

LONG ROUGH DAB – SKRÁPFLÚRA

Hippoglossoides platessoides

GENERAL INFORMATION

Long rough dab is common all around Iceland. It is a demersal species on a sandy or muddy substrate, occurring at depths ranging from 10-400 m, but has been caught down to 1200 m. Growth is relatively slow and females grow considerably larger than males. Only a small proportion of males become longer than 30 cm, but about the same proportion of females grow larger than 45 cm. Size at sexual maturity differs between the sexes. At the length of 11.5 cm about half the males have reached maturity at the south coast, females reach that level at 17.5 cm. Because of this difference in size, the fishery for long rough dab is largely based on "old" females.

THE FISHERY

The geographical distribution of the long rough dab fisheries has remained more or less unchanged in recent years (Figure 1). Long rough dab fishing grounds in 2009-2017, as reported by mandatory logbooks are shown on Figure 1.

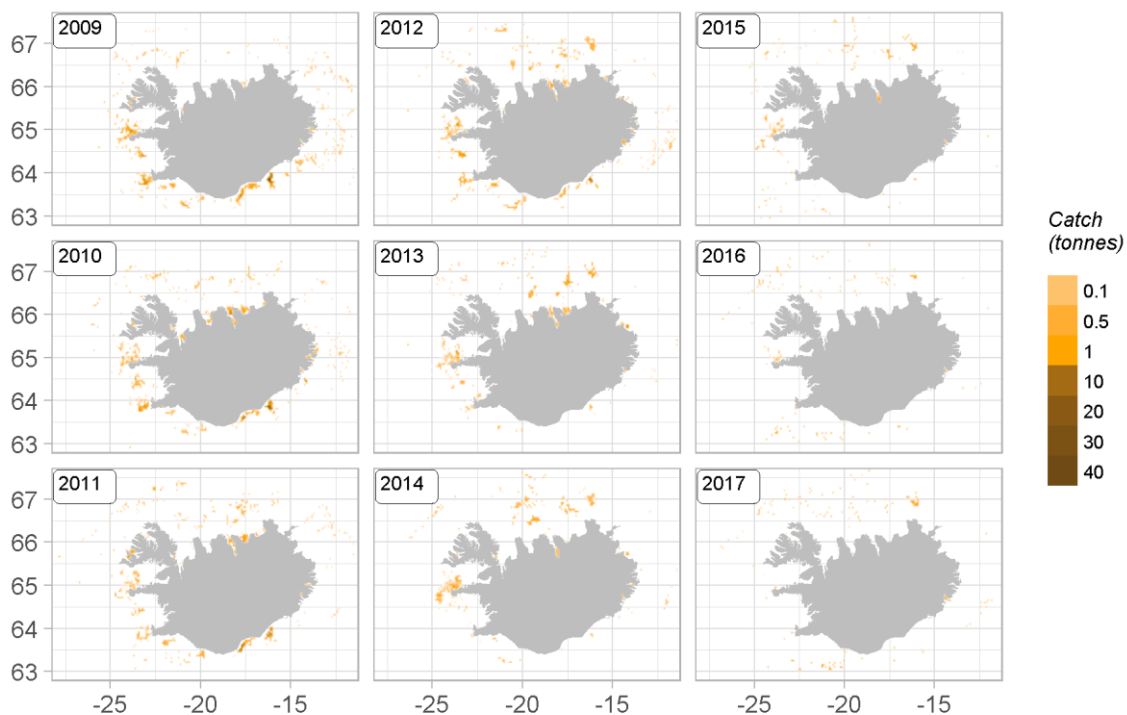


Figure 1. Long rough dab. Geographical distribution of the Icelandic fishery since 2009. Reported catch from logbooks.

Mynd 1. Skrápflúra. Útbreiðsla veiða á Íslandsmiðum frá 2009 samkvæmt afladagbókum.

Since 2000, the main fishing grounds of long rough dab have been in the southeast, west and southwest of the Icelandic shelf (Figure 2) according to logbook entries. Reported catch has however, decreased in the SE area meanwhile catch in the NW and NE areas increased.

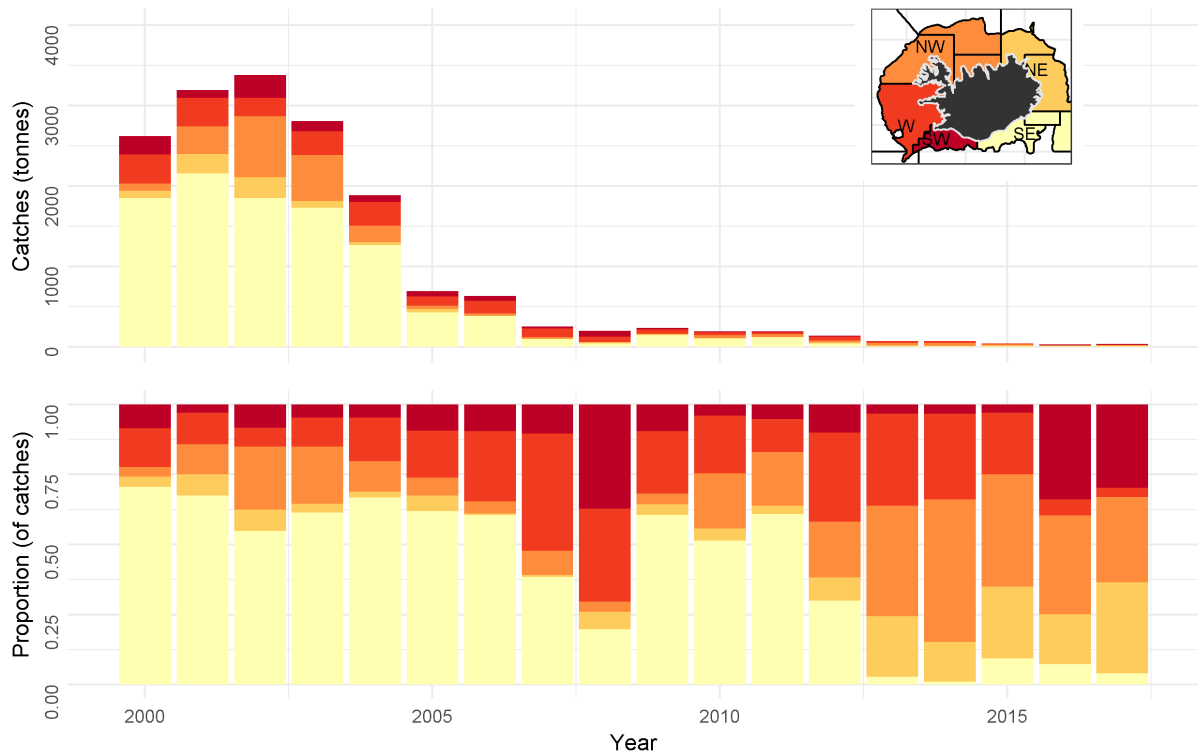


Figure 2. Long rough dab. Spatial distribution of the Icelandic fishery by fishing area from 2000-2017. All gears combined.

