

ATLANTIC HALIBUT – LÚÐA

Hippoglossus hippoglossus

GENERAL INFORMATION

Atlantic halibut is the largest flatfish species in the world's oceans and the largest bony fish in Icelandic waters. The largest recorded measurement in Iceland is from the year 1935, when a 365 cm long halibut was caught off the North coast, weighing 266 kg. It matures slowly; at the length of 80 cm about half of the males have reached maturity, whereas females reach that level at 103 cm.

Atlantic halibut is found all around Iceland, but is most common off the West and South coast. It is a demersal species on muddy, sandy or gravel substrate, and sometimes even on hard bottoms at 20-2000 m depths. The juvenile halibut occupy relatively shallow waters, up to the age of 3-5 years, after which they migrate to deeper waters of the continental shelf and slope.

Atlantic halibut is known for occasional long-distance migrations. Individuals tagged in Icelandic waters have been recaptured off Faroe Islands, East- and West-Greenland, and in the waters off Newfoundland. Recaptures from Iceland include fish tagged in Faroe Islands and Canada.

THE FISHERY

The geographical distribution of the halibut fishery has changed since 2011 following a ban on targeted fishing as well as mandatory release of all viable fish (Figure 1).

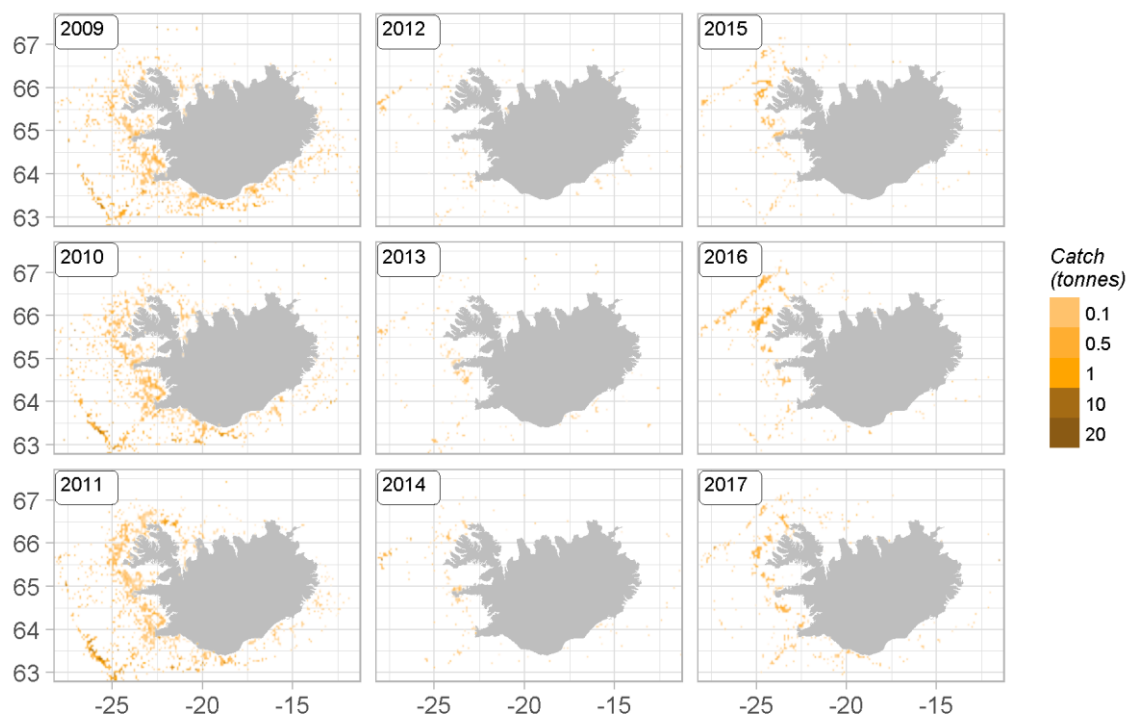


Figure 1. Atlantic halibut. Geographical distribution of the Icelandic fishery since 2009. Reported catch from logbooks.

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

In 2000-2011, the main fishing grounds for halibut were in the western part of the Icelandic shelf (Figure 2) according to logbook entries. After the ban on targeted fishing, most of the landed catch has been taken on demersal trawl grounds in the west and northwest areas (Figure 2).

