

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).

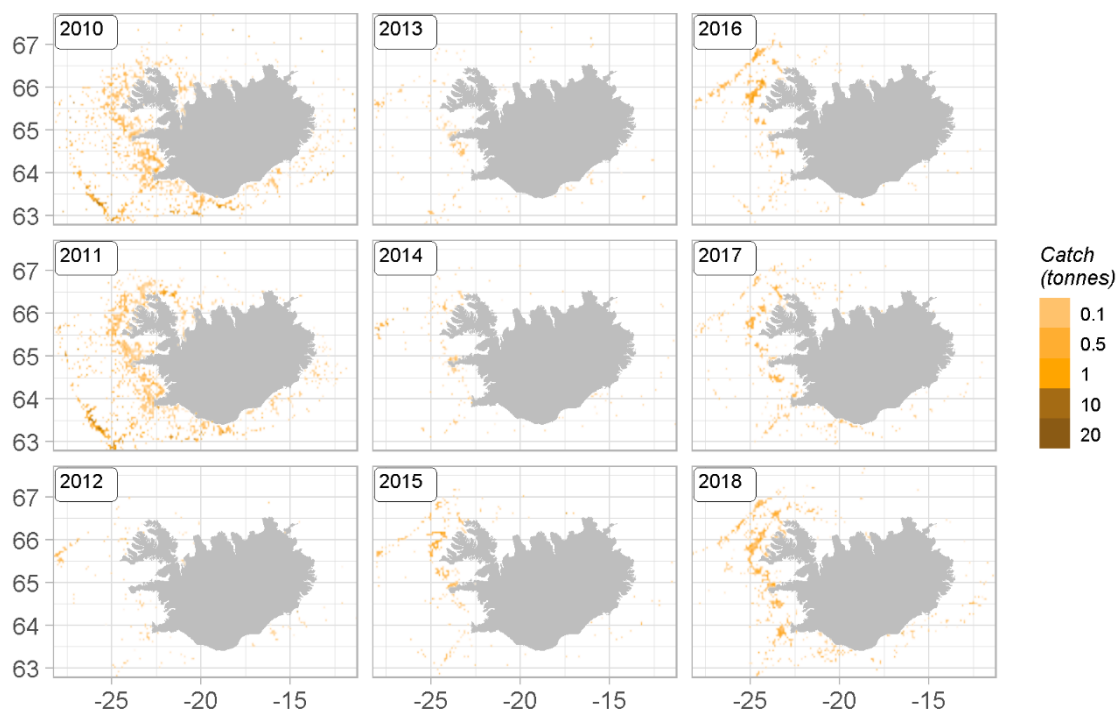


Figure 1. Atlantic halibut. Geographical distribution of the Icelandic fishery since 2010. Reported catch from logbooks.

Mynd 1. Lúða. Útbreiðsla veiða á Íslandsmiðum frá 2010 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).

