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Results for Greenland halibut, American plaice and Atlantic cod of the Spanish survey in NAFO Div. 3NO for the period 1997-2011

by

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Abstract

Greenland halibut (*Reinhardtius hippoglossoides*), American plaice (*Hippoglossoides platessoides*) and Atlantic cod (*Gadus morhua*) indices from the bottom trawl survey that Spain carries out in Spring since 1995 in Div. 3NO of the NAFO Regulatory Area are presented. Mean catch per town, biomass, length and age distributions for the three species are presented since 1997, year in which the survey extended the depth strata. In 2001, the R/V *Vizconde de Eza* replaced the C/V *Playa de Menduíña* in the execution of the survey. We present the transformed to the R/V *Vizconde de Eza* series for the period 1997-2000, and the original obtained data for the period 2002-2011. In 2001, there are data from the two vessels. Greenland halibut biomass and abundance estimates present a decreasing trend since 1999, cut in year 2007 with a slight increase and a high increase since 2008, reaching in 2009 the highest value in the series. In 2011 the biomass drops under the 2008 value. In last years it can be seen a presence of juveniles, mainly in 2004, but the greatest lengths have failed, although in 2009 there is a quite good presence of individuals of ages 6-7 and in 2010 between 5-7. In 2011 the presence of all the ages is poor. For American plaice we can see an increasing trend along the whole period, reaching a maximum of biomass and number in 2006, following by the 2008 indices, cut in 2009 with a decrease in the indices, remains in a lower value than in the year 2003 following with an increase in 2010-2011. The greatest recruitment in the presented series occurred in 2004 and we can follow their mode along the years, reaching its maximum in 2008. For Atlantic cod it can be seen a general decreasing in the biomass between 2002 and 2005 and an increasing since then, especially in 2006 and, higher, in 2009-2011. For this species, an increase in the recruitment can be seen in 2004 and 2005, and from 2007 the youngest length classes are much over the rest of the length classes. With the 2006 cohort the series reaches the maximum number of its historical values at five years in 2011.

Material and Methods

Since 1995, Spain carries out a Spring-Summer survey in the NAFO Regulatory Area of Div. 3NO. To 2000, the survey was on board the C/V *Playa de Menduíña* with a net trawl type *Pedreira*. In 2001 this vessel was replaced by the R/V *Vizconde de Eza*, using a trawl net type *Campelen*. To know more details about the technical specifications of the surveys, see Walsh *et al.*, 2001 and González Troncoso *et al.*, 2004.

The catch of each haul was sorted and weighted into species and a sample of each species was taken in order to measure the length distribution. For Greenland halibut, American plaice and Atlantic cod each individual of the sample was measured to the total length to the nearest lower cm. We present the indices for the period 1997-2011. In 1995 and 1996 only the less deep strata were surveyed, so these years are not representative for these species, thus they are not included in the analysis.

The number of valid tows, the depth strata covered and the dates of the survey series (1997-2011) are presented in Table 1. Table 2 shows the swept area and the tow number by strata and year.

For each species, all the indices are presented transformed until 2000 and no-transformed in the period 2002-2011. In year 2001 there are data transformed from the former vessel with original data from the new vessel. To know more about the transformation, see González-Troncoso *et al*., 2005 and González-Troncoso *et al*., 2006. We present per haul the mean catch, the stratified mean catch per tow and the biomass with their variance per year; the length distribution in number per haul stratified mean catches per length, sex and year; as well as mean catches per tow age numbers with their mean length and mean weight by age. The age numbers were calculated starting from the stratified mean catches per haul length distribution applying the Age Length Key (ALK) for age-length keys. Weight at age was calculated by applying the length/weight relationship for each year to the mean length.

Results

Greenland halibut

The Greenland halibut stock in Subarea 2 and Div. 3KLMNO is considered to be part of a biological stock complex, which includes Subareas 0 and 1. Abundance and biomass indices were available from research vessel surveys by Canada in Div. 2J+3KLMNO (1978-2011), EU in Div. 3M (1988-2011) and EU-Spain in Div. 3NO (1995-2011). In 2003 the Fisheries Commission implemented a fifteen years rebuilding plan for this stock, establishing progressively decreasing TACs. The catches in 2004-2011 have exceeded the rebuilding plan TACs by 30% on average, despite reductions in fishing effort. Fishing is now concentrated within Div. 3LM. The CPUE has increased considerably over the last years.

The exploitable biomass (age 5+) declined to low levels in 1995-97 due to very high catches and high fishing mortality. It increased during 1998-2000 due to greatly reduced catches, much lower fishing mortality and improved recruitment. Biomass increased over 2004-2008 with decreases in fishing mortality. However, it has shown decreases over 2008-2011, in part due to weaker year-classes recruiting to the biomass. The current (2004-2011) estimates of exploitable biomass are amongst the lowest in the series. The current assessment indicates that year-classes about to recruit to the exploitable biomass are well below average strength. The 2009 and 2010 estimates of recruitment are considerably improved, but will not recruit to the fishery for at least another three years. Recent recruitment has been far below average. After decreasings since 2003, in 2011 fishing mortality had a slight increase (NAFO, 2011).

Mean catches and Biomass

Table 3 shows the mean catches and their variance per haul and year for Greenland halibut. Mean weight per tow by stratum with the total variance per year are presented in Table 4 and in Figure 1 we compare these data with the mean number per town. Table 5 and Figure 2 present the biomass per swept area per stratum and their total variance per year, as the biomass corresponding with the ages 5+ and 10+. In Table 6 we present the length-weight relationship parameters *a* and *b*.

Greenland halibut biomass decreased since 1999 to 2006, and from 2007 to 2010 the biomass increased, mainly in 2009 and 2010, when the biomass reaches the highest values in the series. In 2011, the biomass decreased to a half of the 2010 value, reaching the same level as in 2008. The lowest biomass value was in 2002. The biomass 5+ and 10+ have had the same trend as the total biomass with a marked increase during 2008-2010, being the highest values of the series, and a decreasing in 2011. Since 2007, the 5+ biomass represents more than the 90% of total biomass. Despite of this, with respect to the mean number per tow, although in the 2008-2010 period there was a substantial increase in the numbers, this increase is not as the increase in biomass, reaching the level of the 2001 numbers per town, but still far of the values of the first years of our series. Since 2009, there is a decrease in the numbers.

Length Distribution

Table 7 presents the stratified mean catches per haul length distribution for the Greenland halibut by sex and year, with the number of samples in which there were length measures, the total number of individuals measured in these samples, the sampled catch and the range of lengths met, as the total catch of this species and the total hauls made in

the survey. In Figures 3 and 4 we can follow the evolution along the years. We can follow a mode since 1997 until 2001, but since then no high new values appears. The highest recruitments were in 1997, 2001 and 2004. In 2006 and 2007 the small individuals (around 12-14 cm, corresponding to 1 year of age) are the mode of the length distribution range, but all the length ranges were poor. The same occurred in 2011, with a mode in the leghts 14-15, that corresponds to age 1. In 2009 and 2010 an increase in number for lengths between 38-52 cm (ages 5-7) can be seen, but they almost disappear in 2011. It seems that the high increase in the biomass in 2009-2010 was due to the higher presence of these length classes, while at the beginning of the series the presence of juveniles was stronger.

Age numbers

We present the abundance at age per stratified mean catch by haul by sex and year in Table 8 and the total by year in Figure 5. Individuals between 0 and 20 years were caught in the period 1997-2011 and in last years (most since 2002) more number of younger individuals was caught. It can be due to the change of gear and/or vessel. We can follow three conspicuous cohorts in our series, the 1994-1996 cohorts (ages 1, 2 and 3 in 1997). Cohorts from following years seem to be weaker than those ones, but more constant. And 2001-2003 cohorts appear to be quite strong, as we can see in recent years, particularly 2002 one, and these cohorts seem to be present in year 2008 (ages 5 to 7) and in 2009 (ages 6 to 8). In 2010 the mode of the ages is between 5 and 7 years, which can imply that the cohorts of years 2004 and 2005 could be better than it can be seen in the graph. In 2011 there were two modes, one in age 1 and another in age 7, but the presence of both is very weak.

Mean length and mean weight

Mean length and weight at age by sex over time are presented in Tables 9 and 10, and shown in Figures 6 and 7. It seems that the greatest ages were increasing their mean length and weight until 2003, and falling in the youngest individuals. In 2011 all the mean length and weight have increase, except for age 13. The total mean length and the total mean weight had an increase since 2006.

American plaice

There was no directed fishing of American plaice in 1994 and there has been a moratorium since 1995. Even under moratorium, catches increased substantially from 1995 to 2003 and then decreased. Biomass and SSB are very low compared to historic levels. SSB declined to the lowest estimated level in 1994 and 1995. It has increased since then but still remains very low. Recruitment has been generally poor for the past two decades; however, the 2003 year-class is the largest since the 1985 year-class (NAFO, 2011).

Mean catches and Biomass

American plaice haul mean catches and SD by stratum are presented in Table 11. Mean weight per tow by stratum and year and their SD are presented in Table 12.

The entire time series (1997-2011) of biomass and their SD estimates for American plaice are presented in Table 13. Estimated parameters *a* and *b* values of length-weight distribution are presented in Table 14.

The American plaice indices show a general increasing trend along the years, agree with the results from the Canadian surveys. We can see a decreasing in 2001 and 2002 and an increasing since then, reaching the maximum historical value in 2006 and 2008, with a virtually identical value, remained in 2007 at the same level than in 2005. But in 2009 this increasing trend was broken and the value is below the 2001 value, both in weight and in numbers, following with an increase in 2010 and 2011 (Figs. 8 and 9).

Length Distribution

Table 15 and Figures 10 and 11 show the stratified mean numbers per tow length distribution by sex and year, besides the sampled size and catch, for the period 1997-2011. The data have been grouped in 2 cm intervals. Between years 2000 and 2004 we can follow a mode that then disappeared; probably the 1998 year-class. In 2004 there is a great presence of juveniles (8 cm) and in 2005 the mode appears around 14 cm, following with a mode of around 20 cm in 2006, 24 in 2007, 26 in 2008 and 28 in 2009. This mode can be seen in 2010 around 30 cm and in

2011 around 32 cm, but the mode length in those years is 28, as in 2009. In 2008 and 2010 there is a quite good presence of juveniles (individuals of 10-12 cm in 2008 and 12 cm in 2010) that does not appear in 2011.

Age numbers

We present the mean number per tow at age by sex and by year in Table 16 and the total by year in Figure 12. The ALK is the 3N Canadian one. In 2006 there were no data enough to make an ALK, so we use the sum of the ALKs for the period 1997-2005, separated by sexes. We can follow a cohort without problems since the year 2000, starting in individuals of 2 years old (1998 cohort), reaching 13 year old in 2011; a second cohort, weaker, can be followed since 1999, starting in 2 years old (1997 cohort). Another cohort from the year 2002 (one year old in 2003), can be followed until 2011, reaching 9 years old, although it failed at 5 years old. And the 2003 cohort (one year in 2004) is a very strong cohort, reaching in 2008 five years old and the largest number in the whole series, and in 2011 eigth years old.

Mean length and mean weight

Mean length and weight at age by sex over time are presented in Tables 17 and 18, and shown in Figures 13 and 14. The mean length is more or less stable in all ages, at least since 2002. The same occurs with the mean weight, although with more variations. The major variations appear in the oldest ages studied: 12, 13, 14 and 15+ years old individuals. From 1997 to 1999 a general decreasing in the two means is observed.

