

WHITING - LÝSA

Merlangius merlangus

GENERAL INFORMATION

Whiting is a gadoid species closely related to cod and haddock. It is a demersal species found at depths between 10 and 300 meters, though most commonly between 50 and 250 meters. It is smaller than its previously mentioned relatives with a maximum length of 70 cm, males and females being similar in size. Sexual maturity is reached at around 30 cm.

THE FISHERY

In 2017, whiting was caught as bycatch all around Iceland, but mostly around south and west of Iceland (Figure 1). Annual catches have been between 500 and 1000 tonnes except for 2008-2012 when catches peaked in 2011 and were 2602 tonnes (Figure 2). Increased catches in 2007-2012 occurred almost exclusively in the southwest (Figure 2). Whiting is caught at 100-250 m depth (Figure 3).

Whiting is mainly caught in demersal trawls but to some extent in *Nephrops* trawls, longline and Danish seine (Table 1, Figure 4). The number of boats reporting whiting catches increased with increased catches between 2007 and 2012 but have since then decreased (Figures 2 and 4 and Table 1).

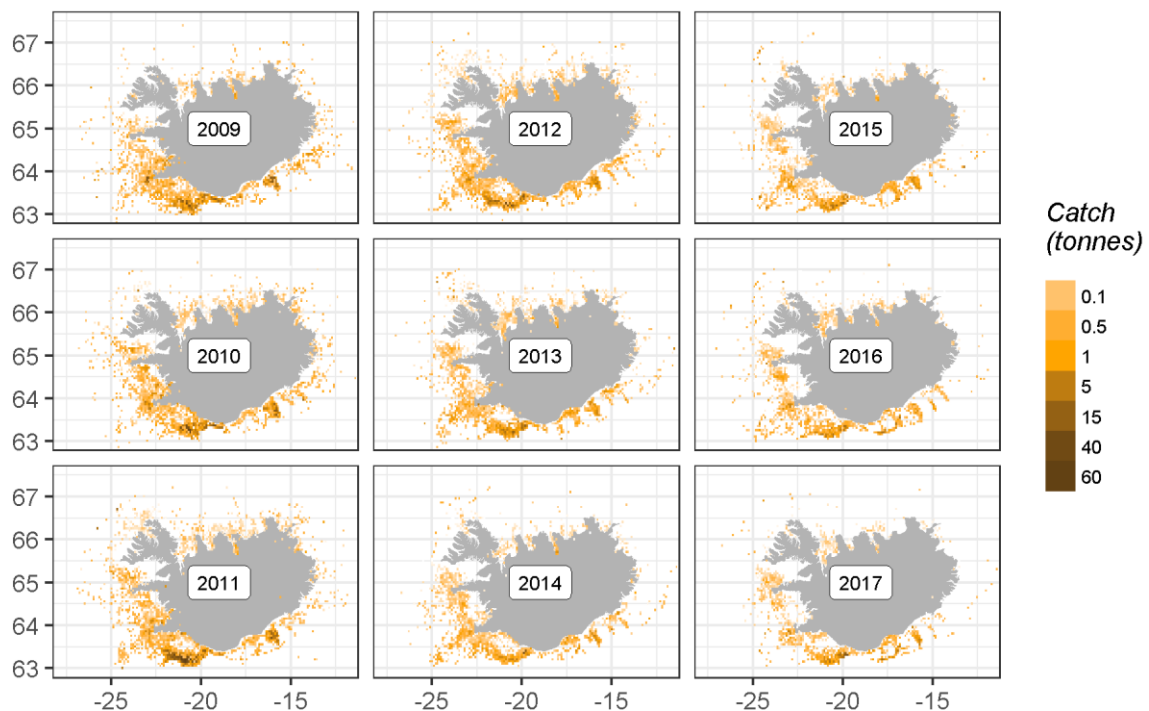


Figure 1. Whiting. Geographic distribution of the Icelandic fishery since 2009 as reported in logbooks.

Mynd 1. Lýsa. Útbreiðsla á Íslandsmiðum frá árinu 2009 samkvæmt afladagbókum.