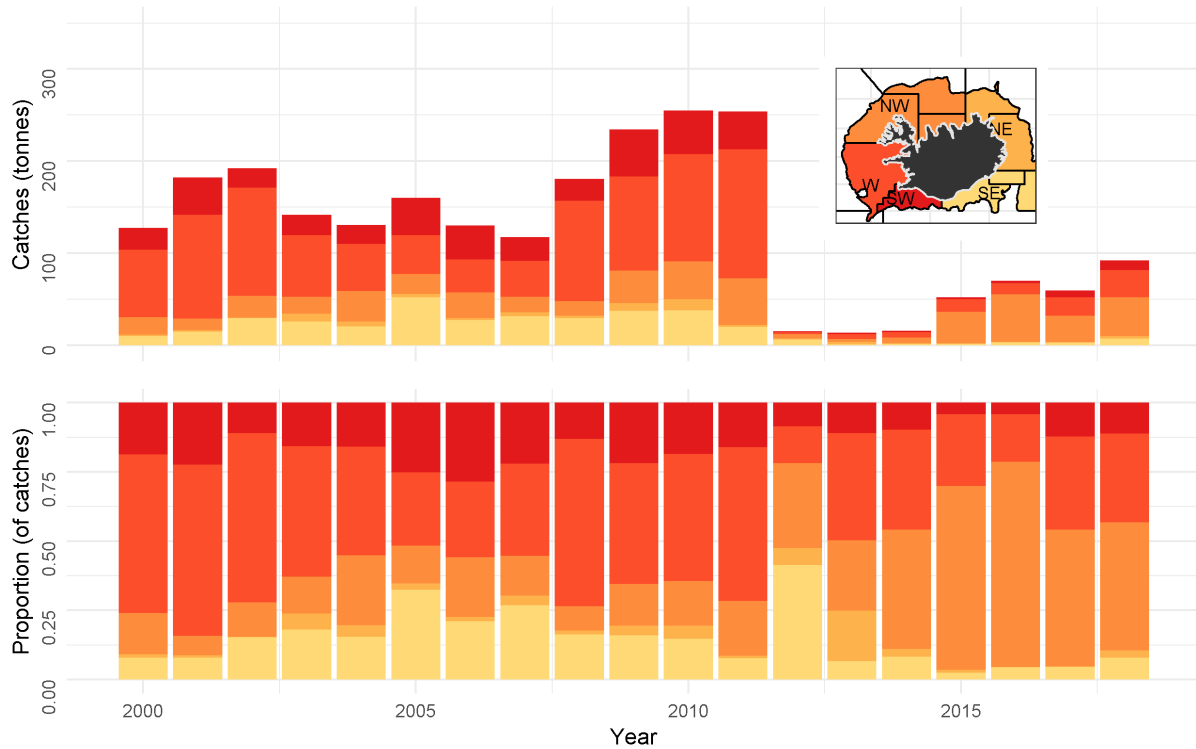


Figure 2. Atlantic halibut. Spatial distribution of the Icelandic fishery by fishing area from 2000-2018. All gears combined.
Mynd 2. Lúða. Útbreiðsla veiða á íslensku veiðisvæði árin 2000-2018. Öll veiðarfæri samanlagt.

The targeted fishing 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.

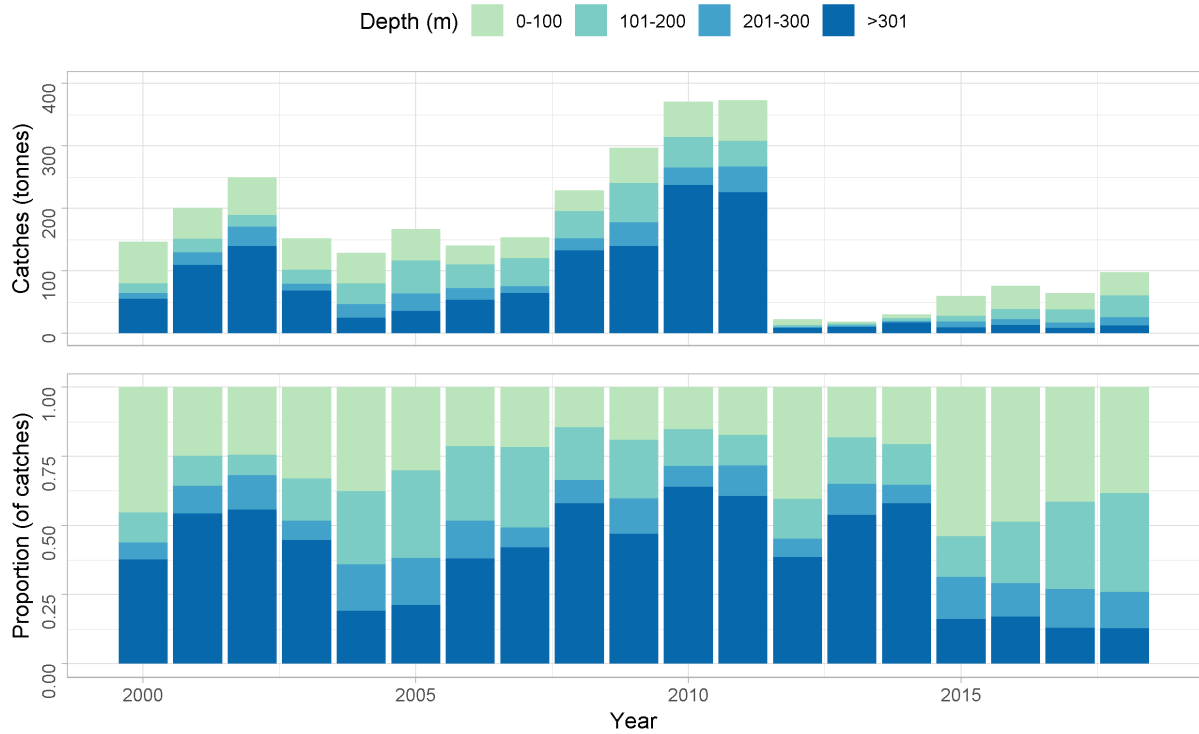


Figure 3. Atlantic halibut. Depth distribution of catch on longline and in demersal trawl according to logbooks.