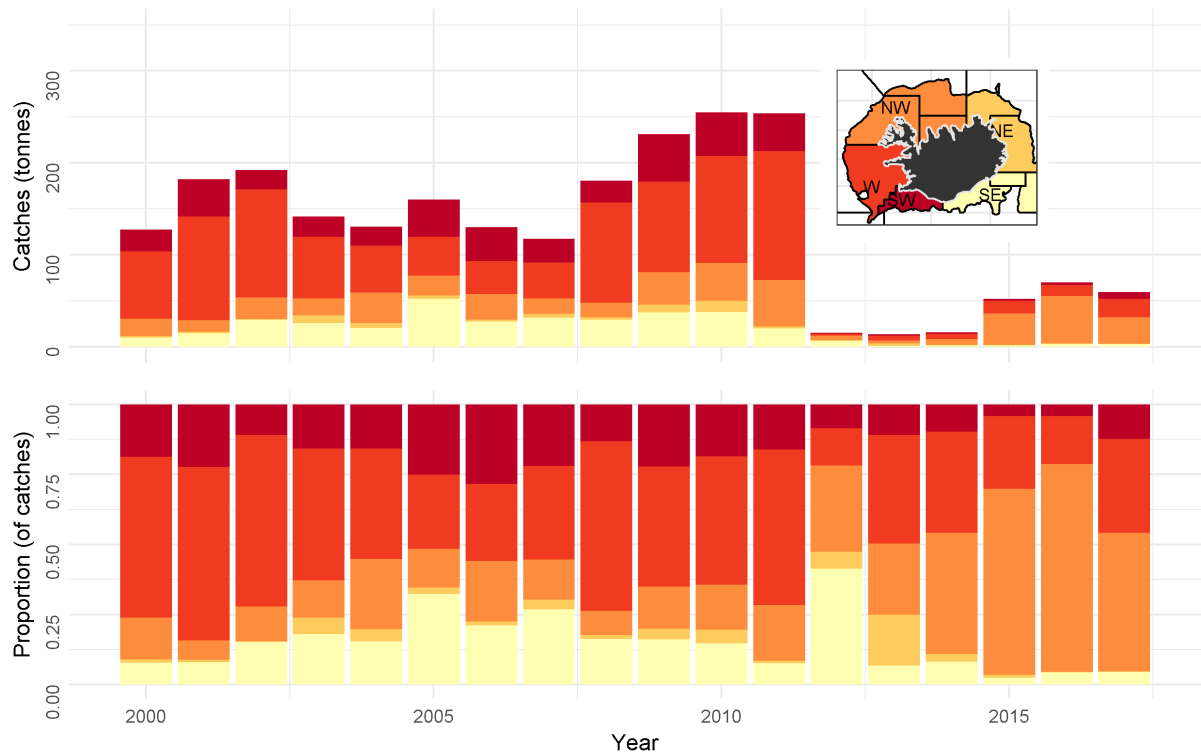


Figure 2. Atlantic halibut. Spatial distribution of the Icelandic fishery by fishing area from 2000-2017. All gears combined.
Mynd 2. Lúða. Útbreiðsla veiða á íslensku veiðisvæði árin 2000-2017. Öll veiðarfæri samanlagt.

The target fishery was mainly conducted in deep waters, of more than 250 meters. The ban on targeted fishing particularly affected the amount of halibut taken in these deeper waters (Figure 3).

Halibut on Icelandic fishing grounds was mainly caught on longline and in demersal trawl, or approximately 85% of landings in 2006-2011 (Table 1). After the ban on targeted fishing in 2012, the majority of the landed catch comes from demersal trawlers, as halibut rarely survive the handling in that gear (Figure 4). Almost no catch is landed from longliners after the ban.

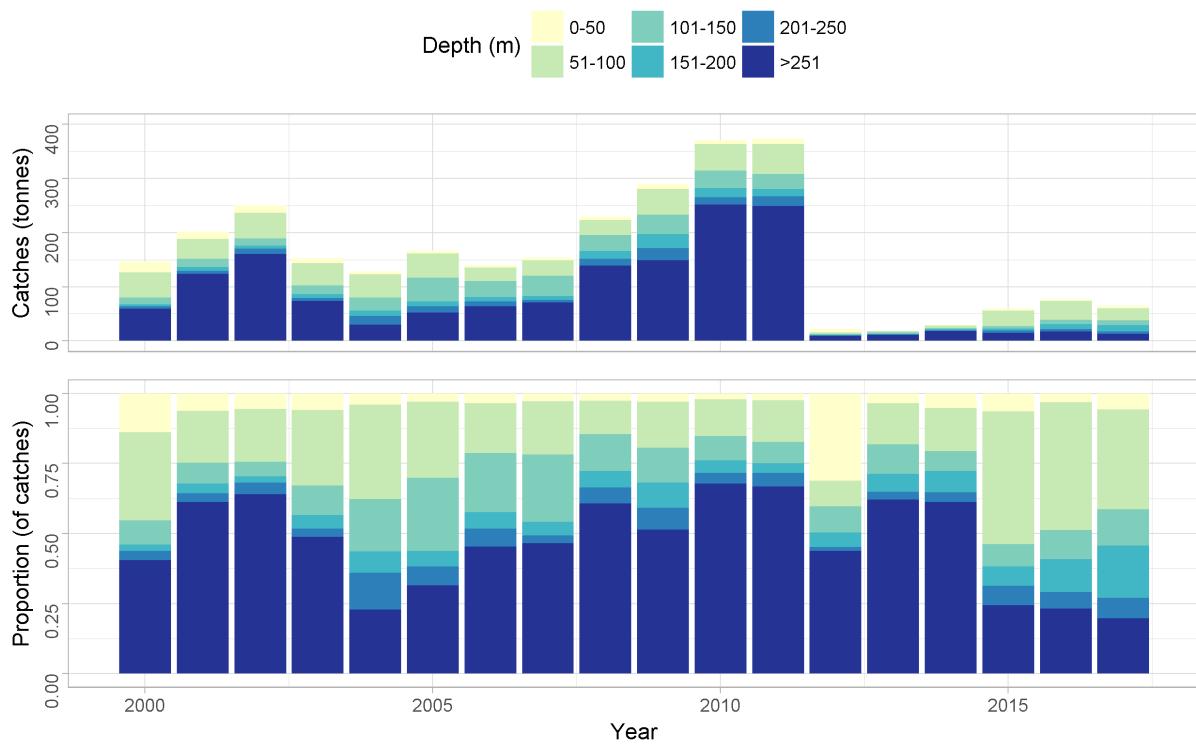


Figure 3. Atlantic halibut. Depth distribution of catch on longline and in demersal trawl according to logbooks.

Mynd 3. Lúða. Afli á línu og í botnvörpu samkvæmt afladagbókum, skipt eftir dýpi.

