

ICES *NEPHROPS* assessments and advice

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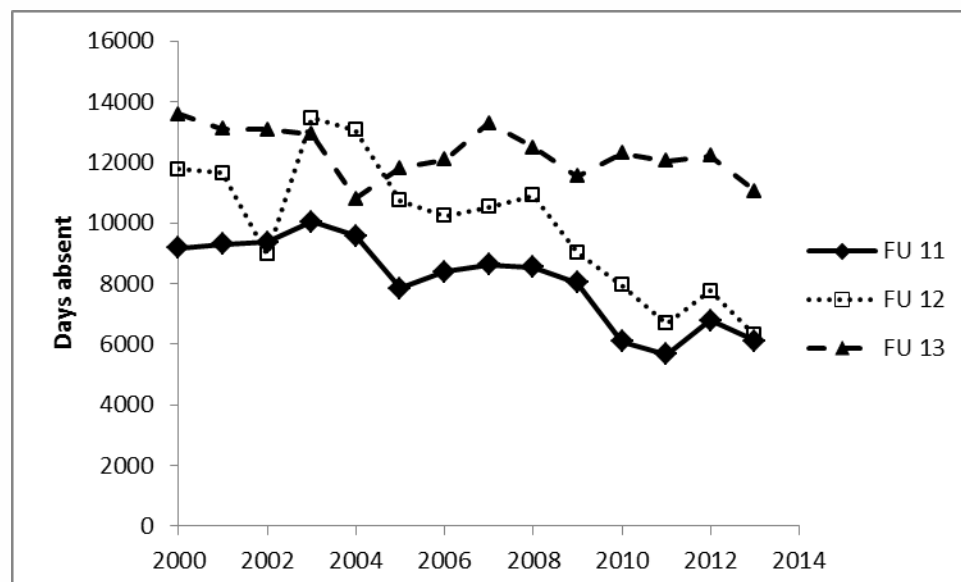
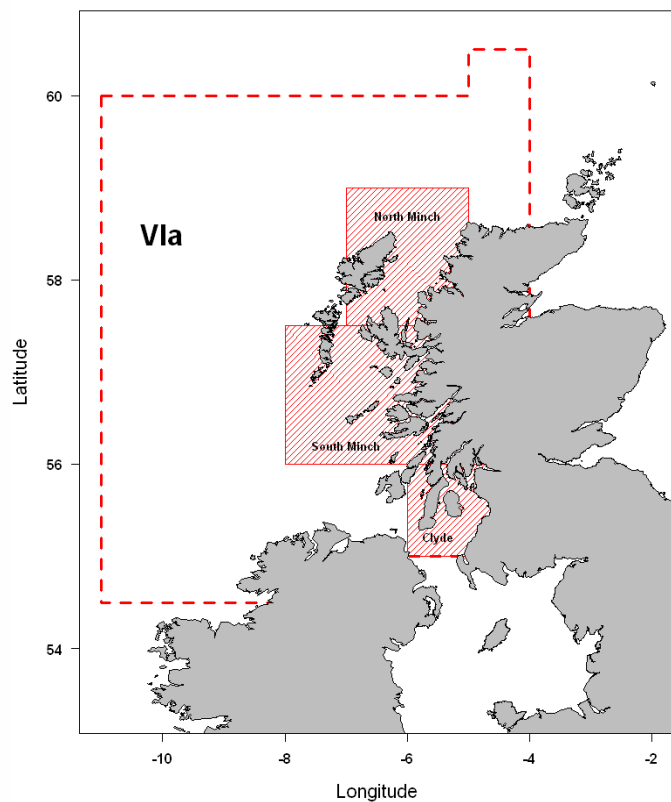


Background

- ICES experts have developed a method to use UWTV surveys to assess and provide catch options for *Nephrops*
- The approach;
 - Absolute abundance estimates from surveys
 - Removal estimates based on sampling & discard survival rates
 - Stock Specific Harvest rates consistent with MSY
- The advice has been delayed until autumn to make use of summer surveys.
- Advice on landings and catches given for 2015