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

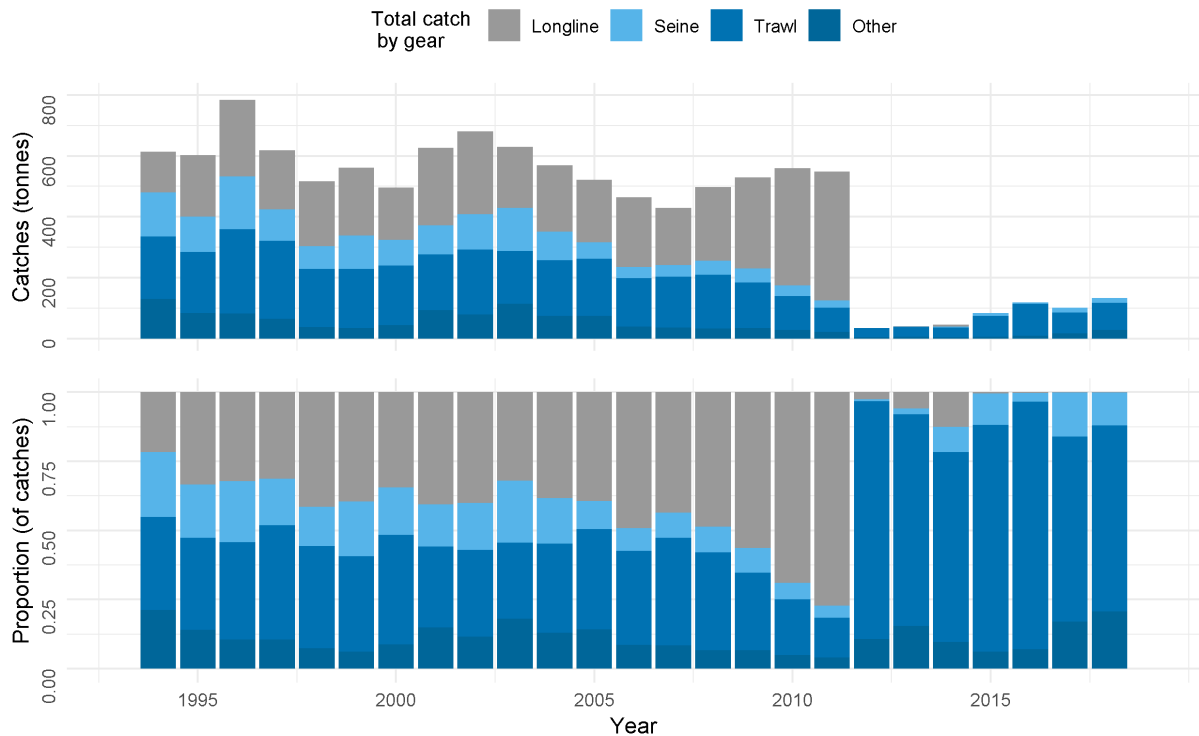


Figure 4. Atlantic halibut. Total catch (landings) by fishing gear since 1994, according to statistics from the Directorate of Fisheries.

Mynd 4. Lúða. Landaður afli eftir veiðarfærum frá árinu 1994, samkvæmt aflskráningarkerfi 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 |
| 2018 | 0 | 31 | 13 | 0 | 90 | 43 | 133 |

