

WHITING - LÝSA

Merlangius merlangus

GENERAL INFORMATION

Whiting is a gadoid closely related to cod and haddock. It is a demersal species found at depths between 10 and 200 meters, though most commonly between 30 and 100 meters. It is rather 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

Whiting was in 2016 caught as bycatch all around Iceland, though mostly around south and west of Iceland (Figure 1). Annual catches have most been between 500 and 1000 tonnes with the exception of 2008-2012 when catches increased to a peak of 2602 tonnes in 2011 (Figure 2).

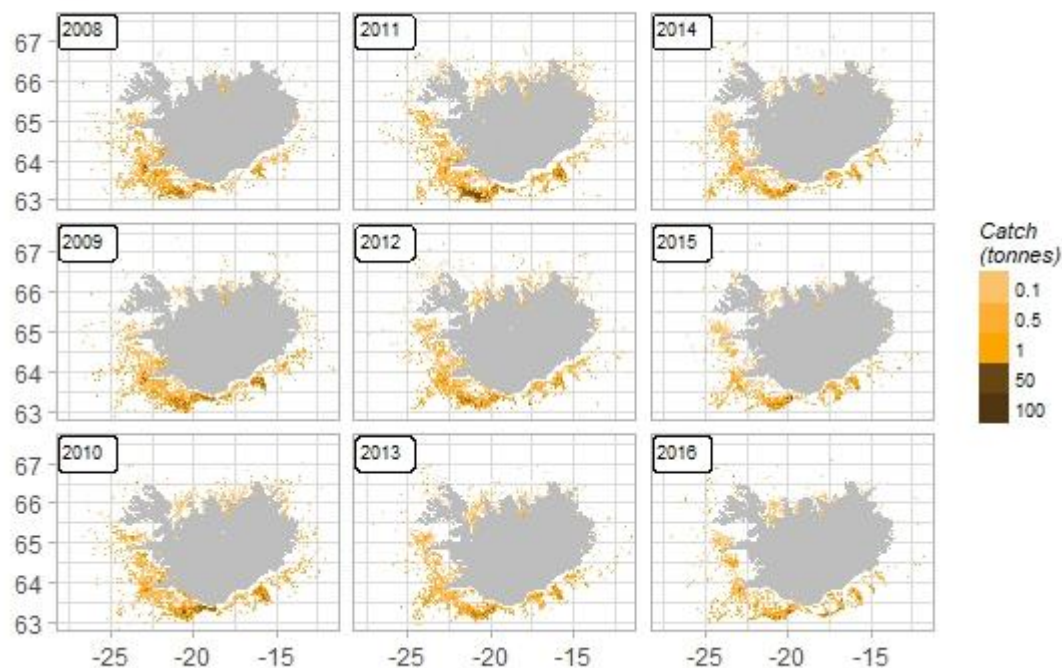


Figure 1. Geographic distribution of the Icelandic fishery since 2008 as reported in logbooks.

Mynd 1. Úbreiðsla lýsu á Íslandsmiðum frá 2008 samkvæmt aflagagbókum.

On Icelandic fishing grounds, whiting is caught mostly 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 in proportion to increased catches between 2007 and 2012 (Figure 2 and 4) with the highest number of 361 and a total catch of 2624 tonnes in 2011. Increased catches occurred almost exclusively in the southwest in 2007 where the majority of whiting is caught (Figure 2). Interestingly, in 2011, when catches were highest, an increase in captures at depth greater than 240 meters occurred (Figure 3).