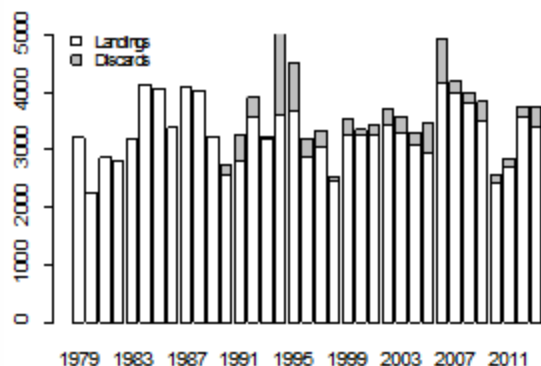
West of Scotland - Overview



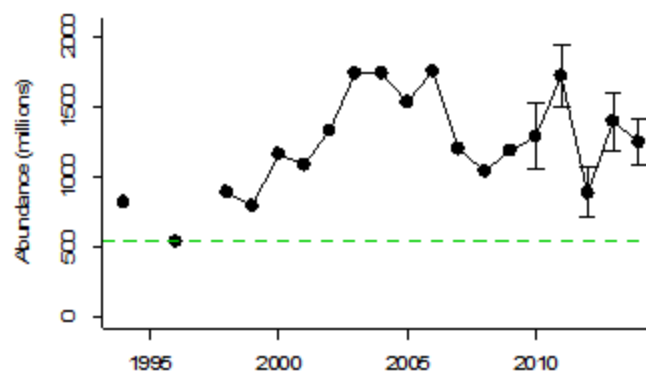


FU11 – North Minch

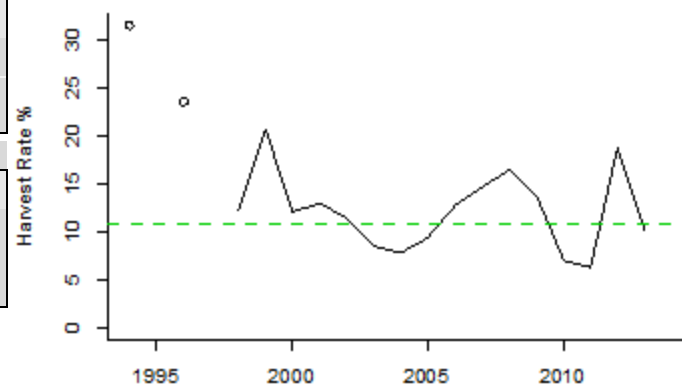
Catches



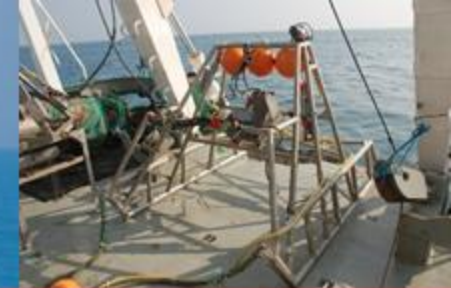
Stock size indicator



Harvest rate

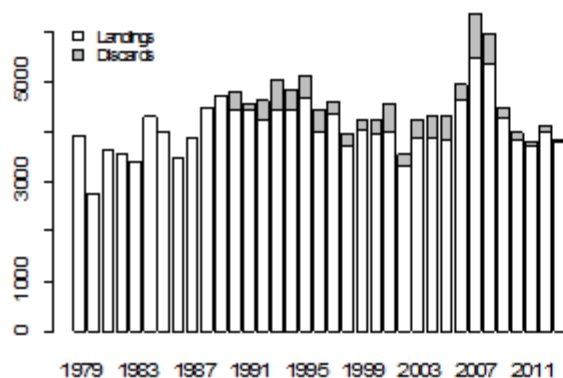


	Fishing pressure		
	2011	2012	2013
MSY (F_{MSY})	✓	✗	✓ Below target
Precautionary approach (F_{pa}, F_{lim})	?	?	? Not defined
	Stock size		
	2012	2013	2014
MSY ($B_{trigger}$)	✓	✓	✓ Above trigger
Precautionary approach (B_{pa}, B_{lim})	?	?	? Not defined

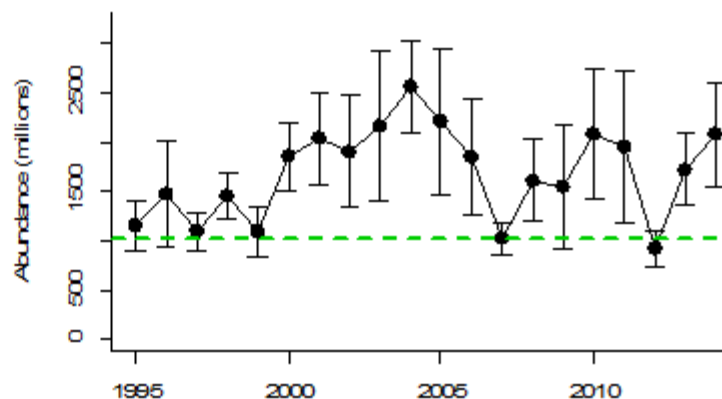


FU12 - South Minch

Catches



Stock Abundance



Harvest rate



	Fishing pressure			
	2011	2012	2013	
MSY (F_{MSY})	✓	✗	✓	Below target
Precautionary approach (F_{pa}, F_{lim})	?	?	?	Not defined
	Stock size			
	2012	2013	2014	
MSY ($B_{trigger}$)	✗	✓	✓	Above trigger
Precautionary approach (B_{pa}, B_{lim})	?	?	?	Not defined



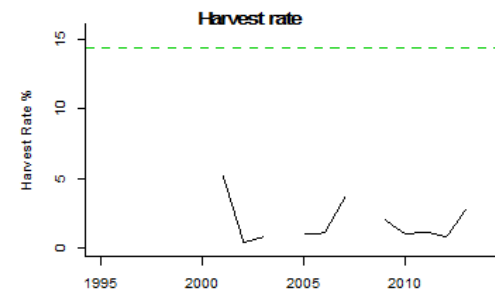
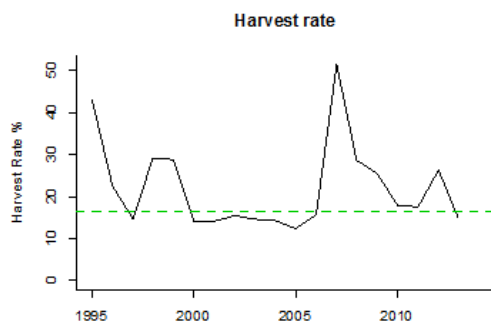
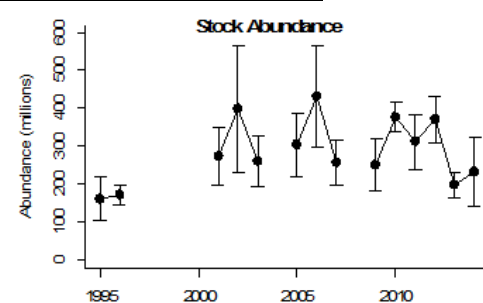
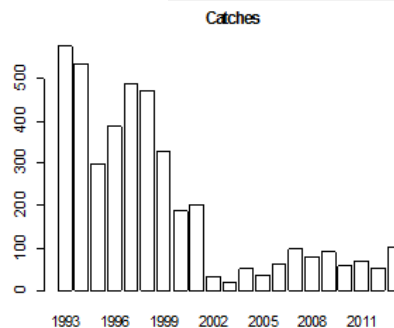
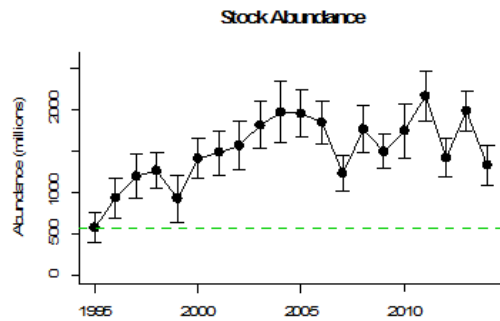
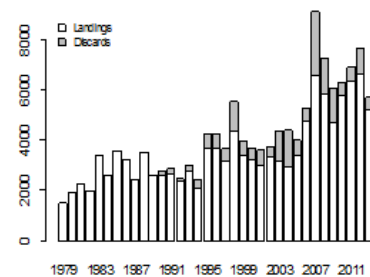
FU13 – Firth of Clyde + Sound of Jura

