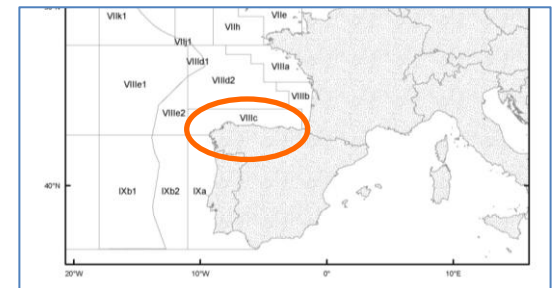
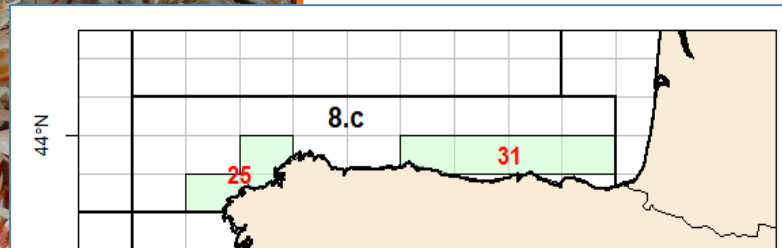
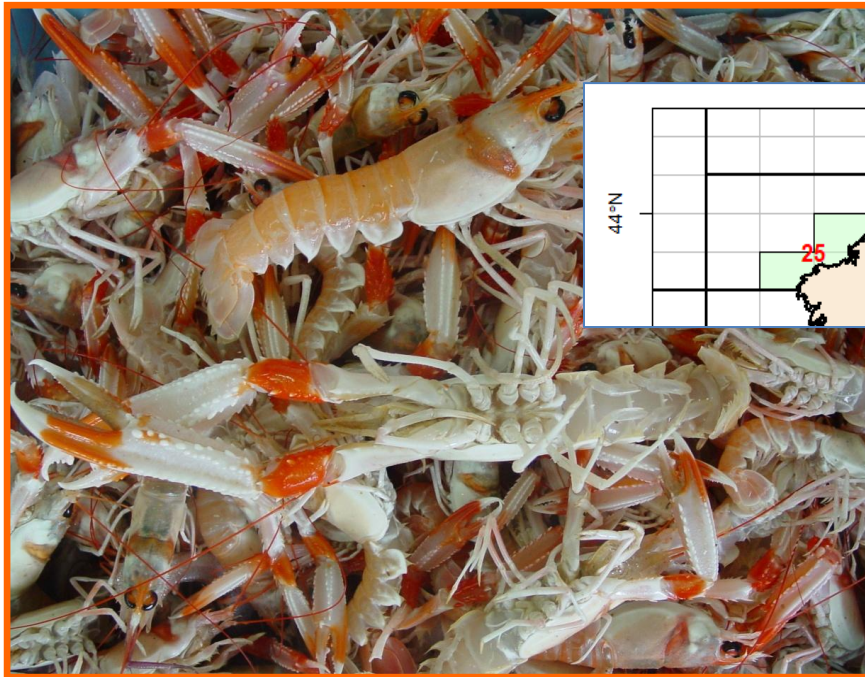


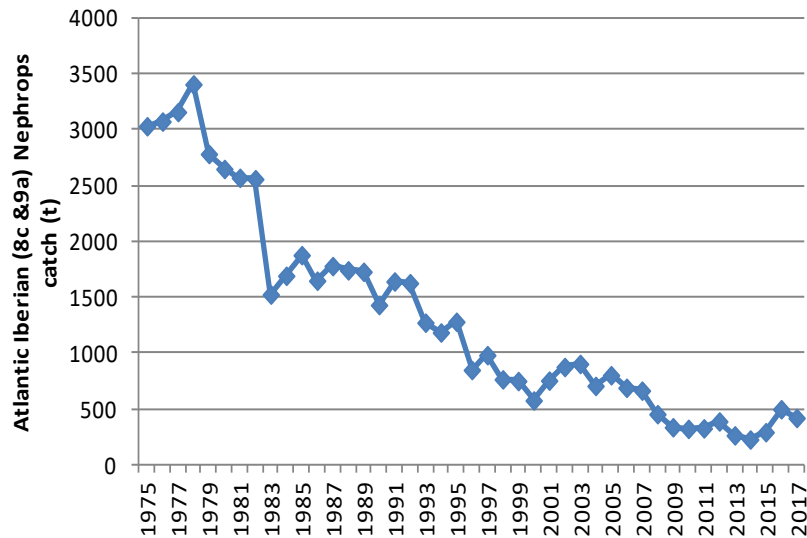
# Cigala Cantábrico (8c)

I. González Herraiz

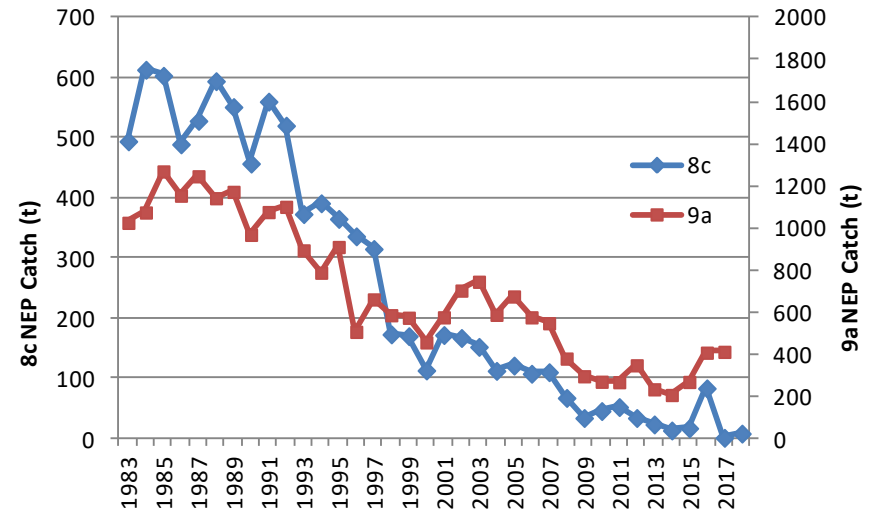


CPUE in **species** with affinity with **temperate waters** decreased from **1992 to 2009** (Teixeira, 2012). More with slower life histories as *Nephrops* (15 years). ?

Descenso generalizado de capturas de cigala en todas las costa Atlántica de la Península Ibérica (8c+9a)

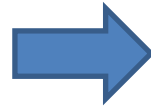


Cantábrico vs Atlántico  
8c vs 9a

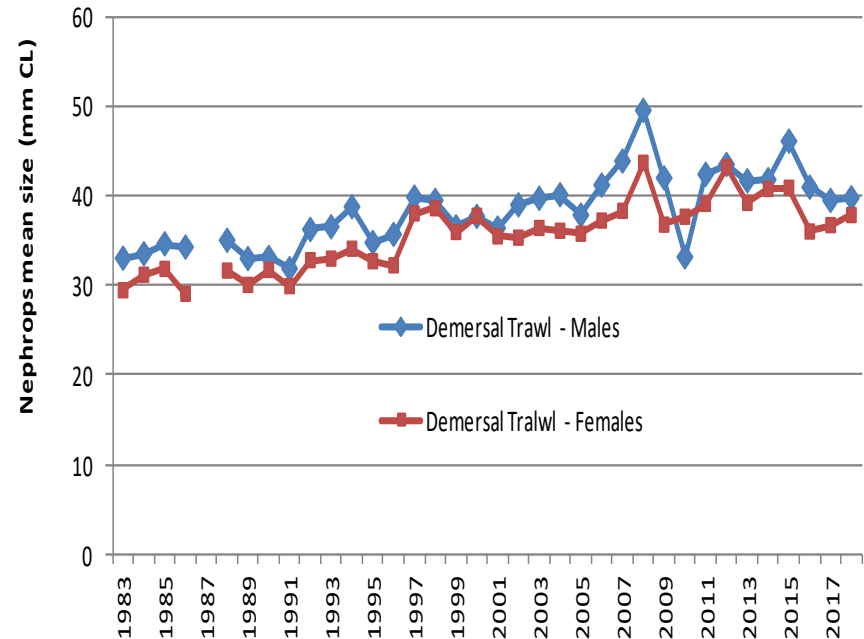
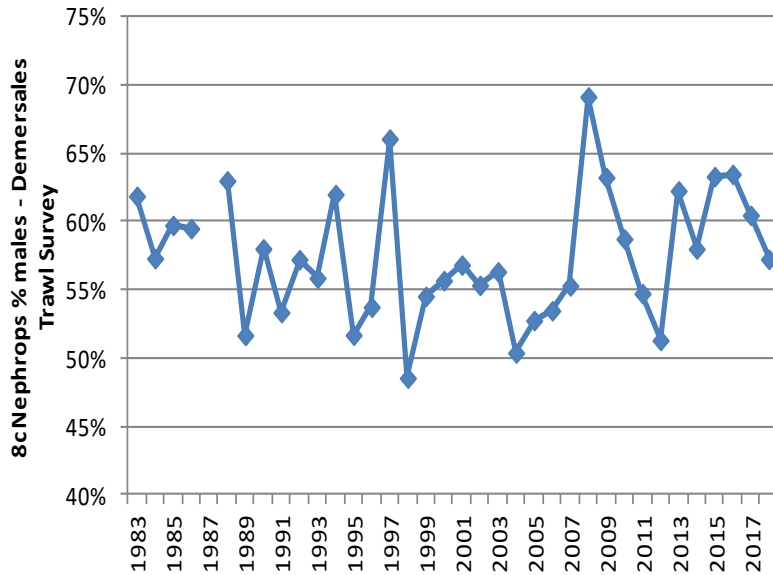