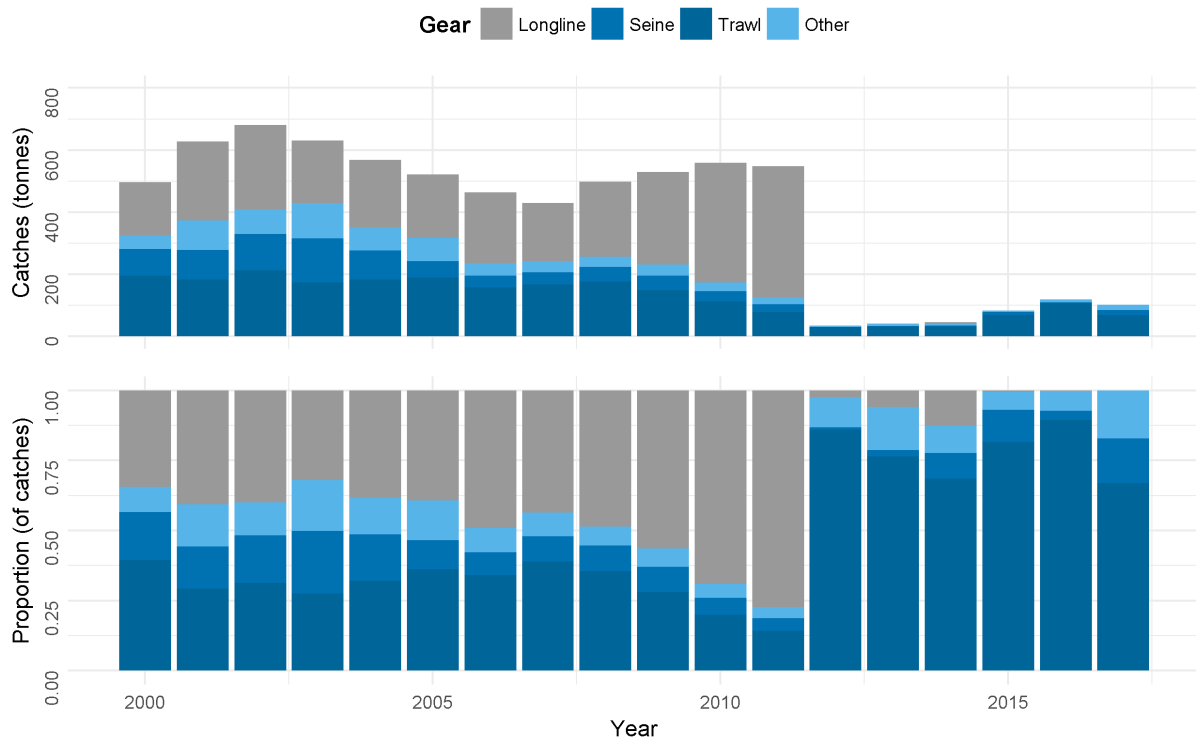


Figure 4. Atlantic halibut. Total catch (landings) by fishing gear since 2000, according to statistics from the Directorate of Fisheries.

Mynd 4. Lúða. Landaður afli eftir veiðarfærum frá árinu 2000, samkvæmt aflaskráningarkerfi Fiskistofu.

Table 1. Atlantic halibut. Number of Icelandic vessels landing 1000 kg or more of halibut, and all landed catch divided by gear type.

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

YEAR	NUMBER OF VESSELS			CATCHES (TONNES)			
	Longliners	Trawlers	Other	Longline	Demersal trawl	Other	Sum
2000	21	67	35	164	201	129	494
2001	28	62	51	229	184	174	587
2002	27	68	51	265	220	197	682
2003	31	64	63	204	180	252	636
2004	36	65	48	198	191	167	556
2005	41	59	35	197	194	122	513
2006	43	59	25	204	160	77	441
2007	44	60	22	172	177	71	420
2008	36	55	24	206	183	83	472
2009	38	54	29	265	151	82	498
2010	38	44	22	349	118	61	528
2011	34	25	14	405	82	46	533
2012	0	9	1	1	30	4	35
2013	0	11	3	2	30	7	39
2014	2	11	1	6	32	8	46
2015	0	20	2	0	75	15	91
2016	0	32	4	0	106	12	118
2017	0	23	14	0	68	34	102

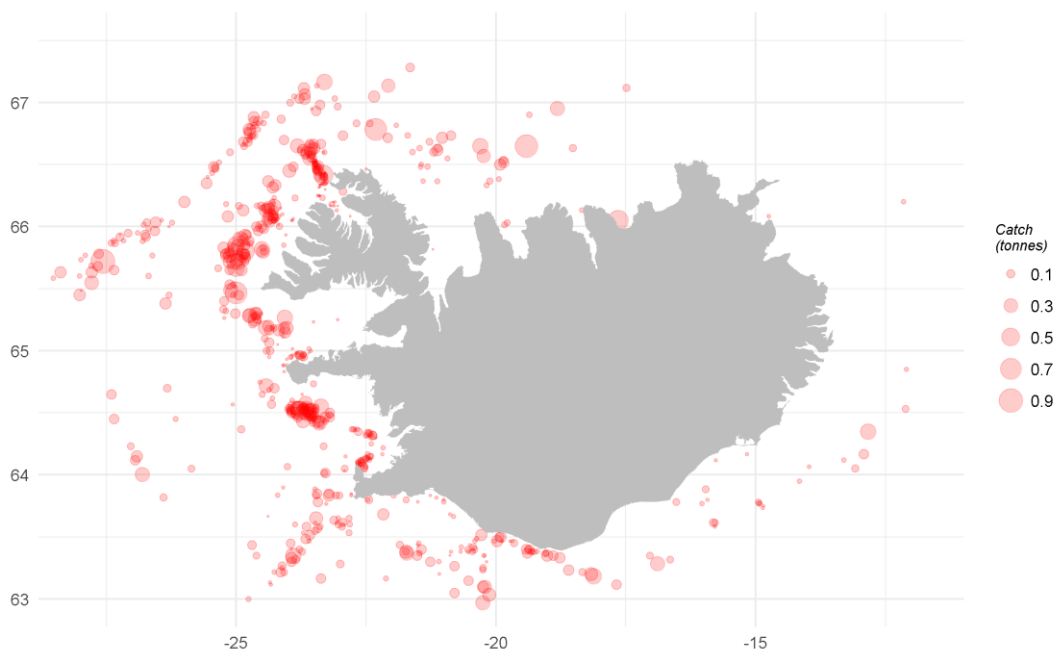


Figure 5. Atlantic halibut. Fishing grounds in 2017 as reported in logbooks.

Mynd 5. Lúða. Veiðisvæði við Ísland árið 2017 samkvæmt afladagbókum.