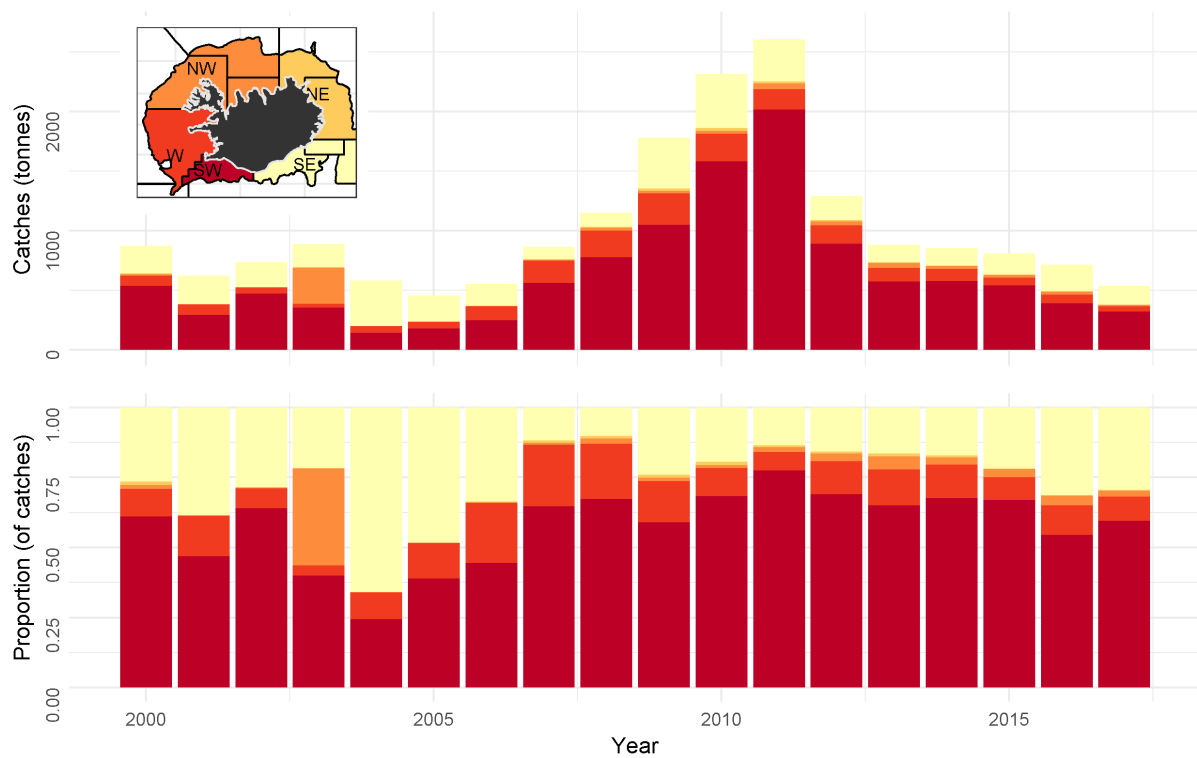


Figure 2. Whiting. Catch distribution and proportions by area from the year 2000 according to logbooks.

Mynd 2. Lýsa. Afli eftir svæðum ásamt hlutfalli innan hvers svæðis frá 2000 samkvæmt afladagbókum.

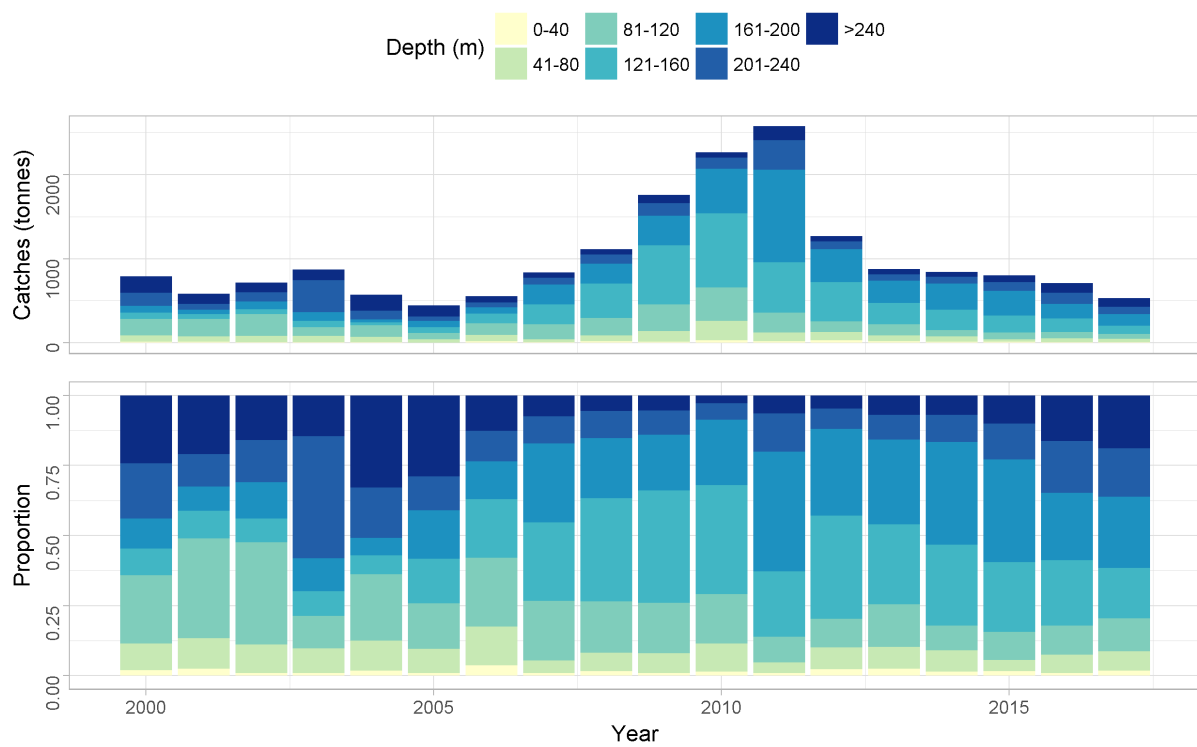


Figure 3. Whiting. Depth distribution of catches according to logbooks.

Mynd 3. Lýsa. Afli eftir dýpi samkvæmt afladagbókum.