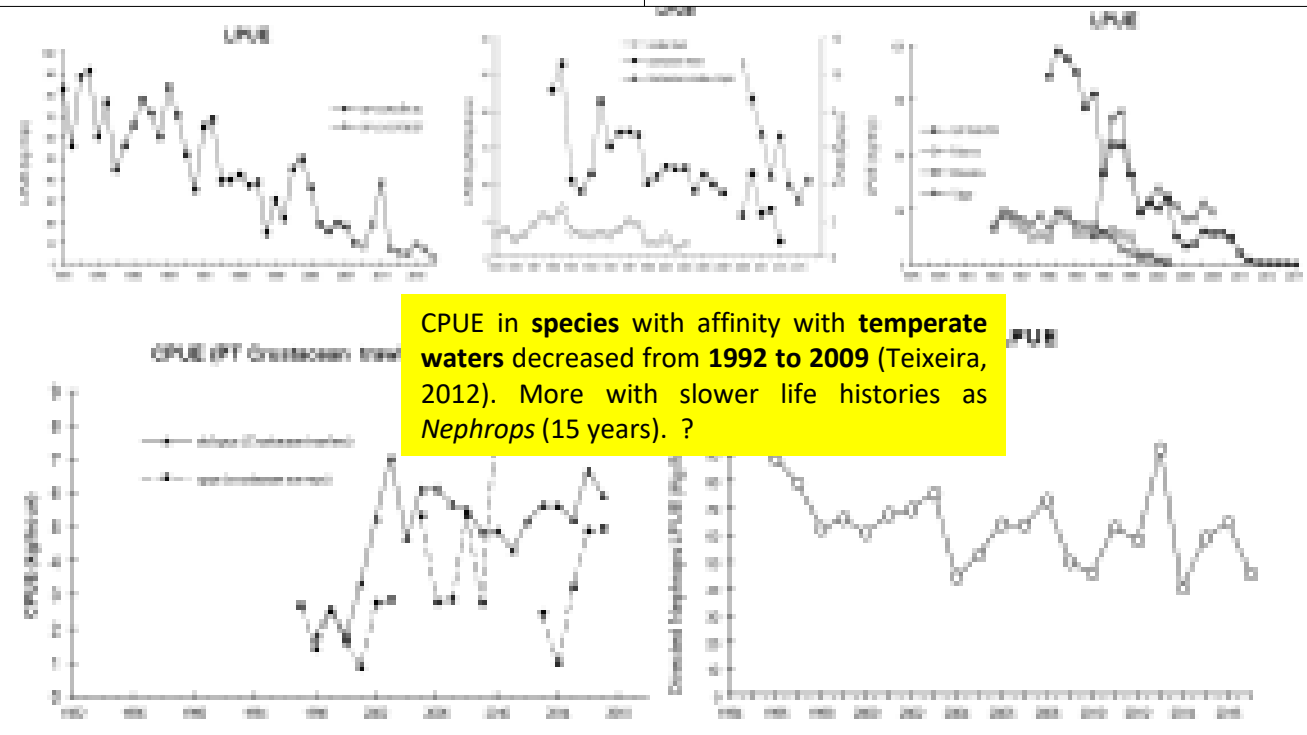
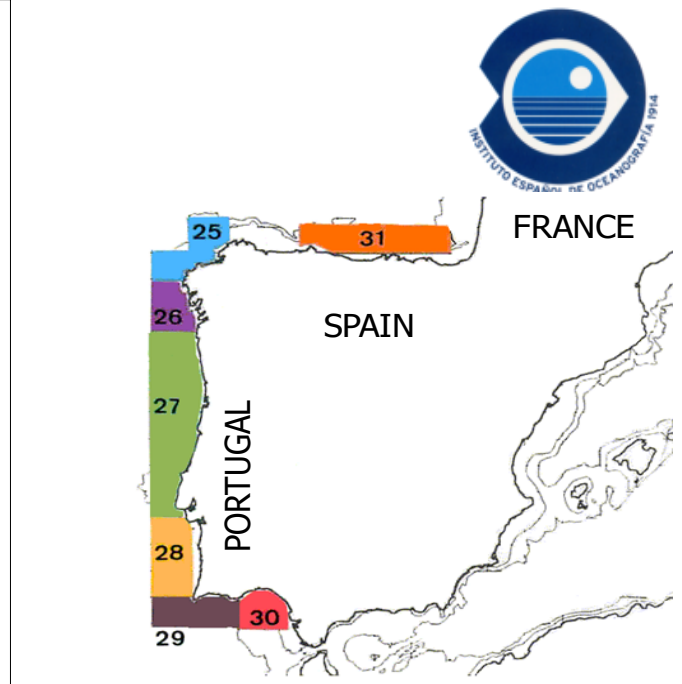
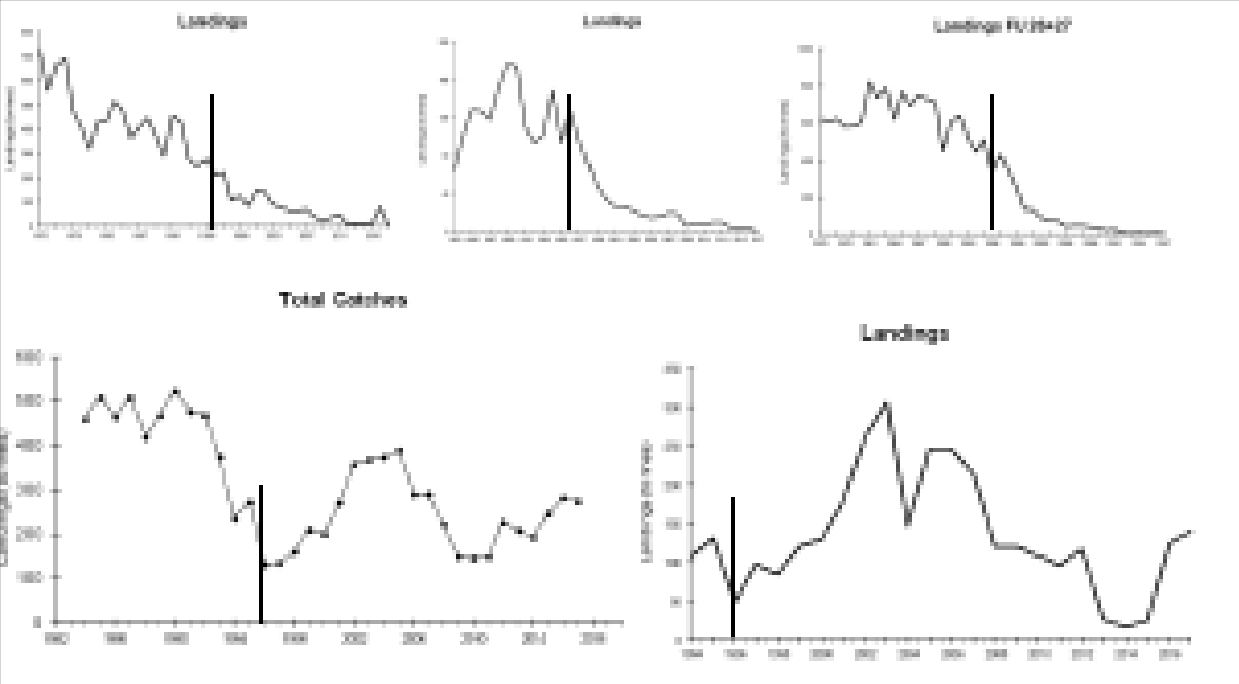
# 8 C