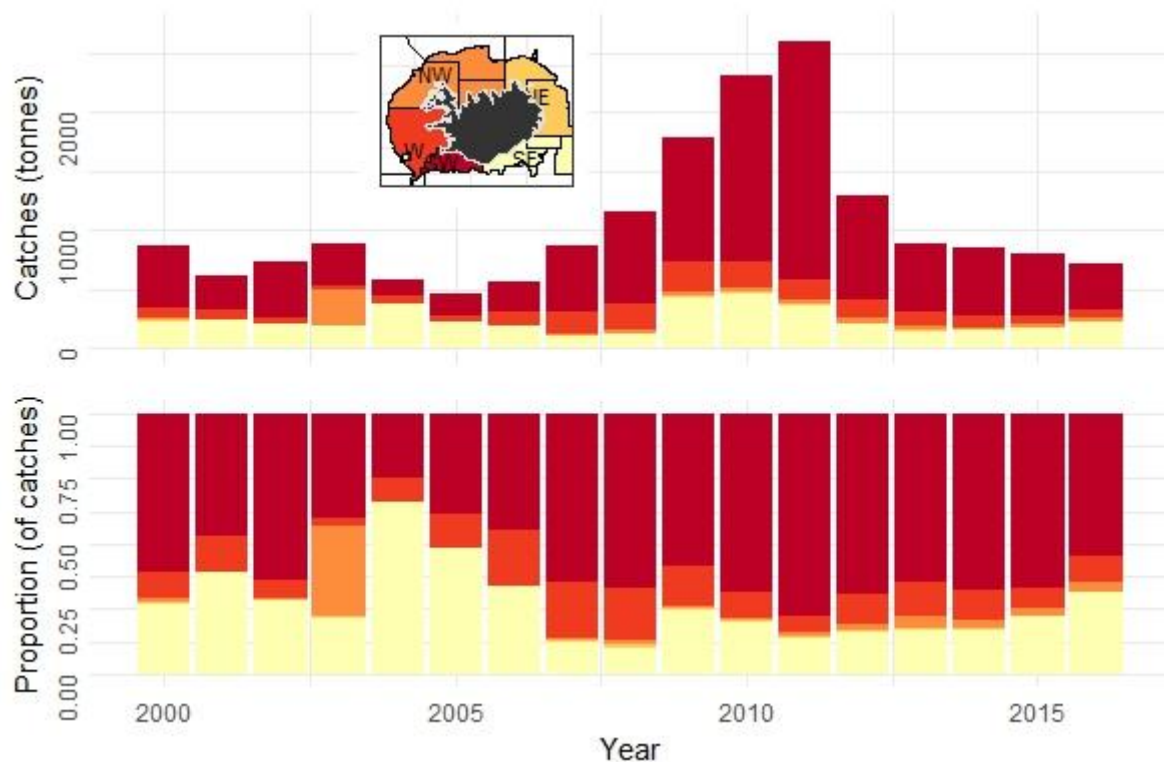


Figure 2. Catch distribution and proportions by area from the year 2000 according to logbooks.

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

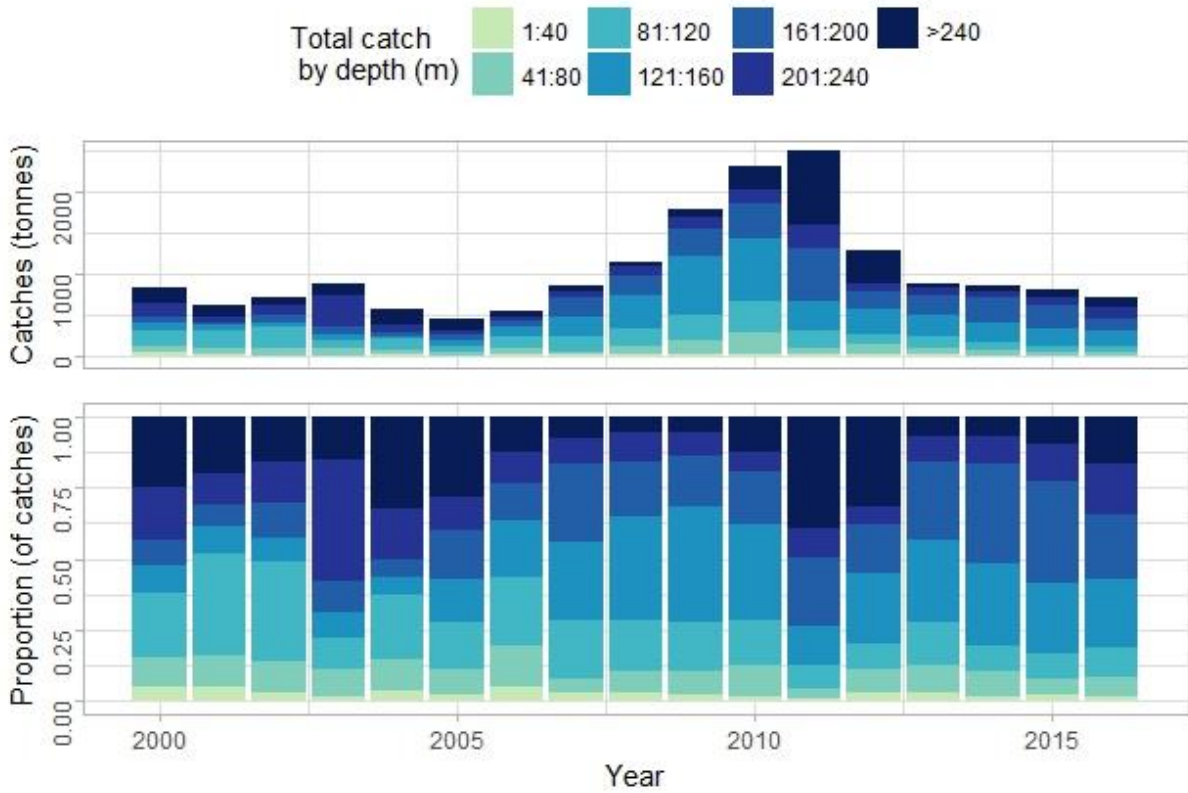


Figure3. Whiting. Depth distribution of catches according to logbooks.