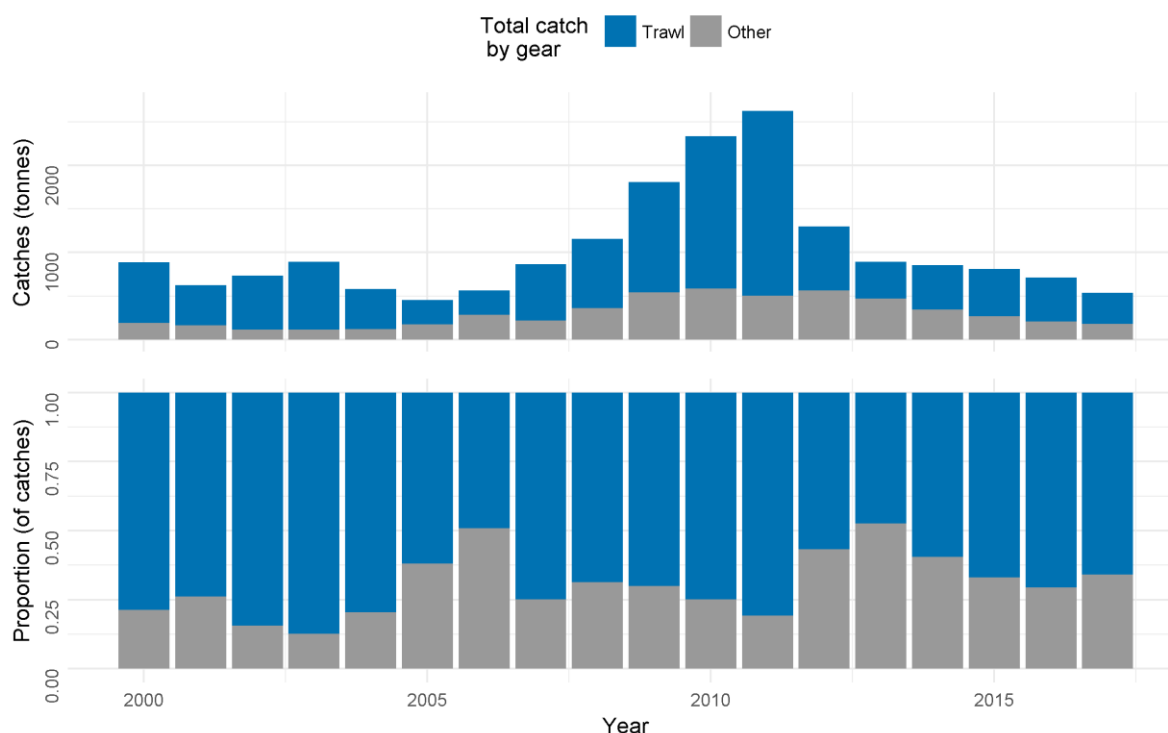


Figure 4. Whiting. Total catches of whiting and proportion captured with nets from 2000 as reported in logbooks.

Mynd 4. Lýsa. Heildaraflí ásamt hlutfalli sem veiddist í net frá árinu 2000 samkvæmt afladagbókum.

Table 1. Whiting. Number of Icelandic boats reporting catches of whiting, landings by fishing gear and yearly reported landings.

Tafla 1. Lýsa. Fjöldi íslenskra skipa sem veitt hafa lýsu ásamt lönduðum afla eftir veiðarfærum ásamt heildarafla hvers árs.

YEAR	NUMBER OF VESSELS			CATCHES (TONNES)			
	<i>Demersal trawl</i>	<i>Nephrops trawl</i>	<i>Other</i>	<i>Demersal trawl</i>	<i>Nephrops trawl</i>	<i>Other</i>	<i>Sum</i>
2000	41	5	98	697	39	151	887
2001	27	7	96	461	47	117	625
2002	38	11	73	620	36	79	736
2003	32	8	63	777	31	82	891
2004	37	4	72	464	5	114	582
2005	28	7	75	283	19	155	457
2006	27	5	95	277	7	281	565
2007	34	5	106	649	16	203	867
2008	45	7	127	793	7	355	1155
2009	46	10	211	1263	33	509	1805
2010	50	15	269	1748	124	460	2332
2011	48	13	290	2121	153	350	2624
2012	43	14	272	736	154	409	1299
2013	38	14	249	423	216	255	894
2014	37	14	207	509	109	237	856
2015	35	12	191	541	114	153	808
2016	38	11	169	504	50	159	713
2017	29	8	124	360	42	157	559

LENGTH DISTRIBUTIONS FROM COMMERCIAL CATCHES OF WHITING

Length measurements of whiting from commercial catches are scarce and are missing for some years. Most of the whiting caught in the commercial fishery are between 40 and 55 cm (Figure 5).

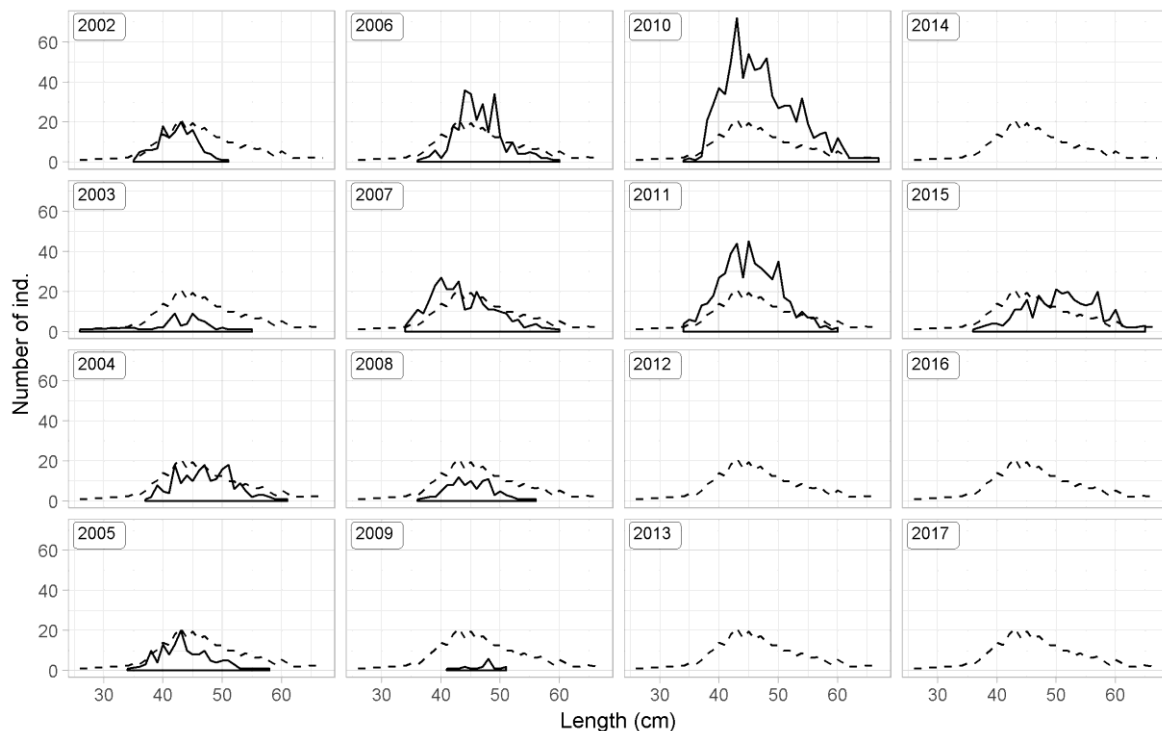


Figure 5. Whiting. Length distribution from commercial catches in 2001-2017. Dotted lines indicate average length distribution in 2001-2017. No length measurements were collected from commercial catches of whiting in 2012, 2013, 2014, 2016 and 2017.