Menos machos porque Mortalidad pesquera (F) muy alta, posiblemente afectó al apareamiento



Bajo reclutamiento: aumenta la talla media



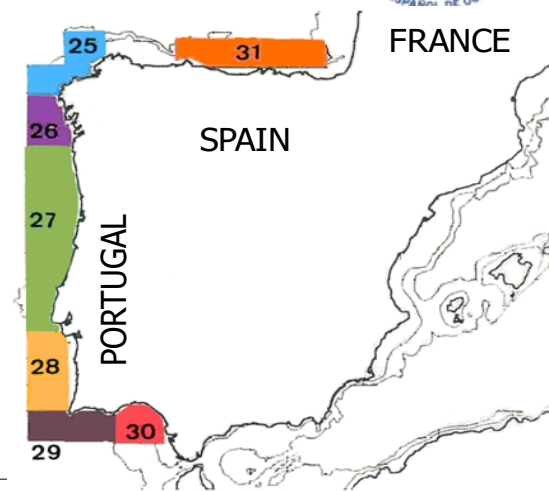


CPUE in species with affinity with temperate waters decreased from 1992 to 2009 (Teixeira, 2012). More with slower life histories as *Nephrops* (15 years). ?

FRANCE

SPAIN

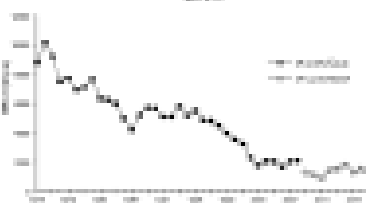
PORTUGAL



Effort

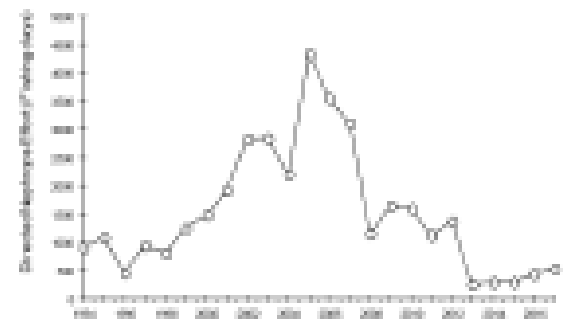
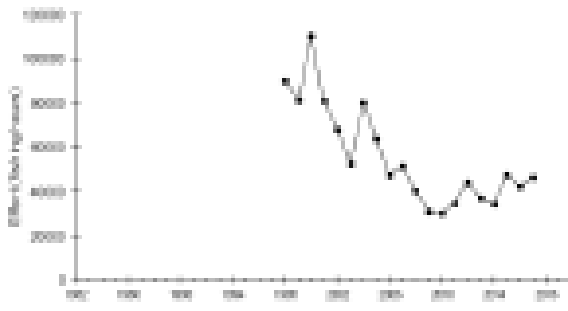
Effort

Effort - Subsector West



Standardized effort

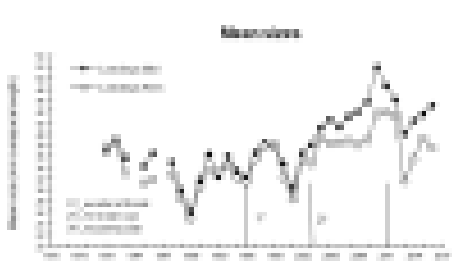
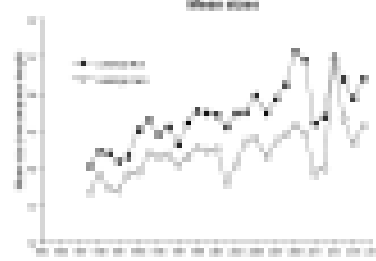
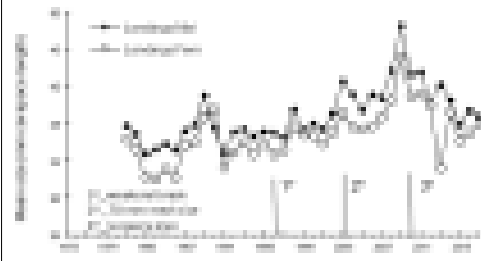
Directed Effort



Mean size

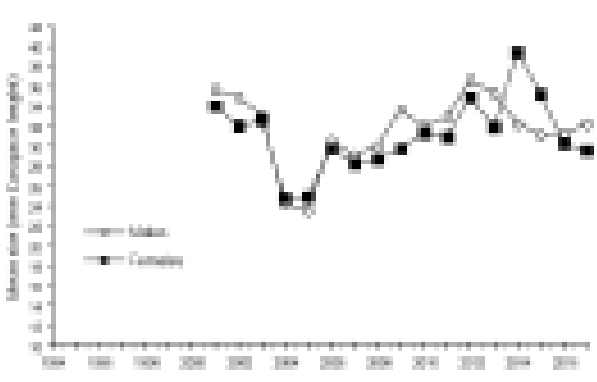
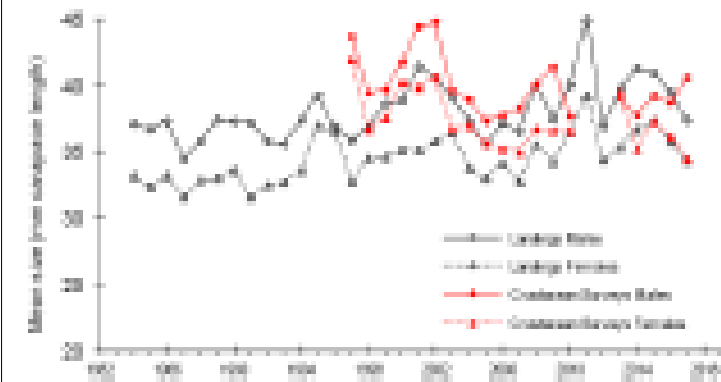
Mean size