Mynd 2. Skrápflúra. Útbreiðsla veiða við Ísland árin 2000-2017. Öll veiðarfæri samanlagt.

Historically, most of the long rough dab was caught at less than 200 m depth, but since 2013 the little catch there is was caught in deeper water (Figure 3).

In Icelandic fishing grounds, long rough dab is mainly caught in demersal seine and bottom trawl, or approximately 70% of total landings (Figure 4, Table 1). Since 2000, 1-48 trawlers and 1-57 seiners have reported annual catches over a tonne of long rough dab. The numbers of trawlers and seiners have decreased in the last 16 years and only 5 vessels landed over a tonne in 2017.

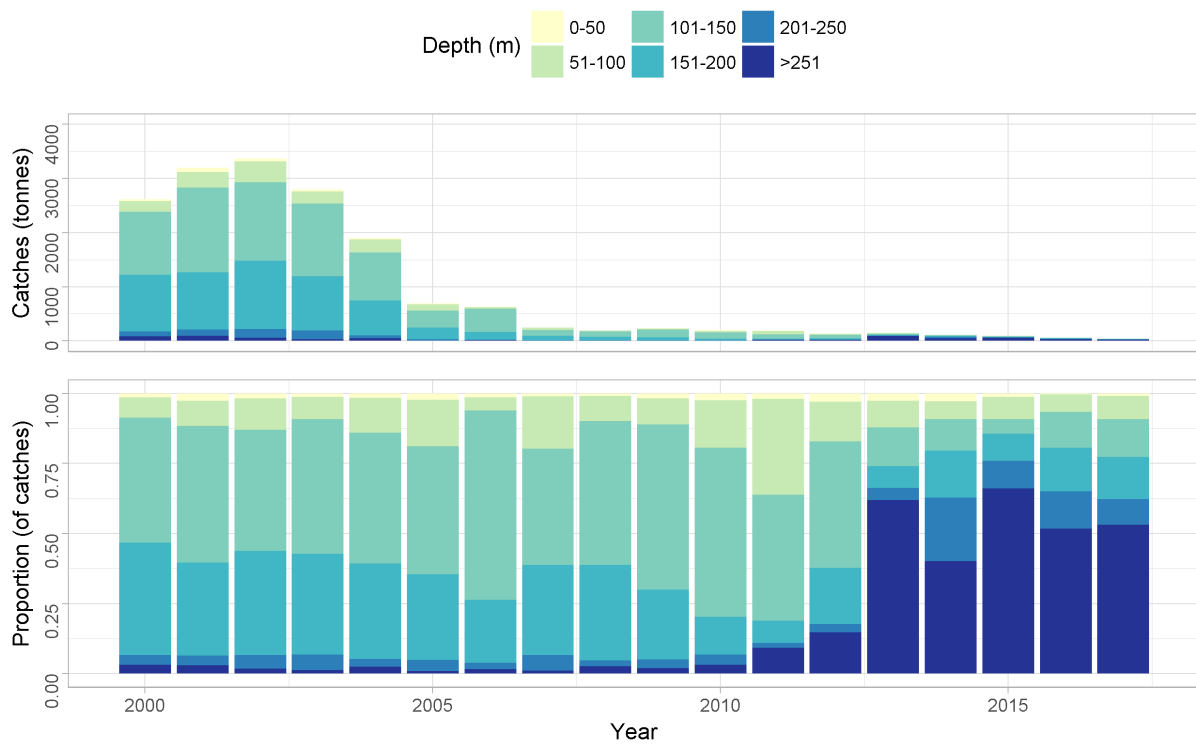


Figure 3. Long rough dab. Depth distribution catches according to logbooks.

Mynd 3. Skrápflúra. Afli samkvæmt afladagbókum, skipt eftir dýpi.

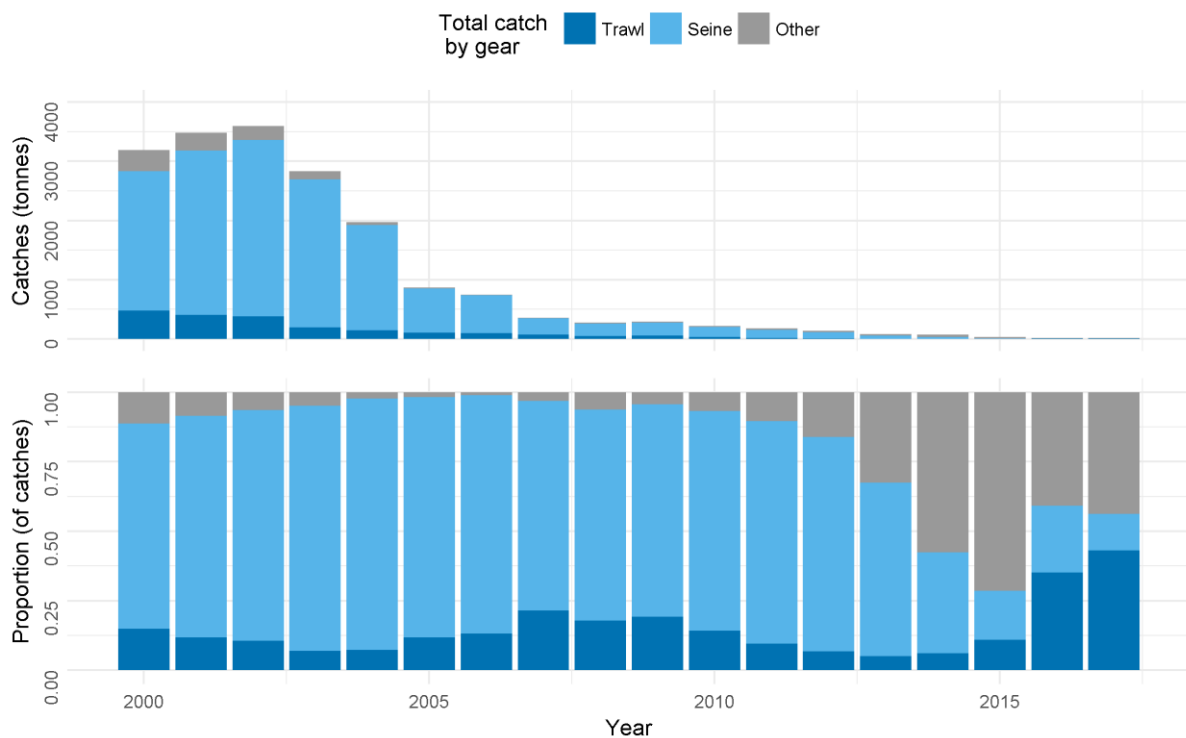


Figure 4. Long rough dab. Total catch (landings) by fishing gear since 2000.