CATCH PER UNIT EFFORT (CPUE) AND EFFORT.

CPUE estimates of halibut in Icelandic waters (Figure 6) 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.

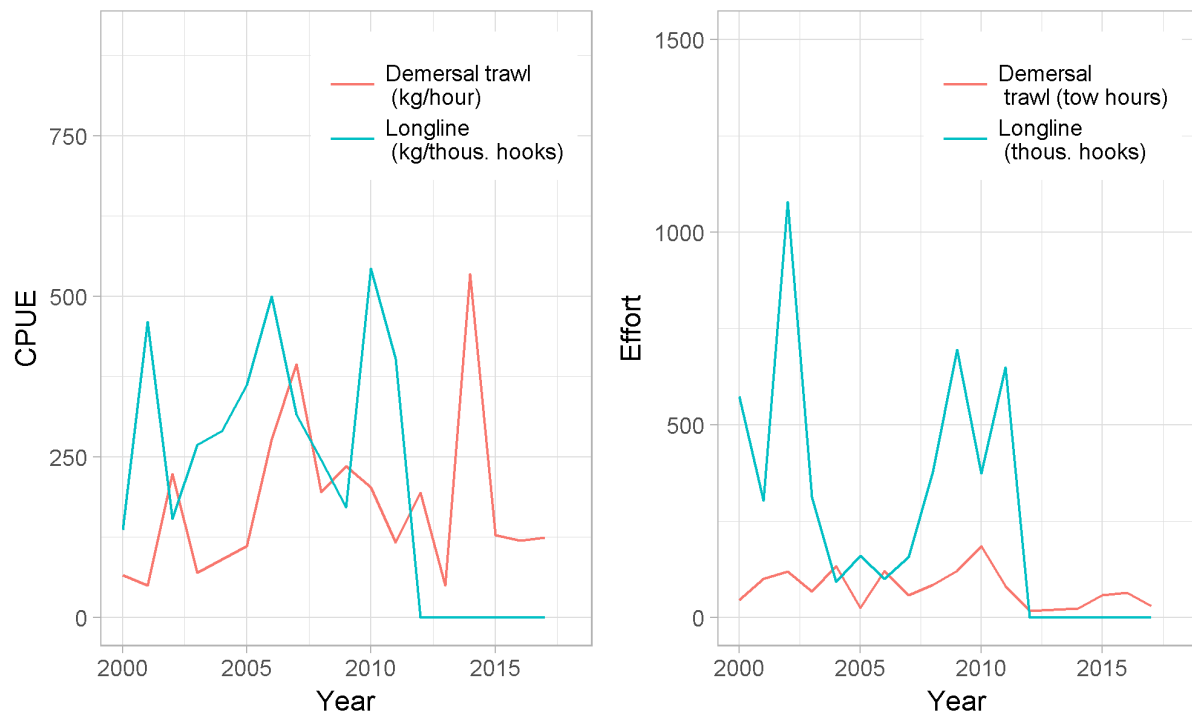


Figure 6. Atlantic halibut. Non-standardised estimate of CPUE (left) and fishing effort (right) from demersal trawl (kg/h or tow hours) in red and longline (kg/thous. hooks or thous. hooks) in blue.

Mynd 6. Lúða. Afli á sóknareiningu (vinstri) og sókn (hægri) með botnvörpu (kg/klst eða togtímar, rautt) og línu (kg/þúsund króka eða þúsundir króka, blátt).

SURVEY DATA

The Icelandic spring groundfish survey (hereafter spring survey), which has been conducted annually in March since 1985, covers the most important area of the halibut fishery on the continental shelf. It does however, not cover the habitats of mature fish in deeper waters further offshore. 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 of immature halibut better than the autumn survey, but both surveys are inadequate at estimating spawning stock biomass.

Figure 7 shows both a recruitment index based on abundance of halibut smaller than 66 cm, and trends in various biomass indices. Survey length distributions are shown in Figure 8 and Figure 9, abundance and changes in spatial distribution in Figure 10 - Figure 13.