Mean size



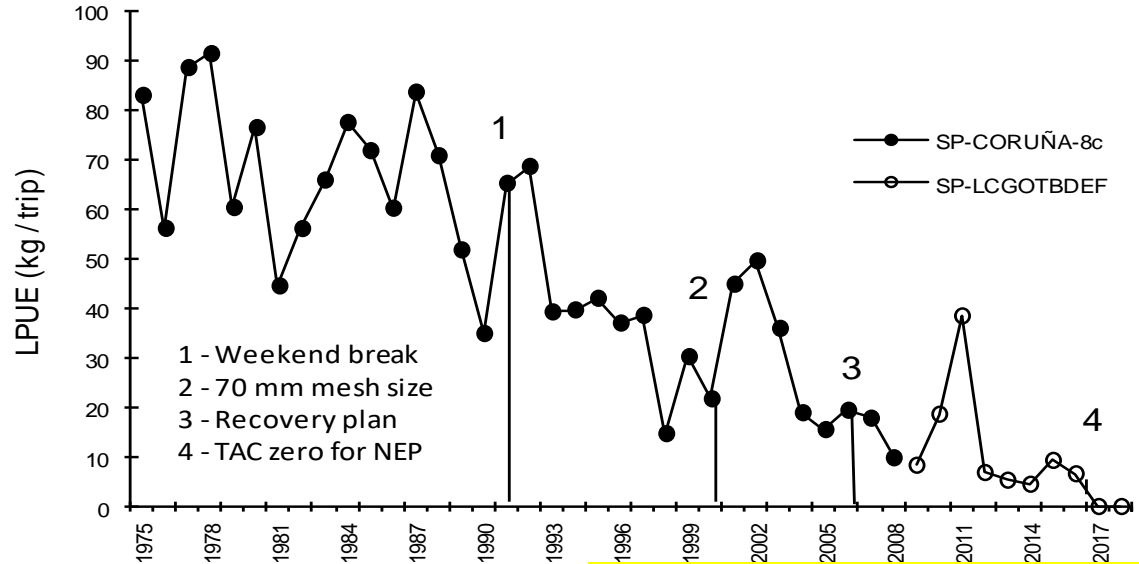
Mean size

Mean size



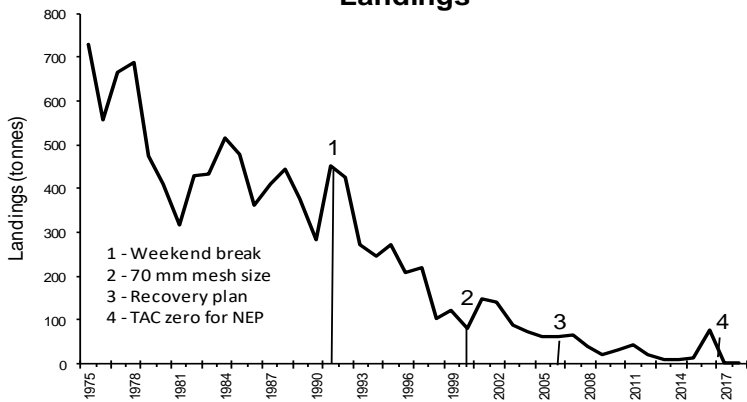
# FU 25

## LPUE

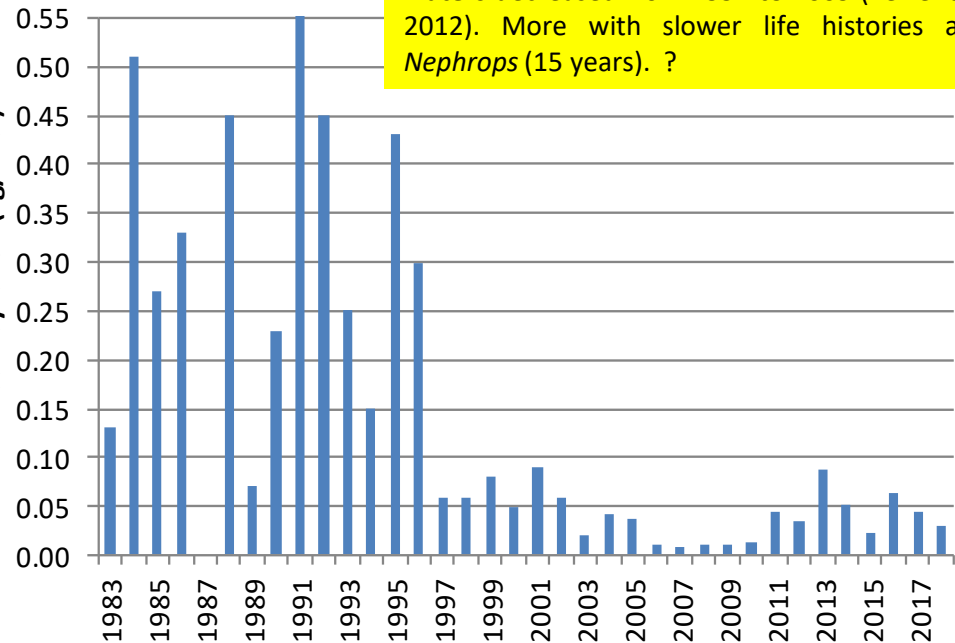


CPUE in species with affinity with temperate waters decreased from 1992 to 2009 (Teixeira, 2012). More with slower life histories as *Nephrops* (15 years). ?

## Landings

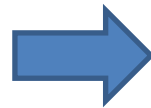


## FU 25 Nephrops Spanish Demersales Trawl Survey CPUE (kg/haul)

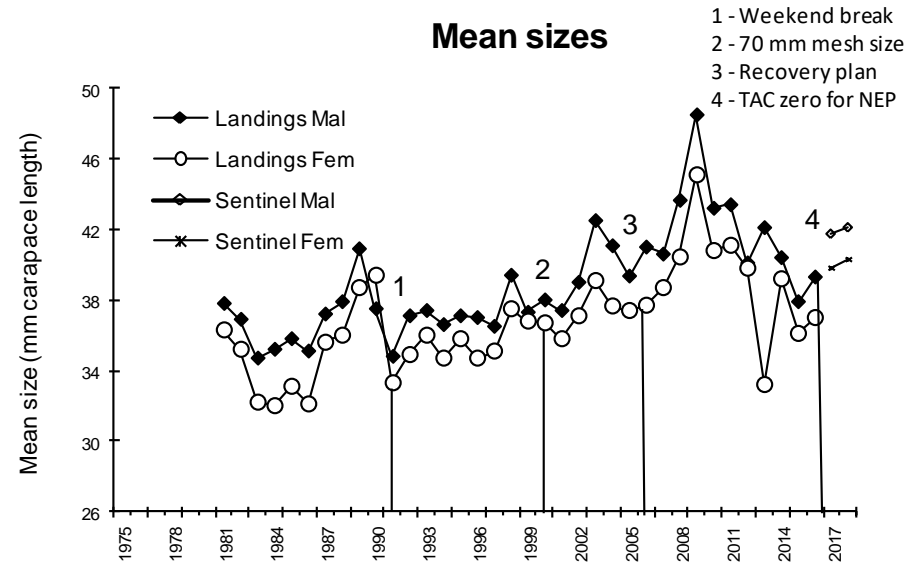
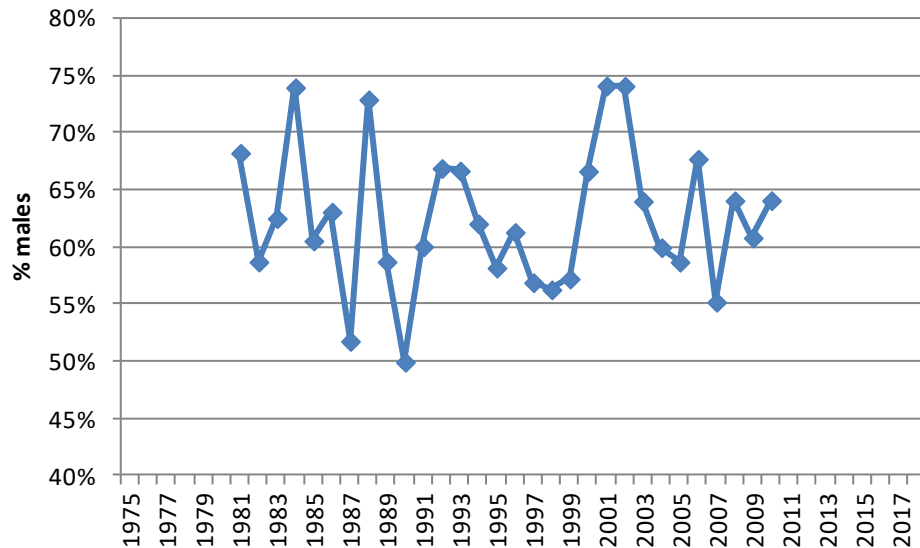