Mynd 3. Lýsa. Afli eftir dýpi samkvæmt afladagbókum.

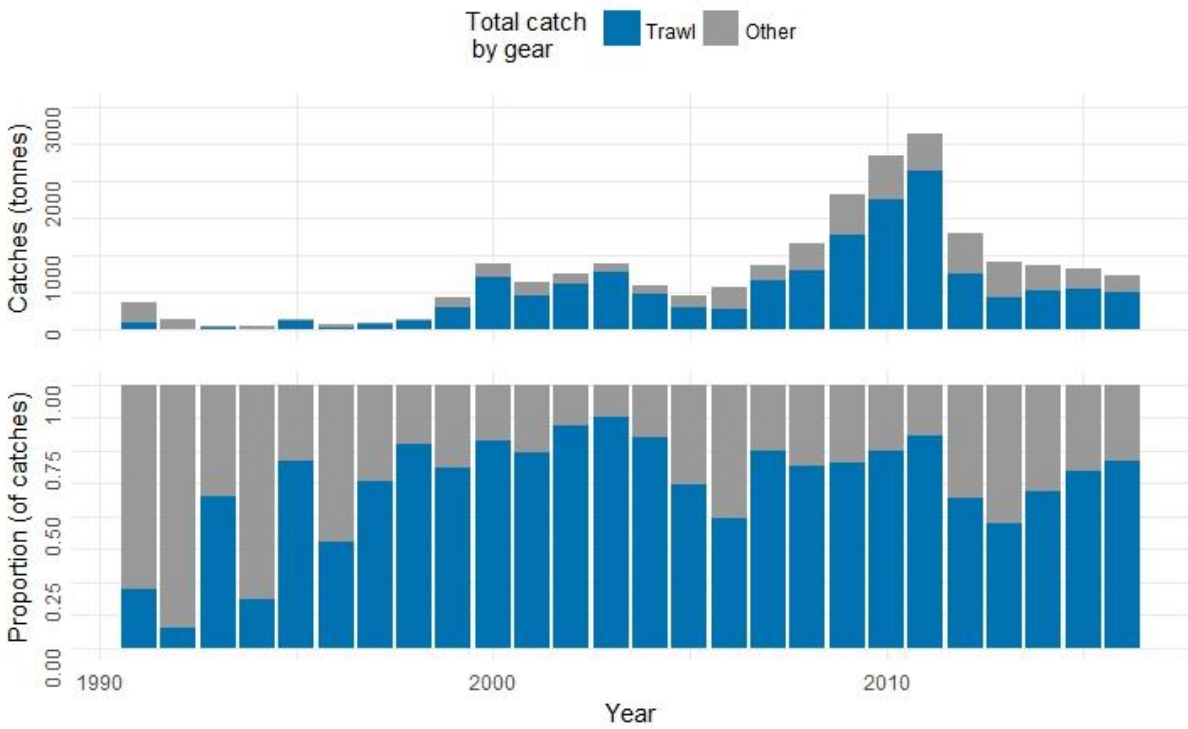


Figure 4. Whiting. Total catches of whiting and proportion captured with nets from 1985 to 2016 as reported in logbooks.

Mynd 4. Heildar afli lýsu ásamt hlutfalli sem veiddist í net frá árinu 1985-2016 samkvæmt afladagbókum.

Table 1. Number of Icelandic boats reporting captures of whiting, captures by fishing gear and yearly reported landings.*Tafla 1. Fjöldi íslenskra skipa sem veitt hafa lýsu ásamt lönduðum afla eftir veiðarfærum ásamt heildarafla fyrir hvert ár.*

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

LENGTH DISTRIBUTIONS FROM COMMERCIAL CATCHES OF WHITING

Length measurements from commercial catches of whiting are scarce and missing for some years, but an increase in smaller whiting can be observed in 2010 for example which may be linked to increased catches the following year (Figure 5).