Mynd 4. Skrápflúra. Landaður afli eftir veiðarfærum frá 2000.

Table 1. Long rough dab. Number of Icelandic vessels landing 1000 kg or more of long rough dab, and all landed catch divided by gear type.

Tafla 1. Skrápflúra. Fjöldi íslenskra skipa sem landað hafa 1000 kg eða meira af skrápflúru og allur landaður afli eftir veiðarfærum.

YEAR	NUMBER OF VESSELS			CATCHES (TONNES)			
	<i>Seiners</i>	<i>Trawlers</i>	<i>Other</i>	<i>Demersal seine</i>	<i>Demersal trawl</i>	<i>Other</i>	<i>Sum</i>
2000	57	48	22	2344	484	355	3183
2001	47	41	15	2772	410	288	3470
2002	46	43	21	2981	378	226	3585
2003	47	28	9	2493	199	139	2831
2004	51	23	5	1822	144	4	1970
2005	34	14	2	753	102	16	871
2006	28	15	1	639	100	6	745
2007	27	11	4	265	83	10	358
2008	25	9	5	208	49	19	276
2009	15	6	2	222	56	12	290
2010	21	4	3	171	31	15	217
2011	12	2	3	139	17	22	178
2012	16	5	3	104	10	22	136
2013	11	0	2	49	4	25	78
2014	9	2	4	22	4	40	66
2015	3	1	5	6	4	21	31
2016	1	1	1	4	6	6	16
2017	1	3	1	2	8	8	18

In 1995-1997, when annual catches of long rough dab were about 5000-6000 tonnes, around 100 vessels accounted for 95% of the catch (Figure 5). Since then, the number of vessels has dropped more or less proportionally to reduced catches.

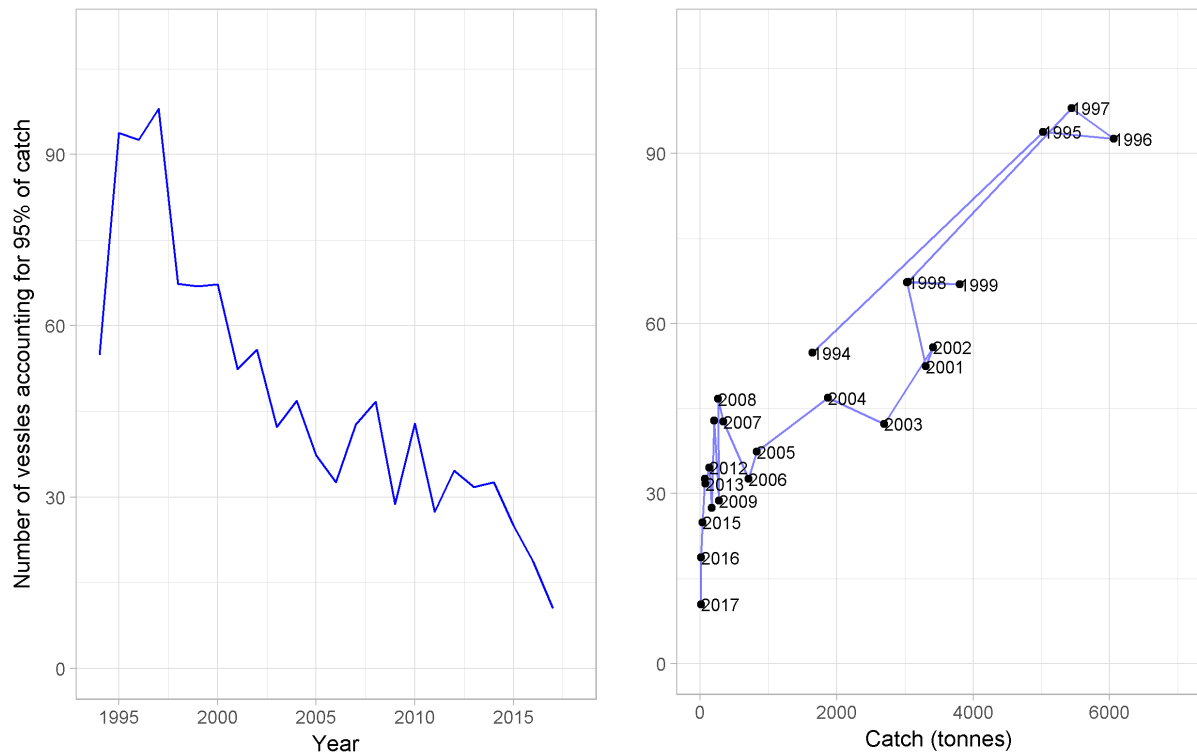


Figure 5. Long rough dab. Number of vessels (all gear types) accounting for 95% of the total catch annually since 1994. Left: Plotted against year. Right: Plotted against total catch. Data from the Directorate of Fisheries.

Mynd 5. Skrápflúra. Fjöldi skipa og báta (öll veiðarfæri) sem veiddu 95% heildaraflans hvert ár frá 1994. Vinstri: Sýnt eftir árum. Hægri: Sýnt í samanburði við heildarafla. Gögn frá aflaskráningarkerfi Fiskistofu.

CATCH PER UNIT EFFORT (CPUE) AND EFFORT.

CPUE estimates of long rough dab in Icelandic waters are not considered representative of stock abundance, as changes in fleet composition, technical improvements and differences in gear setup among other things have not been accounted for when estimating CPUE. CPUE has gone down from a peak in 2001-2003, and so has effort, and close to no effort (sets where long rough dab is more than 10% of the catch) has been observed over the last five years (Figure 6).