Atlantic cod

Atlantic cod in Divisions 3NO has been under moratorium to directed fishing since 1994. According to the NAFO Scientific Council, the stock of Atlantic cod in Divisions 3NO declined dramatically during the mid-1980s, and the total biomass and the spawning biomass are currently estimated to be at an extremely low level (NAFO, 2011).

Mean Catches and Biomass

The Atlantic cod haul mean catches and SD by stratum are presented in Table 19. Atlantic cod stratified mean catches per tow by stratum and year and their SD are presented in Table 20.

The entire time series (1997-2011) of biomass and their SD estimates for Atlantic cod are presented in Table 21. Estimated parameters *a* and *b* values of length-weight relationship are presented in Table 22.

We can see a great variation in the cod indices since 1997 to 2005, but this is due to a few hauls in which the presence of cod was very high. For example, in 1998 and 2001, the C/V *Playa de Menduíña* made a more than seven tons cod catch in a single haul. Besides this, in 2001, the R/V *Vizconde de Eza* made two hauls with more than a ton of cod catches. But before year 2006, and apart from those hauls, the catches of cod were very poor. Between 2002 and 2005 there was a decreasing in the biomass. Since 2006, an increasing trend in the biomass of this species can be seen. Although the 2006 increase is above all for a single catch of almost 2 tons, in general the catches of Atlantic cod in the survey of 2006 were over the mean. In 2007 we can see a decrease in the biomass over the 2006 biomass, but still remains greater than in the 2002-2005 period. In 2008 a new high increase is shown, reaching the second highest value in the time series, and in this case there is no haul with very high catches (the maximum was 585.5 kg). In 2009-2011 the biomass reaches new maximums, well above the rest of the values of the series (Fig. 15 and 16).

Length Distribution

Table 23 and Figures 17 and 18 show the stratified mean catches per haul length distribution by year, besides the sampled size and its catch, for the period 1997-2011. The data have been grouped in two cm intervals. The modal values used to be very low before 2006 except in 2001, and in general all lengths presence is very low, even it is very difficult to follow the modal values. In 2001 we have a good presence of individuals between 36 and 58 cm, probably due to the three hauls with great catches of this year. From 2006 a series of great modal values along the length distribution can be seen. In 2006 there is two modes in the length distribution, one around 30 cm and another one around 40 cm. There is no good recruitment until 2004, in which the individuals between 12 and 16 cm

correspond to the greatest presence in the series, and in 2005 between 24 and 32, with a new mode between 12 and 16 cm, as in last year. In 2007 the youngest lengths dominate the length range, with the highest mode in the lengths 12-16, that are between 2 and 4 times the abundance of the 48 cm length class, the following mode. In 2008 and in 2009 we can follow the evolution of these lengths, being in 2008 the dominant lengths the ones between 20 and 26 and in 2009 between 30 and 36 cm. In 2010 and 2011 the mode followed the previous growth.

Age numbers

We present the mean number per tow at age by sex and by year in Table 24 and the total by year in Figure 19. Until 2006, the numbers are too low to follow any cohort. But between 2006 and 2008 there are three good cohorts that we can follow (2005-2007 cohorts). With the 2006 cohort the series reaches the maximum number of its historical values at four years in 2010. The 2007 cohort (4 years in 2011) is slight strong. But it seems that no new good recruitments have ocurred.

Mean length and mean weight

Mean length and weight at age by sex over time are presented in Tables 25 and 26, and shown in Figures 20 and 21. For the central ages, the mean length and the mean weight seem to be more or less stable. That do not occur in the oldest ages, with the two parameters very scattered. The total mean length and mean weight present no trend until 2006, with an increase since then.

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TABLE 1.- Spanish spring bottom trawl surveys in NAFO Div. 3NO: 1997-2009

Year	Vessel	Valid tows	Depth strata covered (m)	Dates
1997	C/V *Playa de Menduíña*	128	42-1263	April 26-May 18
1998	C/V *Playa de Menduíña*	124	42-1390	May 06-May 26
1999	C/V *Playa de Menduíña*	114	41-1381	May 07-May 26
2000	C/V *Playa de Menduíña*	118	42-1401	May 07-May 28
2001(*)	R/V *Vizconde de Eza*	83	36-1156	May 03-May 24
	C/V *Playa de Menduíña*	121	40-1500	May 05-May 23
2002	R/V *Vizconde de Eza*	125	38-1540	April 29-May 19
2003	R/V *Vizconde de Eza*	118	38-1666	May 11-June 02
2004	R/V *Vizconde de Eza*	120	43-1539	June 06–June 24
2005	R/V *Vizconde de Eza*	119	47-1485	June 10–June 29
2005	R/V *Vizconde de Eza*	119	47-1485	June 10–June 29
2006	R/V *Vizconde de Eza*	120	45-1480	June 7–June 27
2007	R/V *Vizconde de Eza*	110	45-1374	May 29–June 19
2008	R/V *Vizconde de Eza*	122	45-1374	May 27–June 16
2009	R/V *Vizconde de Eza*	109	45-1374	May 31–June 18
2010	R/V *Vizconde de Eza*	95	45-1374	May 30–June 18
2011	R/V *Vizconde de Eza*	122	45-1374	June 5–June 24

(*)For the calculation of the series, 83 hauls were taken from the R/V *Vizconde de Eza* and 40 hauls from the C/V *Playa de Menduíña* (123 hauls in total)

TABLE 2.- Swept area and number of hauls by stratum. Spanish Spring Surveys in NAFO Div. 3NO: 1997-2011. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are from C/V *Playa de Menduíña* data, and 2002-2011 data are from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

	1997		1998		1999		2000		2001		2002		2003		2004	
Stratum	Swept area	Tow number	Swept area	Tow number	Swept area	Tow number	Swept area	Tow number	Swept area	Tow number	Swept area	Tow number	Swept area	Tow number	Swept area	Tow number
353	0.0480	4	0.0465	4	0.0360	3	0.0356	3	0.0341	3	0.0476	4	0.0334	3	0.0338	3
354	0.0233	2	0.0356	3	0.0218	2	0.0356	3	0.0338	3	0.0356	3	0.0338	3	0.0345	3
355	0.0233	2	0.0221	2	0.0229	2	0.0233	2	0.0240	2	0.0236	2	0.0229	2	0.0229	2
356	0.0225	2	0.0221	2	0.0229	2	0.0225	2	0.0240	2	0.0233	2	0.0225	2	0.0221	2
357	0.0443	4	0.0240	2	0.0236	2	0.0124	1	0.0244	2	0.0240	2	0.0229	2	0.0229	2
358	0.0563	5	0.0236	3	0.0349	3	0.0341	3	0.0345	3	0.0345	3	0.0338	3	0.0330	3
359	0.0690	6	0.0698	6	0.0364	3	0.0469	4	0.0803	7	0.0686	6	0.0791	7	0.0791	7
360	0.3754	32	0.2561	25	0.2325	19	0.2396	20	0.2423	20	0.2865	25	0.2254	20	0.2310	20
374	0.0353	3	0.0353	3	0.0244	2	0.0240	2	0.0240	2	0.0345	3	0.0225	2	0.0233	2
375	0.0116	1	0.0345	3	0.0236	2	0.0244	2	0.0338	3	0.0353	3	0.0330	3	0.0338	3
376	0.1583	14	0.0930	10	0.1219	10	0.1200	10	0.1155	10	0.1140	10	0.1125	10	0.1166	10
377	0.0116	1	0.0229	2	0.0240	2	0.0229	2	0.0229	2	0.0229	2	0.0225	2	0.0218	2
378	0.0210	2	0.0120	2	0.0229	2	0.0233	2	0.0236	2	0.0233	2	0.0225	2	0.0225	2
379	0.0206	2	0.0356	3	0.0236	2	0.0225	2	0.0229	2	0.0229	2	0.0229	2	0.0124	1
380	0.0210	2	0.0113	2	0.0236	2	0.0236	2	0.0206	2	0.0225	2	0.0229	2	0.0221	2
381	0.0221	2	0.0229	2	0.0229	2	0.0236	2	0.0236	2	0.0229	2	0.0229	2	0.0225	2
382	0.0461	4	0.0229	3	0.0484	4	0.0499	4	0.0469	4	0.0341	3	0.0454	4	0.0461	4
721	0.0221	2	0.0203	2	0.0244	2	0.0236	2	0.0248	2	0.0233	2	0.0225	2	0.0221	2
722	0.0214	2	0.0101	2	0.0229	2	0.0218	2	0.0233	2	0.0236	2	0.0221	2	0.0218	2
723	0.0210	2	0.0233	2	0.0229	2	0.0248	2	0.0240	2	0.0233	2	0.0229	2	0.0229	2
724	0.0225	2	0.0206	2	0.0225	2	0.0233	2	0.0353	3	0.0225	2	0.0225	2	0.0214	2
725	0.0206	2	0.0086	1	0.0229	2	0.0210	2	0.0116	1	0.0225	2	0.0229	2	0.0225	2
726	n.s.	n.s.	0.0094	2	0.0225	2	0.0221	2	0.0116	1	0.0214	2	0.0225	2	0.0225	2
727	0.0094	1	0.0233	2	0.0236	2	0.0210	2	0.0225	2	0.0233	2	0.0218	2	0.0233	2
728	0.0214	2	0.0206	2	0.0233	2	0.0210	2	0.0229	2	0.0229	2	0.0225	2	0.0180	2
752	0.0218	2	0.0229	2	0.0233	2	0.0206	2	0.0210	2	0.0116	1	0.0229	2	0.0214	2
753	0.0214	2	0.0218	2	0.0229	2	0.0218	2	0.0214	2	0.0229	2	0.0229	2	0.0218	2
754	0.0330	3	0.0210	2	0.0206	2	0.0195	2	0.0195	2	0.0341	3	0.0218	2	0.0214	2
755	n.s.	n.s.	0.0206	2	0.0311	3	0.0431	4	0.0416	4	0.0338	3	0.0221	2	0.0319	3
756	0.0109	1	0.0225	2	0.0225	2	0.0203	2	0.0113	1	0.0229	2	0.0221	2	0.0218	2
757	0.0304	3	0.0206	2	0.0233	2	0.0214	2	0.0233	2	0.0225	2	0.0221	2	0.0218	2
758	0.0214	2	0.0105	2	0.0214	2	0.0210	2	0.0218	2	0.0225	2	0.0221	2	0.0214	2
759	n.s.	n.s.	0.0214	2	0.0218	2	0.0210	2	0.0221	2	0.0225	2	0.0113	1	0.0214	2
760	0.0105	1	0.0214	2	0.0225	2	0.0210	2	0.0229	2	0.0229	2	0.0218	2	0.0221	2
761	0.0315	3	0.0206	2	0.0210	2	0.0221	2	0.0225	2	0.0225	2	0.0225	2	0.0221	2
762	0.0308	3	0.0094	2	0.0210	2	0.0203	2	0.0116	1	0.0225	2	0.0225	2	0.0233	2
763	n.s.	n.s.	0.0218	2	0.0311	3	0.0416	4	0.0330	3	0.0225	2	0.0311	3	0.0326	3
764	0.0206	2	0.0218	2	0.0225	2	0.0218	2	0.0240	2	0.0236	2	0.0221	2	0.0229	2
765	0.0206	2	0.0098	2	0.0221	2	0.0203	2	0.0113	1	0.0236	2	0.0113	1	0.0225	2
766	0.0308	3	0.0191	2	0.0218	2	0.0214	2	0.0203	2	0.0233	2	0.0225	2	0.0225	2
767	n.s.	n.s.	0.0109	2	0.0214	2	0.0210	2	0.0218	2	0.0225	2	0.0229	2	0.0218	2