Mynd 5. Lengdardreifing lýsu úr aflu árin 2001-2017. Punktalínan sýnir meðallengdardreifingu árunna 2001-2017. Engin lýsa var lengdarmæld úr aflu árin 2012- 2014 eða 2016-2017.

SURVEY DATA

Annual Icelandic groundfish surveys have been conducted in March (IS-SMB) since 1985 and October (IS-SMH) since 1996. Both surveys cover the distribution area of whiting on Icelandic grounds. For monitoring, harvestable biomass and recruitment index were estimated for both surveys (Figure 6). The harvestable biomass index is calculated as the biomass of individuals 40 cm and larger. The recruitment index is defined as whiting smaller than 20 cm.

Both the total biomass index and harvestable biomass index in IS-SMB increased from 2003 to a maximum in the time series in 2009 but decreased to low level in 2015 (Figure 6). Since then, both indices have increased but remain at low level. The biomass indices from IS-SMH is much more variable but shows similar trend in the last decade. Recruitment indices show similar trend in both surveys (Figures 6). Strong recruitment was observed in 2003 and 2007 in IS-SMH and in 2004 and 2008 in IS-SMB. These peaks can be seen in the length distributions (Figures 7 and 8) and reached the harvestable biomass 2-3 years later.

Spatial distribution of whiting from the spring survey is similar to what is observed in the commercial catches, that is, mostly in the southwest of Iceland (Figures 1, 2, 9 and 10). The autumn survey however shows the highest indices in the southwest and west (Figures 11 and 12).

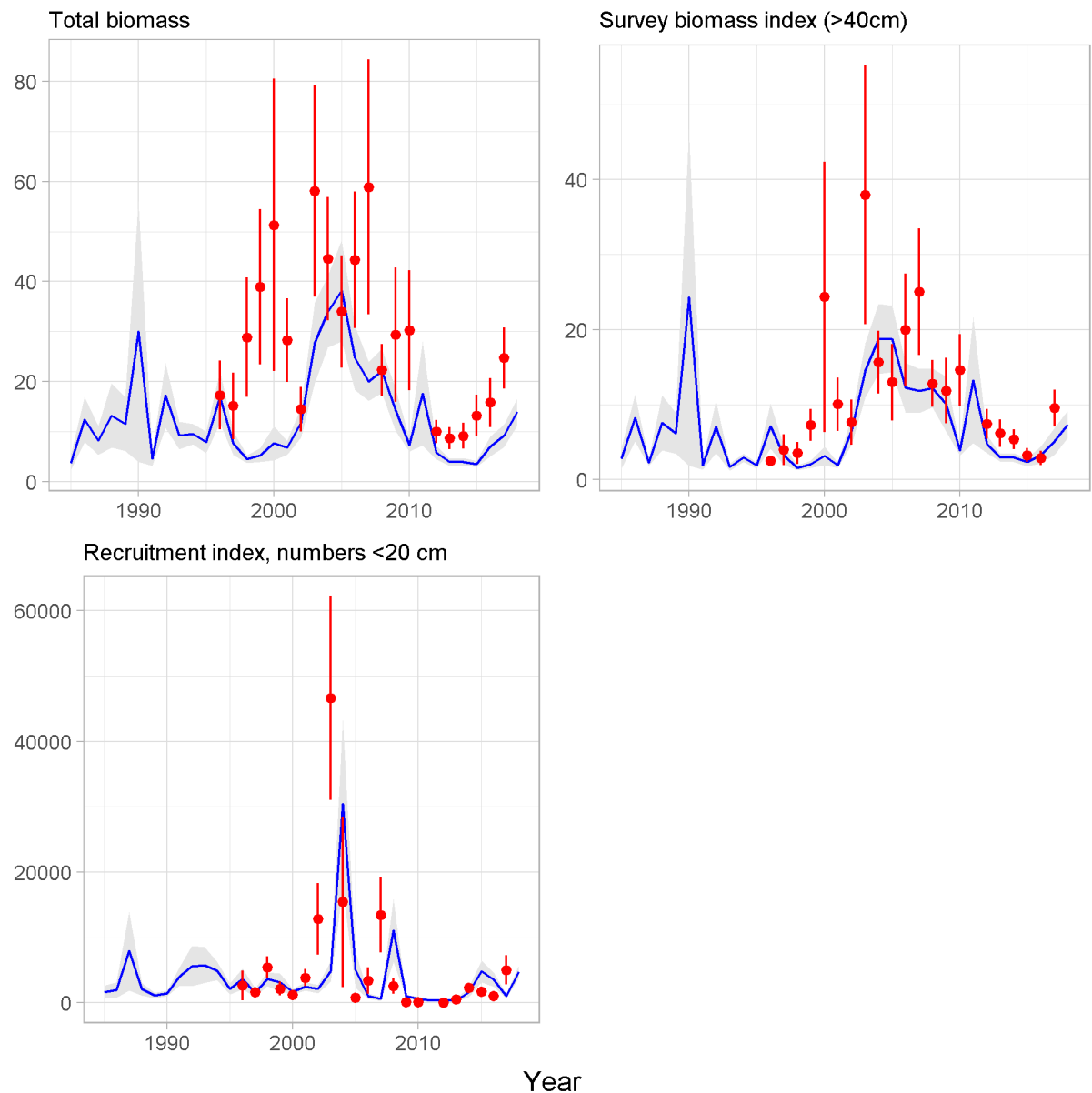


Figure 6. Whiting. Spring and autumn groundfish survey biomass indices, recruitment indices and spatial distribution. Blue represents spring surveys and red autumn surveys.