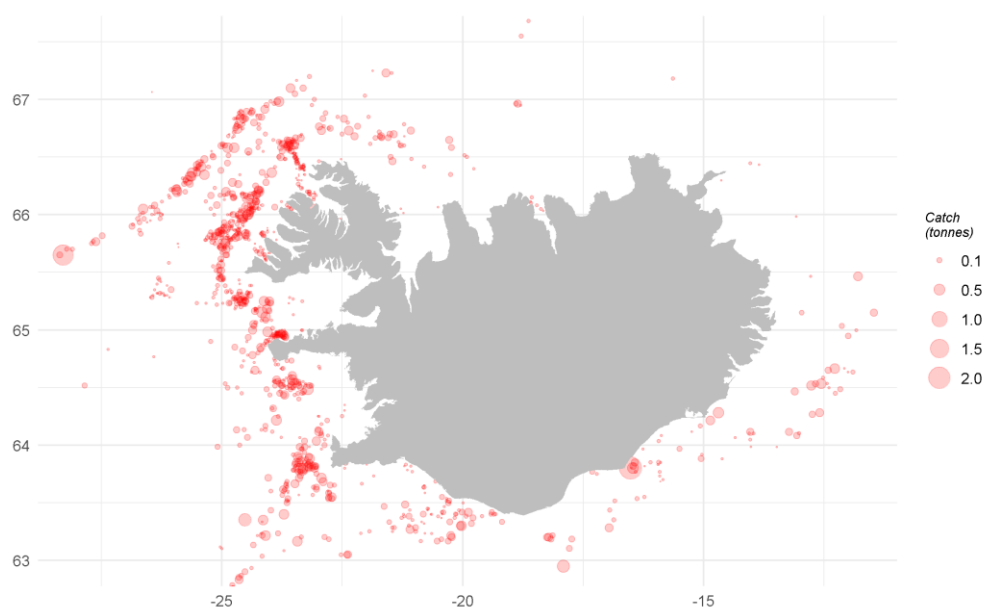


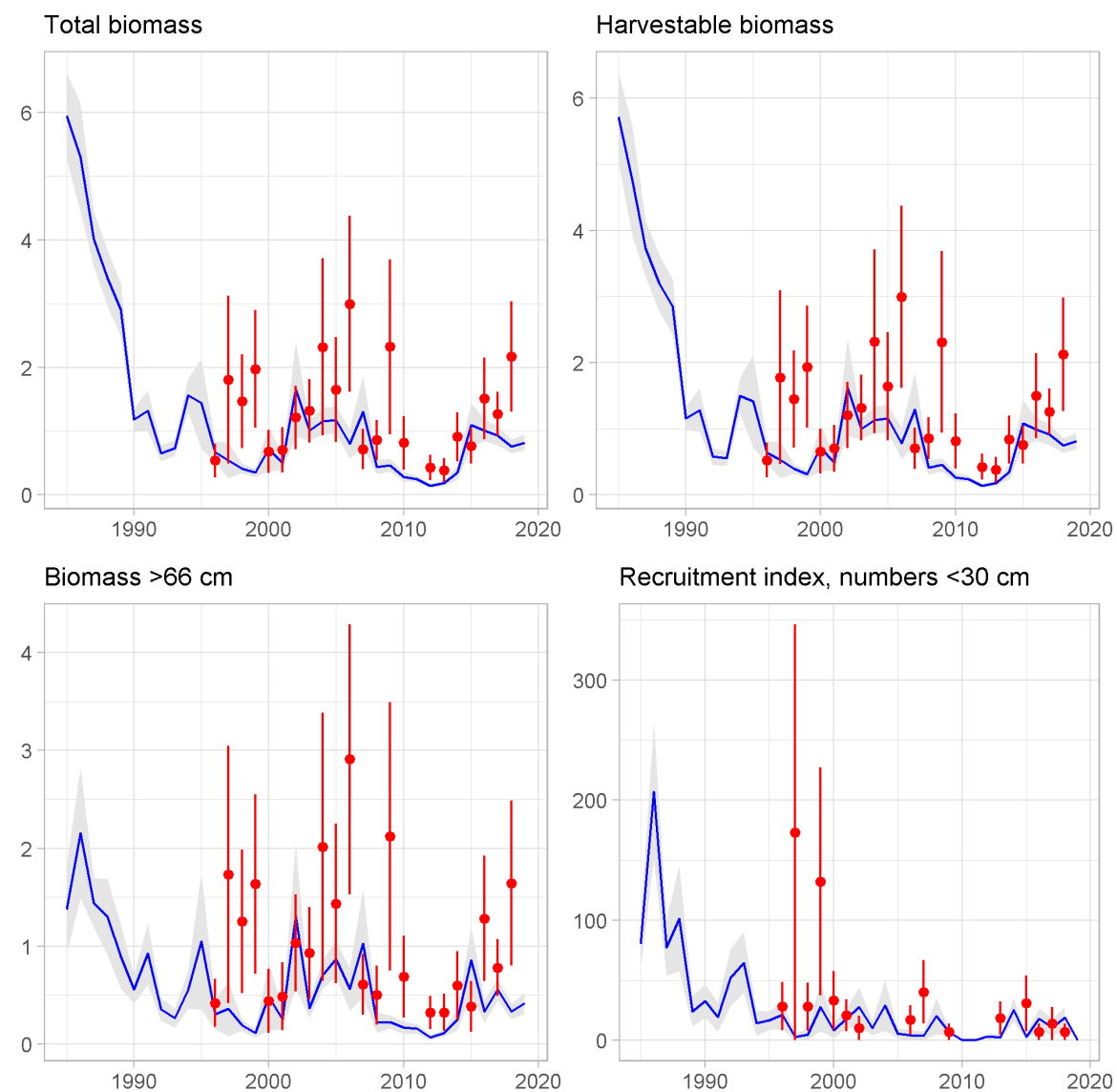
Figure 5. Atlantic halibut. Fishing grounds in 2018 as reported in logbooks.

Mynd 5. Lúða. Veiðisvæði við Ísland árið 2018 samkvæmt afladagbókum.

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. 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 6 shows both a recruitment index based on abundance of halibut 30 cm and smaller, and trends in various biomass indices. Survey length disaggregated abundance indices are shown in Figure 7 and Figure 8, abundance and changes in spatial distribution in Figure 9 - Figure 12.



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 7), while larger halibut are more common in the autumn survey (Figure 8).