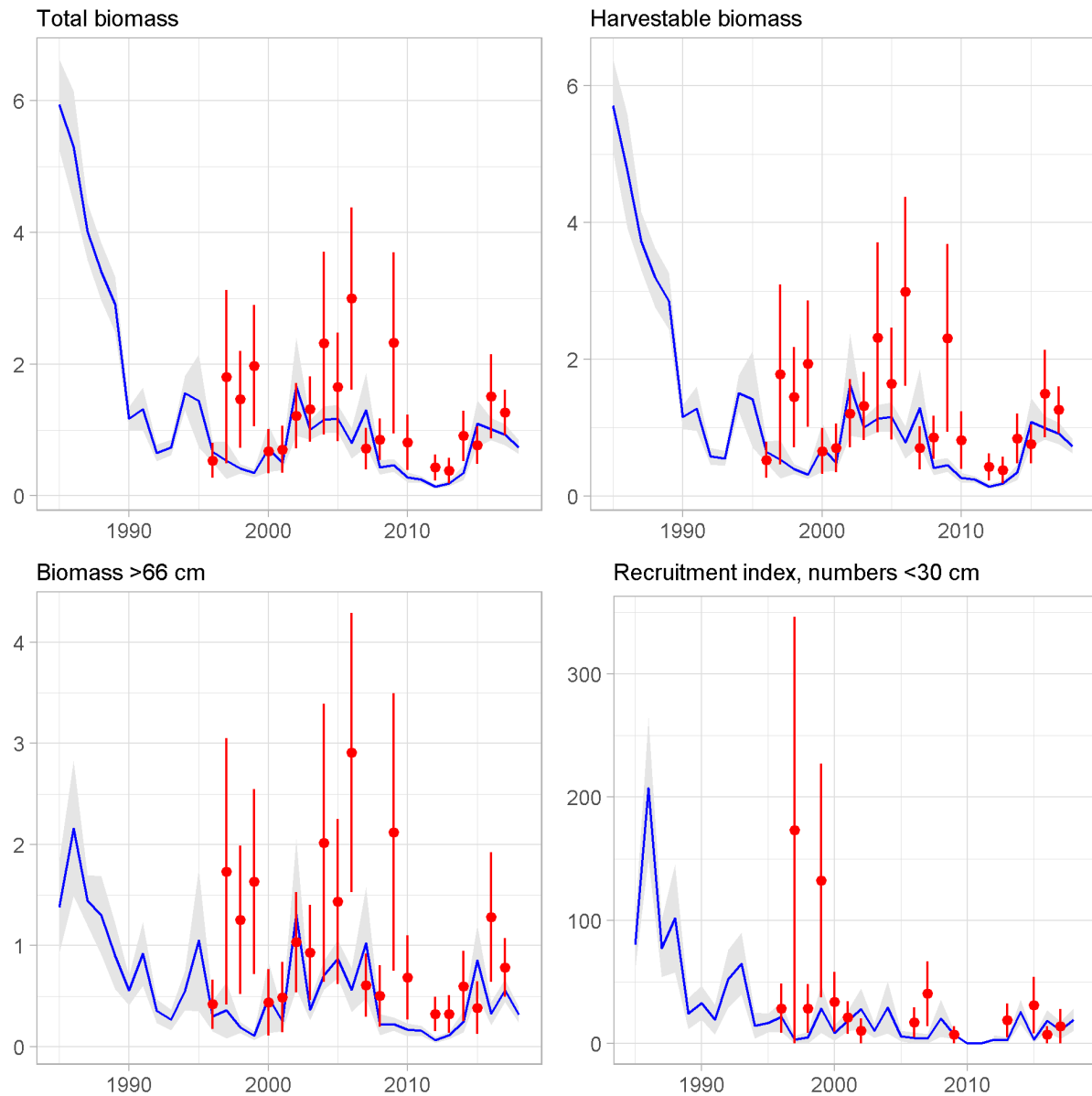


Figure 7. Atlantic halibut. Total biomass indices (upper left), harvestable biomass indices (>40 cm, upper, right) and biomass index of larger ind. (>66 cm, lower left), juvenile abundance indices (< 30 cm, lower right), from the spring survey (blue) from 1985 and autumn survey (red) from 1996, along with the standard deviation.

Mynd 7. Stofnvísitala lúðu (efri til vinstri), vísitala veiðistofns (40 cm og stærri, efri til hægri), vísitala stærri einstaklinga (66 cm og stærri, neðri til vinstri) og nýliðunarvísitala (neðri til hægri) úr stofnmælingu botnfiska að vori (blátt) frá árinu 1985 og hausti (rautt) frá árinu 1996, ásamt staðalfráviki.

Size distributions of halibut from the spring and autumn surveys provide limited information due to the small numbers caught, but small halibut (~50 cm) seem to be most common in the spring survey (Figure 8), while larger halibut are more common in the autumn survey (Figure 9).