	Fishing pressure			2013
	2011	2012		
MSY (F_{MSY})	✗	✗	✓	Below target
Precautionary approach (F_{pa}, F_{lim})	?	?	?	Not defined

	Stock size			2014
	2012	2013		
MSY ($B_{trigger}$)	✓	✓	✓	Above trigger
Precautionary approach (B_{pa}, B_{lim})	?	?	?	Not defined

	Fishing pressure			
	2011	2012	2013	
MSY (F_{MSY})	✓	✓	✓	Below target
Precautionary approach (F_{pa}, F_{lim})	?	?	?	Not defined

	Stock size		
	2012 -2014		
MSY ($B_{trigger}$)	?		Not defined
Precautionary approach (B_{pa}, B_{lim})	?		Not defined
Qualitative evaluation	↘		Decreasing





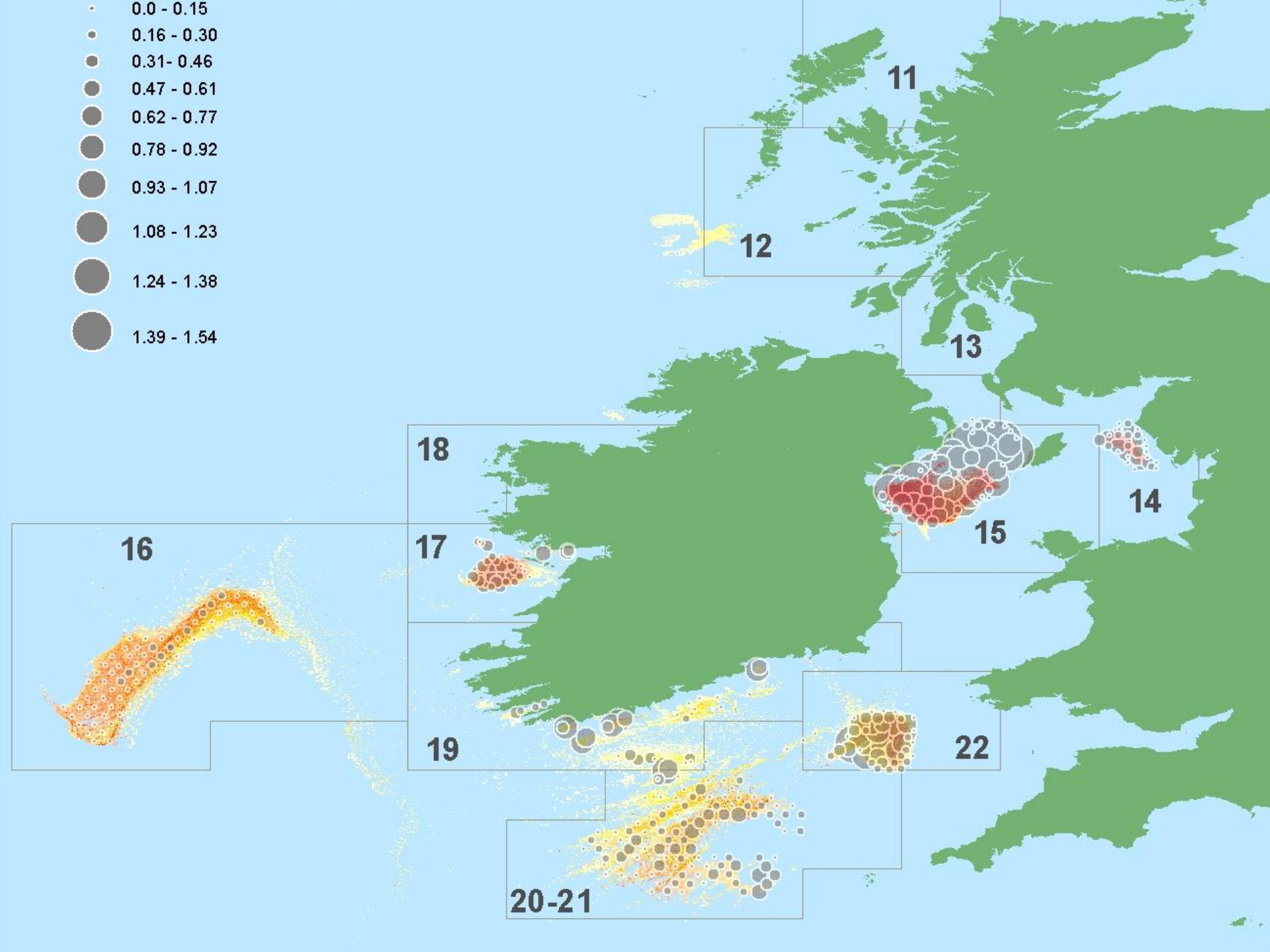
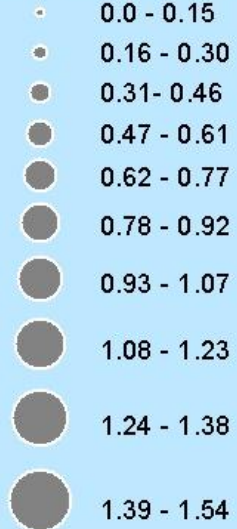
VI – Advice Summary

Stock area	ICES Stock Status 2013		ICES Catch Advice		ICES Landings Advice	
	F ~MSY	SSB ~ Btrigger	2014	2015	2014	2015
FU11	✓	✓	<3702	<3312	<3,485	<3092
FU12	✓	✓	<5394	<6567	<5,211	<6382
FU13 Clyde	✓	✓	<577	<677	<521	<614
FU13 Jura	✓	⬇	<6382	<4184	<5,744	<3776
VI rectangles outside FUs	✓	?	NA	NA	<326	326