Mynd 6. Lýsa. Lífmassavísitala, nýliðunarvísitala og útbreiðsla í stofnmælingum botnfiska að vori frá 1985 (blá lína) og að hausti frá 1996 (rauðir punktar).

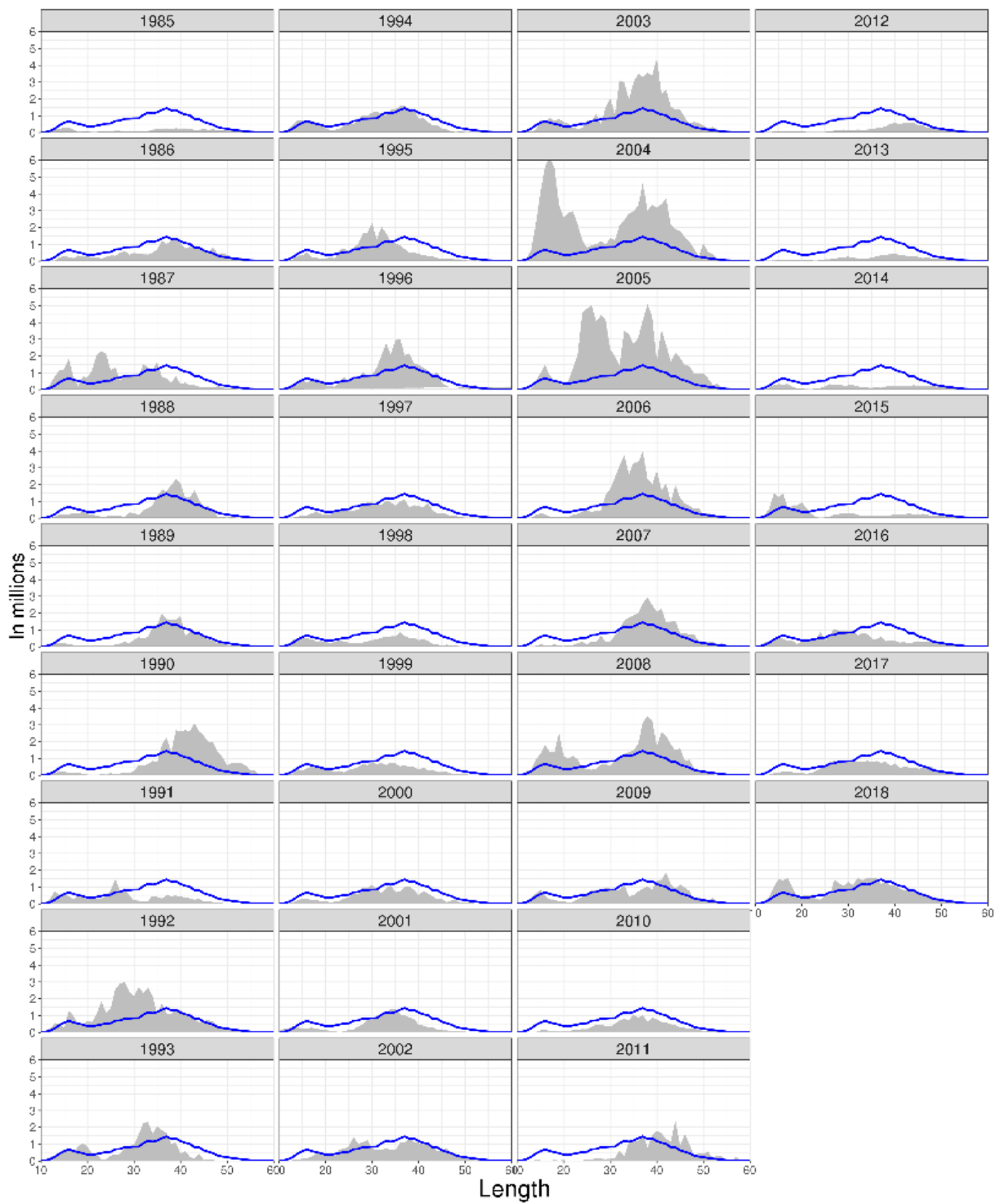


Figure 7. Whiting. Length distribution from the spring survey. The blue line indicates mean length for all years.

Mynd 7. Lýsa. Lengdardreifing lýsu úr stofnmælingu botnfiska að vori frá 1985 ásamt meðallengd (blá lína).