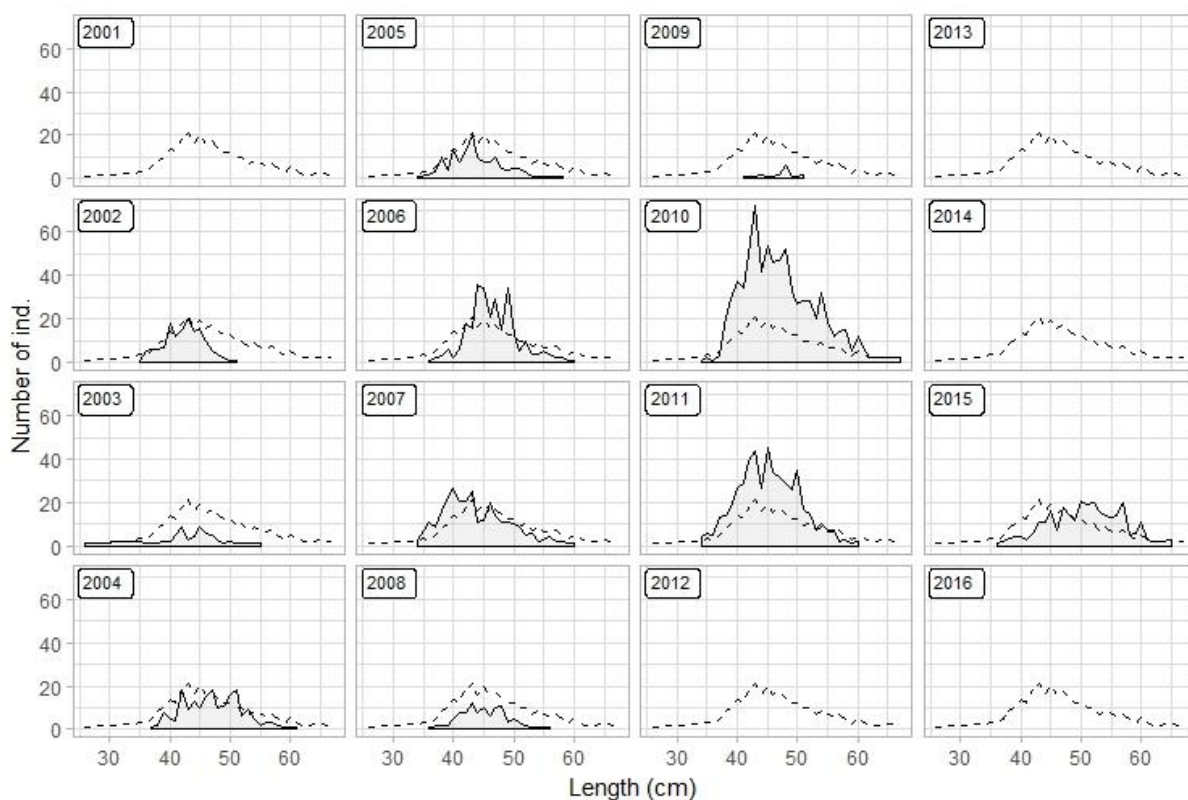


Figure 5. Whiting length distribution from 2001-2016 from commercial catches. Dotted lines indicate average length distribution 2001-2016.

Mynd 4. Lengdardreifing lýsu frá 2001-2016 úr afla. Punktalínan sýnir meðallengdardreifinguna frá 2001 til og með 2016.

SURVEY DATA

Annual Icelandic groundfish surveys have been conducted in March since 1985 and October since 1996. The spring survey covers the whole Icelandic whiting distribution area as well as the autumn survey, though catches are lower in the autumn survey. Additionally, due to a labour dispute, the autumn survey was not fully completed in 2011 and hence excluded from all analyses. For the purpose of monitoring, harvestable biomass and recruitment index were estimated for both surveys (Figure 6). The (harvestable) biomass index is calculated as total biomass of individuals that are 40 cm or larger in total body length. As seen in figure 6, the survey indices increased in 2003 before an increase in catches occurs in 2007 (Figure 2 and 4).

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 2 and 8). The autumn survey however shows the highest indices in the southwest and west (Figure 10).

Changes in length distributions are better evaluated from the survey data as sampling intensity from commercial catches is low for this species. A peak in recruitment can be seen in the autumn of 2003 (Figure 8) and the spring of 2004 (Figure 7), which later may have led to the increase in catches observed in 2007-2011 (Figure 2 and 4).