15,287 14,190

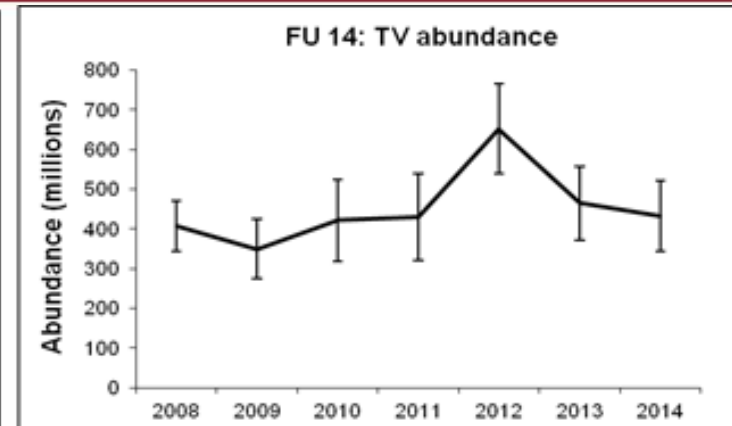
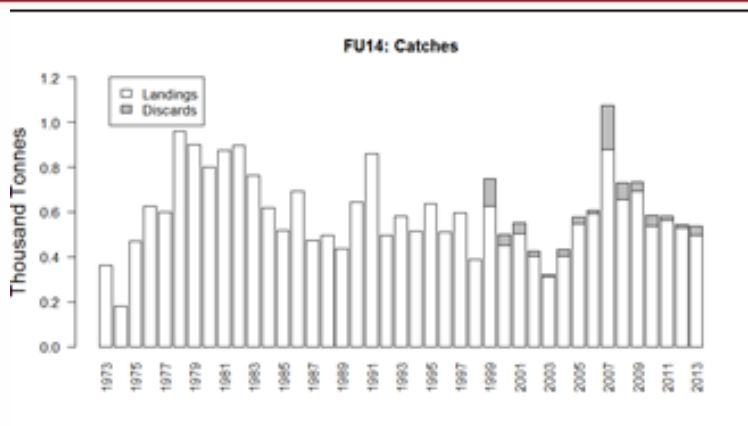
Stock area	International Landings 2013	International Discards 2013	TAC 2014	ICES Category	Harvest Rate	Basis
FU11	3,395	364	15,287	1	10.9%	F35%SpR
FU12	3,783	50		1	12.3%	F35%SpR
FU13 Clyde	5,258	434		1	16.4%	Fmax
FU13 Jura	102	NA		1	14.5%	F35%SpR
VI rectangles outside FUs	234	NA		6.2.0	RAL-20%	DLA

12,772 848

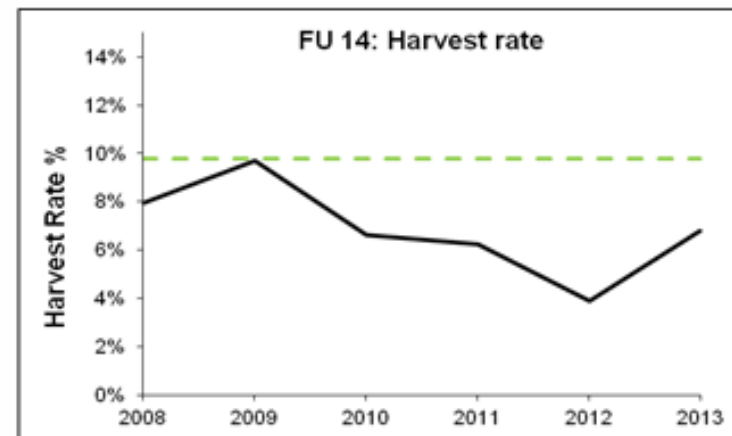


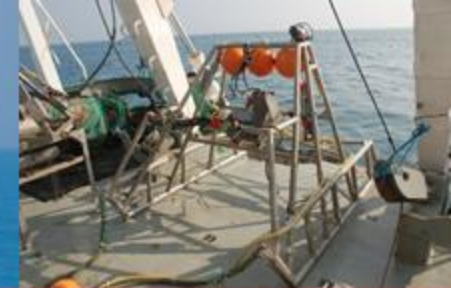


FU14 – Eastern Irish Sea



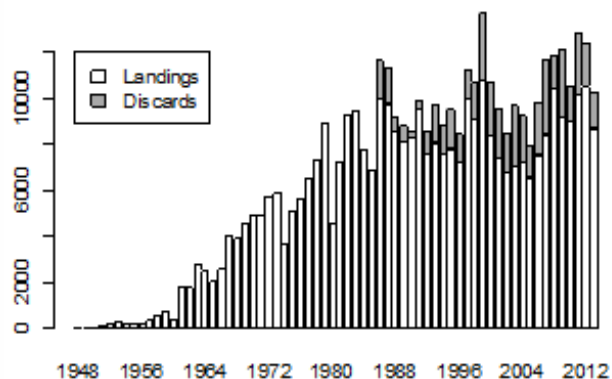
F (Fishing Mortality)			
	2011	2012	2013
MSY (F_{MSY})	✓	✓	✓ Below target
Precautionary approach (F_{pa}, F_{lim})	?	?	? Undefined
SSB (Spawning-Stock Biomass)			
	2012–2014		
MSY ($B_{trigger}$)	? Undefined		
Precautionary approach (B_{pa}, B_{lim})	? Undefined		
Qualitative evaluations	↘ Decreasing		