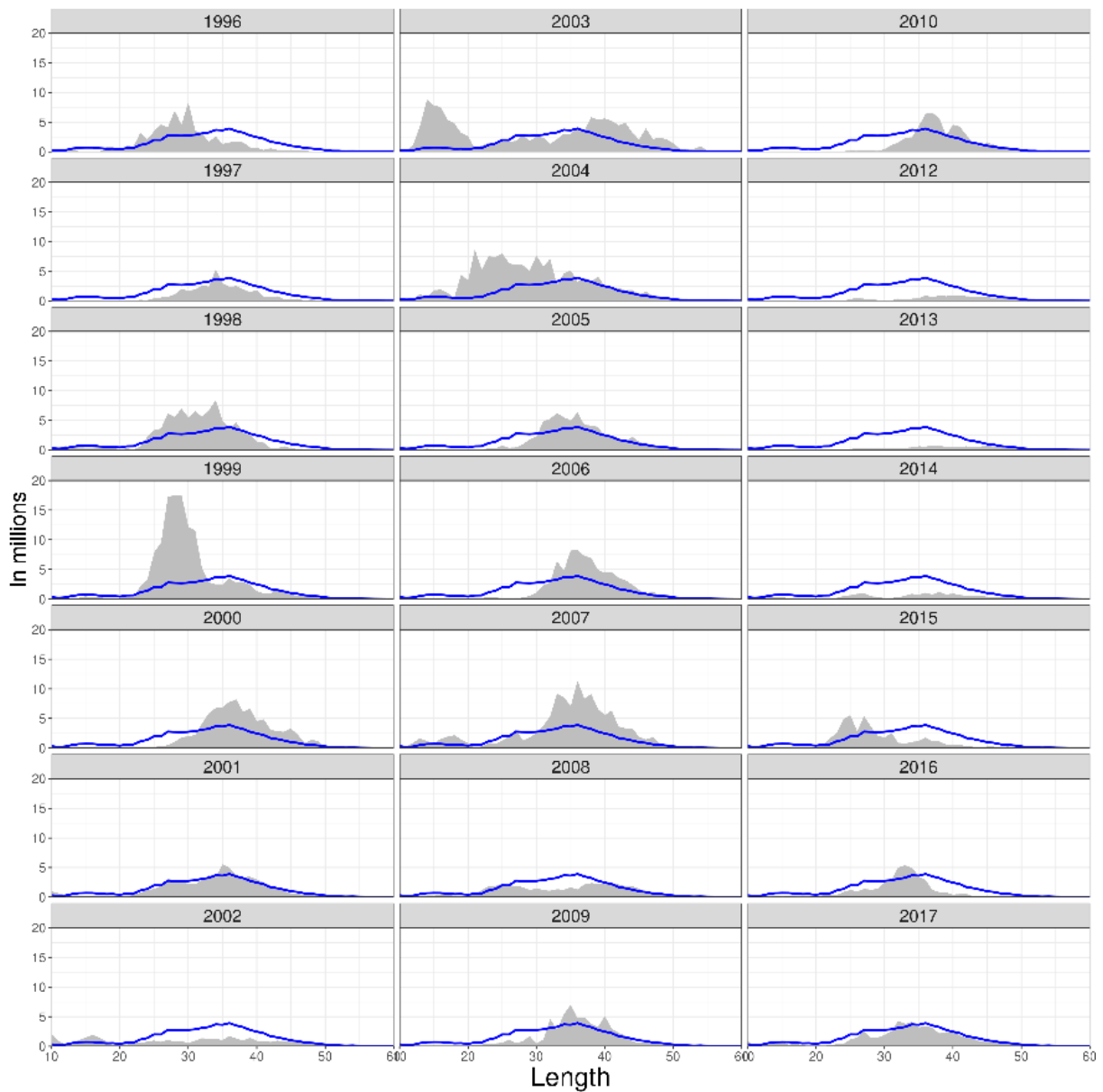


Figure 8. Whiting. Length distribution from the autumn survey. The blue line indicates mean length for all years.

Mynd 8. Lýsa. Lengdardreifing úr stofnmælingu botnfiska að hausti frá 1996 ásamt meðallengd (blá lína).

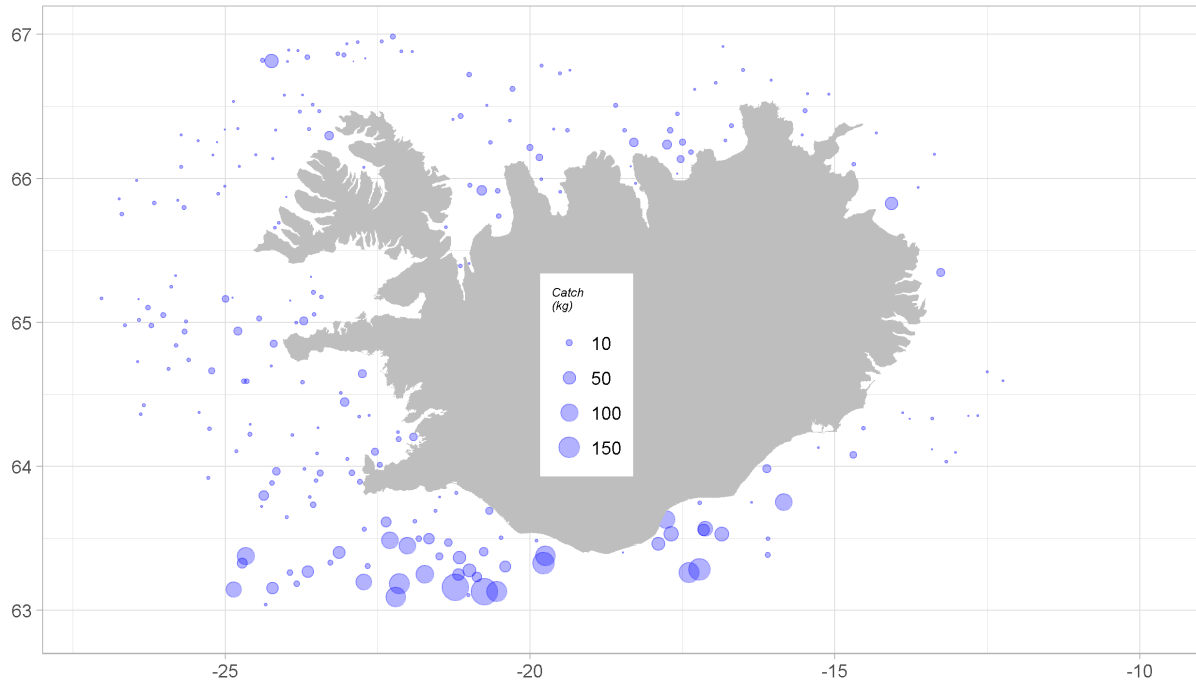


Figure 9. Whiting. Spatial distribution from the spring groundfish survey in 2018.

Mynd 9. Lýsa. Útbreiðsla í stofnmælingu botnfiska að vori árið 2018.