# FU 25

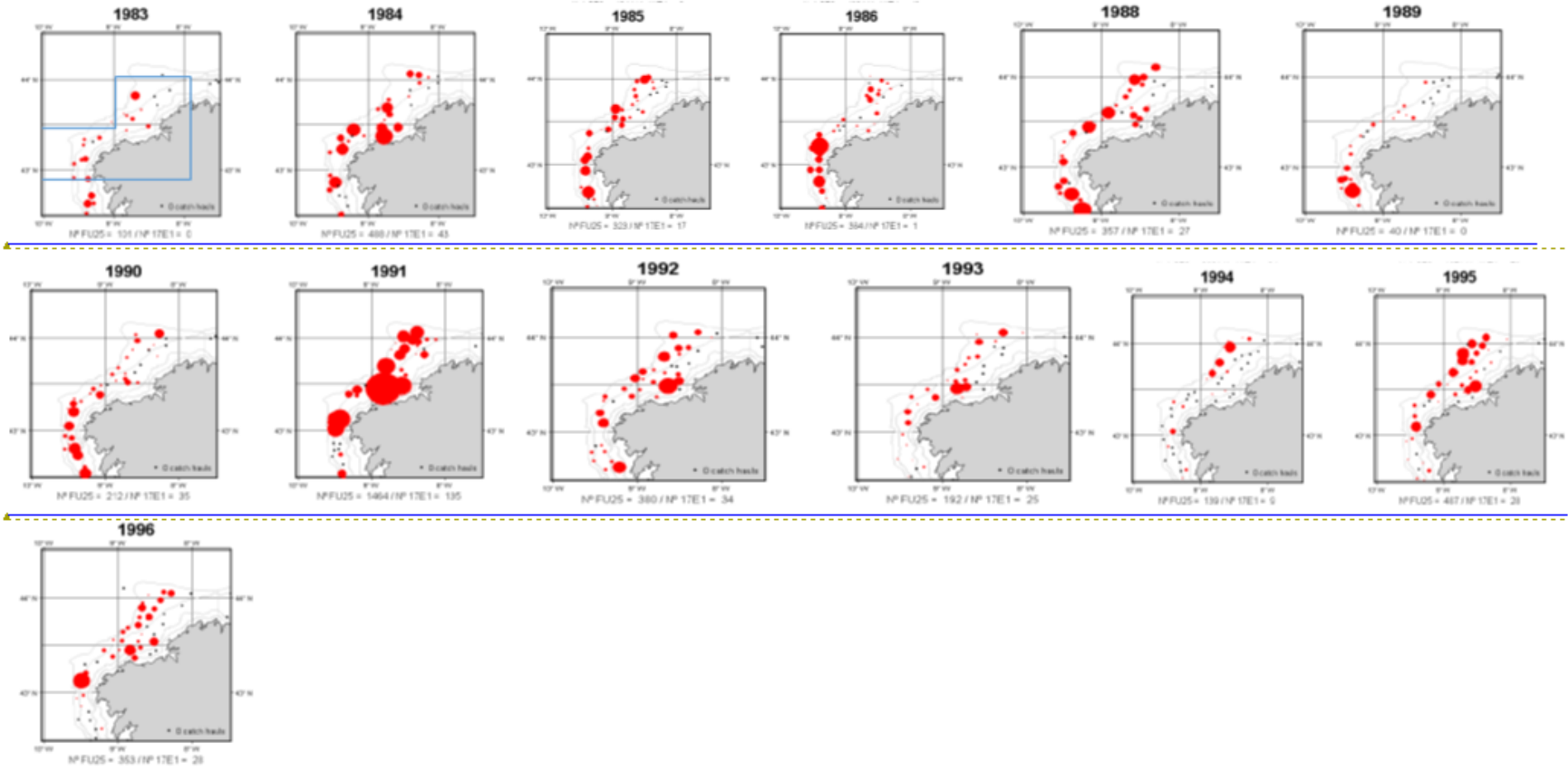
Menos machos porque Mortalidad pesquera muy alta, posiblemente afectó al apareamiento