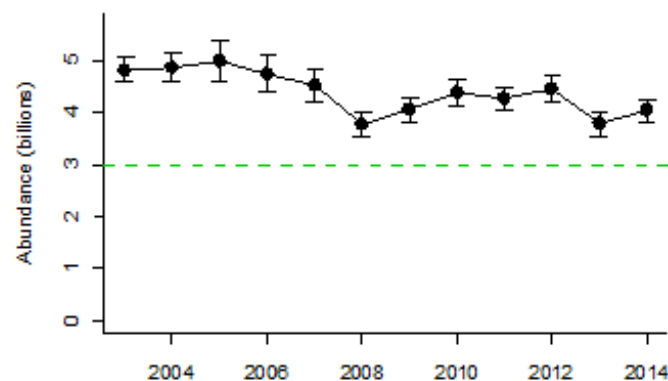


FU15 – Western Irish Sea

FU 15 : International Catch

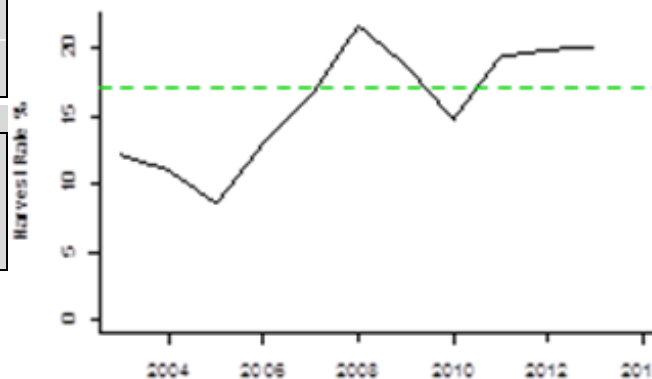


FU 15 : TV abundance



	Fishing pressure			
	2011	2012	2013	
MSY (F_{MSY})	✗	✗	✗	Above target
Precautionary approach (F_{pa}, F_{lim})	?	?	?	Undefined
	Stock size			
	2012	2013	2014	
MSY ($B_{trigger}$)	✓	✓	✓	Above trigger
Precautionary approach (B_{pa}, B_{lim})	?	?	?	Undefined