TABLE 2 (cont.).- Swept area and number of hauls by stratum. Spanish Spring Surveys in NAFO Div. 3NO: 1997-2011. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are from C/V *Playa de Menduíña* data, and 2002-2011 data are from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

	2005		2006		2007		2008		2009		2010		2011	
Stratum	Swept area	Tow number	Swept area	Tow aa	Swept area	Tow number	Swept area	Tow number	Swept area	Tow number	Swept area	Tow number	Swept area	Tow number
353	0.0353	3	0.0371	3	0.0364	3	0.0341	3	0.0345	3	0.0225	2	0.0349	3
354	0.0353	3	0.0364	3	0.0364	3	0.0345	3	0.0338	3	0.0225	2	0.0345	3
355	0.0225	2	0.0248	2	0.0240	2	0.0221	2	0.0233	2	0.0229	2	0.0233	2
356	0.0233	2	0.0240	2	0.0240	2	0.0236	2	0.0229	2	0.0225	2	0.0229	2
357	0.0233	2	0.0244	2	0.0360	3	0.0233	2	0.0116	2	0.0225	2	0.0225	2
358	0.0349	3	0.0349	3	0.0368	3	0.0345	3	0.0341	3	0.0225	2	0.0345	3
359	0.0814	7	0.0975	8	0.0855	7	0.0799	7	0.0795	7	0.0705	6	0.0806	7
360	0.2325	20	0.2340	19	0.2378	20	0.2340	20	0.2273	20	0.1628	14	0.2374	20
374	0.0229	2	0.0236	2	0.0240	2	0.0233	2	0.0225	2	0.0225	2	0.0225	2
375	0.0349	3	0.0364	3	0.0364	3	0.0334	3	0.0341	3	0.0364	3	0.0360	3
376	0.1174	10	0.1219	10	0.1185	10	0.1129	10	0.1133	10	0.0788	7	0.1178	10
377	0.0233	2	0.0236	2	0.0240	2	0.0233	2	0.0225	2	0.0233	2	0.0233	2
378	0.0225	2	0.0240	2	0.0233	2	0.0240	2	0.0229	2	0.0225	2	0.0240	2
379	0.0236	2	0.0236	2	0.0240	2	0.0229	2	0.0229	2	0.0229	2	0.0221	2
380	0.0229	2	0.0229	2	0.0240	2	0.0225	2	0.0229	2	0.0236	2	0.0229	2
381	0.0233	2	0.0229	2	0.0240	2	0.0229	2	0.0229	2	0.0244	2	0.0233	2
382	0.0458	4	0.0469	4	0.0484	4	0.0458	4	0.0450	4	0.0233	2	0.0450	4
721	0.0229	2	0.0236	2	0.0116	1	0.0225	2	0.0229	2	0.0225	2	0.0229	2
722	0.0233	2	0.0240	2	0.0225	2	0.0206	2	0.0225	2	0.0225	2	0.0225	2
723	0.0233	2	0.0236	2	0.0240	2	0.0225	2	0.0225	2	0.0225	2	0.0218	2
724	0.0225	2	0.0233	2	0.0233	2	0.0221	2	0.0233	2	0.0229	2	0.0233	2
725	0.0236	2	0.0233	2	0.0225	2	0.0229	2	0.0229	2	0.0233	2	0.0240	2
726	0.0113	1	0.0225	2	0.0229	2	0.0225	2	0.0229	2	0.0233	2	0.0225	2
727	0.0229	2	0.0225	2	0.0240	2	0.0221	2	0.0113	1	0.0240	2	0.0225	2
728	0.0109	1	0.0225	2	0.0225	2	0.0221	2	0.0229	2	0.0240	2	0.0229	2
752	0.0236	2	0.0225	2	0.0225	2	0.0218	2	0.0229	2	0.0240	2	0.0236	2
753	0.0225	2	0.0225	2	0.0225	2	0.0221	2	0.0116	1	n.s.	n.s.	0.0225	2
754	0.0225	2	0.0225	2	0.0225	2	0.0218	2	0.0113	1	0.0225	2	0.0225	2
755	0.0450	4	0.0338	3	0.0338	3	0.0431	4	0.0116	1	0.0120	1	0.0454	4
756	0.0233	2	0.0229	2	0.0225	2	0.0218	2	0.0225	2	0.0225	2	0.0206	2
757	0.0225	2	0.0225	2	0.0229	2	0.0221	2	0.0229	2	0.0221	2	0.0236	2
758	0.0225	2	0.0225	2	0.0225	2	0.0218	2	0.0225	2	0.0225	2	0.0225	2
759	0.0229	2	0.0225	2	n.s.	n.s.	0.0221	2	0.0113	1	0.0225	2	0.0218	2
760	0.0229	2	0.0225	2	0.0233	2	0.0225	2	0.0229	2	0.0225	2	0.0214	2
761	0.0221	2	0.0233	2	0.0225	2	0.0214	2	0.0225	2	0.0229	2	0.0236	2
762	0.0225	2	0.0233	2	n.s.	n.s.	0.0214	2	0.0225	2	0.0229	2	0.0225	2
763	0.0334	3	0.0225	2	n.s.	n.s.	0.0311	3	n.s.	n.s.	n.s.	n.s.	0.0349	3
764	0.0233	2	0.0233	2	0.0225	2	0.0221	2	0.0116	1	n.s.	n.s.	0.0225	2
765	0.0229	2	0.0236	2	0.0225	2	0.0214	2	0.0225	2	0.0225	2	0.0225	2
766	0.0229	2	0.0229	2	n.s.	n.s.	0.0218	2	0.0225	2	0.0225	2	0.0225	2
767	0.0113	1	0.0233	2	n.s.	n.s.	0.0214	2	n.s.	n.s.	n.s.	n.s.	0.0233	2

TABLE 3.- Greenland halibut mean catch (kg) and SD by stratum. Spanish Spring Surveys in NAFO 3NO: 1997-2011. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

	1997		a 1998		1999		2000		2001		2002		2003		2004	
Stratum	G. halibut Mean	G. halibut SD	G. halibut Mean catch	G. halibut SD	G. halibut Mean catch	G. halibut SD	G. halibut Mean	G. halibut SD	G. halibut Mean	G. halibut SD	G. halibut Mean catch	G. halibut SD	G. halibut Mean	G. halibut SD	G. halibut Mean catch	G. halibut SD
353	0.06	0.053	1.37	1.274	0.61	0.569	0.19	0.178	0.03	0.038	0.21	0.278	0.01	0.013	1.44	2.395
354	0.70	0.095	2.36	1.246	0.86	0.781	0.11	0.057	3.22	1.927	0.85	0.839	0.04	0.029	1.51	2.160
355	4.07	0.230	0.29	0.066	0.22	0.295	0.22	0.274	17.25	15.486	0.43	0.467	2.46	2.492	4.02	5.119
356	4.11	1.871	4.27	4.759	0.23	0.174	0.49	0.043	0.07	0.042	1.40	1.131	2.95	3.695	3.35	3.873
357	1.08	1.341	8.40	6.433	1.69	0.276	0.11	-	2.69	2.135	1.15	1.626	6.72	5.070	1.50	0.521
358	1.38	1.168	2.35	1.843	4.10	3.155	0.48	0.529	8.46	12.298	3.20	0.819	3.45	5.973	0.94	0.438
359	0.66	0.623	0.22	0.185	2.15	3.725	1.35	2.014	1.97	2.329	0.28	0.219	0.30	0.438	1.18	2.137
360	0.04	0.183	0.04	0.158	0.31	0.918	0.13	0.352	0.17	0.484	0.00	0.007	0.02	0.056	0.11	0.459
374	0.00	0.000	0.05	0.080	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.005
375	0.00	-	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.002	0.00	0.000
376	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.003	0.00	0.000
377	0.00	-	0.03	0.039	0.48	0.683	0.16	0.221	0.42	0.537	0.00	0.001	1.55	1.884	0.07	0.011
378	0.78	0.985	0.66	0.873	1.03	0.330	1.09	1.214	5.69	8.040	1.85	0.636	2.97	3.008	0.38	0.530
379	2.23	1.031	1.88	0.826	0.96	0.013	1.23	0.880	4.61	4.236	5.85	4.313	7.67	5.275	2.60	-
380	2.64	1.210	2.48	2.022	3.94	1.326	2.42	1.447	4.06	0.066	5.05	3.041	4.345	0.205	10.3	0.424
381	0.21	0.009	0.70	0.144	2.82	0.985	1.36	0.352	0.90	1.271	0.5275	0.145	1.06	1.188	5.488	6.701
382	0.00	0.000	0.04	0.064	0.00	0.001	0.12	0.147	0.05	0.080	0.401	0.683	0.045	0.061	0.0575	0.068
721	2.98	1.053	11.82	9.833	0.62	0.249	0.48	0.681	0.40	0.431	0.08	0.062	0.12	0.051	1.92	0.693
722	1.53	2.163	24.84	1.628	13.36	7.909	19.49	9.977	1.09	0.863	2.63	2.906	1.66	0.410	24.04	23.144
723	5.16	2.543	5.32	1.956	11.07	10.916	2.85	1.094	1.33	0.240	1.24	1.075	4.02	5.416	3.85	3.755
724	1.92	0.624	8.40	1.044	4.55	1.181	5.83	2.179	3.45	2.786	4.75	1.202	7.07	4.971	12.45	3.182
725	7.85	4.225	2.07	-	4.97	5.763	10.03	8.796	2.67	0.522	7.35	6.718	10.55	0.778	19.57	19.537
726	n.s.	n.s.	27.96	33.187	29.04	26.314	12.95	3.348	3.65	1.200	3.25	3.323	0.00	0.000	14.71	1.287
727	5.16	-	7.80	6.754	10.48	8.316	2.65	1.181	3.79	0.243	2.01	1.400	18.48	11.066	20.47	10.281
728	36.24	23.055	57.21	56.042	62.32	12.655	29.91	0.098	8.62	1.654	7.93	10.986	39.95	17.748	5.70	4.950
752	36.90	9.964	54.22	23.669	56.93	8.677	23.33	1.989	26.37	8.723	0.34	-	39.80	39.032	4.64	5.424
753	32.43	8.270	33.32	8.507	64.23	4.417	49.77	21.700	22.66	4.883	2.45	3.465	16.64	12.721	4.37	0.820
754	18.70	4.941	17.32	4.706	17.12	11.204	46.69	14.381	41.09	41.477	20.33	4.996	19.12	6.484	3.21	0.007
755	n.s.	n.s.	19.07	0.177	15.94	8.279	35.73	20.076	27.16	16.279	0.46	0.655	1.88	2.652	2.64	4.567
756	68.36	-	220.13	34.559	125.28	46.721	60.60	40.187	30.10	16.124	10.55	14.920	23.11	27.994	14.99	4.609
757	34.70	10.823	95.25	21.628	106.53	27.496	37.41	10.108	42.23	4.326	9.95	2.192	2.49	2.348	4.55	6.435
758	39.36	23.502	52.55	9.813	52.72	11.736	56.67	11.487	42.11	8.828	17.15	1.485	0.00	0.000	9.73	3.714
759	n.s.	n.s.	48.19	35.497	44.72	44.096	29.43	8.579	76.11	21.890	2.15	3.041	21.61	-	4.43	3.203
760	10.44	-	32.89	28.743	44.98	46.019	30.56	2.862	9.42	10.861	4.75	4.172	19.38	13.188	14.63	7.958
761	61.90	36.985	46.01	16.364	37.88	1.004	36.09	26.813	8.10	7.778	16.65	16.900	13.26	3.387	2.92	1.996
762	45.89	27.172	38.22	15.038	63.34	37.289	36.37	1.726	22.50	21.072	2.11	1.563	34.91	19.622	8.44	4.349
763	n.s.	n.s.	35.02	27.312	21.44	8.946	25.64	21.799	31.61	22.554	0.74	1.047	1.75	3.037	20.78	9.792
764	20.63	2.422	21.31	10.686	28.81	12.412	16.96	6.498	53.64	1.888	6.95	5.869	28.37	15.882	33.78	29.165
765	35.43	14.289	22.82	3.131	31.43	0.328	37.13	30.587	35.87	13.111	45.90	39.739	31.80	-	20.98	8.464
766	62.87	9.784	20.82	3.479	31.31	20.000	16.76	2.475	16.42	9.557	9.53	1.025	8.91	1.966	8.46	11.958
767	n.s.	n.s.	10.21	50.629	25.90	9.786	21.21	6.393	5.72	2.593	0.85	1.202	15.96	21.270	1.26	1.782