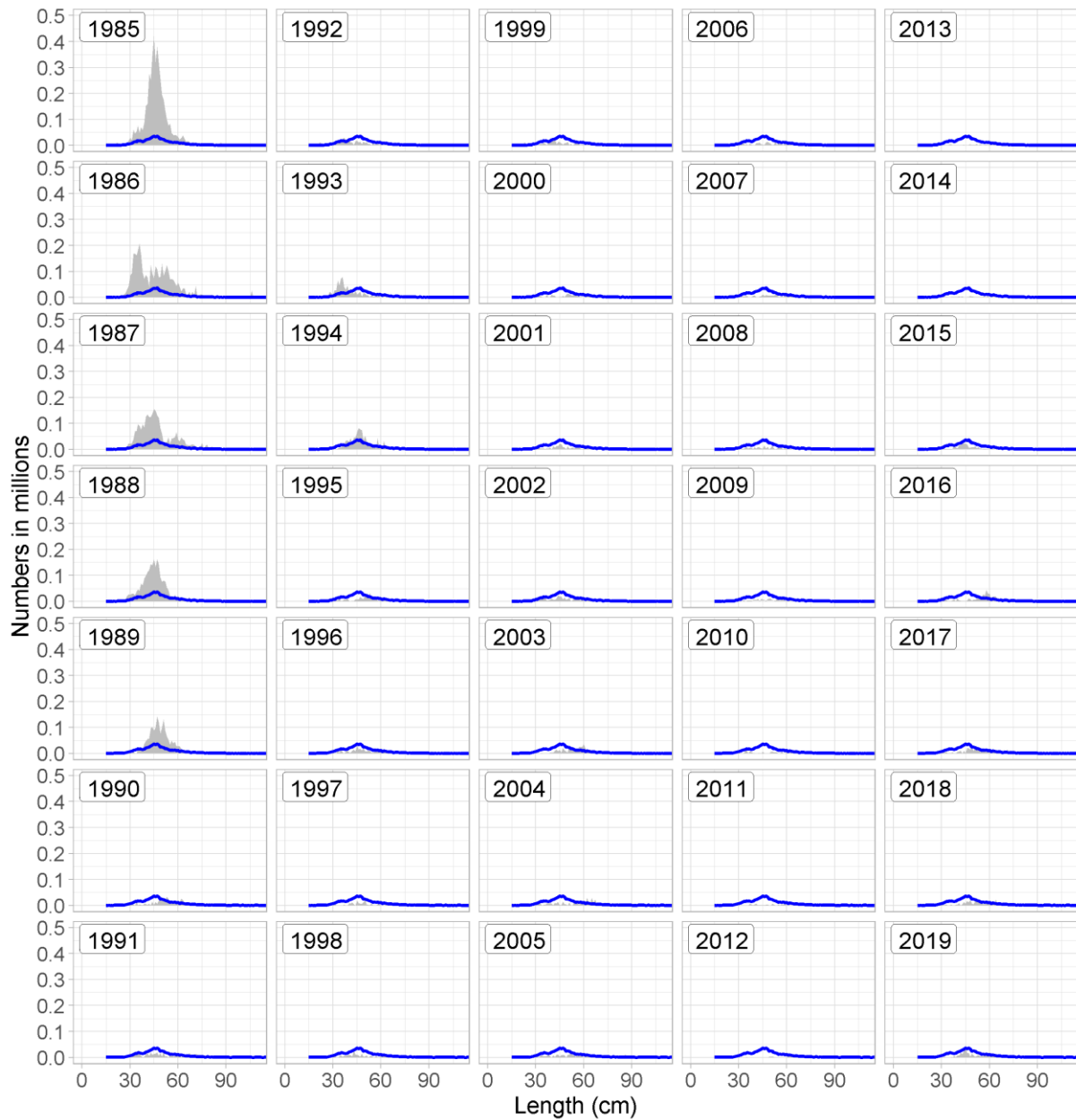


Figure 7. Atlantic halibut. Length disaggregated abundance indices from the spring survey. The blue line shows the mean for all years

Mynd 7. Lúða. Lengdarskiptar vísitölur úr stofnmælingu botnfiska að vori ásamt meðaltali allra ára (blá lína).