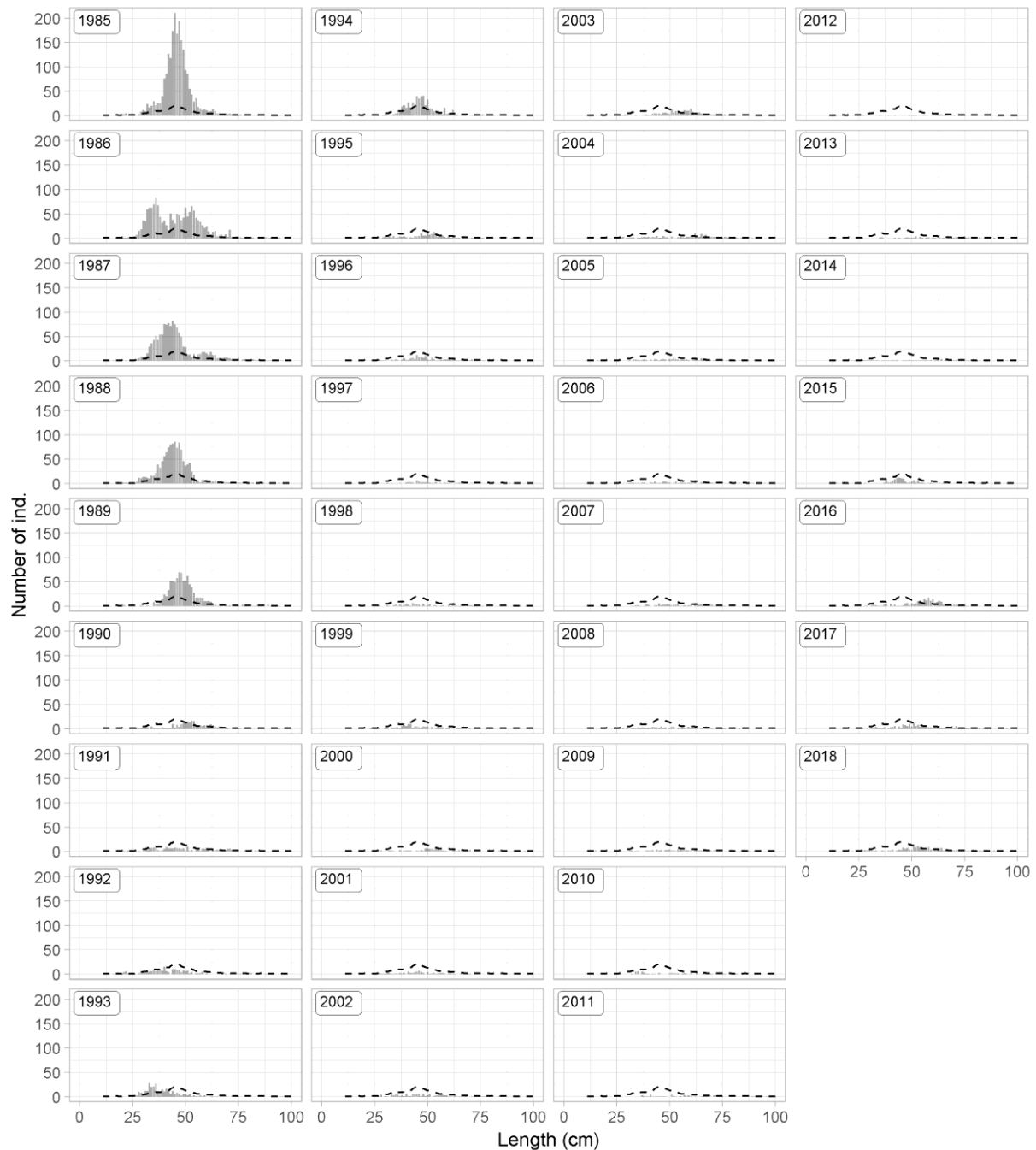


Figure 8. Atlantic halibut. Length distribution from the spring survey. The dotted line shows mean length for all years combined.

Mynd 8. Lúða. Lengdardreifing úr stofnmælingu botnfiska að vori frá 1985 ásamt meðallengd allra ára (punktalína).

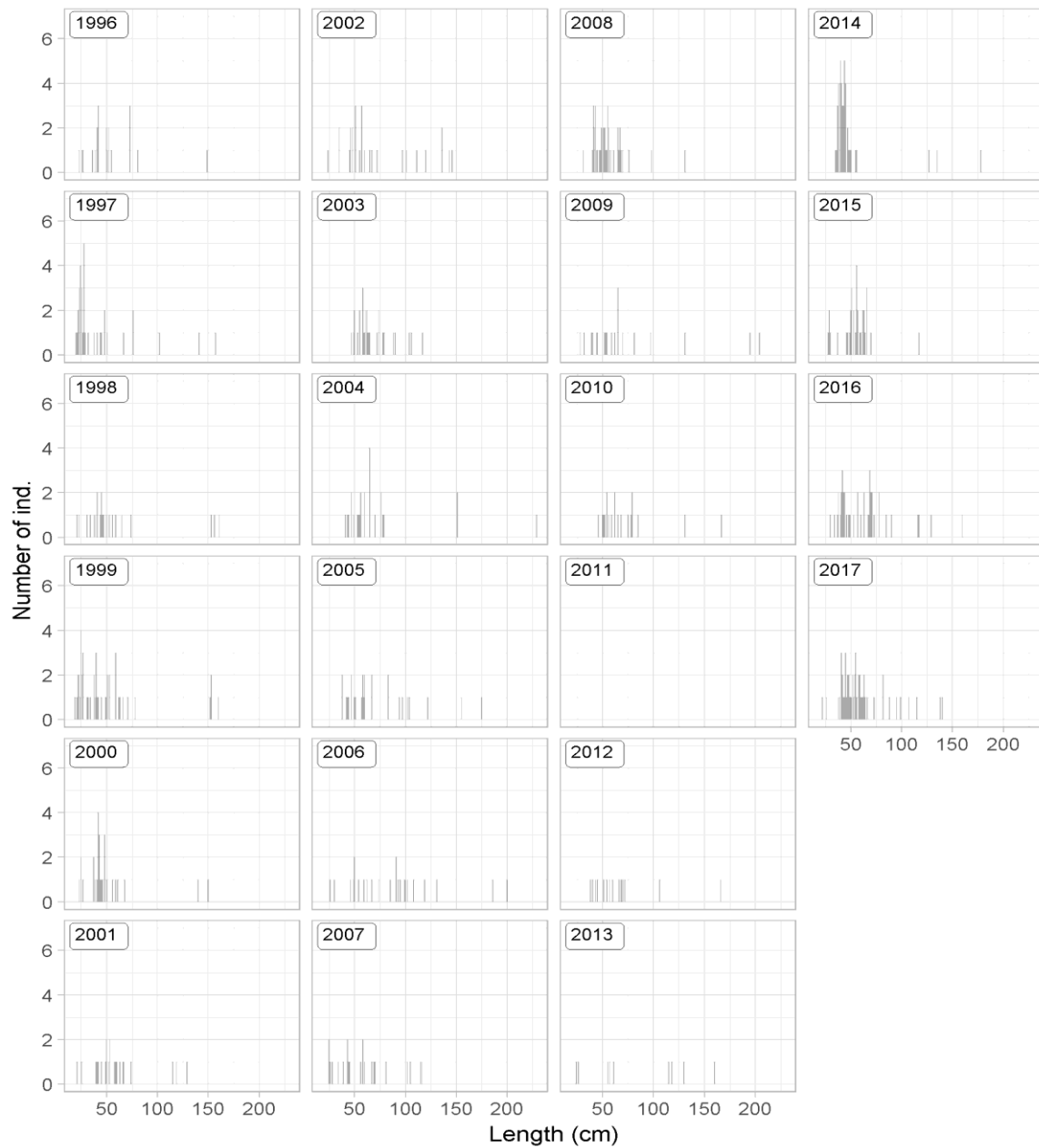


Figure 9. Atlantic halibut. Length distribution from the autumn survey.

Mynd 9. Lúða. Lengdardreifing úr stofnmælingu botnfiska að hausti frá 1996 .

Halibut is mainly caught in the NW and W areas in the spring survey (Figures 10 & 11), although a considerable proportion of the catch was caught in the SE area between 2002 and 2010 (Figure 11).