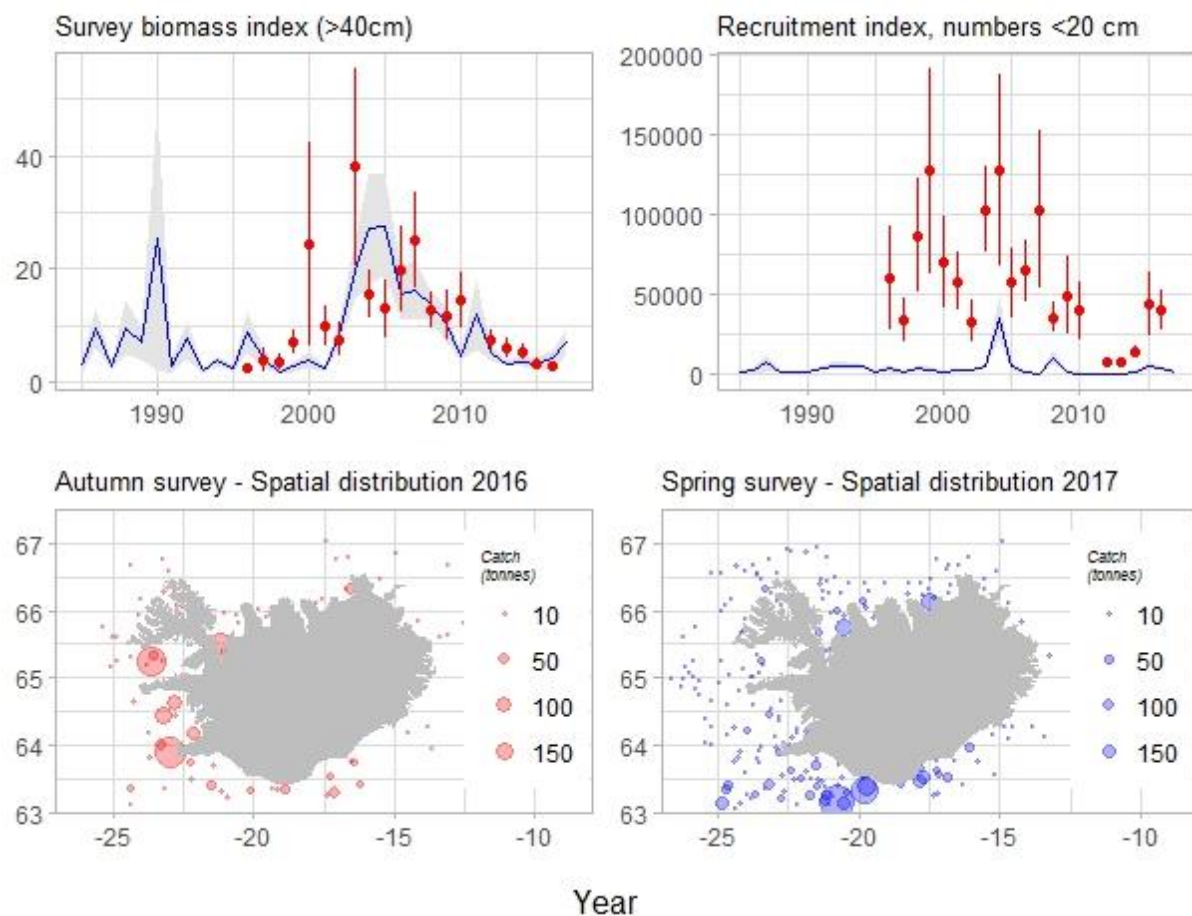


Figure 6. Whiting. Spring and autumn groundfish survey biomass indices, recruitment indices and spatial distribution. Blue represents spring surveys and red autumn surveys.

Mynd 6. Lýsa. Lífmassavísitala, nýliðunarvísitala og útbreiðsla í stofnmælingum botnfiska að hausti 2016 og vori 2017. Blátt táknar stonmælingar að vori og rautt að hausti.