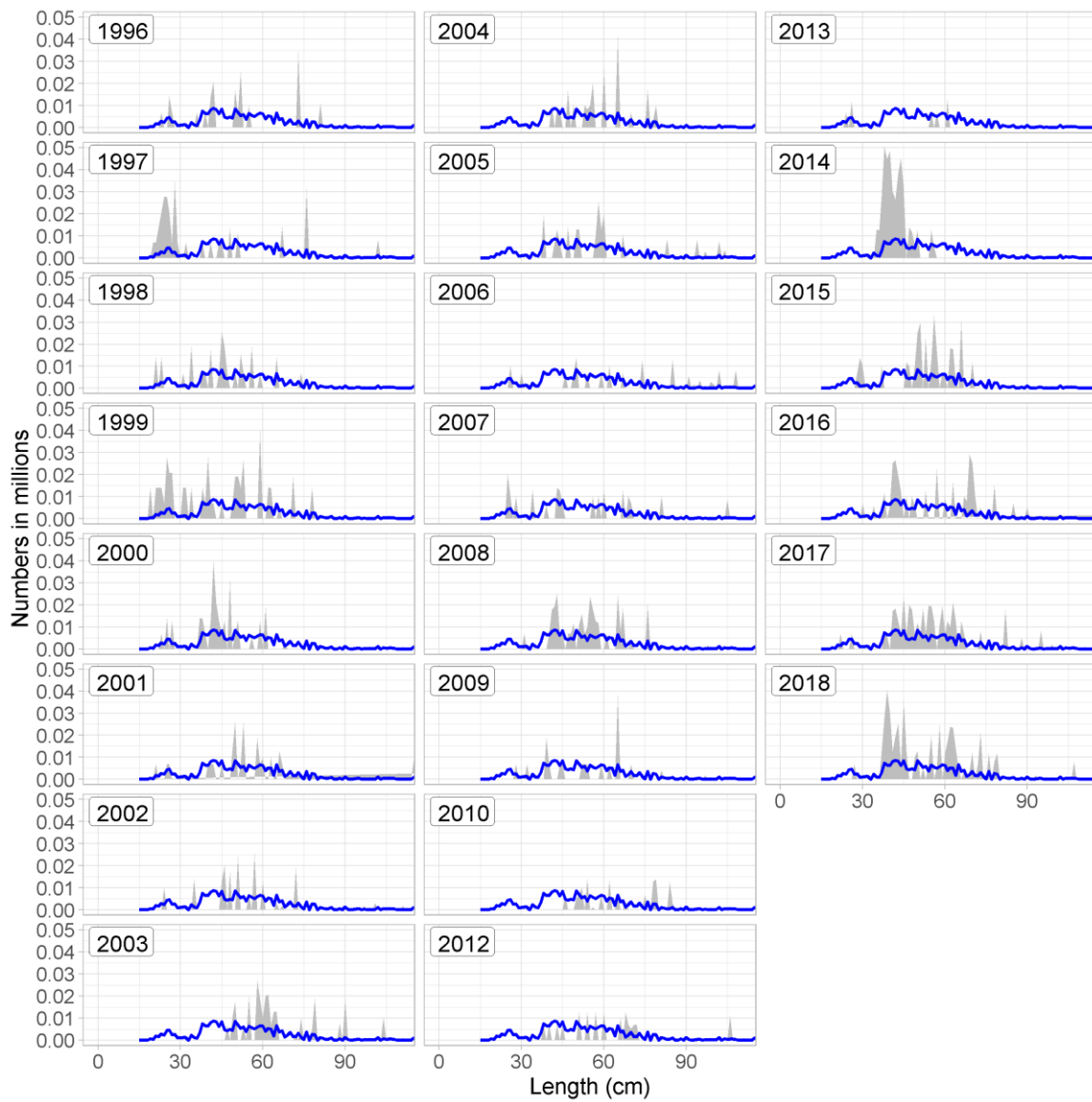


Figure 8. Atlantic halibut. Length disaggregated abundance indices from the autumn survey. The blue line shows the mean for all years.

Mynd 8. Lúða. Lengdarskiptar vísitölur úr stofnmælingu botnfiska að hausti ásamt meðaltali allra ára (blá lína).

Halibut is mainly caught in the NW and W areas in the spring survey (Figures 9 & 10), although a considerable proportion of the catch was caught in the SE area between 2002 and 2010 (Figure 10).