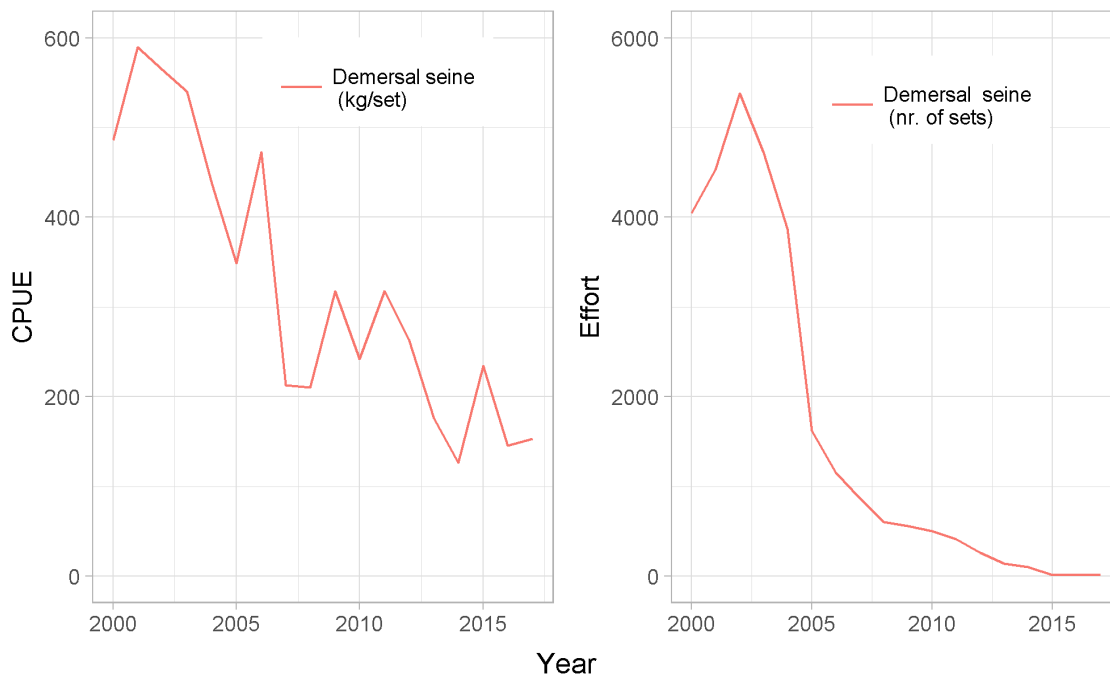


Figure 6. Long rough dab. Raw CPUE (left) and fishing effort (right) from demersal seine (kg/set or nr. of sets).

Mynd 6. Skrápflúra. Afli á sóknareiningu (vinstri) og sókn (hægri) með dragnót (kg í kasti eða fjöldi kasta).

SAMPLING OF LANDED LONG ROUGH DAB

As landings of long rough dab have been low and sporadic over the last ten years, samples have been hard to get, and no otoliths have been collected over the last three years (Table 2).

Table 2. Long rough dab. Number of samples and aged otoliths from landed catch.

Tafla 2. Skrápflúra. Fjöldi sýna og aldursgreindra fiska úr lönduðum aflu.

Year	Demersal seine	
	Samples	Otoliths
2010	2	50
2011	3	125
2012	4	200
2013	1	50
2014	1	25
2015	0	0
2016	0	0
2017	0	0

LENGTH DISTRIBUTION OF LANDED LONG ROUGH DAB

During 1994-2004, the main fishing years for long rough dab, the length distribution of landings changed little from one year to another (Figure 7). The average length of females was 35-36 cm over the entire period.

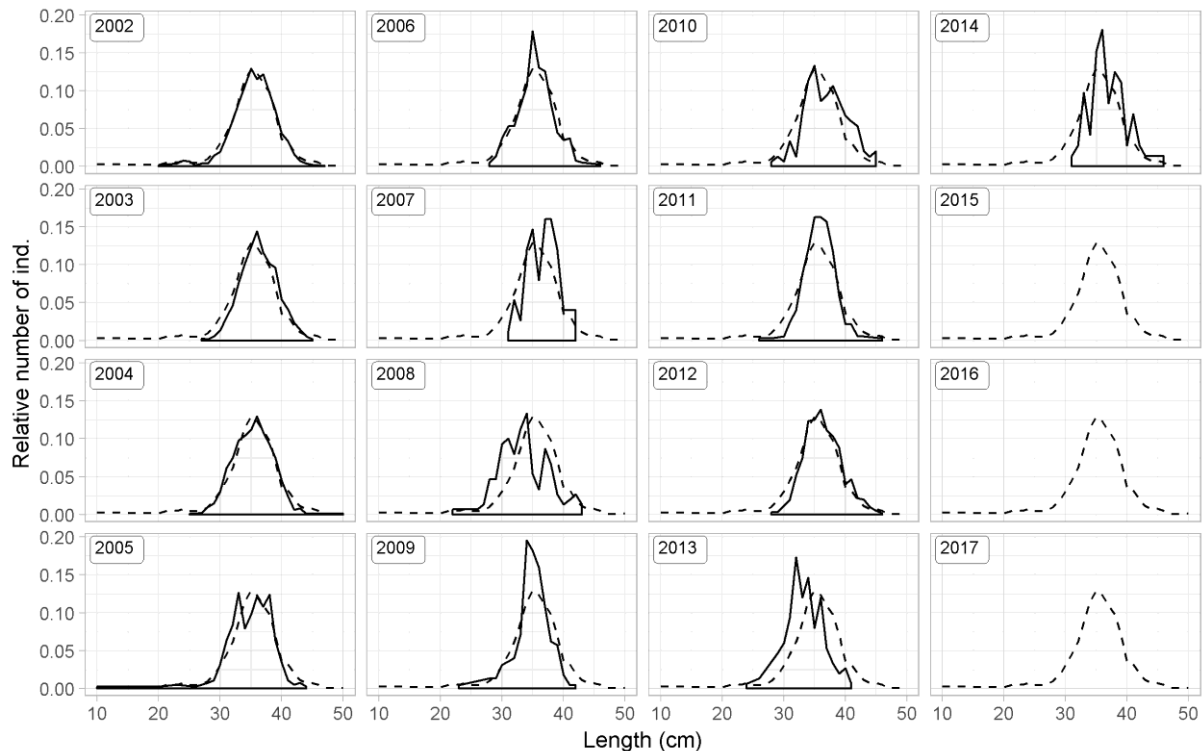


Figure 7. Long rough dab. Length distribution of long rough dab sampled from landed catch. The dotted line represents the mean length distribution for all years.

Mynd 7. Skrápflúra. Lengdardreifing aflasýna frá árinu 2002 með meðallengdardreifingar fyrir öll árin (punktalína).

SURVEY DATA

The Icelandic spring groundfish survey (hereafter spring survey), which has been conducted annually in March since 1985, covers the most important distribution area of the long rough dab fishery. In addition, the Icelandic autumn groundfish survey (hereafter autumn survey) was commenced in 1996. However, a full autumn survey was not conducted in 2011 due to a labour dispute and therefore the results for 2011 are not presented. The spring survey is considered to measure changes in abundance/biomass better than the autumn survey.

Figure 8 shows both a recruitment index based on abundance of long rough dab smaller than 25 cm, and trends in various biomass indices. Survey length distributions are shown in Figures 9-10, abundance and changes in spatial distribution in Figures 11-14.

Total biomass index and the biomass index for long rough dab larger than 25 cm (harvestable part of the stock) decreased in 2003–2011 according to spring survey. After somewhat improved indices for next five years they fell to a new low in the 2018 survey. Biomass index of larger fish has been decreasing since 2001 and is at an all-time low, while the recruitment index has been decreasing since 2014 (Figure 8).