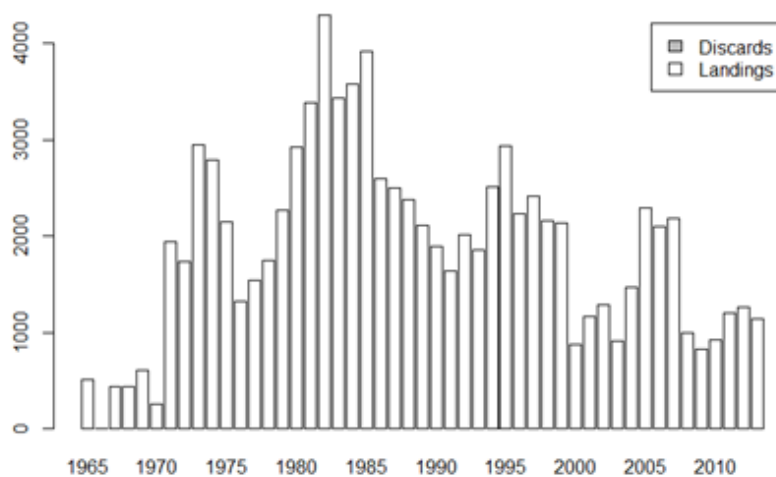
FU 15 : Harvest rate



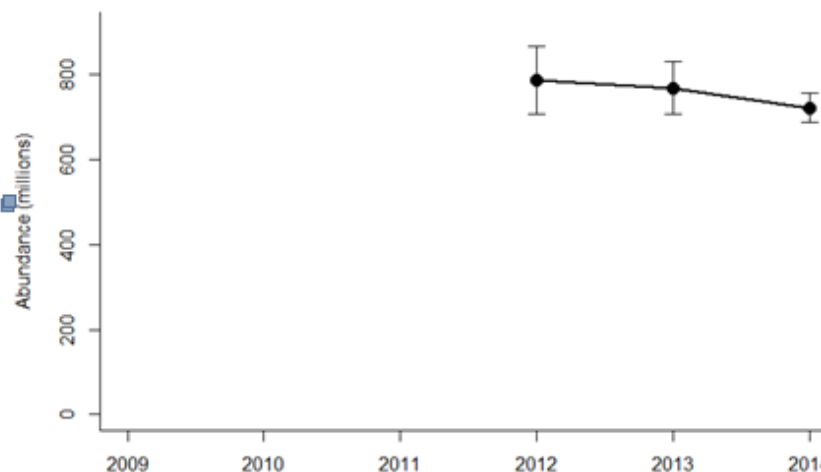


FU16 – Porcupine Bank

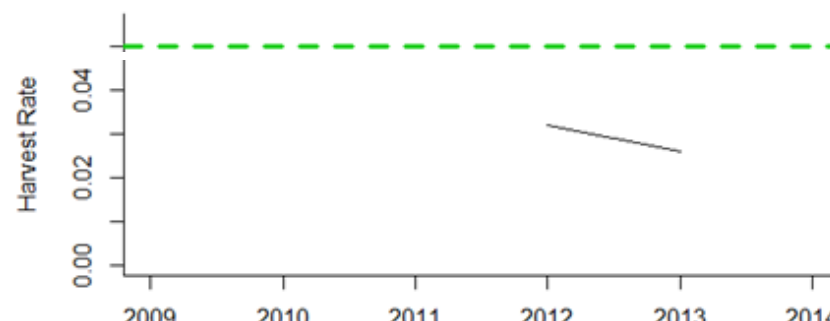
Catch



TV abundance



Harvest rate



Fishing pressure

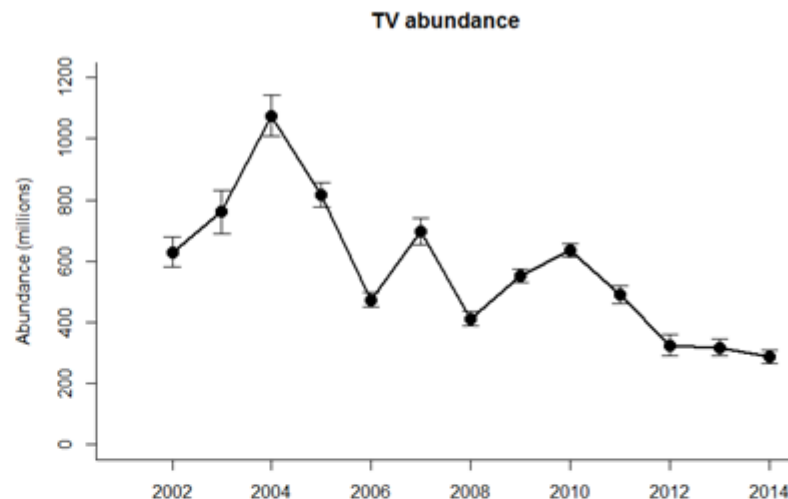
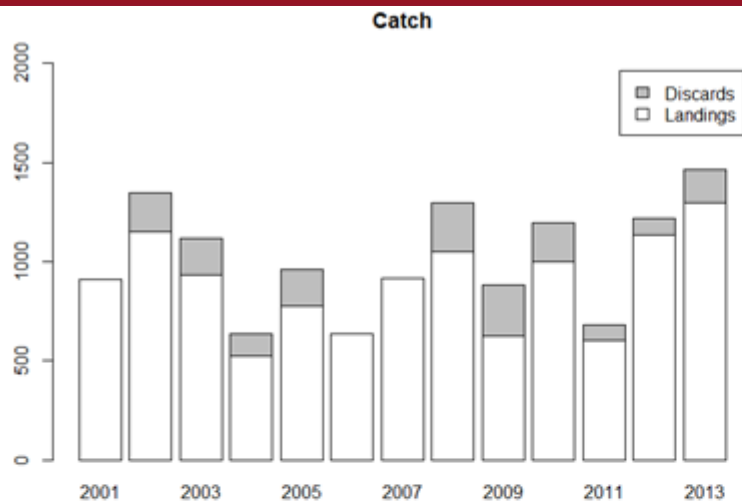
	2011	2012	2013	
MSY (F_{MSY})	?	✓	✓	Appropriate
Precautionary approach (F_{pa}, F_{lim})	?	?	?	Undefined

Stock size

	2012–2014	
MSY ($B_{trigger}$)	?	Undefined
Precautionary approach (B_{pa}, B_{lim})	?	Undefined
Qualitative evaluation	➡	Stable (based on UWTV abundance)

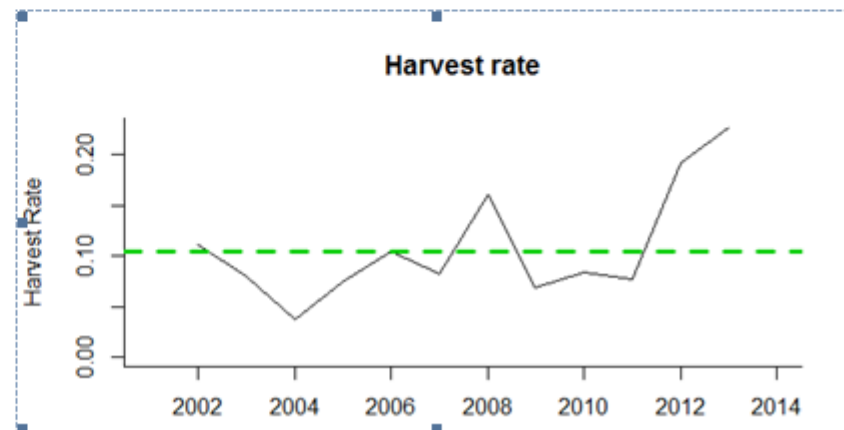


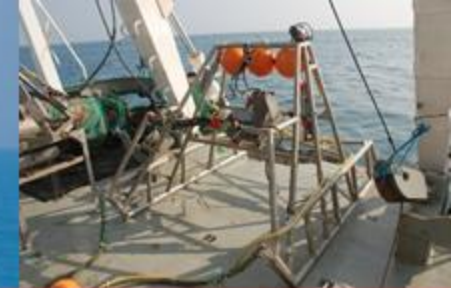
FU17 – Aran Grounds



Fishing pressure			
	2011	2012	2013
MSY (F_{MSY})	✓	✗	✗ Above target
Precautionary approach (F_{pa}, F_{lim})	?	?	? Undefined

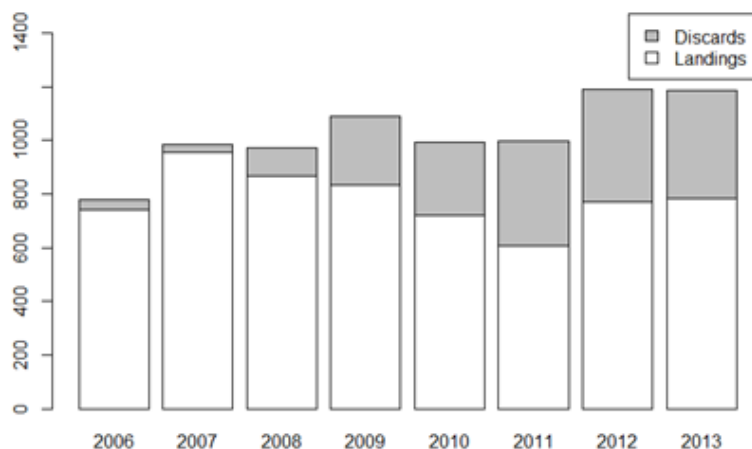
Stock size		
	2012–2014	
MSY ($B_{trigger}$)	?	Undefined
Precautionary approach (B_{pa}, B_{lim})	?	Undefined
Qualitative evaluation	↘	Decreasing