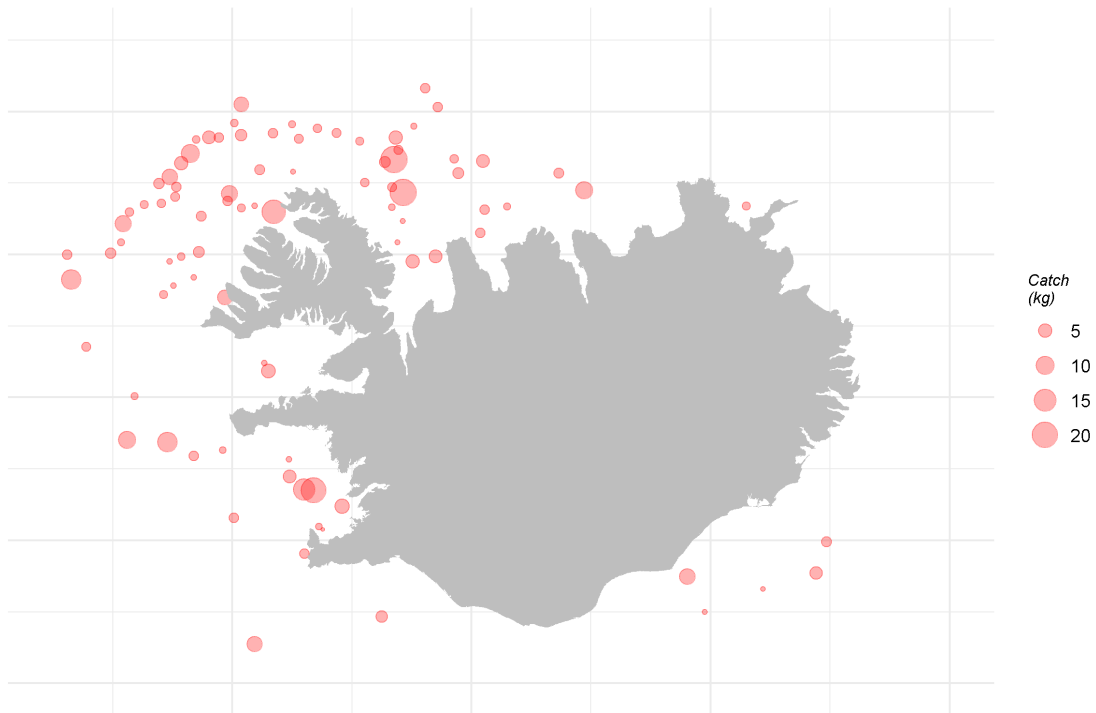


Figure 9. Atlantic halibut. Spatial distribution in the spring survey in 2019

Mynd 9. Lúða. Útbreiðsla í stofnmælingu botnfiska að vori 2019

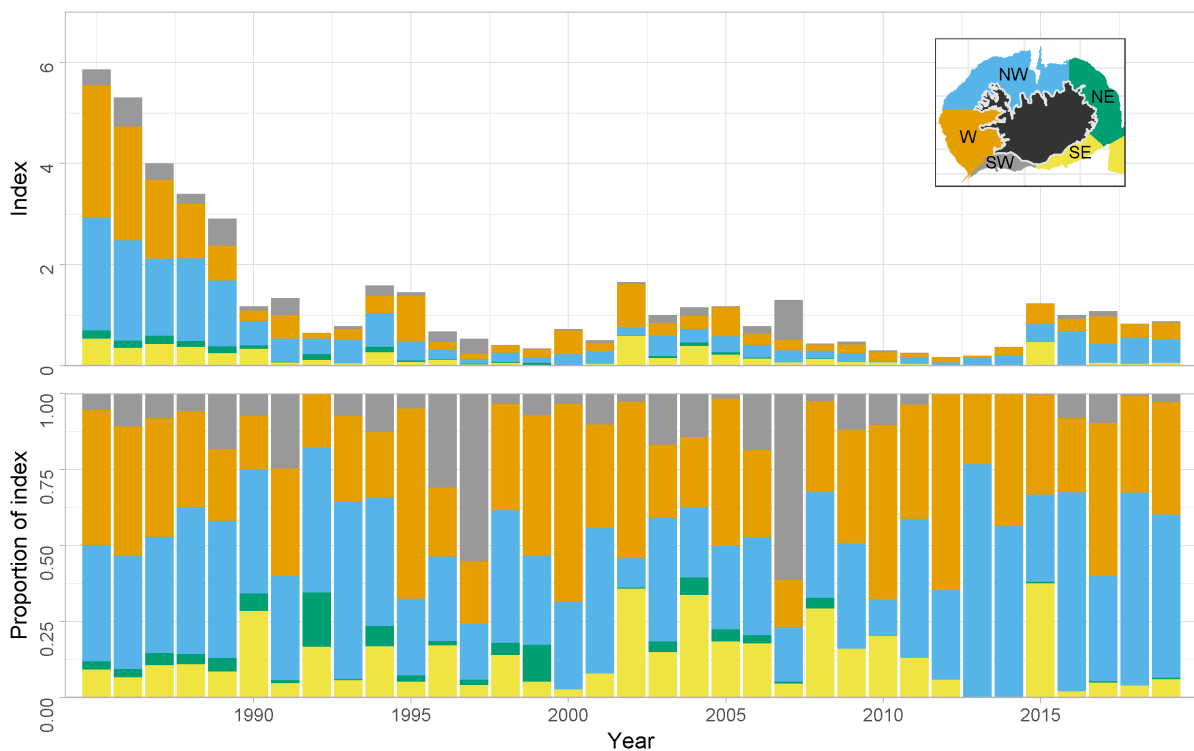


Figure 10. Atlantic halibut. Spatial distribution of biomass index from the spring survey.

Mynd 10. Lúða. Dreifing lífmassavísitölu í stofnmælingu botnfiska að vori.

Catches of halibut in the autumn survey are sporadic events with no discernible pattern (Figures 11 & 12).

