled in the fishing devices?



Some of the practices to avoid interactions are already used by fishers (Table C.1.1). Regarding the practice of communicating the presence of dolphins or seabirds to other skippers, a significance difference between these the two fleets was found (X-squared =

40.327, $df = 2$, $p\text{-value} < 0.05$). While 45.2% of fishers from the purse seine fleet reported that they already use this measure because they believe that it is efficient, only 8.6% of the fishers from the artisanal fleet implement this measure mainly because they believe its not efficient (46.7%). This is due to the speed of the animals and the fact that the majority of the fishing devices used by them is static. However, 37.5% of fishers from the artisanal fishery reported that they are willing to use it in the future.

Table C.1.1 – Communicate presence of cetaceans/seabirds to other vessels.

Fleet	Answer	Already in use?	Is it efficient?	Willing to use it?
Artisanal	Yes	8.6	53.3	-
Purse seine		45.2	100	-
Artisanal	No	90.6	-	37.5
Purse seine		54.8	-	-

Another avoidance practice in use by the purse seine fishers (21%) is surveillance (Table C.1.2) because they believe it is efficient. They usually use the sonar to detect unusual behaviour of fish schools that are commonly associated with the presence of cetaceans. None of the interviewed artisanal fishers uses this measure. A significance difference between the two fishing fleets was found ($X\text{-squared} = 82.257$, $df = 2$, $p\text{-value} < 0.05$). The majority of fishers that don't use this measure are willing to use it in the future (66.7% of the purse seine fishers and 25% of the artisanal fishers).

Table C.1.2 - Surveillance of the fishing area to avoid encounters.

Fleet	Answer	Already in use?	Is it efficient?	Willing to use it?
Artisanal	Yes	0.0		-
Purse seine		33.3	100	-
Artisanal	No	99.6	-	25.0
Purse seine		66.7	-	66.7

Regarding the use of pingers (Table C.1.3), a significance difference between the two fishing fleets was found (X-squared = 24.81, df = 2, p-value < 0.05). 9.8% of the purse seine fishers reported to use pingers and from these 33.3% believe that they are not very efficient and 66.7% believe they are. Some of those that don't use this measure yet are willing to use them in the future (77.8%) while others admit that they are not interested in using them. In the artisanal fishery none of the fishers uses this practice but are willing to use it (69.6%) if they don't interfere with captures and some say they would have to be given to them considering the high costs in face of the profit of the fishery.

Table C.1.3 - Use of pingers to minimize cetacean by-catch.

Fleet	Answer	Already in use?	Is it efficient?	Willing to use it?
Artisanal	Yes	0.0		-
Purse seine		9.8	66.7	-
Artisanal	No	98.4	-	69.6
Purse seine		90.2	-	77.8

Only one skipper (0.4%) from the artisanal fishery has ever used streamlines or other measures to deter seabirds, which makes this the least used practice to avoid interactions (Table C.1.4). None of the skippers from the purse seine have ever used this practice but 37.5% are willing to try it out. In the artisanal fleet 30% of the fishers that don't use this measure are willing to try it out.

Table C.1.4 - Use of streamlines to scare seabirds.

Fleet	Answer	Already in use?	Is it efficient?	Willing to use it?
Artisanal	Yes	0.4	100.0	-
Purse seine		0.0		-
Artisanal	No	99.6		30.0
Purse seine		100.0		37.5

In regards to measures that only apply to the purse seine fishery (Table C.1.5):

19% reported that they avoid or even interrupt fishing operations when they sight a group of animals nearby the fishing vessels. All believe that this is an efficient measure. Only 4% of the fishers that don't use this measure reported that they are not willing to use this measure in the future. The remaining 96% didn't reply.

The avoidance of slipping is a practice already in use by 14.3% of skippers. 81% reported that they don't use it and while 8.8% are not willing to use this measure the others didn't reply to this question.

23.8% reported that they interrupt fishing operations to release any entangled animals and believe that either it is an efficient measure (70%), not very effective (10%) or not effective at all (10%). From the skippers that don't use this measure yet, only 6.2% reported that they're willing to try it in the future although 93.8% didn't reply to this question.

Finally, 92.9% of the purse seine skippers don't use stretchers to release cetaceans. Some are willing to use it in the future (15.4%) but others say they're not (2.6%). 66.7% of the skippers that already use this measure state that it is an effective measure.

Table C.1.5 - Results of the questionnaires filled by purse seine skippers.

	Yes	No	NA
Avoid or even interrupt operation when groups of animals are sighted nearby			

Already in use?	19.0	59.5	21.4
Is it efficient?	100		
Willing to use it?		4.0	96.0
Avoid slipping			
Already in use?	14.3	81.0	4.8
Is it efficient?	50.0		50.0
Willing to use it?		8.8	91.2
Interrupt the operation to release entangled animals			
Already in use?	23.8	76.2	0.0
Is it efficient?	70.0	10.0	10.0
Willing to use it?		6.2	93.8
Release cetaceans using a stretcher			
Already in use?	7.1	92.9	0.0
Is it efficient?	66.7		33.3
Willing to use it?	15.4	2.6	82.1

Only 2.6% of the longline fisheries fishers uses measures to avoid the attraction of dolphins or seabirds to the bate and none are willing to use it in the future.

Annex 3 - Pictures: meetings with PO leaders and members (fishers and skippers)



Meeting with purse seine PO Leaders, IPMA-Algés, 19/09/2013



Meeting with purse seine and artisanal fisheries PO leaders and members, Olhão, 12/12/2013.



Meeting with purse seine PO leaders and members, Matosinhos, 07/03/2014



Meeting with artisanal and purse seine fisheries PO leaders and members, Sines, 21/02/2014.