TABLE 3 (cont.).- Greenland halibut mean catch (kg) and SD by stratum. Spanish Spring Surveys in NAFO 3NO: 1997-2011. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

	2005		2006		2007		2008		2009		2010		2011	
Stratum	G. halibut Mean catch	G. halibut SD	G. halibut Mean catch	G. halibut SD	G. halibut Mean catch	G. halibut SD	G. halibut Mean catch	G. halibut SD	G. halibut Mean catch	G. halibut SD	G. halibut Mean catch	G. halibut SD	G. halibut Mean catch	G. halibut SD
353	1.92	2.694	1.44	1.561	0.04	0.014	0.075	0.071	0.052	0.045	0.043	0.060	0.78	0.820
354	3.13	4.202	0.77	0.981	4.90	7.475	0.780	0.716	0.000	0.000	0.805	0.028	0.08	0.143
355	1.36	0.849	3.39	0.858	1.97	2.242	11.719	16.096	0.025	0.035	5.164	3.728	2.44	2.730
356	0.92	0.973	4.85	3.910	1.74	1.725	0.172	0.040	0.000	0.000	3.408	0.371	1.48	0.371
357	1.20	0.817	0.27	0.299	7.31	7.944	2.856	1.450	1.647	0.610	1.767	0.756	0.18	0.136
358	1.91	3.063	0.05	0.056	0.44	0.445	5.547	7.618	0.024	0.029	8.233	11.437	0.27	0.385
359	0.35	0.364	0.00	0.000	0.02	0.030	0.243	0.329	0.000	0.000	0.185	0.396	0.06	0.085
360	0.29	1.075	0.14	0.376	0.00	0.008	0.029	0.100	0.014	0.045	0.031	0.102	0.00	0.020
374	0.00	0.000	0.00	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.000
375	0.00	0.000	0.00	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.000
376	0.00	0.004	0.00	0.006	0.00	0.003	0.000	0.000	0.081	0.253	0.000	0.000	0.00	0.000
377	1.34	1.898	0.40	0.526	0.00	0.006	0.222	0.266	0.072	0.022	0.011	0.016	0.01	0.018
378	0.02	0.005	0.56	0.668	0.39	0.516	1.470	0.485	0.012	0.017	1.105	1.563	0.04	0.030
379	3.72	3.370	0.61	0.418	2.06	0.862	0.708	0.823	0.270	0.382	0.548	0.006	2.26	3.071
380	34.1	23.617	21.445	6.159	5.673	7.770	12.050	5.586	1.409	0.836	2.548	2.421	4.53	0.997
381	6.248	3.948	19.358	5.009	0.7345	0.855	2.859	4.018	0.100	0.083	0.101	0.083	0.68	0.022
382	0.49	0.571	3.712	3.749	0.014	0.020	0.038	0.069	0.000	0.000	0.000	0.000	0.00	0.003
721	0.99	0.131	0.51	0.714	0.66	-	1.791	1.154	16.005	20.923	6.980	7.836	17.80	7.872
722	23.29	12.887	1.75	2.468	12.87	3.097	16.244	3.406	11.325	4.702	44.800	24.749	22.12	2.069
723	2.68	2.271	6.89	3.149	3.31	0.523	1.652	0.457	7.588	8.884	7.225	7.336	7.03	9.685
724	11.98	10.925	22.49	13.740	11.58	5.699	4.603	2.784	25.675	21.178	31.310	7.623	13.85	2.190
725	17.37	18.374	11.81	2.819	10.72	11.836	0.005	0.006	3.095	0.276	11.305	8.337	5.73	1.136
726	12.24	-	2.36	1.146	8.90	3.702	6.194	4.514	213.215	217.457	37.450	9.405	20.33	2.871
727	19.28	7.582	8.80	2.121	21.96	1.640	64.950	17.890	3.982	-	72.685	37.823	26.29	10.165
728	0.84	-	4.36	0.836	18.98	21.814	21.700	12.445	32.950	2.333	110.470	78.814	47.33	20.046
752	5.66	2.482	6.10	0.898	5.34	7.552	17.900	7.071	130.950	130.178	60.800	15.981	24.10	9.751
753	9.00	1.107	4.06	4.380	6.99	7.792	18.795	7.785	45.100	-	n.s.	n.s.	26.57	0.332
754	4.60	6.498	0.65	0.919	20.96	1.612	24.450	11.809	113.100	-	65.350	30.476	20.90	17.819
755	5.61	4.039	4.12	5.260	7.30	2.970	26.838	13.282	27.600	-	46.400	-	15.09	11.234
756	7.11	0.308	6.54	6.739	16.63	17.637	38.650	7.849	18.850	0.919	128.972	50.447	23.30	13.440
757	6.81	3.422	5.58	1.520	35.49	37.929	34.185	16.426	58.216	21.898	48.315	7.191	12.38	2.714
758	11.25	1.775	13.44	14.665	22.09	15.330	44.710	19.361	61.750	3.182	72.300	48.932	10.83	3.917
759	9.03	12.763	0.46	0.651	n.s.	n.s.	53.289	44.846	140.080	-	66.950	33.0219	18.27	14.467
760	4.77	2.843	8.97	6.672	16.31	5.706	26.785	5.197	40.025	21.602	54.300	23.476	30.50	33.375
761	6.61	5.172	5.18	3.603	13.82	2.440	13.611	12.464	44.265	20.457	54.635	37.724	36.28	12.862
762	13.23	3.500	16.55	21.529	n.s.	n.s.	27.274	24.047	53.850	9.4045	68.150	55.6493	41.67	8.437
763	5.06	6.575	7.07	2.920	n.s.	n.s.	19.762	14.378	n.s.	n.s.	n.s.	n.s.	17.93	11.358
764	4.07	5.756	13.46	2.380	18.67	4.197	19.406	9.965	17.340	-	n.s.	n.s.	32.86	11.566
765	18.44	0.926	13.00	14.333	24.07	8.167	26.025	19.311	53.062	29.470	31.615	15.620	14.02	6.512
766	9.33	13.198	3.69	2.534	n.s.	n.s.	12.829	7.877	10.415	1.011	26.365	9.836	15.10	8.372
767	0.00	-	0.80	1.131	n.s.	n.s.	6.409	4.653	n.s.	n.s.	n.s.	n.s.	18.02	19.176

TABLE 4.- Stratified mean catches (Kg) by stratum and year and SD by year of Greenland halibut (1997-2011). n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data (by FPC). 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
353	15.61	368.31	164.80	50.27	7.17	57.16	2.06	387.99	516.48	386.10	10.76	20.18	14.08	11.43	210.90
354	171.84	581.54	211.23	27.55	792.94	209.92	10.33	371.38	769.98	188.27	1204.25	191.88	0.00	197.91	20.34
355	301.21	21.29	16.18	16.14	1276.50	31.86	181.89	297.48	100.64	251.12	145.41	867.17	1.85	382.14	180.60
356	193.06	200.47	10.97	23.25	3.29	65.80	138.51	157.52	43.33	227.86	81.78	8.08	0.00	160.15	69.44
357	176.36	1377.73	277.07	17.81	441.16	188.60	1101.26	246.25	197.05	45.02	1199.33	468.30	270.11	289.71	29.52
358	310.53	529.11	921.77	108.61	1903.50	720.00	776.85	212.40	430.50	10.58	98.18	1248.08	5.48	1852.43	61.65
359	279.62	94.44	905.35	568.81	827.57	116.83	125.94	495.40	145.85	0.00	8.06	102.30	0.00	77.96	24.36
360	120.66	100.23	852.78	358.57	461.98	5.79	49.54	314.48	795.80	379.37	4.87	79.32	40.21	87.27	12.38
374	0.00	9.93	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
375	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
376	0.00	0.00	0.00	0.00	0.00	0.00	1.73	0.00	1.60	2.40	1.60	0.00	108.32	0.00	0.00
377	0.00	2.78	48.27	15.59	42.00	0.10	154.80	7.40	134.20	39.80	0.40	22.20	7.15	1.10	1.30
378	108.38	92.26	143.03	151.61	790.22	257.15	413.25	52.13	2.71	77.49	53.52	204.33	1.67	153.60	5.14
379	236.64	199.42	101.35	130.87	488.13	620.10	813.02	275.60	394.00	64.50	218.41	75.05	28.62	58.09	240.04
380	253.84	237.93	377.84	232.32	389.43	484.80	417.12	988.80	3273.60	2058.72	544.61	1156.80	135.26	244.61	434.40
381	30.54	100.25	406.36	196.29	129.93	75.96	152.64	790.27	899.71	2787.55	105.77	411.62	14.33	14.47	97.42
382	0.00	12.74	0.16	42.51	16.16	137.54	15.44	19.72	168.07	1273.22	4.80	13.12	0.00	0.00	0.43
721	193.53	768.09	40.40	31.32	25.68	5.23	7.54	124.80	64.51	32.83	42.90	116.42	1040.33	453.70	1156.77
722	128.46	2086.59	1122.44	1637.46	91.56	220.50	139.44	2018.94	1956.15	146.58	1081.08	1364.45	951.30	3763.20	1858.08
723	799.62	824.44	1715.78	441.21	206.15	192.20	623.18	596.29	414.78	1068.42	513.05	256.06	1176.14	1119.80	1089.34
724	237.69	1041.12	564.01	722.86	427.80	589.00	876.06	1543.80	1484.90	2788.45	1435.92	570.71	3183.70	3882.44	1717.96
725	824.43	217.35	521.45	1052.65	280.46	771.75	1107.75	2054.33	1823.59	1239.74	1125.44	0.47	324.98	1187.03	601.28
726	n.s.	2013.07	2090.94	932.35	262.92	234.00	0.00	1059.12	880.92	169.56	640.62	445.97	15351.48	2696.40	1463.98
727	495.47	749.00	1006.54	253.97	364.03	192.96	1773.60	1965.12	1850.98	844.80	2108.16	6235.20	382.27	6977.76	2523.60
728	2826.86	4462.31	4861.26	2333.24	672.64	618.66	3116.10	444.60	65.52	340.00	1480.09	1692.60	2570.10	8616.66	3691.35
752	4833.71	7102.82	7457.90	3056.49	3454.13	1731.75	5213.80	607.19	740.81	798.45	699.54	2344.90	17154.45	7964.80	3156.45
753	4475.84	4597.53	8863.93	6868.76	3126.94	338.10	2295.63	603.06	1242.35	560.69	964.62	2593.71	6223.80	n.s.	3665.97
754	3365.21	3117.02	3081.94	8403.69	7396.15	3141.00	3440.70	576.90	827.10	117.00	3772.80	4401.00	20358.00	11763.00	3762.00
755	n.s.	7342.42	6136.26	13757.44	10457.90	155.28	721.88	1015.12	2160.81	1585.43	2811.78	10332.44	10626.00	17864.00	5810.61
756	6904.11	22233.50	12653.16	6121.02	3040.24	1065.55	2333.61	1514.09	718.36	660.04	1679.73	3903.65	1903.85	13026.12	2353.65
757	3539.38	9715.91	10866.31	3815.73	4307.61	1014.90	253.98	464.10	694.62	568.65	3619.98	3486.87	5937.98	4928.13	1262.66
758	3896.21	5202.82	5218.91	5610.39	4168.97	1697.85	0.00	962.87	1113.26	1330.56	2186.91	4426.29	6113.25	7157.70	1072.17
759	n.s.	6119.66	5679.93	3737.70	9666.37	273.05	2744.47	561.98	1146.18	58.42	n.s.	6767.70	17790.16	8502.65	2320.29
760	1608.22	5065.54	6926.79	4706.01	1450.68	731.50	2983.75	2252.64	734.58	1381.07	2510.97	4124.89	6163.85	8362.20	4697.00
761	10584.19	7867.63	6477.12	6170.76	1385.10	2847.15	2266.61	499.58	1129.80	885.01	2362.37	2327.40	7569.32	9342.59	6203.03
762	9728.04	8102.93	13428.13	7711.31	4769.98	446.26	7399.86	1788.22	2803.70	3509.24	n.s.	5782.09	11416.20	14447.80	8833.19
763	n.s.	9139.92	5595.80	6691.10	8250.35	193.14	457.62	5422.71	1319.79	1846.44	n.s.	5157.80	n.s.	n.s.	4679.73
764	2063.07	2131.30	2880.87	1695.94	5363.50	695.00	2837.00	3377.75	407.00	1345.70	1866.75	1940.60	1734.00	n.s.	3285.85
765	4392.98	2829.86	3897.46	4604.20	4447.98	5691.60	3943.20	2600.90	2285.94	1611.38	2984.06	3227.10	6579.63	3920.26	1737.86
766	9053.27	2998.23	4508.03	2413.42	2364.63	1371.60	1283.04	1217.59	1343.88	531.07	n.s.	1847.38	1499.76	3796.56	2174.40
767	n.s.	1613.33	4092.64	3351.32	904.20	134.30	2521.68	199.08	0.00	126.40	n.s.	1012.62	n.s.	n.s.	2847.24
TOTAL	72149	121271	124125	98061	84456	27324	52695	38088	35083	31338	37569	79227	146677	143304	73352.36
$\overline{Y}$	7.73	11.73	12.00	9.48	8.17	2.64	5.10	3.68	3.39	3.03	3.98	7.66	14.78	14.80	7.09
S.D.	0.62	0.89	1.00	0.75	0.84	0.45	0.61	0.40	0.36	0.42	0.44	0.74	1.73	1.40	0.63