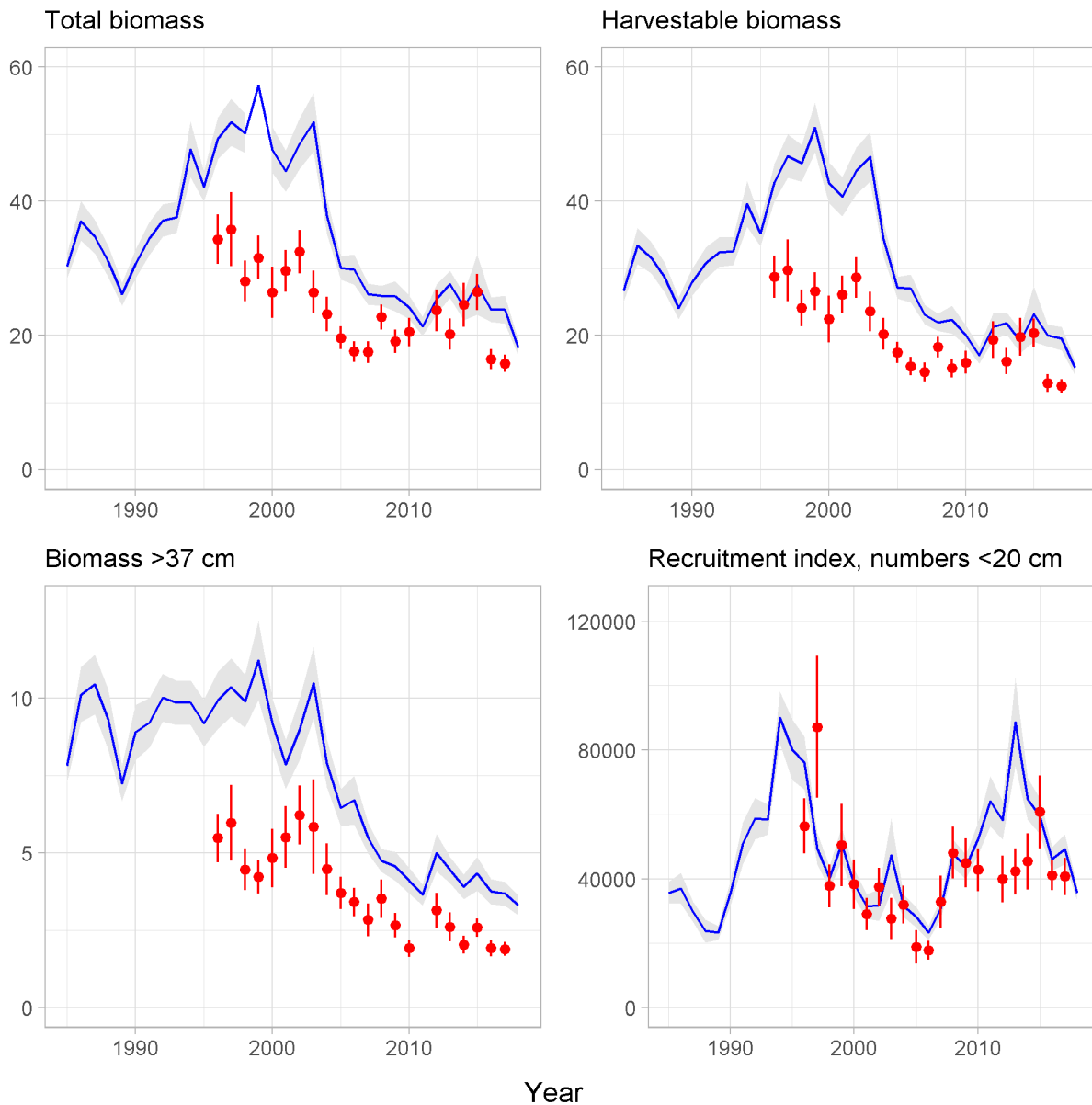


Figure 8. Long rough dab. Total biomass indices (upper left), harvestable biomass indices (>25 cm) (upper, right) and biomass index of larger ind. (>37 cm) (lower left), juvenile abundance indices (< 20 cm) (lower right), from the spring survey (blue) from 1985 and autumn survey (red) from 1996, along with the standard deviation.

Mynd 8. Skrápflúra. Stofnviðisitala (efri til vinstri), viðisitala veiðistofns (25 cm og stærri, efri til hægri), viðisitala stærri einstaklinga (37 cm og stærri, neðri til vinstri) og nýliðunarviðisitala (neðri til hægri) úr stofnmælingu botnfiska að vori (blátt) frá árinu 1985 og hausti (rautt) frá árinu 1996, ásamt staðalfrávikum.

Length distribution of long rough dab in the spring survey is characterised by two periods of increased number of small fish, 25 cm or less. The first period was from 1993-1997 and the second from 2010-2015 (Figure 9). In the years that followed the first period there was an increase in long rough dab larger than 25 cm which was not seen after the second period. Although there is more variance in the length distributions from the autumn survey, these two periods of recruitment are also seen there (Figure 10).