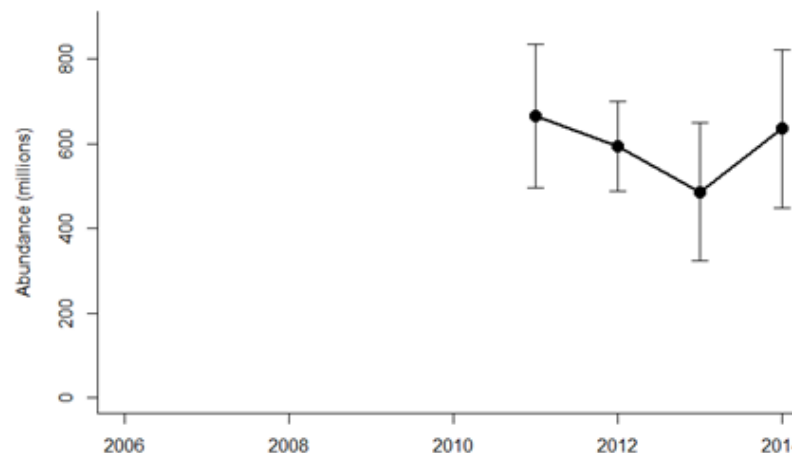


FU19 - Southeastern and southwestern coasts of Ireland

Catch



TV abundance



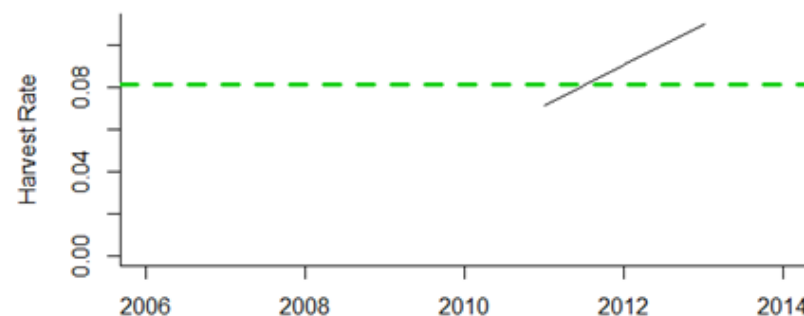
Fishing pressure

	2011	2012	2013	
MSY (F_{MSY})	✓	✗	✗	Above target
Precautionary approach (F_{pa}, F_{lim})	?	?	?	Undefined

Stock size

	2012–2014	
MSY ($B_{trigger}$)	?	Undefined
Precautionary approach (B_{pa}, B_{lim})	?	Undefined
Qualitative evaluation	➡	Stable

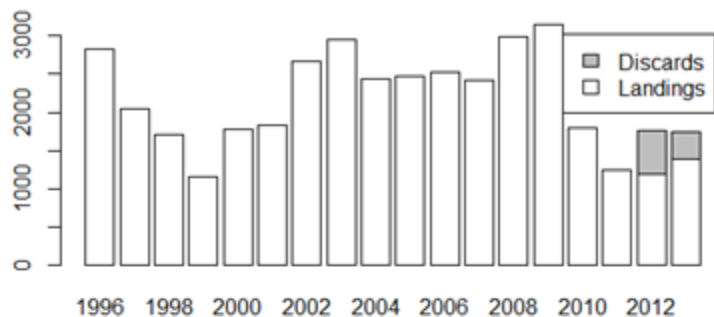
Harvest rate



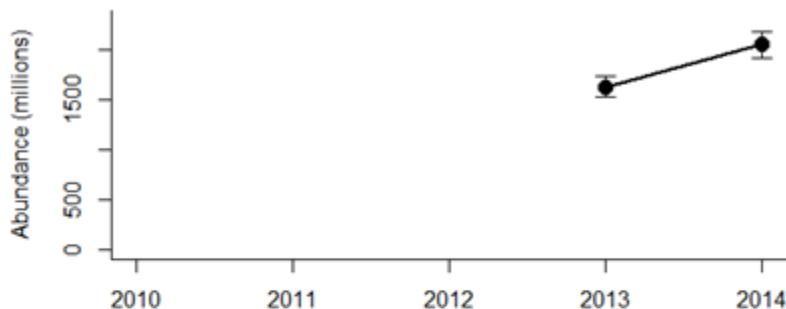


FU 20 (Labadie) and FU 21 (Jones and Cockburn)