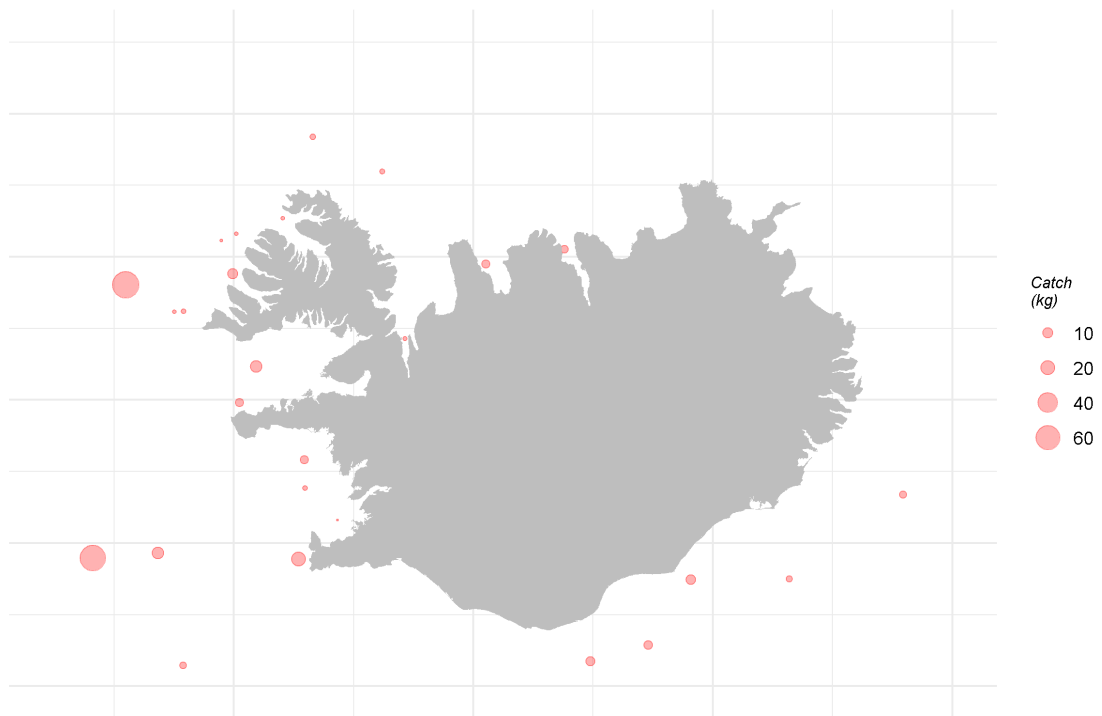


Figure 11. Atlantic halibut. Spatial distribution of halibut in the autumn survey 2018.

Mynd 11. Lúða. Útbreiðsla í stofnmælingu botnfiska að hausti árið 2018.

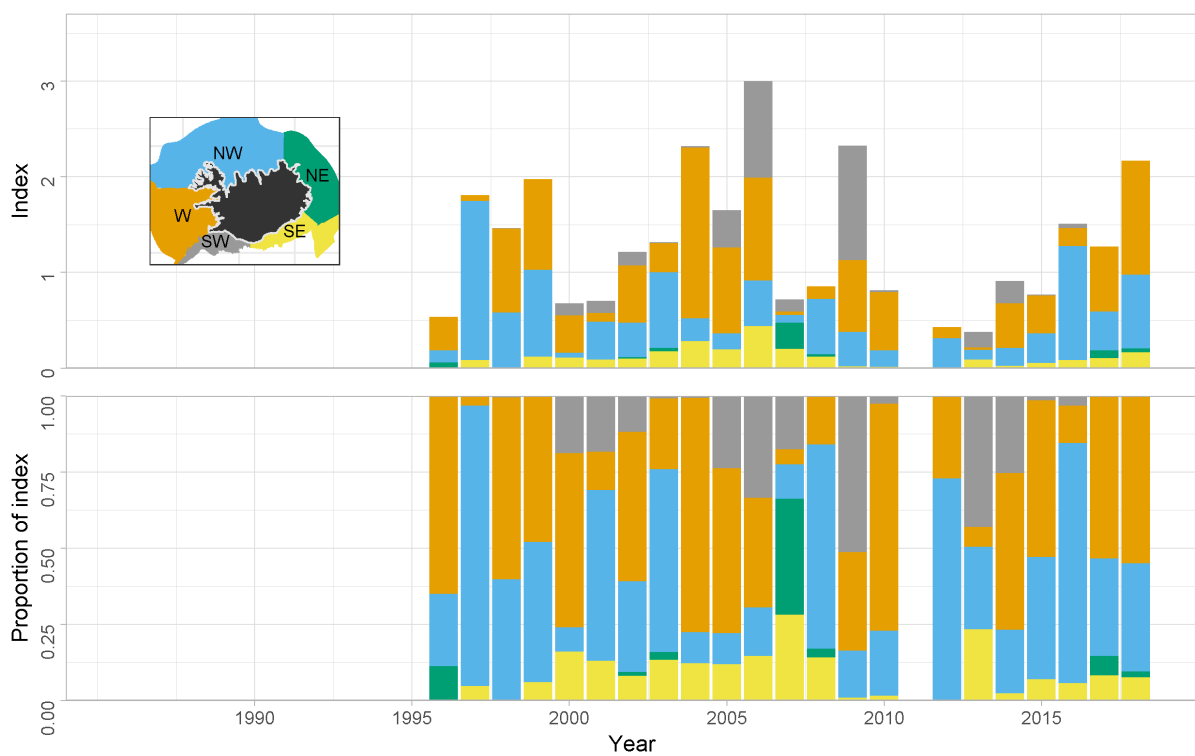


Figure 12. Atlantic halibut. Spatial distribution of biomass index from the autumn survey.

Mynd 12. Lúða. Dreifing lífmassavísitölu í stofnmælingu botnfiska að hausti.

MANAGEMENT

The Ministry of Industries and Innovation is responsible for management of the Icelandic fisheries and implementation of legislation. 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. No TAC has been set since.