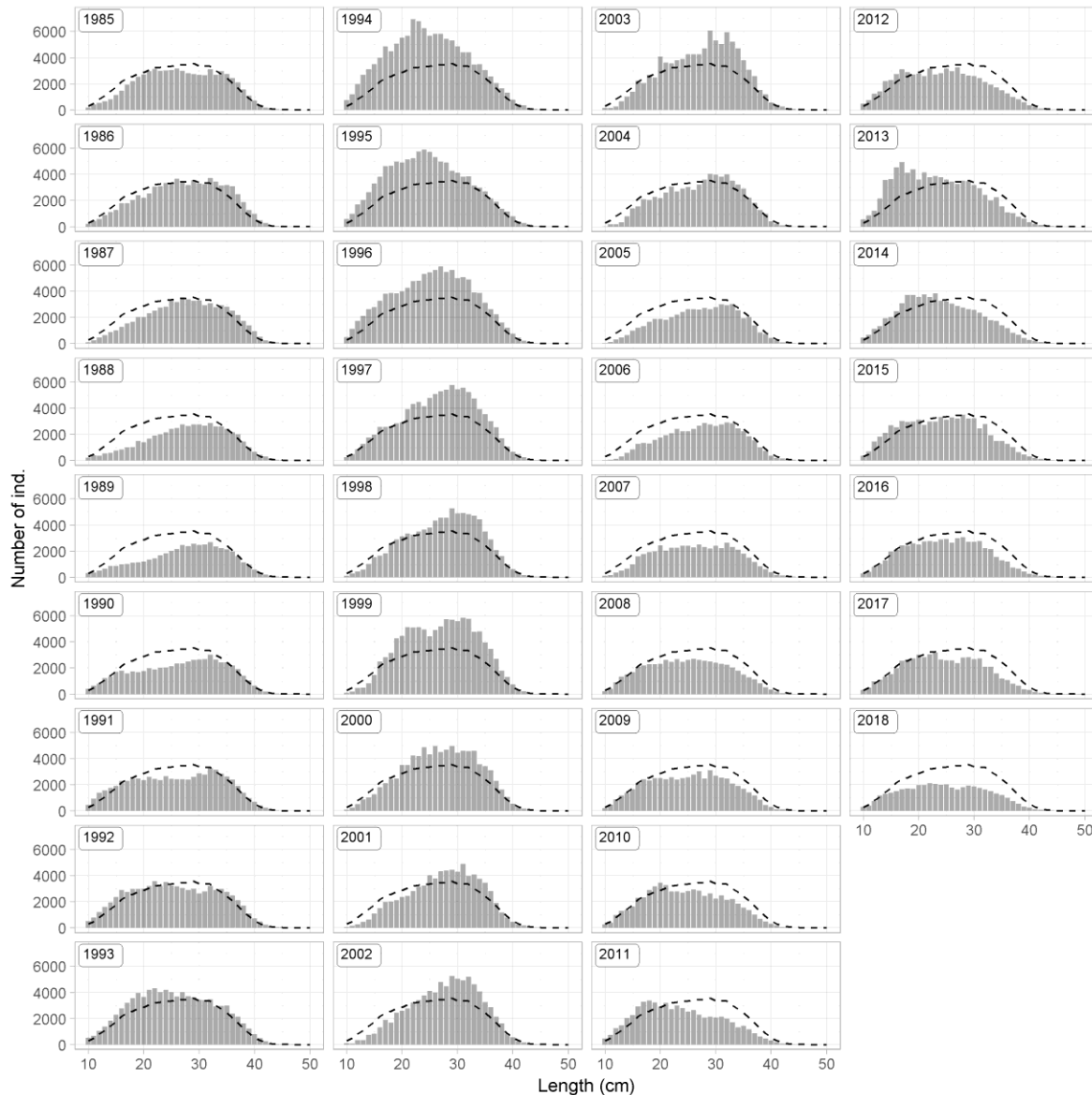


Figure 9. Long rough dab. Length distribution from the spring survey. The dotted line shows mean length distribution for all years combined.

Mynd 9. Skrápflúra. Lengdardreifing úr stofnmælingu botnfiska að vori frá 1985 ásamt meðallengdardreifingu allra ára (punktalína).

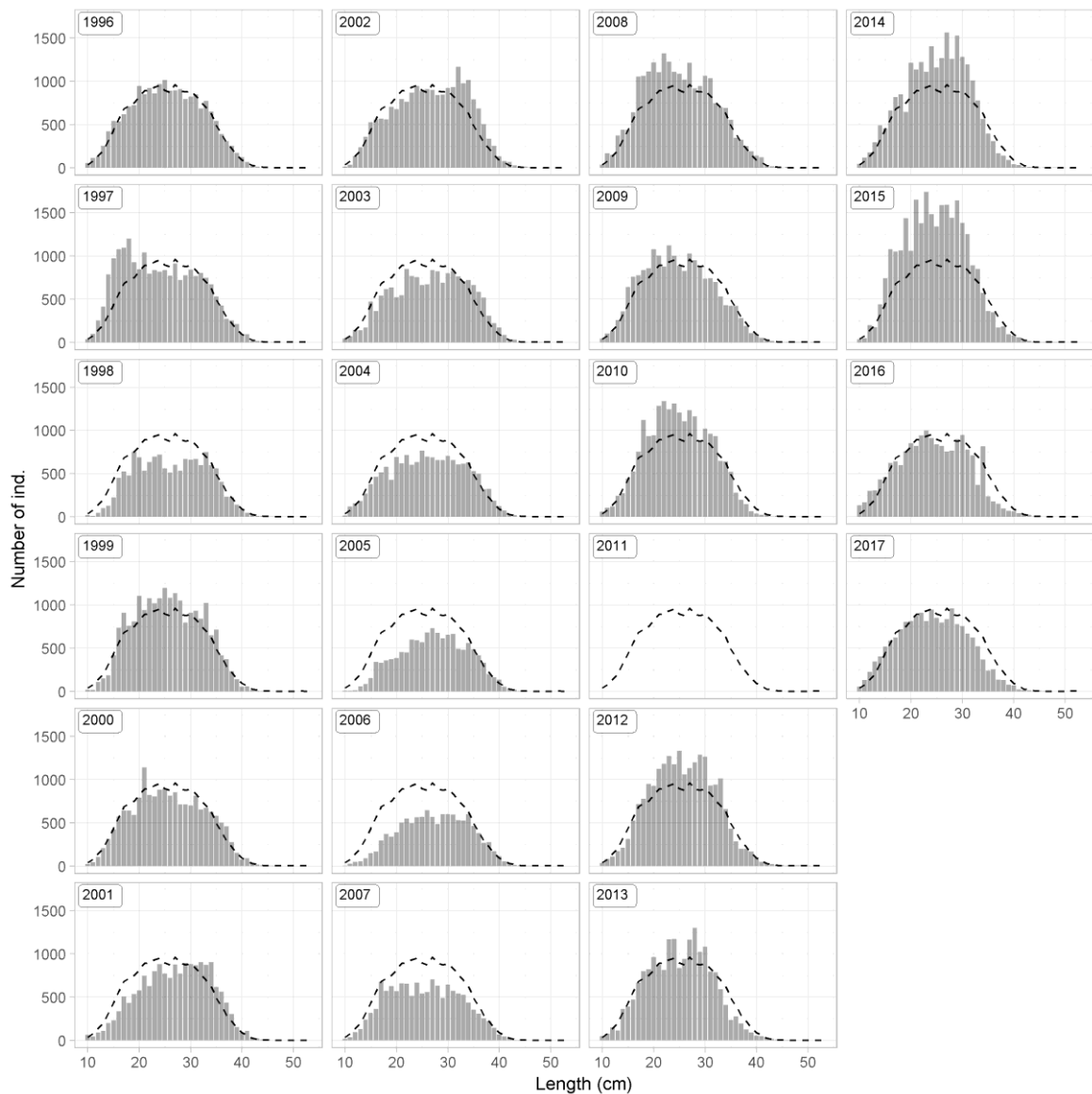


Figure 10. Long rough dab. Length distribution from the autumn survey. The dotted line shows mean length distribution for all years combined.

Mynd 10. Skrápflúra. Lengdardreifing úr stofnmælingu botnfiska að hausti frá 1996 ásamt meðallengdardreifingu allra ára (punktalína).

Distribution of long rough dab in the spring survey shows that the species is found all around Iceland (Figures 11-12). Most of the biomass is measured in the northern areas. This also applies to the autumn survey (Figures 13-14). This is worth noticing, as most of the commercial catch during the main fishing years of 1994-2004 was taken in the SE area (Figure 2).