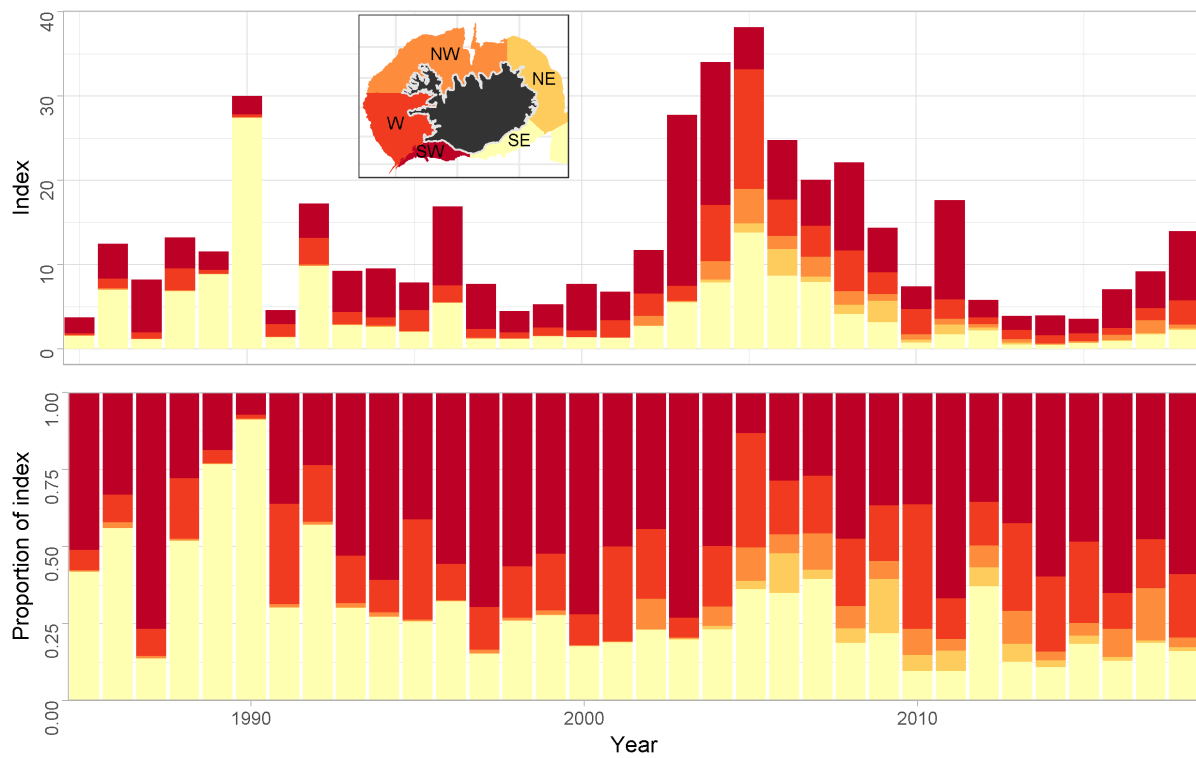


Figure 10. Whiting. Spatial distribution of biomass index from the spring groundfish survey in 1985-2018.

Mynd 10. Lýsa. Dreifing lífmassavísitölu í stofnmælingum botnfiska að vori árin 1985-2018.

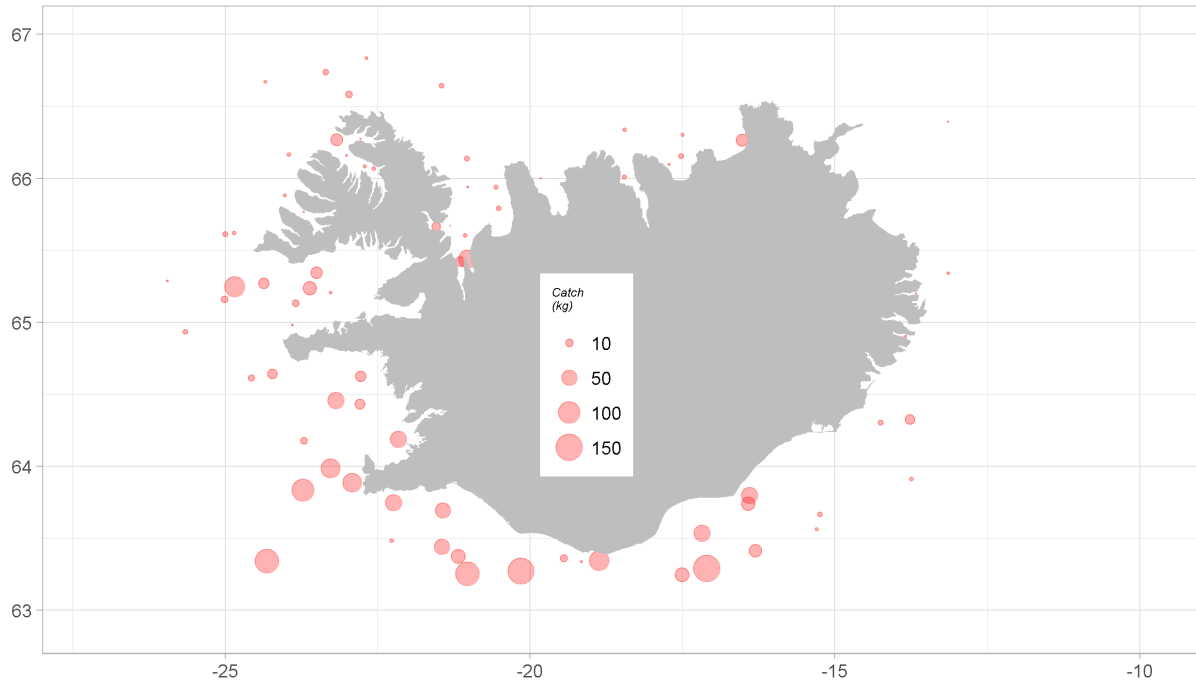


Figure 11. Whiting. Spatial distribution of catches from the autumn groundfish survey 2017.