Bajo reclutamiento: aumenta la talla media



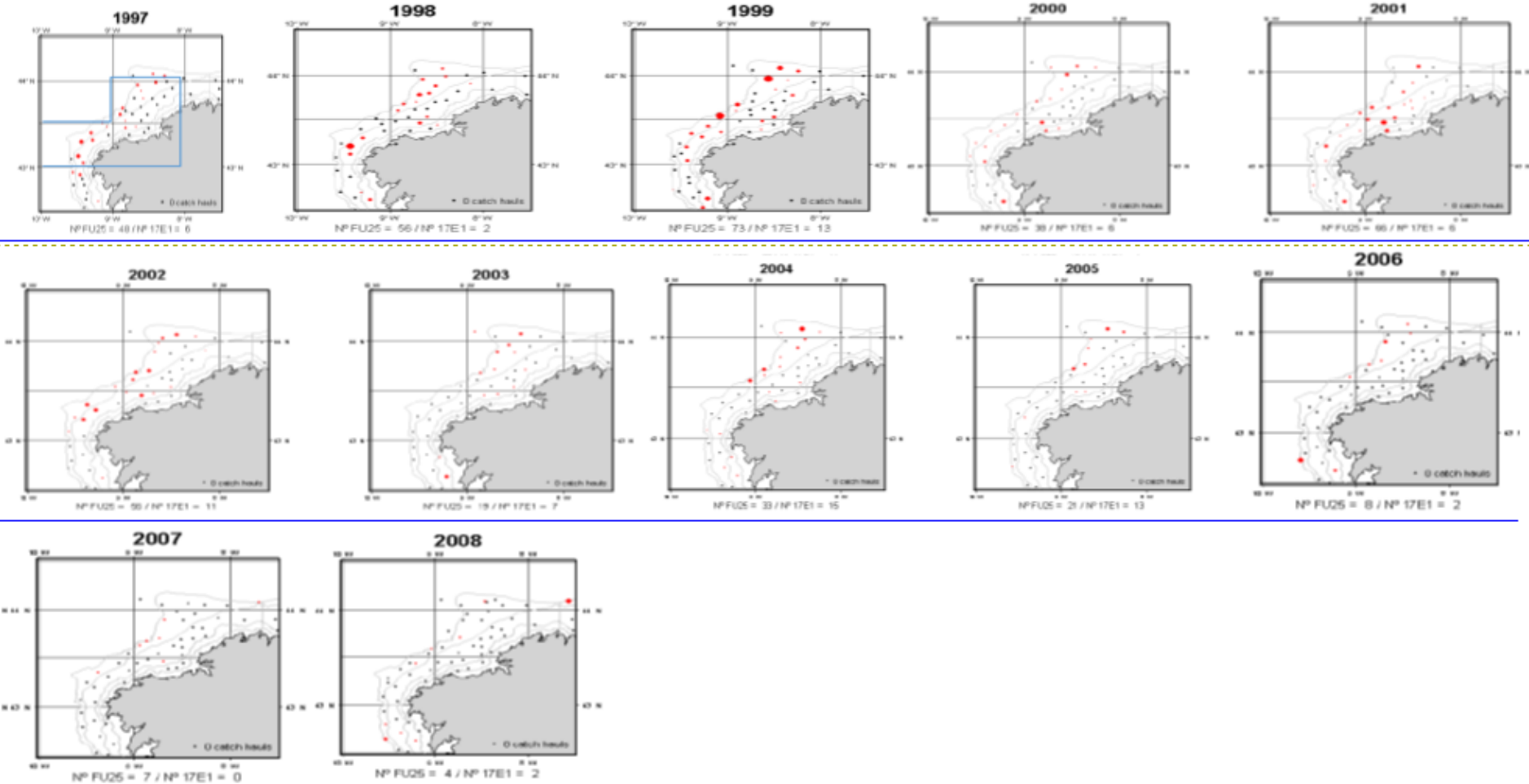
# ALTOS RENDIMIENTOS



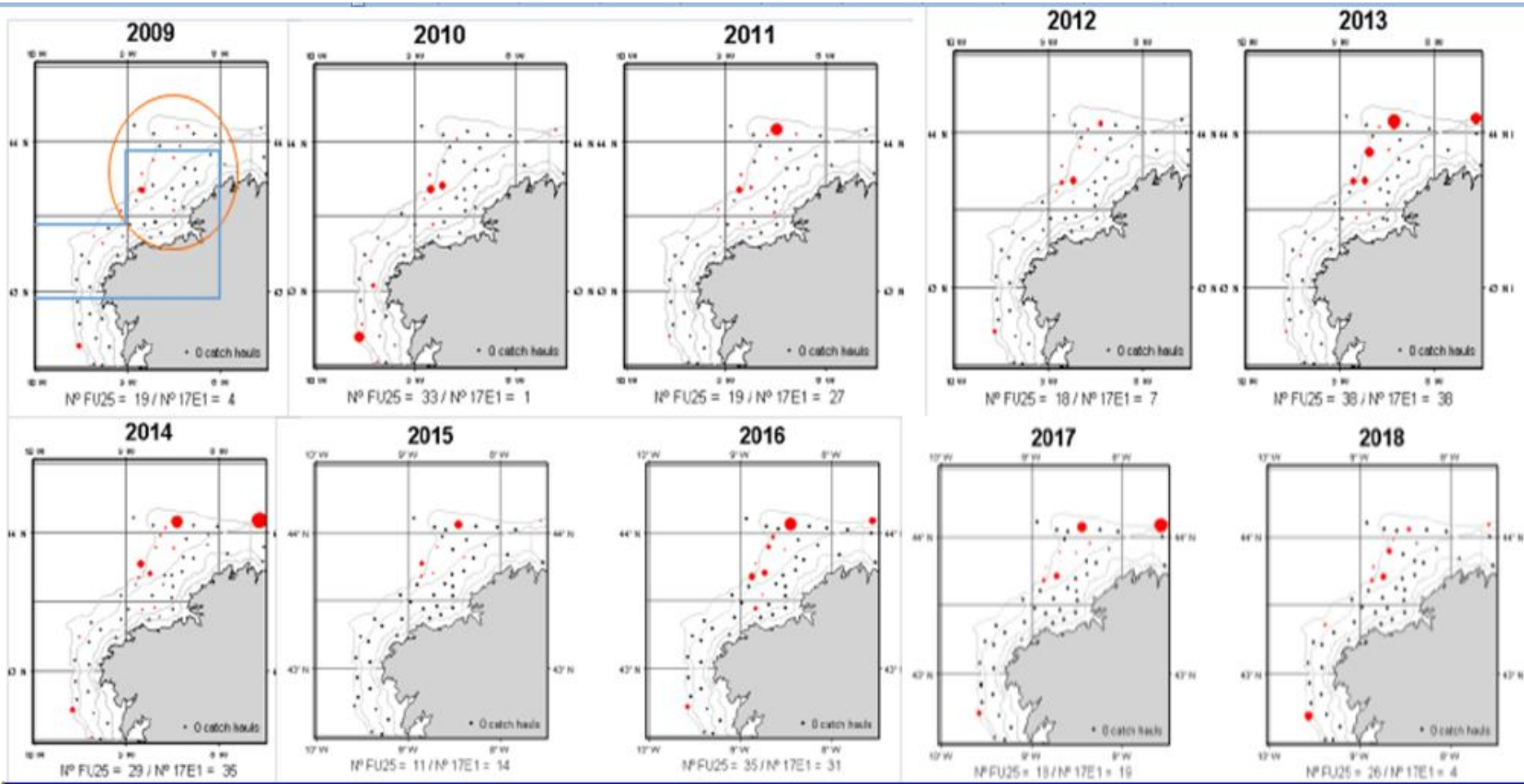


## BAJOS RENDIMIENTOS

CPUE in **species** with affinity with **temperate waters** decreased from **1992 to 2009** (Teixeira, 2012). More with slower life histories as *Nephrops* (15 years). ?



## LIGERA RECUPERACIÓN EN EL RECTÁNGULO 16E1 (ZONA CENTINELA)

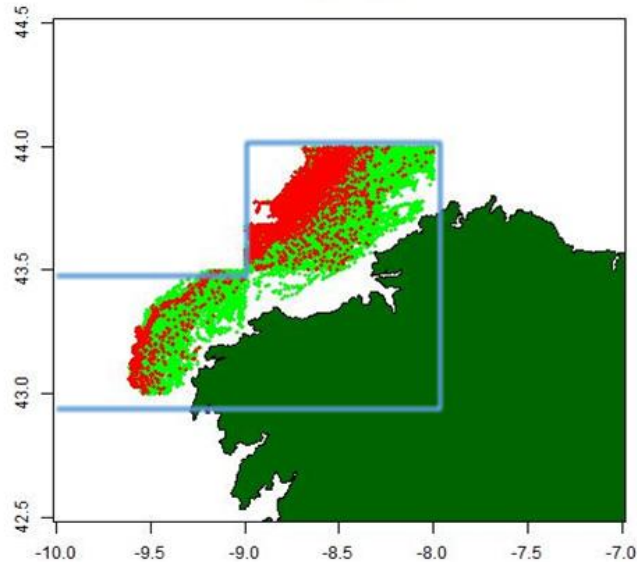


# FU 25

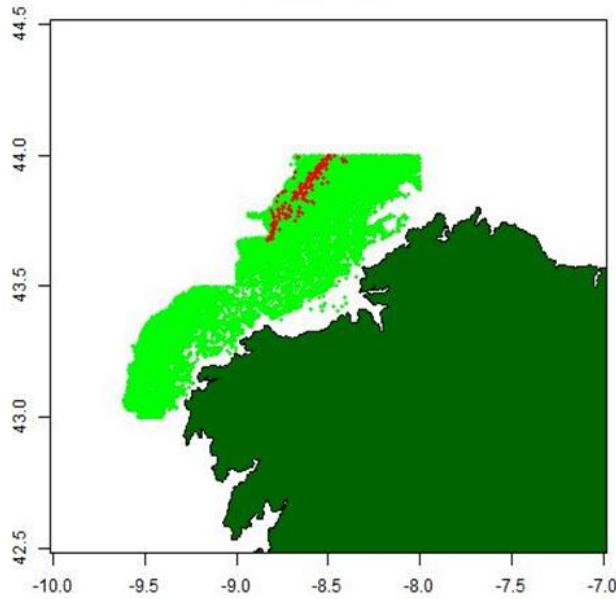
PESQUERÍA

CENTINELAS

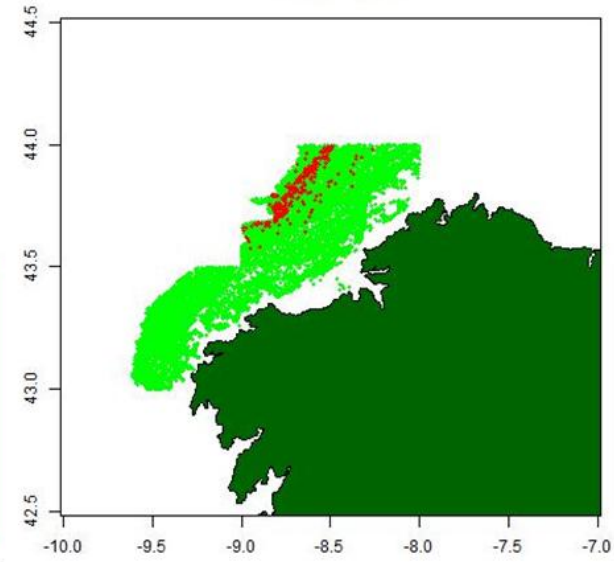
2009 NEP FU25



2017 NEP FU25



2018 NEP FU25



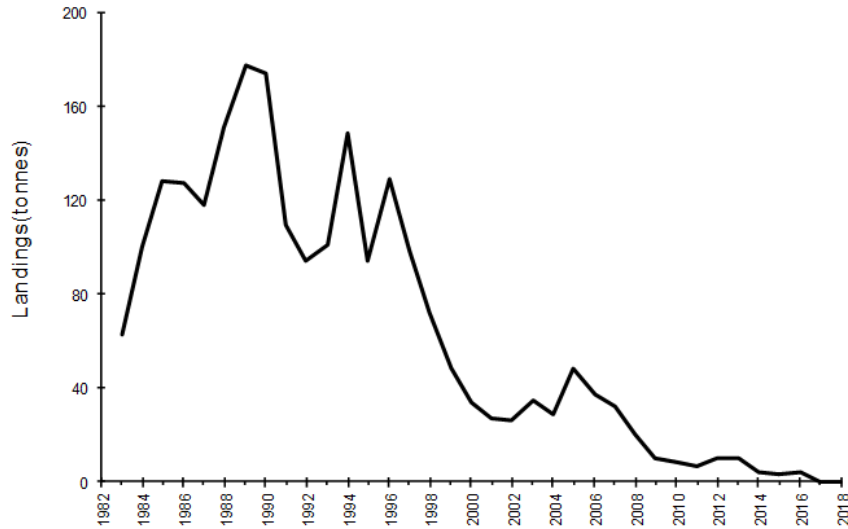
# INDUSTRY & SENTINEL SURVEYS CPUES

SOURCE	YEAR	PERIOD	DIRECTED CPUE ( <del>K</del> KG/HOUR)	S.D.	NON-DIRECTED* CPUE (KG/HOUR)	S.D.
<a href="#">ICES2017Fernández et al., 2017 - Fishing Industry</a>	2015	Year	6.46		0.18	
<a href="#">ICES2017Fernández et al., 2017 - Fishing Industry</a>	2016	Year	10.81		0.27	
CARACAS <a href="#">Sentinel survey</a>	2017	Aug-Sep	7.22	1.57	0.59	0.56
<a href="#">CARACAS Sentinel survey</a>	<a href="#">2018</a>	<a href="#">Aug-Sep</a>	<a href="#">5.2</a>	<a href="#">2.94</a>	<a href="#">0.9</a>	<a href="#">1.3</a>

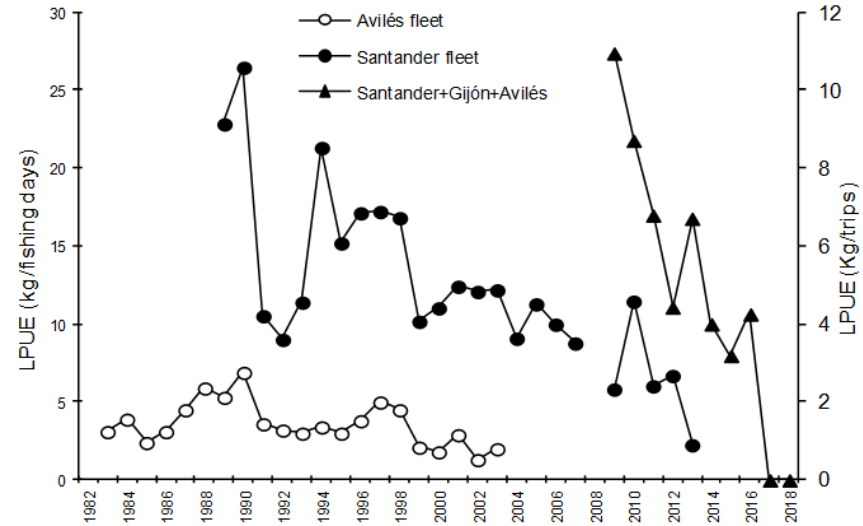
\*To avoid the effect of daily variations in the catchability of *Nephrops*, which is a consequence of the changes in their behavior, the hauls that were carried out in more than 50% of time between dusk and dawn were considered non-directed to *Nephrops*.