TABLE 5.- Survey estimates (by the swept area method) of Greenland halibut biomass (t) and SD by stratum and year in NAFO Div. 3NO. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels. The last two rows present the biomass corresponding to set of ages 5+ and 10+.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
353	1	32	14	4	1	5	0	34	44	31	1	2	1	1	18
354	15	49	19	2	70	18	1	32	66	16	99	17	0	18	2
355	26	2	1	1	106	3	16	26	9	20	12	78	0	33	16
356	17	18	1	2	0	6	12	14	4	19	7	1	0	14	6
357	16	115	23	1	36	16	96	22	17	4	100	40	46	26	3
358	28	46	79	10	165	63	69	19	37	1	8	109	0	165	5
359	24	8	75	49	72	10	11	44	13	0	1	9	0	7	2
360	10	9	70	30	38	1	4	27	68	31	0	7	4	8	1
374	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
376	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0
377	0	0	4	1	4	0	14	1	12	3	0	2	1	0	0
378	10	8	13	13	67	22	37	5	0	6	5	17	0	14	0
379	23	17	9	12	43	54	71	22	33	5	18	7	3	5	22
380	24	21	32	20	38	43	36	89	286	180	45	103	12	21	38
381	3	9	36	17	11	7	13	70	77	244	9	36	1	1	8
382	0	1	0	3	1	12	1	2	15	109	0	1	0	0	0
721	17	76	3	3	2	0	1	11	6	3	4	10	91	40	101
722	12	195	98	151	8	19	13	186	168	12	96	132	85	335	165
723	76	71	150	36	17	17	54	52	36	90	43	23	105	100	100
724	21	101	50	62	36	52	78	144	132	240	124	52	274	339	148
725	80	25	46	100	24	69	97	183	154	107	100	0	28	102	50
726	n.s.	195	186	84	22	22	0	94	78	15	56	40	1342	232	130
727	53	64	85	24	32	17	163	169	162	75	176	564	34	581	224
728	265	433	418	222	59	54	277	49	6	30	132	153	225	718	323
752	444	621	642	296	329	151	456	57	63	71	62	216	1500	664	267
753	419	423	775	632	293	30	201	55	110	50	86	234	535	0	326
754	306	297	299	862	758	275	316	54	74	10	335	405	1810	1046	334
755	n.s.	712	591	1276	1005	14	65	96	192	141	250	958	914	1489	512
756	635	1976	1125	605	266	93	211	139	62	58	149	359	169	1158	228
757	350	942	935	357	371	90	23	43	62	51	317	315	519	445	107
758	365	478	488	534	383	151	0	90	99	118	194	407	543	636	95
759	n.s.	573	522	356	874	24	244	53	100	5	n.s.	612	1581	756	213
760	153	474	616	448	127	64	274	204	64	123	216	367	539	743	439
761	1008	763	617	558	123	253	201	45	102	76	210	218	673	817	525
762	949	786	1279	762	424	40	658	154	249	302	n.s.	541	1015	1263	785
763	n.s.	840	539	643	750	17	44	499	119	164	n.s.	497	n.s.	0	403
764	200	196	256	156	447	59	256	295	35	116	166	175	149	0	292
765	426	270	352	455	402	482	351	231	200	136	265	302	585	348	154
766	883	314	415	226	233	118	114	108	117	46	n.s.	170	133	337	193
767	n.s.	146	383	319	83	12	220	18	0	11	n.s.	95	n.s.	0	245
TOTAL	6859	11305	11246	9331	7721	2380	4701	3437	3071	2720	3286	7272	12927	12462	6483
S.D.	546	860	973	707	790	410	575	373	325	379	363	708	1506	1197	593
Biomass 5+	4303	6284	6367	8785	6700	2011	3386	2318	2585	2151	3057	6908	11971	12057	6091
Biomass 10+	406	504	660	1111	741	279	495	318	380	182	343	798	1134	1158	1163

TABLE 6.- Length weight relationships in the calculation of Greenland halibut biomass. The equation is $Weight = a(l + 0.5)^b$ Spanish Spring Surveys in NAFO Div. 3NO: 1997-2011. To calculate the parameters for the indeterminate individuals, we used the total data (males + females + indeterminate individuals). *E* means Error.

		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Males	a	0.0042	0.0042	0.0044	0.0020	0.0036	0.0031	0.0033	0.0034	0.0036	0.0042	0.0039	0.0036	0.0032	0.0041	0.0054
		E = 0.0663	E = 0.0824	E = 0.1112	E = 0.1562	E = 0.2538	E = 0.0962	E = 0.1081	E = 0.0886	E = 0.1075	E = 0.0826	E =0.1100	E =0.0713	E =0.0963	E =0.0927	E =0.1308
	b	3.1561	3.1622	3.1587	3.3625	3.1925	3.2496	3.2318	3.2123	3.2050	3.1556	3.1847	3.2001	3.2220	3.1663	3.0923
		E = 0.0185	E = 0.0226	E = 0.0308	E = 0.0433	E = 0.0846	E = 0.0285	E = 0.0318	E = 0.0254	E = 0.0306	E = 0.0238	E = 0.0315	E =0.0205	E =0.0270	E =0.0267	E =0.0378
		R^2 = 0.999	R^2 = 0.999	R^2 = 0.995	R^2 = 0.996	R^2 = 0.997	R^2 = 0.987	R^2 = 0.995	R^2 = 0.997	R^2 = 0.995	R^2 = 0.999	R^2 = 0.996	R^2 = 0.999	R^2 = 0.999	R^2 = 0.997	R2 = 0.993
		N = 893	N = 417	N = 267	N = 315	N = 15	N = 316	N = 509	N = 498	N = 387	N = 402	N= 411	N= 485	N= 273	N= 379	N= 516
Females	a	0.0033	0.0038	0.0033	0.0018	0.0034	0.0027	0.0034	0.0026	0.0050	0.0033	0.0041	0.0032	0.0039	0.0043	0.0029
		E = 0.0650	E = 0.0692	E = 0.0897	E = 0.1003	E = 0.2252	E = 0.1315	E = 0.0871	E = 0.0767	E = 0.1357	E = 0.1215	E =0.0611	E =0.0777	E =0.1422	E =0.0802	E =0.0688
	b	3.2308	3.2043	3.2547	3.4066	3.2240	3.2950	3.2302	3.2998	3.1259	3.2306	3.1750	3.2457	3.1931	3.1713	3.2753
		E = 0.0170	E = 0.0179	E = 0.0237	E = 0.0262	E = 0.0656	E = 0.0368	E = 0.0241	E = 0.0212	E = 0.0374	E = 0.0342	E = 0.0170	E =0.0215	E =0.0384	E =0.0221	E =0.0186
		R^2 = 0.999	R^2 = 0.999	R^2 = 0.996	R^2 = 0.995	R^2 = 0.995	R^2 = 0.993	R^2 = 0.997	R^2 = 0.998	R^2 = 0.991	R^2 = 0.997	R^2 = 0.998	R^2 = 0.999	R^2 = 0.989	R^2 = 0.997	R2 = 0.998
		N = 1473	N = 681	N = 408	N = 642	N = 26	N = 456	N = 726	N = 600	N = 602	N = 539	N= 680	N= 719	N= 382	N= 546	N= 871
Indet.	a	0.0032	0.0036	0.0040	0.0019	0.0038	0.0028	0.0027	0.0027	0.0040	0.0036	0.0042	0.0030	0.0037	0.0040	0.0033
		E = 0.0547	E = 0.0706	E = 0.1010	E = 0.0893	E = 0.1320	E = 0.0941	E = 0.0814	E = 0.0781	E = 0.0941	E = 0.0715	E = 0.0622	E =0.0702	E =0.1398	E =0.0705	E =0.0666
	b	3.2409	3.2201	3.2009	3.3882	3.1925	3.2837	3.2894	3.2812	3.1787	3.2024	3.1663	3.2546	3.2040	3.1909	3.2445
		E = 0.0145	E = 0.0183	E = 0.0269	E = 0.0234	E = 0.0394	E = 0.0263	E = 0.0226	E = 0.0217	E = 0.0260	E = 0.0201	E = 0.0174	E = 0.0195	E = 0.0379	E = 0.0194	E = 0.0185
		R^2 = 0.999	R^2 = 0.999	R^2 = 0.987	R^2 = 0.998	R^2 = 0.997	R^2 = 0.996	R^2 = 0.997	R^2 = 0.997	R^2 = 0.996	R^2 = 0.999	R^2 = 0.998	R^2 =0.999	R^2 =0.988	R^2 =0.998	R2 =0.998
		N = 2383	N = 1105	N = 679	N = 966	N = 44	N = 776	N = 1243	N = 1105	N = 990	N = 941	N= 1095	N= 1206	N= 662	N= 925	N= 1401

TABLE 7.- Greenland halibut length distribution per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels. (*) indicates untransformed data.