Mynd 11. Lýsa. Útbreiðsla í stofnmælingu botnfiska að hausti árið 2017.

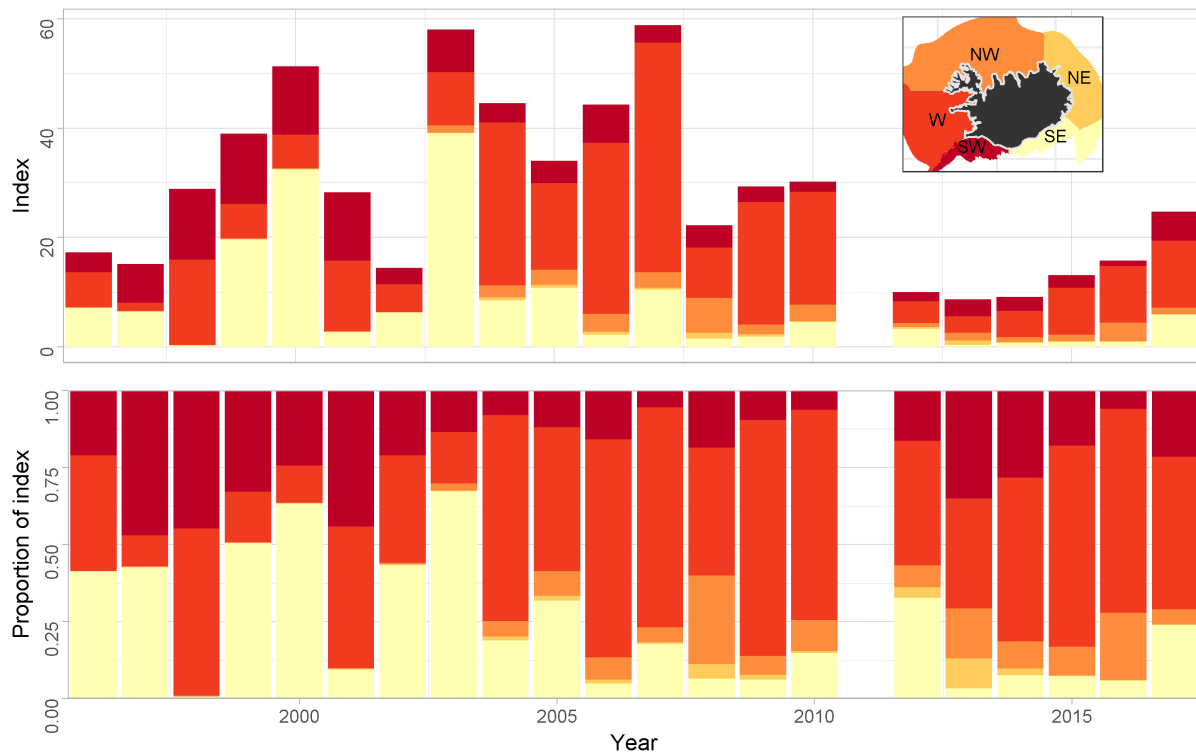


Figure 12. Whiting. Spatial distribution of biomass index from the autumn groundfish survey in 1996-2017.

Mynd 12. Lýsa. Dreifing lífmassavísitölu í stofnmælingu botnfiska að hausti árin 1996-2017.

MANAGEMENT

Whiting is not subject to management such as TAC limitations and catch advice is not given by the Marine and Freshwater Research Institute. Changes in survey biomass indices (Figure 6) and F_{proxy} (catch/spring survey biomass index, figure 13) are monitored to evaluate the state of the stock.

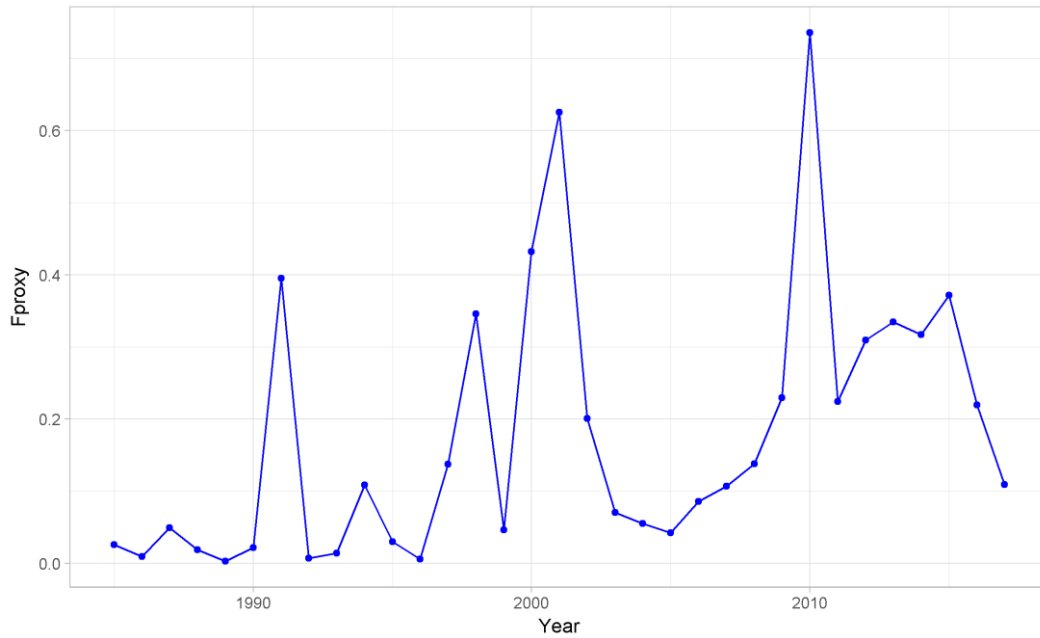


Figure 13. Whiting. F_{proxy} (catch/survey biomass).

Mynd 13. Lýsa. Vísitala veiðihlutfalls ($F_{proxy} = afli/vísitala$).