# FU 31

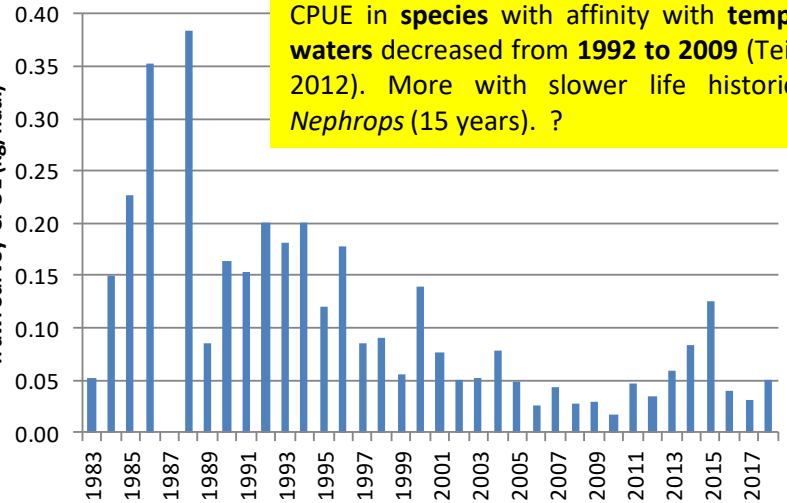
Landings



LPUE

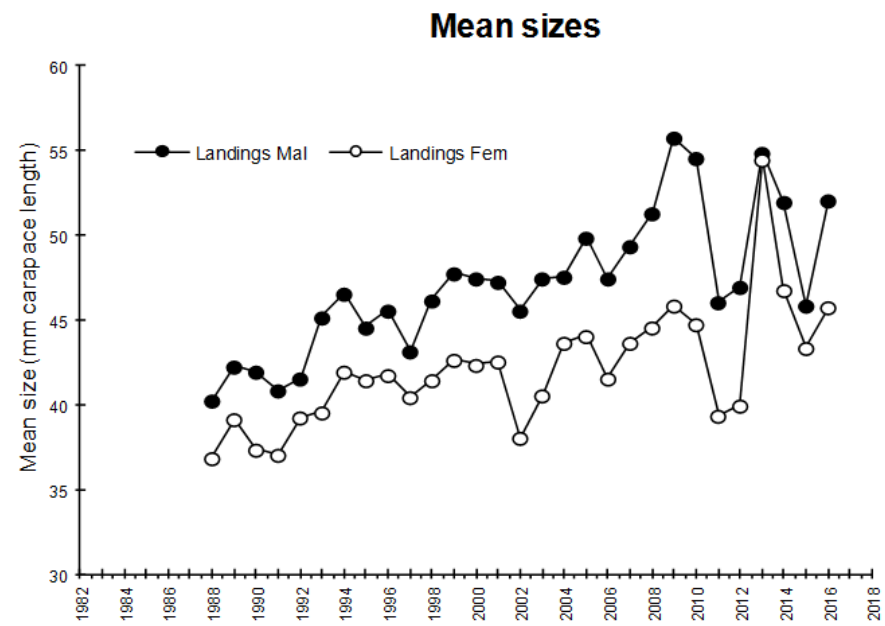


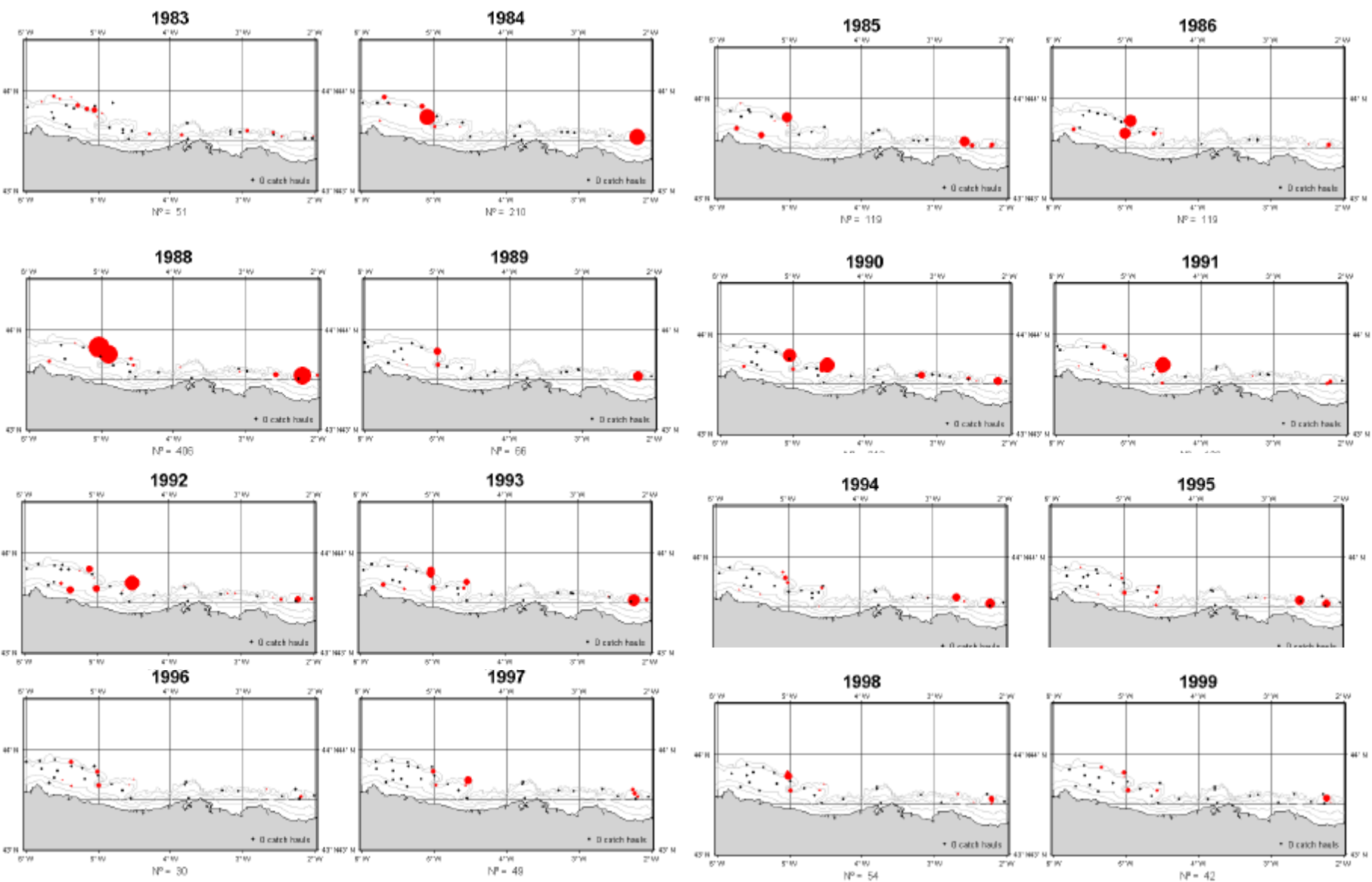
FU 31 Nephrops Spanish Demersales Trawl Survey CPUE (kg/haul)



CPUE in species with affinity with temperate waters decreased from 1992 to 2009 (Teixeira, 2012). More with slower life histories as *Nephrops* (15 years). ?