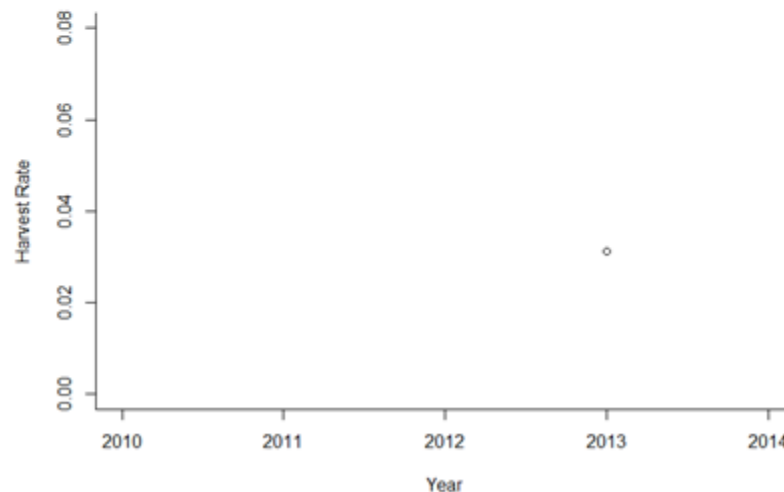
Catch



TV abundance



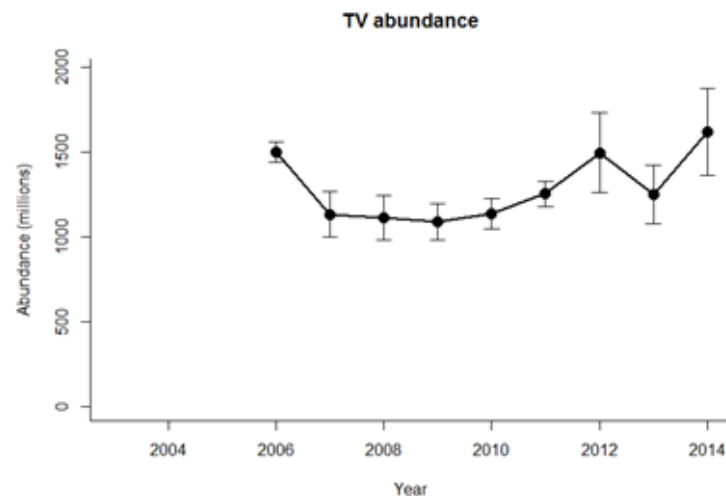
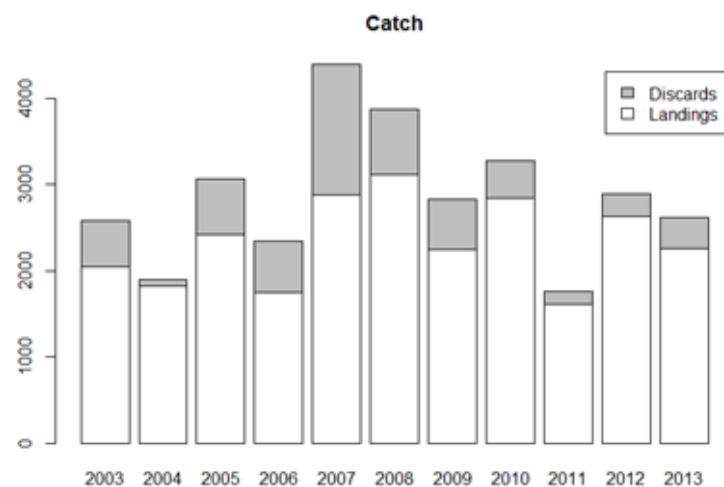
Harvest rate



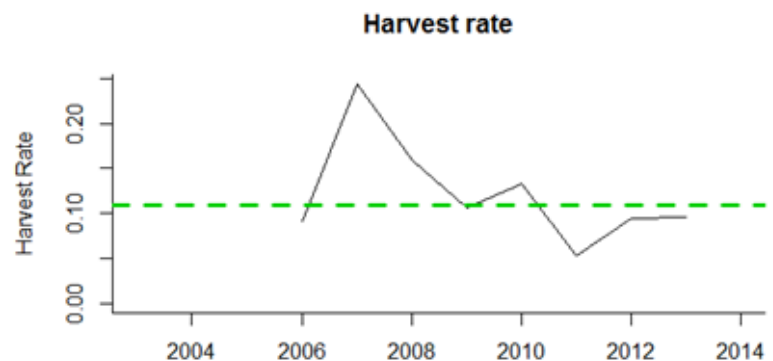
	Fishing pressure			
	2011	2012	2013	
MSY (F_{MSY})	?	?	?	Not defined
Precautionary approach (F_{pa}, F_{lim})	?	?	?	Undefined
Qualitative evaluation	?	?	✓	Below possible reference points
	Stock size			
	2013 -2014			
MSY ($B_{trigger}$)	?			Not defined
Precautionary approach (B_{pa}, B_{lim})	?			Not defined
Qualitative evaluation	↗			Increasing



FU22 – Smalls



F (Fishing Mortality)			
	2011	2012	2013
MSY (F_{MSY})	✓	✓	✓ Appropriate
Precautionary approach (F_{pa}, F_{lim})	?	?	? Unknown
Stock size			
	2012–2014		
MSY ($B_{trigger}$)	?	Undefined	
Precautionary approach (B_{pa}, B_{lim})	?	Undefined	
Qualitative evaluation	➡	Stable	





VII Overview

Stock area	ICES Stock Status 2013		ICES Catch Advice		ICES Landings Advice	
	F ~MSY	SSB ~ Btrig	2014	2015	2014	2015
FU19	✗	➡	<618	1,119	<521	<715
FU20-21	✓	↗	NA	3,366	<2,500	<2,500
FU22	✓	➡	<2937	3,797	<2674	<3409
FU17	✗	↘	<669	591	<591	<524
FU16	✓	➡	<1848	1,850	<1848	<1850
FU15	✗	✓	<9914	<9922	<8244	<8223
FU14	✓	↘	<1131	<715	<951	<662
FU18 & other rectangles	?	?	NA	NA	<235	<235

17564

18,118



VII Overview

Stock area	International Landings 2013	International Discards 2013	TAC 2014	ICES Category	Harvest Rate	Basis
FU19	781	404	20,989	1	8.1%	F0.1
FU20-21	1,387	347		4.1.4	5.5%	RAL
FU22	2,255	362		1	10.9%	F35%SpR
FU17	1,295	170		1	10.5%	F35%SpR
FU16	1,142	0		1	5.0%	F0.1
FU15	8,672	1,590	20,989	1	17.1%.	Fmax
FU14	495	39		1	9.8%	F0.1
FU18 & other rectangles	118	NA		6.2.0	RAL-20%	DLA
	16,145	2,912				



Data Deficiencies

- FU11-13, 15, 17 & 22 No major issues highlighted
- FU16 – Industry information critical
- FU20-21 Improvements in information base thanks to benchmark (especially FR- VMS data). Sampling intensity remains low
- FU19 Sampling coverage is problematic
- FU14 Sampling resumed in 2013 after a few years of insufficient sampling



2014 TV Survey Reports

Available on MI online repository <http://oar.marine.ie>

Western Irish Sea <i>Nephrops</i> Grounds (FU15) 2014 UWTV Survey Report and catch options for 2015	http://hdl.handle.net/10793/987
Porcupine Bank <i>Nephrops</i> Grounds (FU16) 2014 UWTV Survey Report and catch options for 2015	http://hdl.handle.net/10793/988
Aran, Galway Bay and Slyne Head <i>Nephrops</i> Grounds (FU17) 2014 UWTV Survey Report and catch options for 2015.	http://hdl.handle.net/10793/989
FU19 <i>Nephrops</i> Grounds 2014 UWTV Survey and catch options for 2015	http://hdl.handle.net/10793/990
The Labadie, Jones and Cockburn Banks <i>Nephrops</i> Grounds (FU2021) 2014 UWTV Survey Report and catch options for 2015	http://hdl.handle.net/10793/991
The "Smalls" <i>Nephrops</i> Grounds (FU22) 2014 UWTV Survey Report and catch options for 2015	http://hdl.handle.net/10793/992