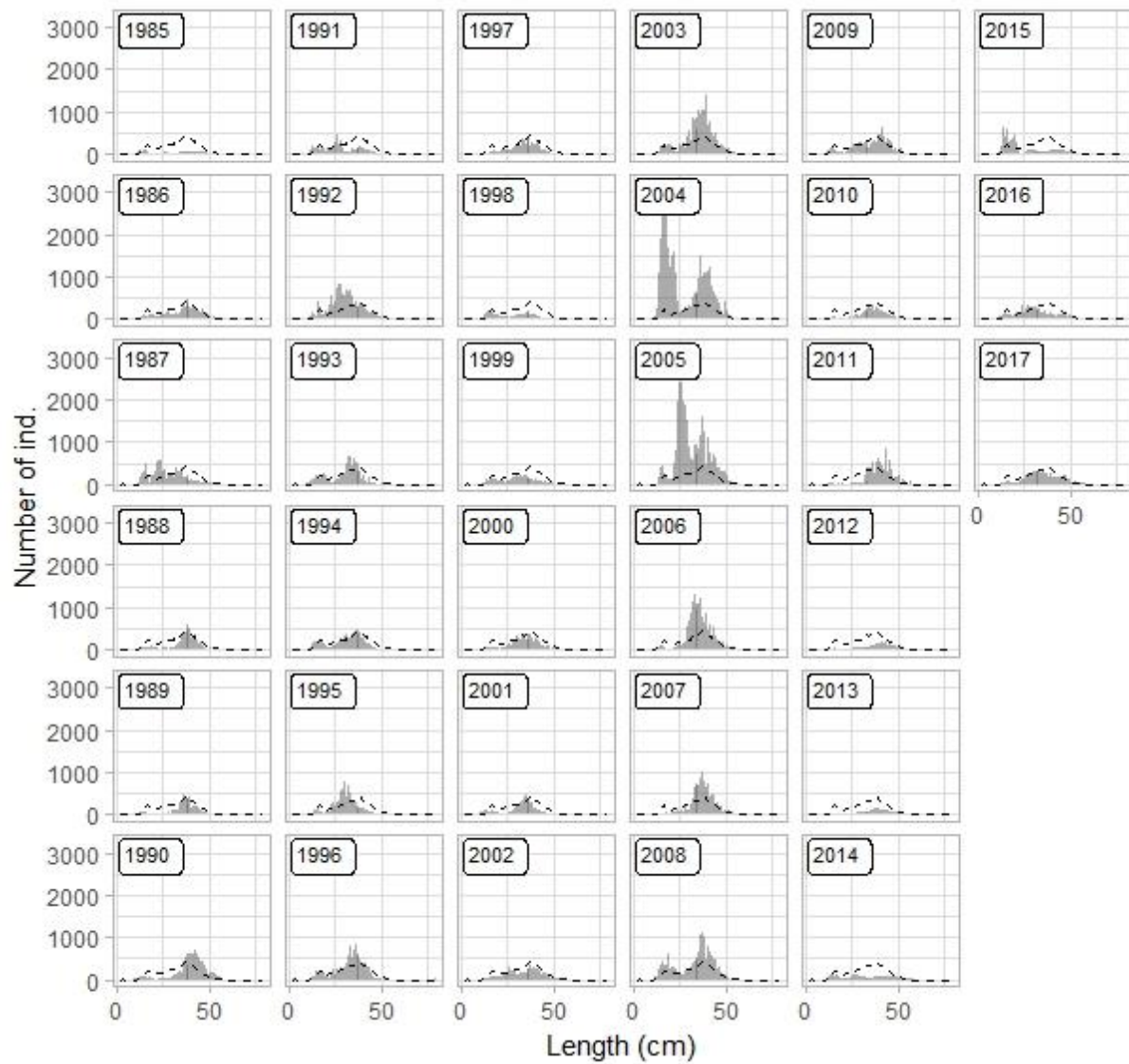


Figure 7. Whiting length distribution from the spring survey. The dotted line indicates mean length for all years.

Mynd 7. Lengdardreifing lýsu úr stofnmælingum botnfiska að vori frá 1985 ásamt meðallengd (punktalína).