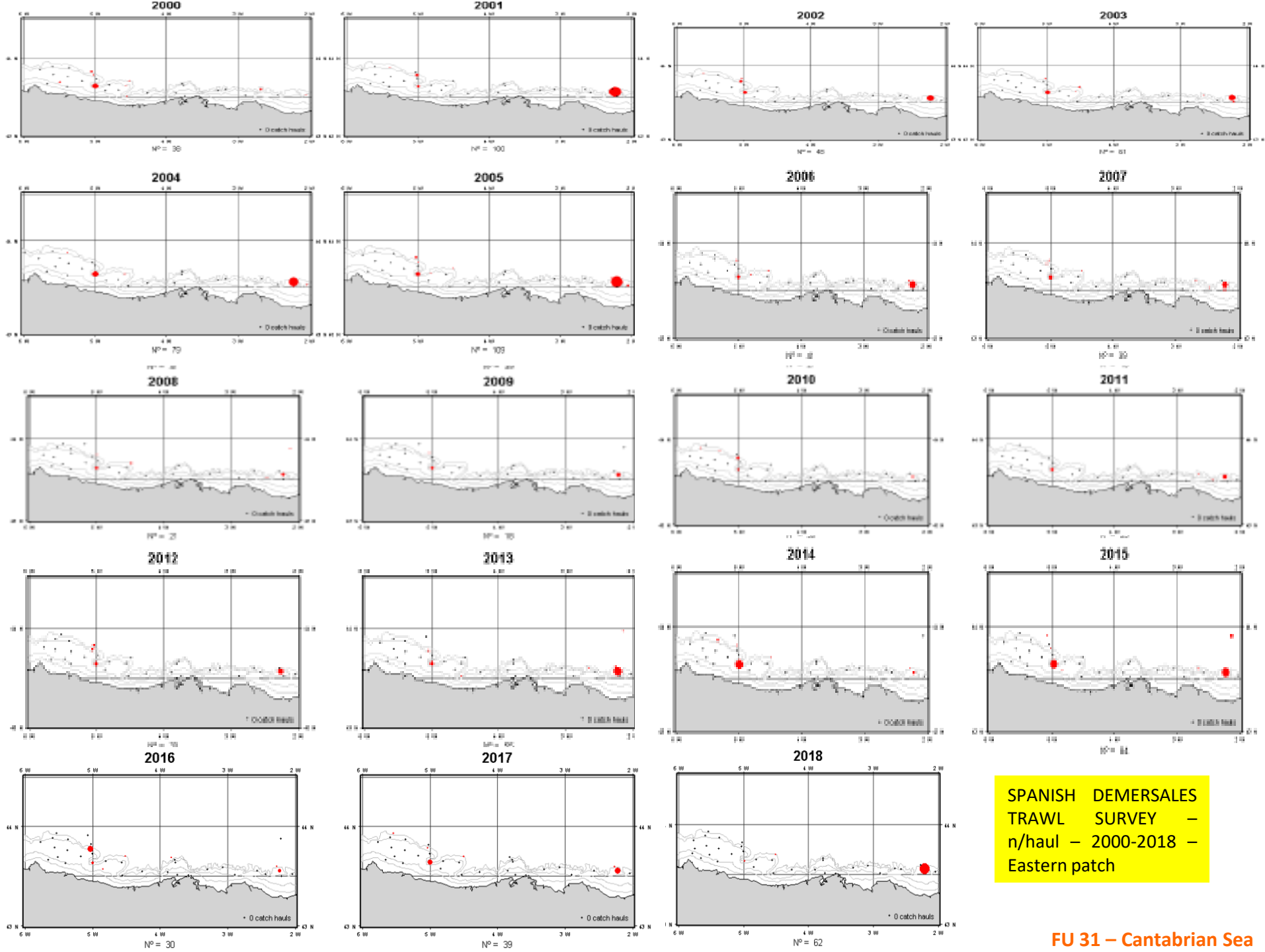
% MACHOS?





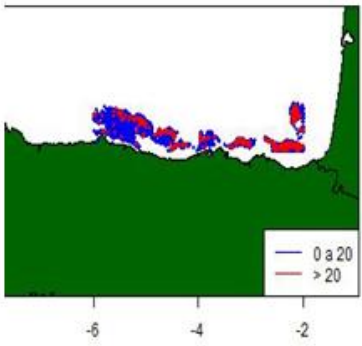
SPANISH DEMERSALES TRAWL SURVEY – n/haul  
 – 1983-2000 – DISMINUYE CPUE

CPUE in **species** with affinity with **temperate waters** decreased from **1992 to 2009** (Teixeira, 2012). More with slower life histories as *Nephrops* (15 years). ?

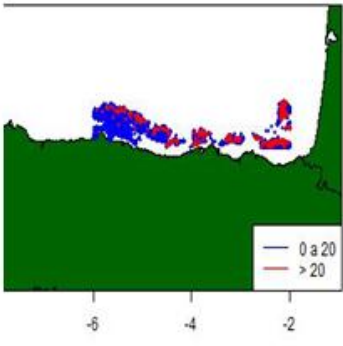




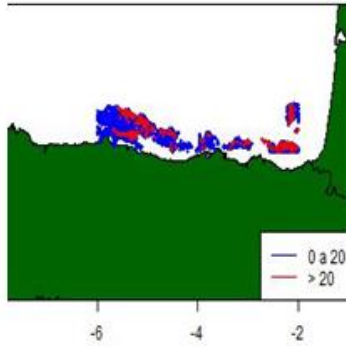
2009 NEP FU31 por Rango



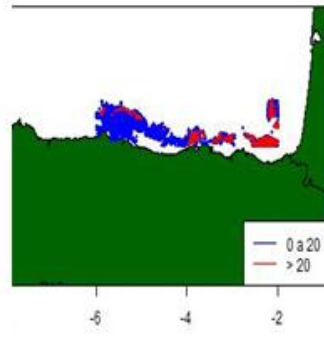
2010 NEP FU31 por Rango



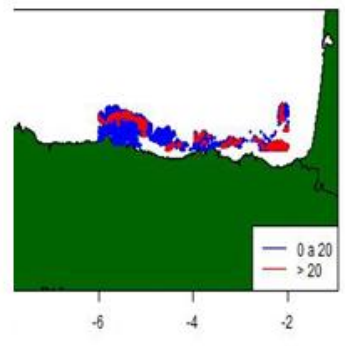
2011 NEP FU31 por Rango



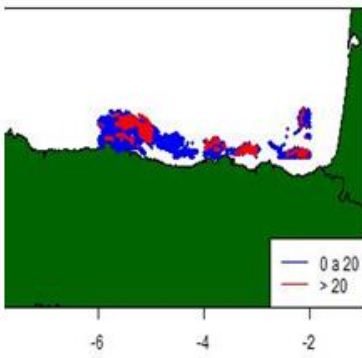
2012 NEP FU31 por Rango



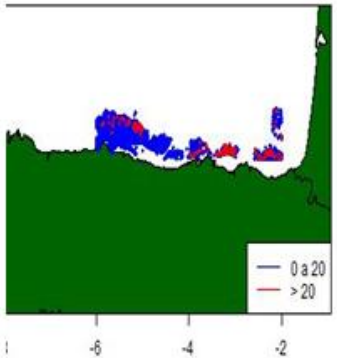
2013 NEP FU31 por Rango



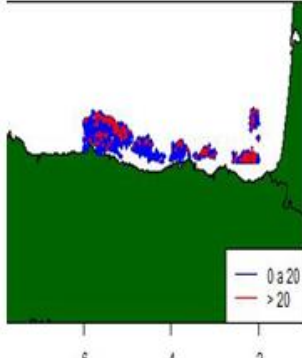
2014 NEP FU31 por Rango



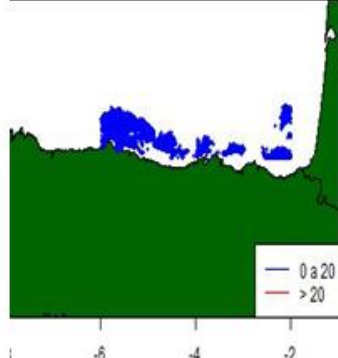
2015 NEP FU31 por Rango



2016 NEP FU31 por Rango



2017 NEP FU31 por Rango



2018 NEP FU31 por Rango