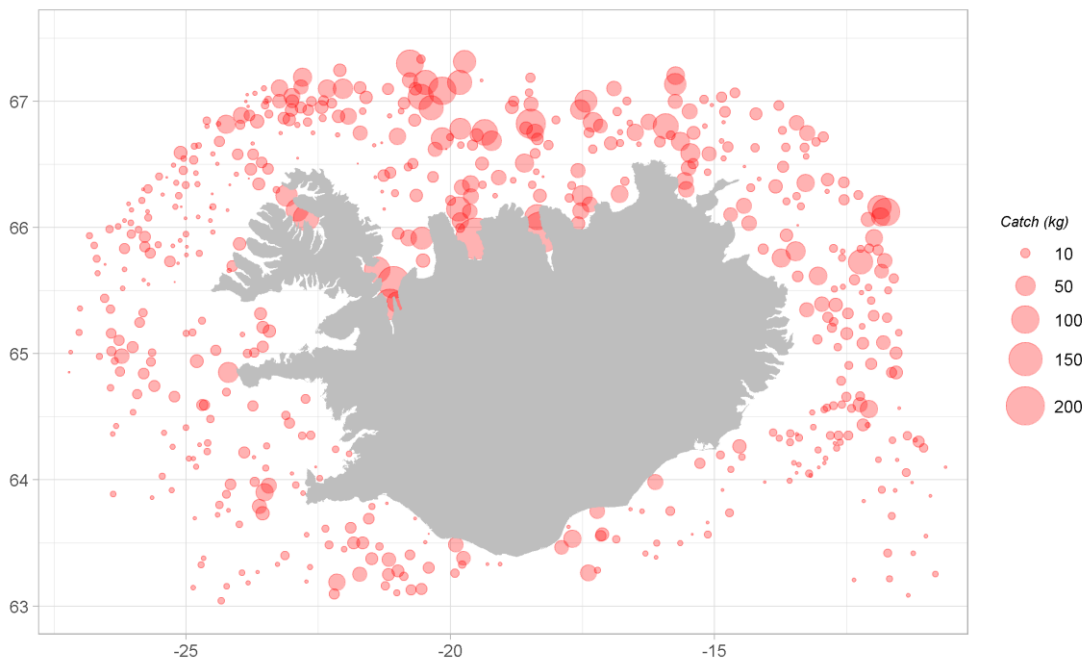


Figure 11. Long rough dab. Spatial distribution in the spring survey in 2018

Mynd 11. Skrápflúra. Útbreiðsla í stofnmælingu botnfiska að vori 2018.

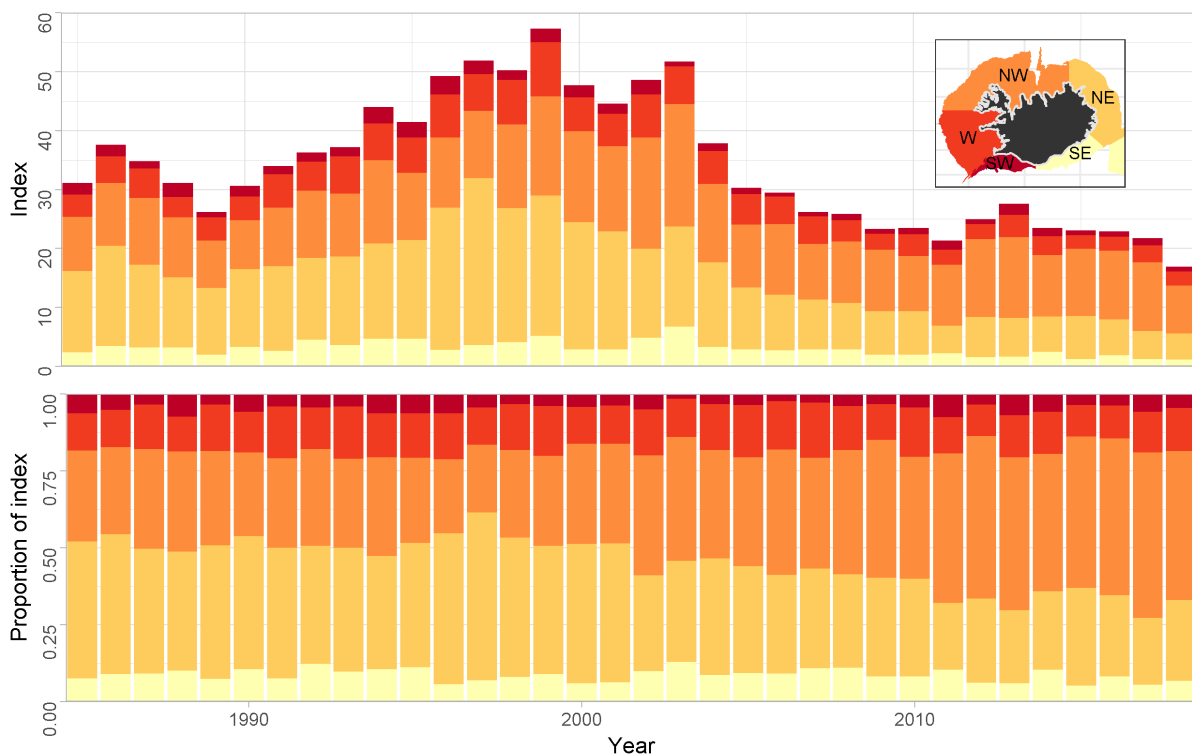


Figure 12. Long rough dab. Spatial distribution of biomass index from the spring survey in 1985-2018.

Mynd 12. Skrápflúra. Dreifing lífmassavísitölu í stofnmælingu botnfiska að vori, árin 1985-2018.