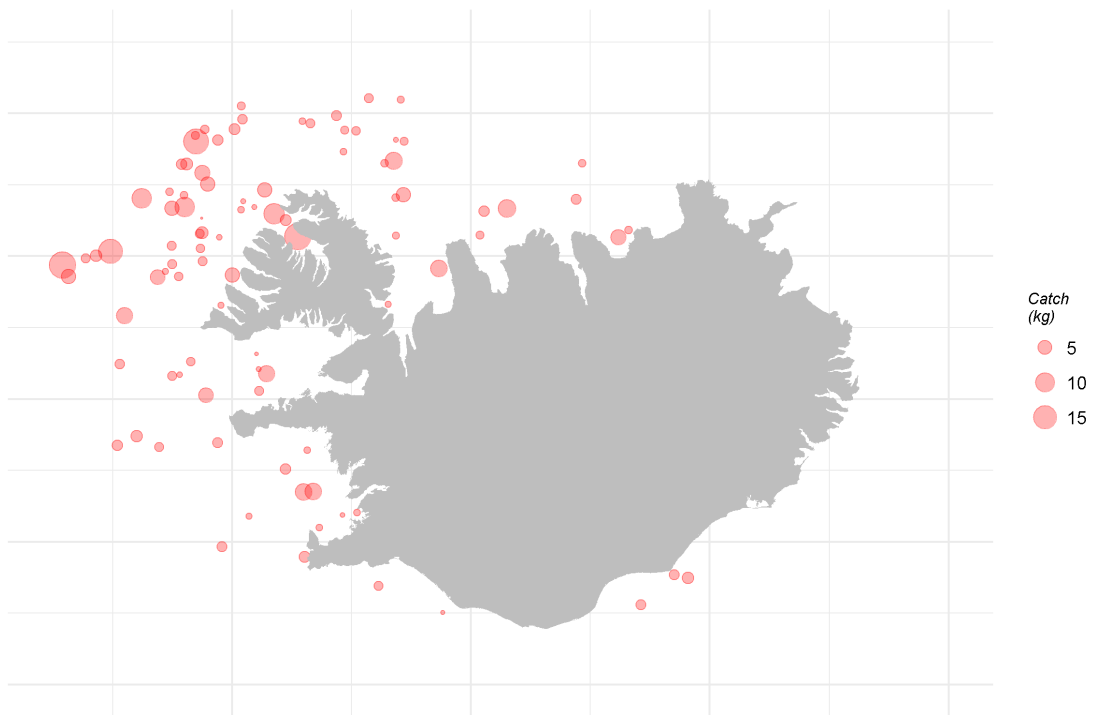


Figure 10. Atlantic halibut. Spatial distribution in the spring survey in 2018.

Mynd 10. Lúða. Útbreiðsla í stofnmælingu botnfiska að vori 2018.

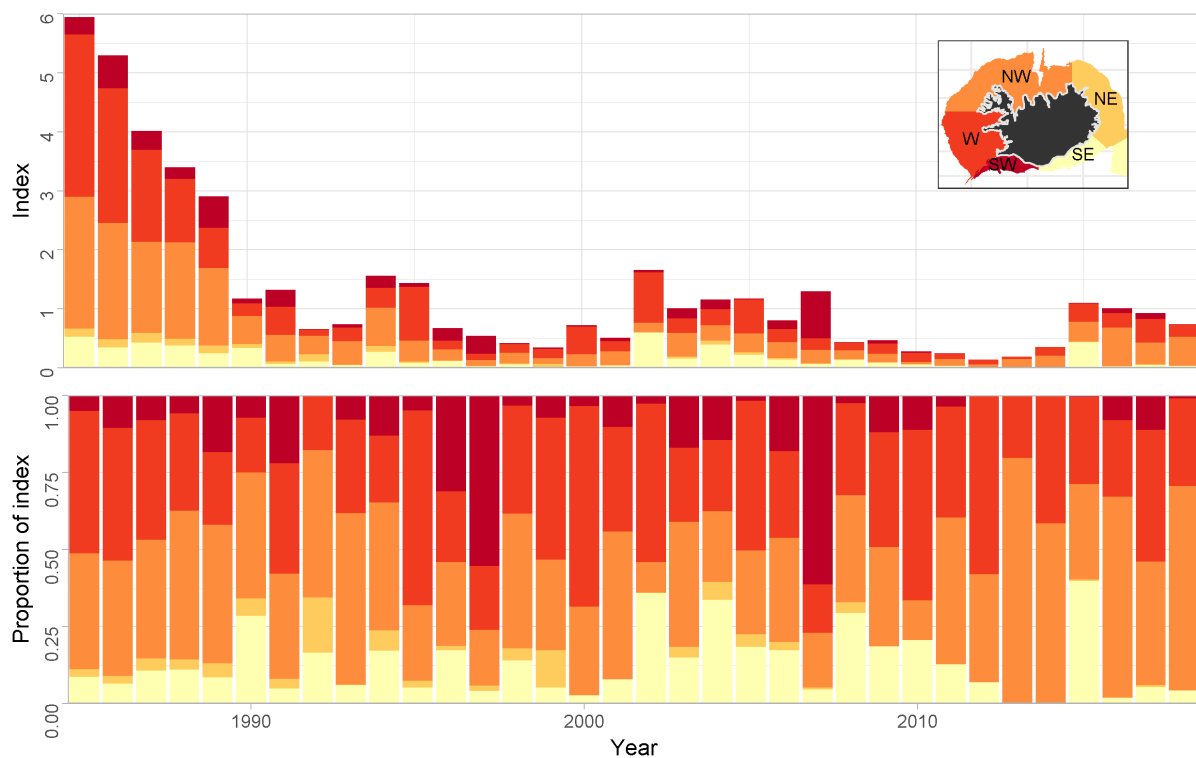


Figure 11. Atlantic halibut. Spatial distribution of biomass index from the spring survey in 1985-2018.

Mynd 11. Lúða. Dreifing lífmassavísitölu í stofnmælingu botnfiska að vori, árin 1985-2018.

Catches of halibut in the autumn survey are sporadic events with no discernible pattern (Figures 12 & 13).