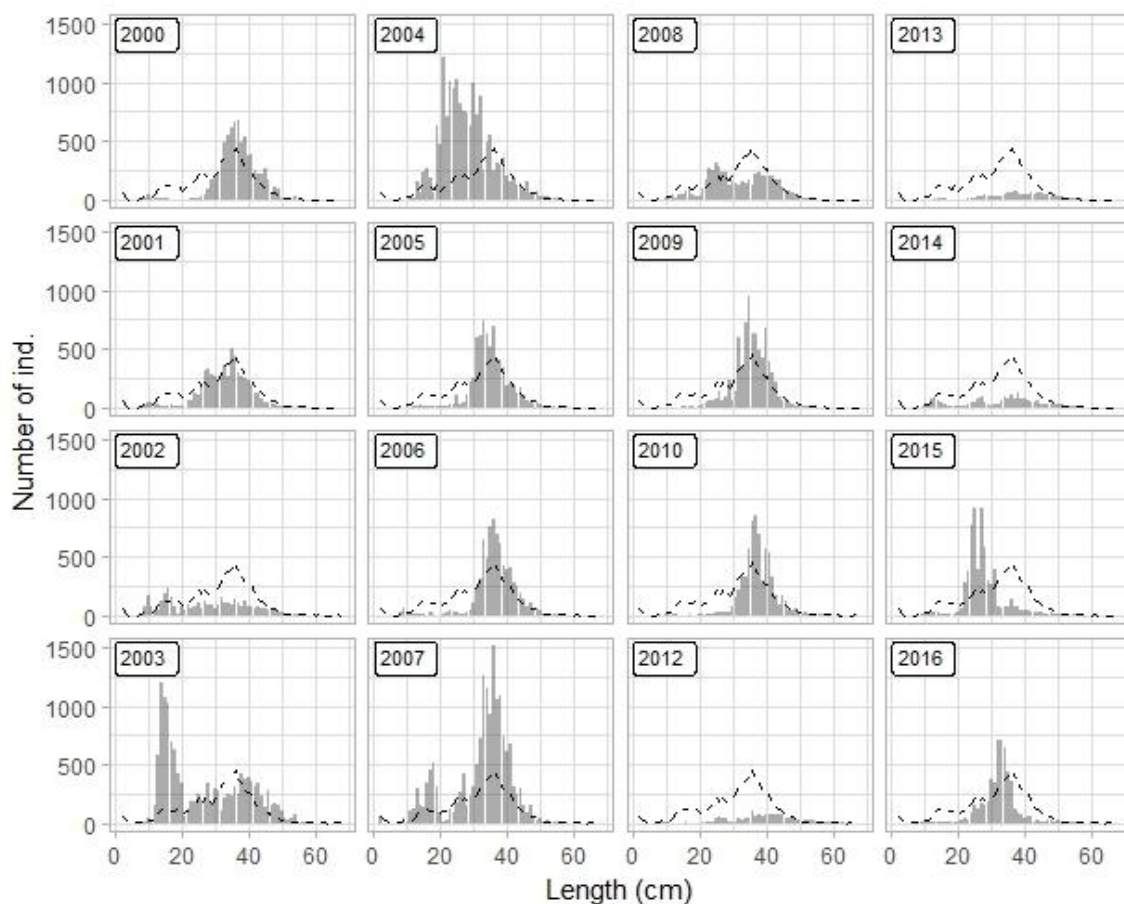


Figure 8. Whiting length distribution from the autumn survey. The dotted line indicates mean length for all years.

Mynd 8. Lengdardreifing lýsu úr stofnmælingum botnfiska að hausti frá 2001 ásamt meðallengd (punktalína).

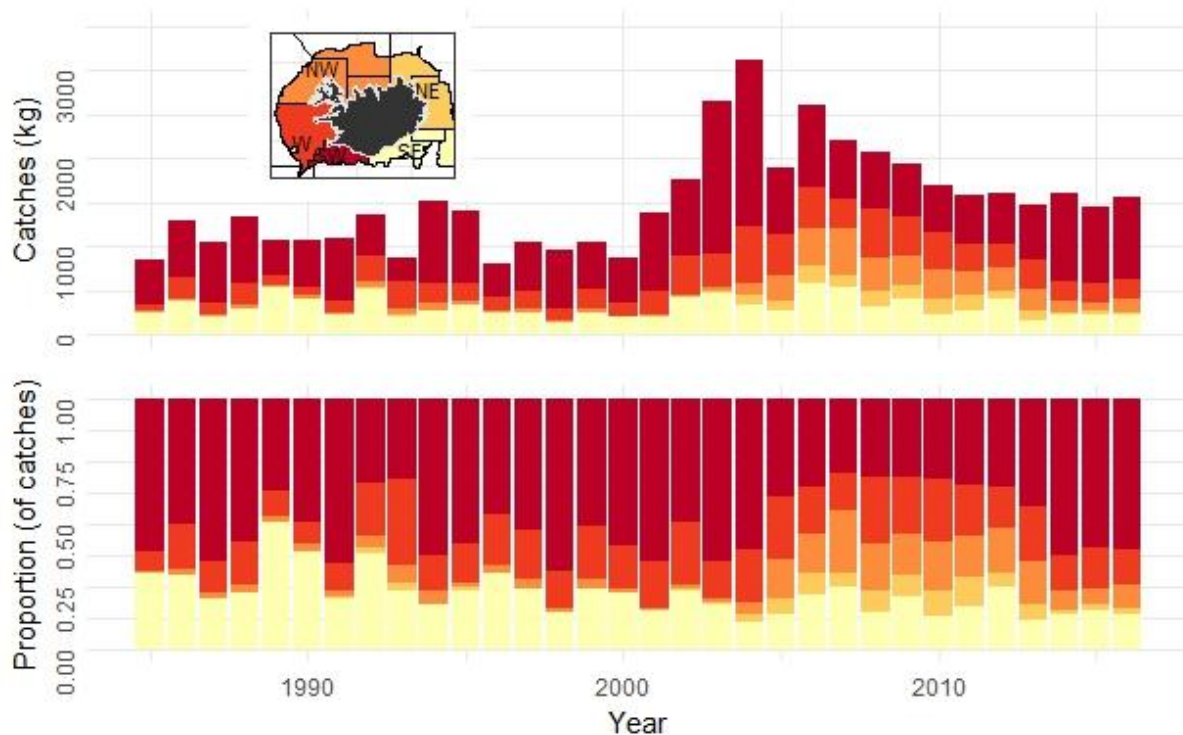


Figure 9. Whiting spatial distribution of catches from the spring groundfish survey in 1985-2017.

Mynd 9. Útbreiðsla lýsu í stofnmælingum botnfiska að vori árin 1985-2017.

