Nephrops grid

&

Nephrops grid combined to square mesh cylinder and window

Information session on technical conservation measures, discards and the escapement of juvenile fish

North Western Waters Regional Advisory Council (NWWRAC)

Dublin, 5 of July 2011 M.Meillat, F.Morandeau, <u>S.Méhault</u>, P.Larnaud

2 selective devices - Objectives

Introduction

Material and method

Results

Discussion

Nephrops grid (2005)

Reduce the discard of *Nephrops* below 34mm of cephalothoracic length (11cm). Trials conducted in the Bay of biscay but aiming the Celtic sea trawler fishery.

(Anon. 2007, NEphrops and CEtacean Species Selection Information and TechnologY, Area 1.3 – Modernisation and sustainability of fisheries, including aquaculture-based production systems, **NECESSITY Periodic Activity Report No 2, Annex** 3.10)



Nephrops grid combined to square mesh cylinder and window (2010)

Reduce the discard of hake and *Nephrops* in the mixed trawl fishery of the bay of Biscay.

(Meillat, Méhault, Morandeau, Vacherot, Marc, 2010. Etude de dispositifs sélectifs - Pêcherie crustacés-poissons du golfe de Gascogne. Rapport interne Ifremer: R.INT.STH/LTH 11-01.)









Video (01:14)





Nephrops grid – period and area

Introduction

Material and method

Results

Discussion



South Brittany

25 of August to 05 of September 2005

21 hauls



Ifremer Nephrops grid : problems of hauling

Grid : efficient for *Nephrops* escapement but manipulation problem when hauling back and wearing down due to frictions on the sea bed



Introduction

Material and method

Results

Nephrops grid : problems of friction

Gri : efficient for *Nephrops* escapement but manipulation problem when hauling back and wearing down due to frictions on the sea bed



Material and method

Introduction

Results



Ifremer	Combined selective device		
	Combination of:	Reduction of grid problems:	
Introduction	* Grid (13mm spaced bars, 100*75cm),	 Better hauling Less friction on the 	
	* <i>Nephrops</i> square mesh panel (62mm, 1*1.5m),		
Material and	* Square mesh cylinder (2m long)	5ea 11001	
method	- Hake SMP (100mm, 1*2m)		
	- 70mm square meshes	meshes eficiency	
Results			
Discussion	Square mesh cylinder Nappe anti-retour Gorget Grid Jone 70mm	Codendl, breizline 70 mm dbl	







Combined selective device – period and area



Material and method

Results

Discussion



South Brittany

23 of April to 12 of May 2010

26 hauls

Nephrops – Catch comparison

Introduction

Material and method

Nephrops				
% escape (numbe	ment er)	% escapement (weight)		
< MLS	\geq MLS	< MLS	\geq MLS	
46	10	41	6	
Numbers		Kg		
Standard gear	Selective gear	Standard gear	Selective gear	
20 742	14 583	380	311	



Equivalent catches from 31mm (cephalothoracique length, *i.e.* 10cm)





Hake – Catch comparison

Hake

Introduction

Material and

% escapement (number)		% escapement (weight)		
< MLS	\geq MLS	< MLS	\geq MLS	
46	13	34	20	
Numbers		Kg		
Standard gear	Selective gear	Standard gear	Selective gear	
2057	1 250	248	190	

Equivalent catches from 26cm

Results

method



Ifremer	Combined selective device – Catch comparison	
Introduction		
Material and method	 Best perfoming selective device in Hake / Nephrops mixed fishery among all those tested 	
Results	- Problems of grid are solved	
Discussion	 Still problem of square mesh deformation – may be solved by T90 (to be tested) 	

Video (05:50)

Bonus: Fish grid (1994-95)

Aluminium grid (1994-95)

Introduction

Material and method



1200mm 50mm 1200mm 50mm 110mm 2 surveys:

From 20/08 to 03/09/1994 and 13/03 to 27/03/1995 North of bay of Biscay

Flexible grid (2005)



Dupouy, Meillat, Rivoalen et Bavouzet, 1996. Les paramètres de la courbe de sélectivité des chaluts munis d'un dispositif à grille. Référence DG XIV: Study proposal 94/099

Results







Ifremer Thank You!