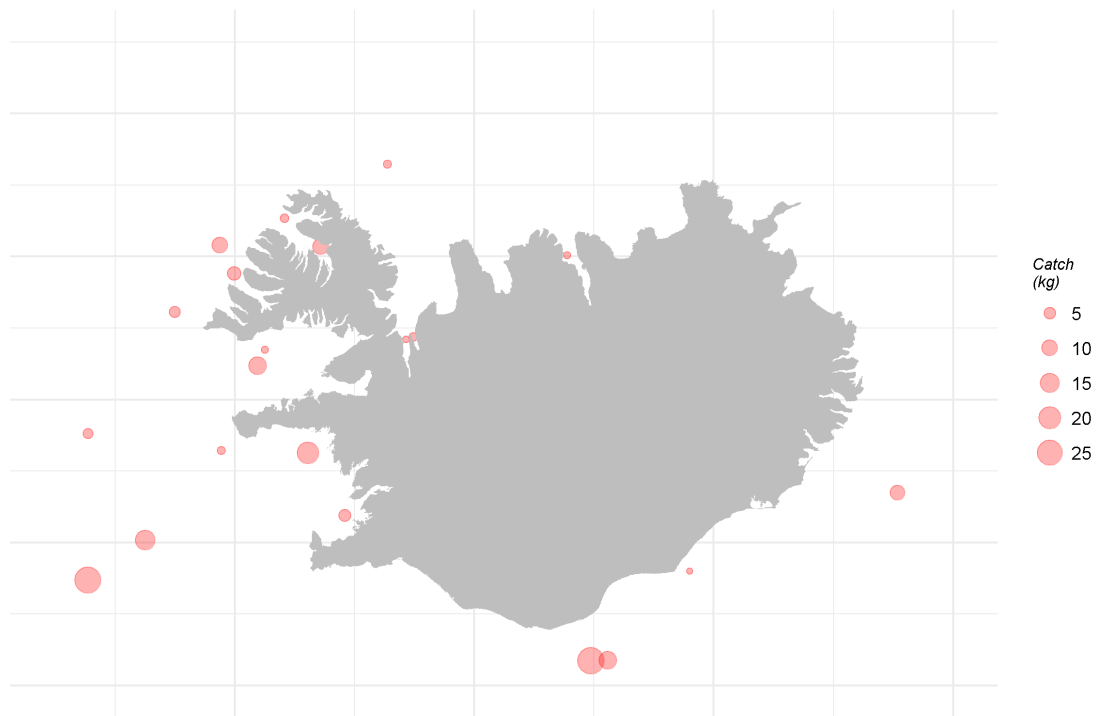


Figure 12. Atlantic halibut. Spatial distribution of halibut in 2017 in the autumn survey.

Mynd 12. Lúða. Útbreiðsla í stofnmælingu botnfiska að hausti árið 2017.

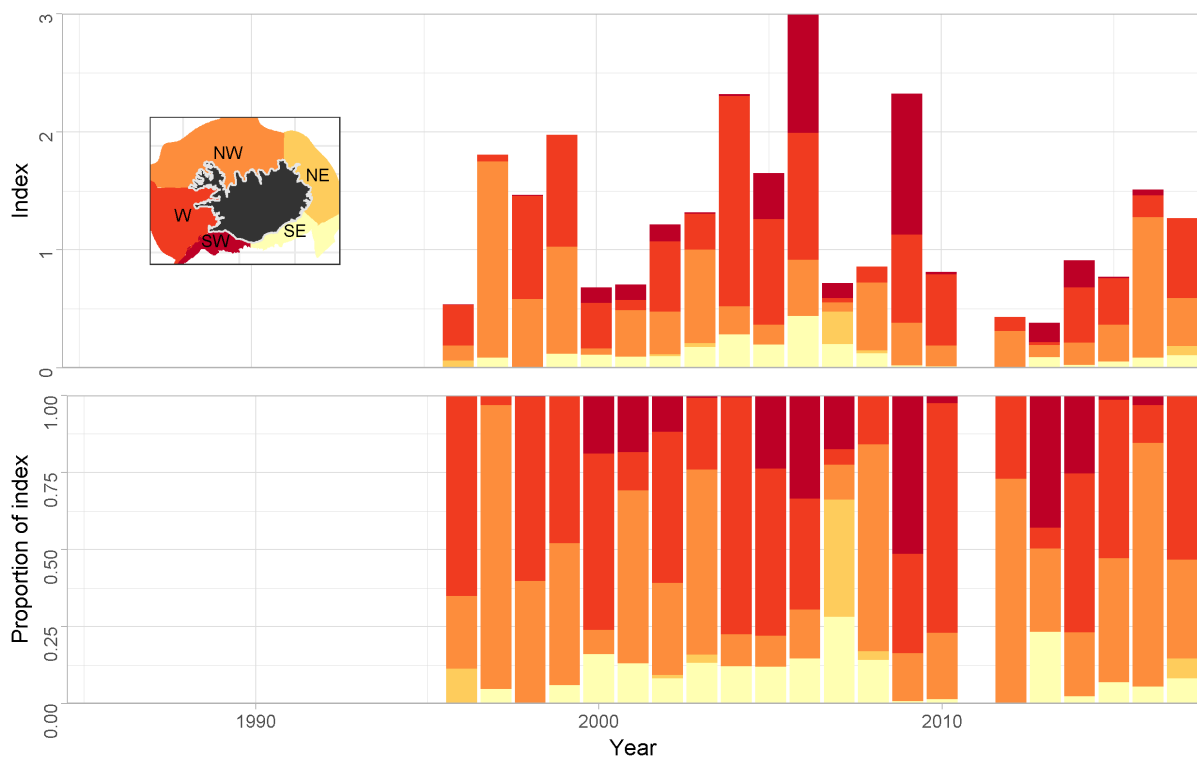


Figure 13. Atlantic halibut. Spatial distribution of biomass index from the autumn survey in 1996-2017.

Mynd 13. Lúða. 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. Direct fishing for Atlantic halibut was banned in 2011, and no TAC has been set since.

ADVICE 2018

No TAC is set for halibut in 2018. In 2012, a regulation was issued to ban all targeted fishing for Atlantic halibut and stipulating that all viable halibut must be released in other fisheries. MFRI recommends that these regulations should be maintained.