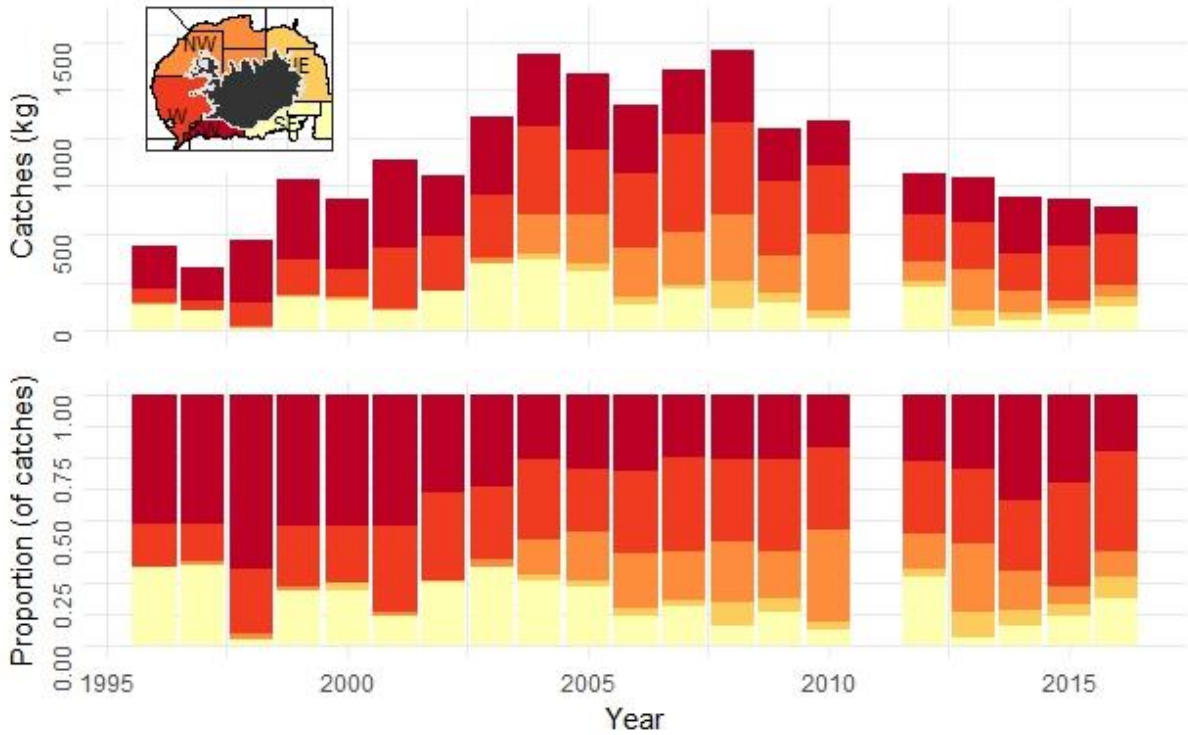


Figure 10. Whiting spatial distribution of catches from the autumn groundfish survey in 1996-2017.

Mynd 10. Útbreiðsla lýsu í stofnmælingum botnfiska að hausti árin 1996-2017.

MANAGEMENT

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

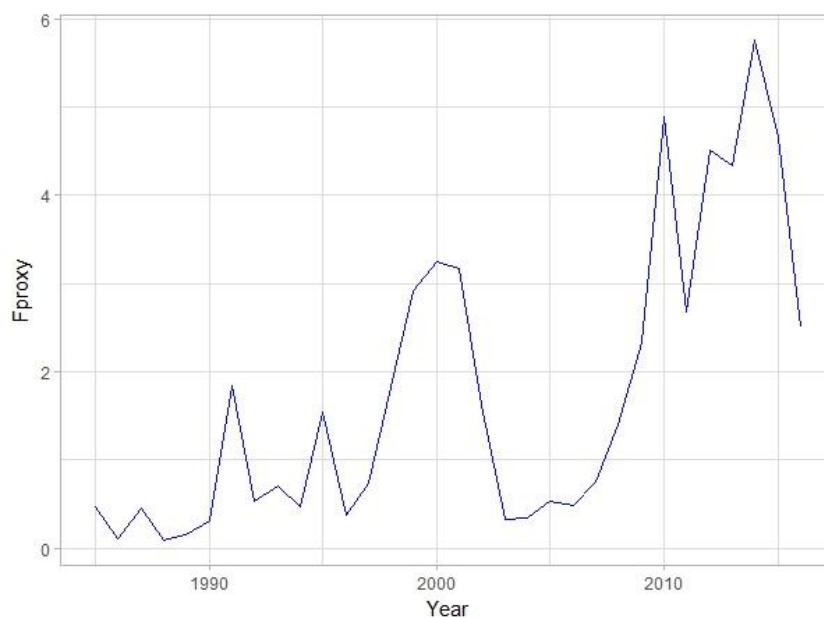


Figure 11. Whiting. F_{proxy} (catch/survey biomass).

Mynd 11. Lýsa. Vísitala veiðihlutfalls (F_{proxy} =afli/vísitala).