	1997				1998				1999				2000				2001			
Length (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.151	0.151	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.043	0.382	0.425	0.000	0.000	0.036	0.036	0.098	0.395	0.000	0.493	0.175	0.169	0.108	0.453	0.404	0.313	0.311	1.028
12	0.477	1.164	0.811	2.452	0.000	0.028	0.086	0.114	0.305	1.049	0.080	1.434	0.525	0.690	0.159	1.374	1.318	1.937	0.566	3.820
14	0.157	0.418	0.234	0.809	0.016	0.283	0.092	0.391	0.244	0.928	0.015	1.187	0.297	0.553	0.019	0.868	1.555	2.089	0.159	3.804
16	0.076	0.081	0.000	0.158	0.038	0.027	0.000	0.065	0.187	0.132	0.000	0.319	0.122	0.162	0.000	0.284	0.280	0.349	0.000	0.629
18	0.934	1.073	0.004	2.012	0.090	0.105	0.000	0.195	0.141	0.322	0.006	0.469	0.146	0.130	0.000	0.276	0.134	0.115	0.000	0.250
20	1.836	2.362	0.012	4.210	0.507	0.540	0.025	1.071	0.867	1.170	0.000	2.037	0.035	0.039	0.000	0.074	0.763	0.900	0.000	1.663
22	1.222	1.395	0.000	2.616	0.699	1.099	0.000	1.798	0.731	1.506	0.000	2.237	0.089	0.083	0.000	0.172	1.431	1.614	0.000	3.045
24	0.507	0.520	0.000	1.027	0.750	0.930	0.000	1.681	0.318	0.591	0.000	0.909	0.152	0.198	0.000	0.350	0.521	0.798	0.000	1.319
26	0.769	0.973	0.000	1.742	1.280	1.447	0.000	2.726	0.625	0.531	0.000	1.156	0.085	0.131	0.000	0.216	0.104	0.136	0.000	0.241
28	1.103	1.091	0.000	2.194	1.893	2.566	0.000	4.459	1.053	0.907	0.000	1.960	0.077	0.104	0.000	0.181	0.033	0.040	0.000	0.073
30	0.676	1.098	0.000	1.774	1.951	2.433	0.000	4.384	1.594	1.649	0.000	3.243	0.150	0.186	0.000	0.335	0.054	0.088	0.000	0.142
32	0.491	0.675	0.000	1.165	1.382	1.885	0.000	3.267	2.232	2.431	0.000	4.662	0.234	0.294	0.000	0.527	0.160	0.189	0.000	0.349
34	0.485	0.723	0.000	1.209	1.543	1.672	0.000	3.214	2.309	2.727	0.000	5.036	0.399	0.464	0.000	0.863	0.169	0.259	0.000	0.428
36	0.412	0.822	0.000	1.234	1.252	1.820	0.000	3.073	1.687	2.289	0.000	3.976	0.677	0.811	0.000	1.488	0.291	0.348	0.000	0.639
38	0.358	0.782	0.000	1.140	1.015	1.509	0.000	2.523	0.815	1.570	0.000	2.385	0.755	1.075	0.000	1.831	0.352	0.528	0.000	0.880
40	0.397	0.689	0.000	1.086	0.546	0.964	0.000	1.509	0.612	1.166	0.000	1.778	0.785	1.562	0.000	2.347	0.539	0.834	0.000	1.373
42	0.332	0.528	0.000	0.860	0.384	0.683	0.000	1.067	0.346	0.758	0.000	1.103	0.608	1.381	0.000	1.989	0.515	0.829	0.000	1.343
44	0.249	0.480	0.000	0.729	0.261	0.560	0.000	0.822	0.260	0.483	0.000	0.742	0.400	1.026	0.000	1.426	0.443	1.064	0.000	1.507
46	0.200	0.394	0.000	0.594	0.199	0.412	0.000	0.611	0.141	0.301	0.000	0.443	0.260	0.624	0.000	0.884	0.384	0.865	0.000	1.249
48	0.115	0.334	0.000	0.449	0.170	0.301	0.000	0.471	0.095	0.223	0.000	0.318	0.115	0.409	0.000	0.524	0.186	0.650	0.000	0.836
50	0.098	0.230	0.000	0.327	0.095	0.233	0.000	0.328	0.043	0.149	0.000	0.192	0.092	0.231	0.000	0.323	0.107	0.347	0.000	0.453
52	0.063	0.154	0.000	0.217	0.082	0.117	0.000	0.199	0.043	0.114	0.000	0.157	0.072	0.175	0.000	0.248	0.051	0.188	0.000	0.239
54	0.049	0.102	0.000	0.151	0.031	0.089	0.000	0.121	0.025	0.065	0.000	0.090	0.037	0.145	0.000	0.182	0.046	0.129	0.000	0.175
56	0.032	0.081	0.000	0.114	0.040	0.079	0.000	0.119	0.021	0.060	0.000	0.081	0.034	0.109	0.000	0.144	0.012	0.073	0.000	0.085
58	0.020	0.057	0.000	0.077	0.015	0.055	0.000	0.070	0.011	0.033	0.000	0.044	0.017	0.060	0.000	0.077	0.019	0.061	0.000	0.080
60	0.019	0.048	0.000	0.068	0.016	0.035	0.000	0.051	0.008	0.029	0.000	0.038	0.012	0.065	0.000	0.076	0.011	0.027	0.000	0.038
62	0.004	0.028	0.000	0.032	0.006	0.020	0.000	0.026	0.006	0.027	0.000	0.034	0.005	0.034	0.000	0.039	0.007	0.042	0.000	0.049
64	0.002	0.033	0.000	0.035	0.007	0.023	0.000	0.030	0.002	0.021	0.000	0.022	0.004	0.035	0.000	0.039	0.003	0.024	0.000	0.027
66	0.002	0.025	0.000	0.027	0.003	0.013	0.000	0.016	0.002	0.016	0.000	0.018	0.004	0.022	0.000	0.026	0.003	0.028	0.000	0.030
68	0.000	0.014	0.000	0.014	0.000	0.008	0.000	0.009	0.001	0.013	0.000	0.013	0.001	0.028	0.000	0.029	0.000	0.011	0.000	0.011
70	0.001	0.011	0.000	0.011	0.000	0.009	0.000	0.009	0.001	0.012	0.000	0.012	0.000	0.020	0.000	0.020	0.000	0.011	0.000	0.011
72	0.000	0.014	0.000	0.014	0.000	0.007	0.000	0.007	0.000	0.012	0.000	0.012	0.000	0.014	0.000	0.014	0.000	0.012	0.000	0.012
74	0.000	0.005	0.000	0.005	0.000	0.007	0.000	0.007	0.000	0.008	0.000	0.008	0.000	0.014	0.000	0.014	0.000	0.008	0.000	0.008
76	0.000	0.005	0.000	0.005	0.000	0.006	0.000	0.006	0.000	0.008	0.000	0.008	0.000	0.006	0.000	0.006	0.000	0.014	0.000	0.014
78	0.000	0.005	0.000	0.005	0.000	0.007	0.000	0.007	0.000	0.012	0.000	0.012	0.000	0.021	0.000	0.021	0.000	0.034	0.000	0.034
80	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.010	0.000	0.010	0.000	0.004	0.000	0.004
82	0.000	0.002	0.000	0.002	0.000	0.004	0.000	0.004	0.000	0.003	0.000	0.003	0.000	0.007	0.000	0.007	0.000	0.006	0.000	0.006
84	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.007	0.000	0.007	0.000	0.007	0.000	0.007
86	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.003	0.000	0.003	0.000	0.006	0.000	0.006	0.000	0.002	0.000	0.002
88	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001
90	0.000	0.002	0.000	0.002	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.001	0.000	0.001
92	0.000	0.002	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001
98	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	11.087	16.467	1.445	28.999	14.270	19.987	0.239	34.496	14.821	21.726	0.251	36.799	6.364	11.103	0.286	17.753	9.894	14.977	1.036	25.907
Nº samples (*):				75				84				78				81				44
Nº Ind. (*):	3444	5550	55	9049	4470	7080	14	11564	4012	6533	6	10551	2991	6162	10	9163	445	739	80	1264
Sampled catch:				390				539				524				635				291
Range (*):				10-92				11-94				7-104				11-94				10-78
Total catch:				1259				1885				1898				1437				332
Total hauls (*):				128				124				114				118				123

TABLE 7 (cont.).- Greenland halibut length distribution per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels. (*) indicates untransformed data.