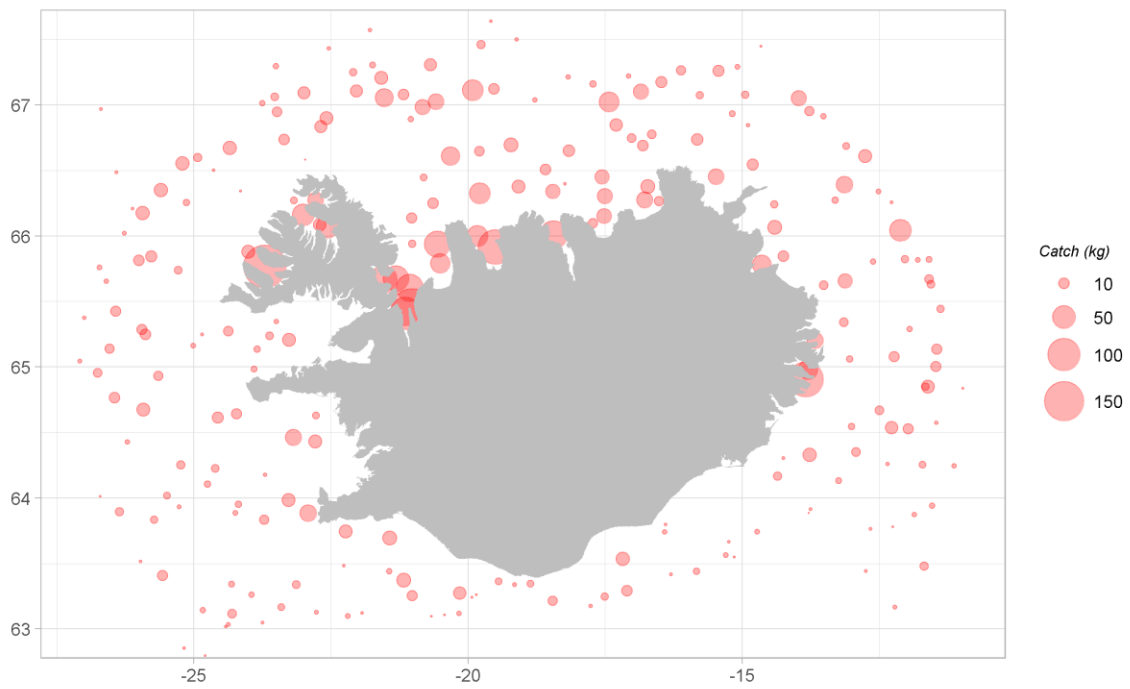


Figure 13. Long rough dab. Spatial distribution of long rough dab in 2017 in the autumn survey.

Mynd 13. Skrápflúra. Útbreiðsla í stofnmælingu botnfiska að hausti árið 2017.

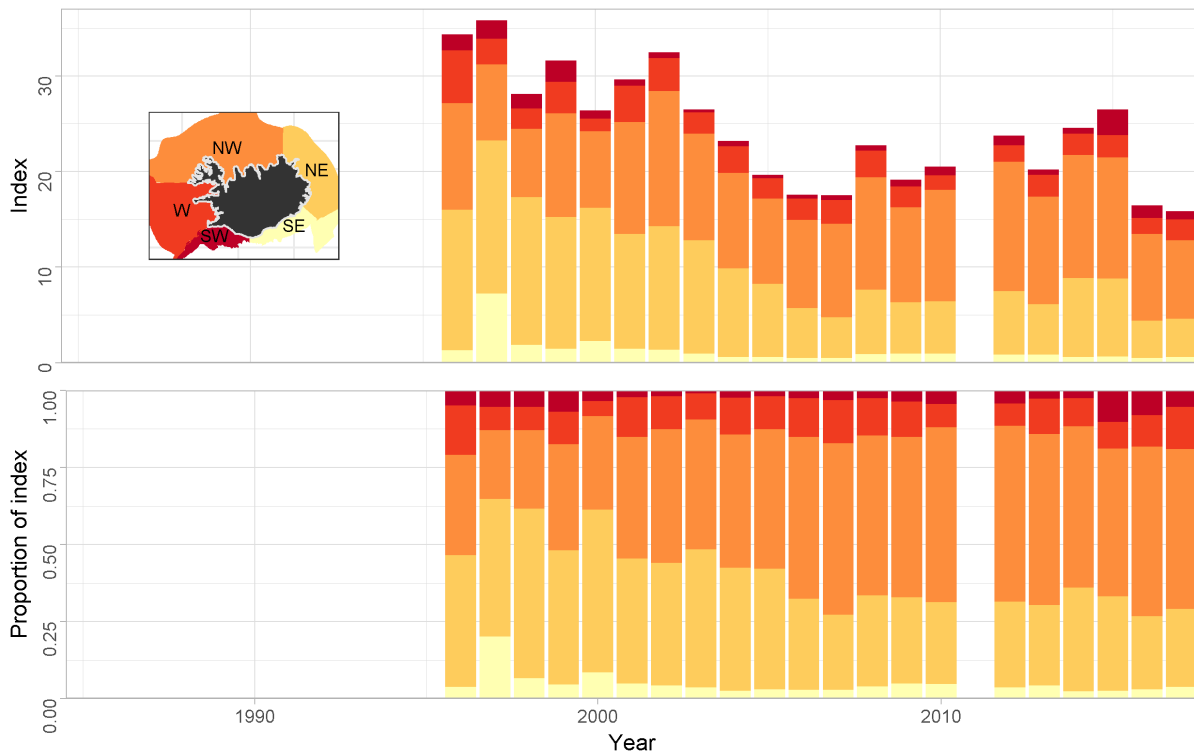


Figure 14. Long rough dab. Spatial distribution of biomass index from the autumn survey in 1996-2017.

Mynd 14. Skrápflúra. Dreifing lífmassavísitölu í stofnmælingu botnfiska að hausti, árin 1996-2017.

MANAGEMENT

The Ministry of Industries and Innovation is responsible for management of the Icelandic fisheries and implementation of legislation. Long rough dab was included in the ITQ system in the 1997/1998 quota year, and as such subjected to TAC limitations, but only in a designated area, the main fishing grounds (Table 3). After considerable decrease in CPUE, direct fishing for long rough dab was no longer commercially feasible and the only landings were bycatch in other fisheries. In view of the changed situation, the Marine Research Institute (MRI) recommended that the long rough dab caught in the designated quota area should no longer be subjected to TAC limitations after 2013/2014 quota year.

Table 3. Long rough dab. Recommended TAC, national TAC set by the Ministry, and landings (tonnes) within the quota area and total landings.

Tafla 3. Skrápflúra. Tillögur Hafrannsóknastofnunar um hámarksafla, ákvörðun stjórnvalda um aflamark og landaður aflí (tonn) innan kvótasvæðisins og heildarlöndun.

FISHING YEAR	REC. TAC	NATIONAL TAC	LANDINGS FROM QUOTA AREA	TOTAL LANDINGS
1995/96	5000			6164
1996/97	5000			5470
1997/98	5000	5000	3413	3793
1998/99	5000	5000	3259	3522
1999/00	5000	5000	2783	3148
2000/01	5000	5000	2817	3658
2001/02	5000	5000	2512	3631
2002/03	5000	5000	2064	3064
2003/04	5000	5000	1636	2021
2004/05	5000	5000	772	1026
2005/06	2000	3500	638	764
2006/07	500	1500	259	359
2007/08	500	1000	210	303
2008/09	250	1000	210	290
2009/10	200	1000	129	213
2010/11	200	200	107	193
2011/12	200	200	77	148
2012/13	200	200	11	71
2013/14	200	200	9	89
2014/15	-	-	-	50
2015/16	-	-	-	14
2016/17	-	-	-	17
2017/18	-	-	-	
2018/19	-	-	-	

ADVICE

Long rough dab is only caught as bycatch, and landed catch is very low. Therefore, the MFRI will not recommend a TAC for the 2018/2019 fishing year.