	2002				2003				2004				2005				2006			
Length (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.011	0.014	0.019	0.044	0.029	0.013	0.064	0.106	0.000	0.007	0.009	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.172	0.201	0.050	0.422	0.347	0.437	0.040	0.824	0.139	0.093	0.015	0.248	0.005	0.028	0.000	0.033	0.116	0.030	0.000	0.146
12	0.725	0.715	0.036	1.476	0.707	1.004	0.007	1.718	0.799	0.810	0.039	1.648	0.097	0.078	0.012	0.187	0.505	0.523	0.007	1.035
14	0.465	0.523	0.007	0.994	0.361	0.622	0.000	0.983	1.793	1.820	0.023	3.636	0.322	0.383	0.000	0.705	0.755	0.674	0.000	1.429
16	0.041	0.033	0.000	0.074	0.051	0.049	0.000	0.100	0.928	0.858	0.000	1.785	0.133	0.270	0.000	0.403	0.323	0.259	0.000	0.582
18	0.019	0.013	0.000	0.032	0.021	0.025	0.000	0.046	0.081	0.066	0.000	0.147	0.032	0.035	0.000	0.068	0.053	0.060	0.000	0.113
20	0.095	0.085	0.000	0.180	0.112	0.098	0.000	0.210	0.056	0.087	0.000	0.142	0.151	0.092	0.000	0.243	0.013	0.007	0.000	0.020
22	0.186	0.246	0.000	0.432	0.393	0.513	0.000	0.906	0.193	0.200	0.000	0.394	0.441	0.552	0.000	0.993	0.024	0.019	0.000	0.043
24	0.228	0.277	0.000	0.505	0.305	0.506	0.000	0.810	0.293	0.382	0.000	0.675	0.302	0.518	0.000	0.820	0.073	0.106	0.000	0.179
26	0.115	0.148	0.000	0.262	0.161	0.225	0.000	0.386	0.197	0.327	0.000	0.524	0.152	0.320	0.000	0.472	0.075	0.081	0.000	0.156
28	0.059	0.070	0.000	0.129	0.190	0.132	0.000	0.323	0.154	0.212	0.000	0.366	0.099	0.131	0.000	0.230	0.050	0.144	0.000	0.194
30	0.095	0.118	0.000	0.213	0.342	0.238	0.000	0.581	0.307	0.302	0.000	0.609	0.102	0.193	0.000	0.294	0.102	0.159	0.000	0.260
32	0.115	0.232	0.000	0.347	0.256	0.467	0.000	0.723	0.337	0.519	0.000	0.856	0.199	0.226	0.000	0.425	0.177	0.167	0.000	0.344
34	0.142	0.200	0.000	0.342	0.317	0.422	0.000	0.739	0.282	0.490	0.000	0.772	0.216	0.307	0.000	0.523	0.278	0.203	0.000	0.481
36	0.134	0.182	0.000	0.316	0.173	0.382	0.000	0.555	0.241	0.412	0.000	0.654	0.191	0.320	0.000	0.511	0.193	0.284	0.000	0.478
38	0.132	0.192	0.000	0.324	0.214	0.494	0.000	0.708	0.163	0.402	0.000	0.566	0.215	0.377	0.000	0.592	0.163	0.294	0.000	0.457
40	0.081	0.303	0.000	0.383	0.260	0.469	0.000	0.729	0.126	0.304	0.000	0.430	0.182	0.343	0.000	0.525	0.200	0.332	0.000	0.533
42	0.129	0.260	0.000	0.389	0.182	0.350	0.000	0.532	0.114	0.244	0.000	0.358	0.118	0.225	0.000	0.343	0.160	0.397	0.000	0.557
44	0.106	0.218	0.000	0.324	0.094	0.320	0.000	0.414	0.072	0.194	0.000	0.266	0.047	0.196	0.000	0.243	0.099	0.303	0.000	0.402
46	0.064	0.166	0.000	0.230	0.149	0.266	0.000	0.415	0.132	0.167	0.000	0.300	0.050	0.164	0.000	0.214	0.052	0.120	0.000	0.172
48	0.038	0.129	0.000	0.167	0.149	0.172	0.000	0.321	0.079	0.099	0.000	0.178	0.067	0.117	0.000	0.184	0.082	0.147	0.000	0.229
50	0.072	0.138	0.000	0.209	0.095	0.227	0.000	0.322	0.098	0.128	0.000	0.226	0.038	0.095	0.000	0.133	0.050	0.149	0.000	0.199
52	0.016	0.048	0.000	0.064	0.090	0.187	0.000	0.277	0.045	0.085	0.000	0.130	0.053	0.081	0.000	0.134	0.031	0.102	0.000	0.133
54	0.023	0.087	0.000	0.110	0.037	0.089	0.000	0.127	0.047	0.075	0.000	0.121	0.073	0.067	0.000	0.141	0.028	0.054	0.000	0.082
56	0.000	0.038	0.000	0.038	0.032	0.116	0.000	0.148	0.012	0.037	0.000	0.049	0.047	0.026	0.000	0.072	0.033	0.050	0.000	0.083
58	0.000	0.009	0.000	0.009	0.007	0.087	0.000	0.094	0.019	0.048	0.000	0.067	0.020	0.088	0.000	0.109	0.018	0.037	0.000	0.055
60	0.000	0.017	0.000	0.017	0.000	0.035	0.000	0.035	0.014	0.018	0.000	0.032	0.013	0.024	0.000	0.037	0.023	0.019	0.000	0.042
62	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.038	0.009	0.018	0.000	0.027	0.000	0.020	0.000	0.020	0.006	0.010	0.000	0.016
64	0.000	0.014	0.000	0.014	0.000	0.027	0.000	0.027	0.008	0.005	0.000	0.012	0.009	0.018	0.000	0.027	0.000	0.019	0.000	0.019
66	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.007	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000
68	0.000	0.009	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.011	0.000	0.017	0.000	0.000	0.000	0.000
70	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.022	0.000	0.005	0.000	0.005	0.000	0.015	0.000	0.015	0.000	0.000	0.000	0.000
72	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.023	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.005
74	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.017	0.000	0.016	0.000	0.016	0.000	0.018	0.000	0.018	0.000	0.000	0.000	0.000
76	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.008	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.007
78	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000
80	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.006	0.000	0.008	0.000	0.008	0.000	0.000	0.000	0.000
82	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
84	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
86	0.000	0.012	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.005
88	0.000	0.009	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
98	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	3.262	4.718	0.111	8.092	5.077	8.101	0.111	13.288	6.738	8.459	0.087	15.284	3.381	5.359	0.012	8.752	3.683	4.765	0.007	8.455
Nº samples (*):				76				79				79				78				71
Nº Ind. (*):	535	782	17	1334	878	1317	17	2212	1235	1511	13	2759	579	925	2	1506	611	773	1	1385
Sampled catch:				430				742				624				507				460
Range (*):				9-89				8-95				9-96				11-81				10-87
Total catch:				429				749				624				551				467
Total hauls (*):				125				118				120				119				120

TABLE 7 (cont.).- Greenland halibut length distribution per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels. (*) indicates untransformed data.

	2007				2008				2009				2010				2011			
Length (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.005	0.005	0.000	0.000	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.050	0.030	0.019	0.099	0.091	0.089	0.018	0.198	0.037	0.053	0.089	0.179	0.029	0.053	0.000	0.082	0.018	0.010	0.034	0.061
12	0.259	0.204	0.011	0.474	0.118	0.191	0.021	0.329	0.174	0.102	0.039	0.315	0.078	0.091	0.005	0.175	0.220	0.195	0.042	0.458
14	0.329	0.418	0.005	0.752	0.029	0.049	0.004	0.083	0.149	0.087	0.000	0.237	0.047	0.062	0.005	0.114	0.455	0.773	0.031	1.259
16	0.218	0.212	0.008	0.438	0.021	0.018	0.000	0.039	0.000	0.014	0.000	0.014	0.011	0.035	0.000	0.046	0.121	0.275	0.000	0.396
18	0.017	0.036	0.000	0.053	0.030	0.046	0.000	0.075	0.335	0.314	0.000	0.649	0.094	0.089	0.000	0.183	0.013	0.064	0.000	0.077
20	0.030	0.004	0.000	0.034	0.162	0.169	0.000	0.331	0.656	1.228	0.000	1.885	0.515	0.469	0.000	0.984	0.101	0.112	0.000	0.213
22	0.071	0.078	0.000	0.149	0.239	0.253	0.000	0.492	0.663	0.589	0.000	1.251	0.329	0.496	0.000	0.825	0.261	0.261	0.000	0.522
24	0.166	0.300	0.000	0.466	0.163	0.340	0.000	0.503	0.274	0.331	0.000	0.605	0.256	0.427	0.000	0.683	0.191	0.255	0.000	0.446
26	0.141	0.243	0.000	0.384	0.081	0.218	0.000	0.299	0.293	0.296	0.000	0.589	0.090	0.215	0.000	0.306	0.117	0.146	0.000	0.263
28	0.044	0.062	0.000	0.106	0.097	0.102	0.000	0.199	0.628	0.437	0.000	1.066	0.083	0.075	0.000	0.157	0.052	0.086	0.000	0.138
30	0.042	0.016	0.000	0.058	0.087	0.057	0.000	0.143	0.343	0.511	0.000	0.854	0.137	0.211	0.000	0.348	0.100	0.174	0.000	0.275
32	0.059	0.049	0.000	0.107	0.127	0.207	0.000	0.334	0.457	0.492	0.000	0.948	0.228	0.236	0.000	0.464	0.166	0.147	0.000	0.313
34	0.161	0.122	0.000	0.282	0.092	0.241	0.000	0.333	0.507	0.294	0.000	0.801	0.256	0.287	0.000	0.543	0.109	0.150	0.000	0.259
36	0.133	0.239	0.000	0.373	0.178	0.205	0.000	0.383	0.293	0.241	0.000	0.534	0.405	0.456	0.000	0.861	0.104	0.106	0.000	0.210
38	0.174	0.286	0.000	0.460	0.153	0.132	0.000	0.285	0.358	0.274	0.000	0.632	0.526	0.749	0.000	1.276	0.156	0.214	0.000	0.370
40	0.221	0.313	0.000	0.534	0.286	0.274	0.000	0.560	0.528	0.722	0.000	1.250	0.551	1.271	0.000	1.822	0.176	0.271	0.000	0.447
42	0.179	0.267	0.000	0.446	0.295	0.519	0.000	0.814	0.571	0.906	0.000	1.477	0.595	1.427	0.000	2.022	0.226	0.375	0.000	0.601
44	0.117	0.406	0.000	0.524	0.284	0.594	0.000	0.878	0.629	1.109	0.000	1.738	0.439	1.505	0.000	1.944	0.172	0.402	0.000	0.574
46	0.145	0.352	0.000	0.498	0.306	0.719	0.000	1.025	0.487	1.484	0.000	1.971	0.497	1.133	0.000	1.630	0.291	0.338	0.000	0.629
48	0.102	0.342	0.000	0.445	0.299	0.704	0.000	1.003	0.494	1.409	0.000	1.902	0.643	1.057	0.000	1.700	0.257	0.457	0.000	0.714
50	0.107	0.292	0.000	0.399	0.214	0.509	0.000	0.722	0.496	1.308	0.000	1.804	0.472	1.040	0.000	1.512	0.196	0.468	0.000	0.664
52	0.069	0.141	0.000	0.209	0.151	0.460	0.000	0.612	0.268	1.023	0.000	1.291	0.149	0.828	0.000	0.978	0.134	0.399	0.000	0.534
54	0.014	0.115	0.000	0.129	0.054	0.304	0.000	0.358	0.149	0.466	0.000	0.614	0.122	0.587	0.000	0.709	0.100	0.324	0.000	0.424
56	0.017	0.087	0.000	0.104	0.086	0.234	0.000	0.320	0.078	0.376	0.000	0.455	0.076	0.402	0.000	0.478	0.055	0.227	0.000	0.282
58	0.012	0.057	0.000	0.069	0.044	0.191	0.000	0.235	0.076	0.202	0.000	0.278	0.021	0.334	0.000	0.356	0.046	0.181	0.000	0.228
60	0.018	0.025	0.000	0.043	0.000	0.091	0.000	0.091	0.029	0.120	0.000	0.149	0.006	0.169	0.000	0.176	0.006	0.165	0.000	0.171
62	0.000	0.017	0.000	0.017	0.009	0.061	0.000	0.070	0.000	0.052	0.000	0.052	0.000	0.088	0.000	0.088	0.000	0.099	0.000	0.099
64	0.000	0.027	0.000	0.027	0.000	0.029	0.000	0.029	0.009	0.052	0.000	0.061	0.000	0.083	0.000	0.083	0.000	0.051	0.000	0.051
66	0.000	0.022	0.000	0.022	0.000	0.005	0.000	0.005	0.000	0.042	0.000	0.042	0.000	0.034	0.000	0.034	0.006	0.017	0.000	0.023
68	0.000	0.016	0.000	0.016	0.000	0.018	0.000	0.018	0.000	0.012	0.000	0.012	0.000	0.016	0.000	0.016	0.000	0.012	0.000	0.012
70	0.000	0.006	0.000	0.006	0.000	0.018	0.000	0.018	0.000	0.007	0.000	0.007	0.000	0.026	0.000	0.026	0.000	0.005	0.000	0.005
72	0.000	0.008	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.006	0.000	0.010	0.000	0.010
74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.079	0.000	0.079	0.000	0.006	0.000	0.006	0.000	0.005	0.000	0.005
76	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.007	0.000	0.011	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.026
78	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.000	0.021
80	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.008
82	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
84	0.000	0.010	0.000	0.010	0.000	0.017	0.000	0.017	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.007	0.000	0.000	0.000	0.000
86	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.009
88	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.008
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
98	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	2.895	4.803	0.048	7.746	3.698	7.075	0.051	10.825	8.980	14.667	0.128	23.775	6.657	13.979	0.010	20.646	3.849	6.847	0.107	10.802
Nº samples (*):				68				83				57				63				77
Nº Ind. (*):	473	805	7	1285	656	1219	10	1885	702	1296	11	2009	994	2045	2	3041	701	1211	15	1927
Sampled catch:				623				1215				1424				2062				1082
Range (*):				9-84				9-88				10-83				10-94				10-89
Total catch:				623				1215				1918				2095				1112
Total hauls (*):				110				122				109				95				122

TABLE 8-Greenland halibut age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0											0.15	0.15								
1	3.74	4.74	1.44	9.92	0.57	0.92	0.22	1.71	1.14	3.15	0.10	4.38	1.15	1.49	0.29	2.92	3.40	4.44	1.03	8.87
2	2.70	2.82	0.00	5.52	2.61	2.62	0.01	5.24	1.86	2.94	0.00	4.80	0.22	0.27		0.49	2.59	3.30	0.01	5.90
3	1.67	1.82		3.49	4.24	4.84		9.08	4.09	3.12		7.21	0.34	0.47		0.80	0.51	0.67		1.18
4	0.81	2.99		3.81	3.35	5.12		8.47	4.35	4.96		9.31	0.59	0.80		1.39	0.41	0.66		1.07
5	0.98	1.26		2.24	1.92	3.14		5.06	2.06	4.23		6.29	1.50	2.34		3.84	1.20	1.64		2.84
6	0.77	1.20		1.97	0.97	1.80		2.77	0.81	2.12		2.92	1.48	2.95		4.42	1.23	2.73		3.96
7	0.21	1.01		1.22	0.34	0.76		1.10	0.32	0.45		0.77	0.89	1.67		2.56	0.50	1.06		1.56
8	0.19	0.41		0.60	0.20	0.46		0.66	0.13	0.36		0.49	0.12	0.59		0.71	0.02	0.20		0.22
9	0.01	0.06		0.07	0.04	0.17		0.21	0.04	0.19		0.23	0.06	0.23		0.28	0.01	0.05		0.06
10	0.00	0.05		0.05	0.03	0.06		0.08	0.03	0.06		0.09	0.02	0.06		0.08	0.01	0.04		0.05
11	0.00	0.05		0.05	0.01	0.03		0.03	0.01	0.02		0.03	0.01	0.05		0.06	0.01	0.03		0.04
12	0.00	0.01		0.02	0.00	0.03		0.03	0.00	0.04		0.05	0.00	0.03		0.04	0.00	0.05		0.05
13		0.01		0.01		0.02		0.02		0.03		0.03	0.00	0.04		0.05	0.00	0.04		0.05
14		0.02		0.02		0.01		0.01		0.03		0.03	0.00	0.05		0.06	0.00	0.04		0.04
15		0.01		0.01		0.01		0.01		0.02		0.02		0.03		0.03		0.02		0.02
16		0.00		0.00		0.00		0.00		0.01		0.01		0.02		0.02		0.00		0.00
17		0.00		0.00		0.00		0.00		0.00		0.00		0.01		0.01		0.00		0.00
18		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00				
19										0.00				0.00		0.00		0.00		0.00
20		0.00		0.00						0.00										
Total	11.09	16.47	1.44	29.00	14.27	19.99	0.24	34.50	14.82	21.73	0.25	36.80	6.36	11.10	0.29	17.75	9.89	14.98	1.04	25.91

	2002				2003				2004				2005				2006			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																				
1	1.40	1.40	0.11	2.91	1.39	2.07	0.11	3.56	0.45	0.71	0.05	1.22	0.42	0.64	0.01	1.07	1.24	1.06	0.01	2.31
2	0.33	0.32	0.00	0.64	1.05	1.35	0.00	2.40	3.55	3.37	0.04	6.96	0.56	0.40	0.00	0.97	0.58	0.53		1.12
3	0.38	0.65		1.02	0.82	0.86		1.68	0.74	1.34		2.09	0.63	1.18		1.81	0.14	0.27		0.41
4	0.24	0.46		0.69	0.86	1.05		1.91	1.01	1.04		2.06	0.44	0.60		1.04	0.68	0.87		1.55
5	0.47	0.67		1.14	0.35	1.22		1.58	0.33	0.91		1.24	0.49	0.83		1.32	0.37	1.01		1.38
6	0.32	0.60		0.92	0.29	0.61		0.90	0.39	0.46		0.85	0.40	1.04		1.44	0.37	0.45		0.81
7	0.11	0.33		0.44	0.28	0.50		0.78	0.15	0.37		0.51	0.30	0.39		0.68	0.20	0.32		0.52
8	0.01	0.21		0.23	0.04	0.23		0.26	0.09	0.12		0.21	0.08	0.11		0.19	0.06	0.16		0.22
9		0.02		0.02	0.00	0.06		0.06	0.01	0.04		0.05	0.02	0.06		0.08	0.02	0.03		0.05
10		0.01		0.01		0.04		0.04	0.02	0.01		0.03	0.02	0.04		0.06	0.02	0.01		0.03
11		0.02		0.02		0.01		0.01	0.01	0.00		0.01	0.00	0.02		0.03		0.02		0.02
12		0.02		0.02		0.07		0.07		0.03		0.03	0.01	0.01		0.02		0.02		0.02
13		0.01		0.01		0.01		0.01		0.02		0.02		0.03		0.03		0.00		0.00
14		0.01		0.01		0.01		0.01		0.01		0.01		0.02		0.02		0.01		0.01
15		0.02		0.02						0.01		0.01		0.00		0.00				
16														0.00		0.00		0.00		0.00
17						0.01		0.01												
18														0.00		0.00				
19																				
20																				
Total	3.26	4.72	0.11	8.09	5.08	8.10	0.11	13.29	6.74	8.46	0.09	15.28	3.38	5.36	0.01	8.75	3.68	4.76	0.01	8.45

TABLE 8 (Cont.).-Greenland halibut age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	2007				2008				2009				2010				2011			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																				
1	0.87	0.89	0.05	1.81	0.23	0.34	0.05	0.62	0.36	0.21	0.13	0.70	0.16	0.20	0.01	0.37	0.81	1.28	0.11	2.20
2	0.26	0.39		0.64	0.52	0.47		0.99	1.53	1.69		3.22	1.02	1.18		2.21	0.60	0.70		1.30
3	0.19	0.32		0.51	0.28	0.62		0.90	0.97	1.25		2.21	0.32	0.62		0.94	0.19	0.29		0.48
4	0.18	0.14		0.32	0.25	0.44		0.69	1.17	1.45		2.61	0.35	0.38		0.73	0.27	0.34		0.62
5	0.50	0.99		1.48	0.41	0.52		0.93	1.62	1.11		2.73	1.62	1.80		3.42	0.38	0.56		0.95
6	0.50	0.90		1.40	0.86	1.84		2.70	1.73	3.21		4.94	1.29	4.29		5.58	0.94	1.07		2.01
7	0.28	0.74		1.02	0.90	1.61		2.50	1.32	4.35		5.67	1.59	3.56		5.16	0.53	1.60		2.12
8	0.08	0.20		0.29	0.14	0.60		0.74	0.12	0.73		0.85	0.24	0.99		1.23	0.08	0.35		0.43
9		0.10		0.10	0.09	0.31		0.40	0.06	0.30		0.35	0.03	0.36		0.39	0.03	0.20		0.22
10	0.02	0.07		0.09	0.01	0.15		0.15	0.08	0.11		0.19	0.03	0.23		0.26	0.00	0.23		0.24
11		0.03		0.03	0.01	0.09		0.10	0.04	0.10		0.14		0.24		0.24	0.00	0.05		0.05
12		0.03		0.03		0.03		0.03		0.03		0.03		0.04		0.04	0.01	0.05		0.06
13						0.02		0.02		0.02		0.02		0.02		0.02		0.02		0.02
14		0.01		0.01		0.01		0.01		0.01		0.01		0.03		0.03		0.06		0.06
15						0.02		0.02		0.08		0.08		0.02		0.02		0.01		0.01
16		0.01		0.01		0.01		0.01		0.02		0.02						0.02		0.02
17																		0.01		0.01
18														0.01		0.01				
19																				
20																				
Total	2.90	4.80	0.05	7.75	3.70	7.07	0.05	10.82	8.98	14.67	0.13	23.78	6.66	13.98	0.01	20.65	3.85	6.85	0.11	10.80

TABLE 9.-Greenland halibut mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0											7.50	7.50								
1	19.81	18.18	12.74	18.01	21.13	19.32	14.09	19.24	16.18	15.28	12.90	15.46	13.81	13.69	12.61	13.63	13.85	13.94	12.78	13.77
2	25.07	23.39	20.19	24.21	25.80	24.54	21.50	25.16	23.11	22.79	18.50	22.91	21.01	19.39		20.12	22.07	22.05	14.84	22.05
3	30.53	29.26		29.87	30.57	29.55		30.03	31.66	30.02		30.95	26.56	27.06		26.85	24.68	26.41		25.66
4	35.84	33.84		34.27	34.21	33.49		33.78	34.05	34.09		34.07	33.79	32.46		33.02	33.45	35.67		34.83
5	39.56	39.25		39.38	37.70	38.41		38.14	37.18	38.20		37.87	38.28	38.60		38.47	39.96	41.07		40.60
6	43.76	44.13		43.99	42.32	42.05		42.14	42.30	40.91		41.30	41.55	42.53		42.21	44.62	45.07		44.93
7	50.97	47.85		48.38	48.42	47.13		47.53	46.47	46.35		46.40	44.89	45.91		45.56	48.26	49.83		49.33
8	50.30	52.28		51.66	50.85	50.89		50.88	51.48	50.42		50.69	53.78	50.51		51.05	56.67	55.58		55.66
9	59.75	59.71		59.72	55.22	53.98		54.22	54.20	53.41		53.54	54.71	55.22		55.12	59.08	59.18		59.16
10	62.50	65.54		65.39	55.28	60.01		58.54	52.29	58.76		56.86	59.85	60.83		60.63	60.33	62.15		61.71
11	65.19	64.52		64.53	62.73	63.40		63.25	62.78	63.55		63.35	62.57	62.58		62.58	62.31	64.62		64.21
12	66.19	71.70		70.74	64.83	68.11		67.86	65.90	66.89		66.83	62.94	65.05		64.77	63.71	67.60		67.33
13		75.84		75.84		73.38		73.38		72.91		72.91	63.53	68.44		68.21	66.28	73.91		73.25
14		77.14		77.14		74.81		74.81		74.49		74.49	67.06	72.48		72.06	78.50	76.47		76.49
15		75.41		75.41		77.99		77.99		76.64		76.64		78.52		78.52		80.53		80.53
16		86.66		86.66		81.44		81.44		83.60		83.60		78.94		78.94		86.14		86.14
17		91.50		91.50		87.76		87.76		90.06		90.06		83.62		83.62		89.08		89.08
18		83.35		83.35		90.48		90.48		94.50		94.50		85.17		85.17				
19														91.03		91.03		97.50		97.50
20		92.50		92.05																
Total	28.46	29.93	12.76	28.52	32.78	33.62	14.54	33.14	32.05	31.74	9.76	31.72	34.47	37.83	12.61	36.22	26.34	29.99	12.80	27.91

TABLE 9 (Cont.).-Greenland halibut mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	2002				2003				2004				2005				2006			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																				
1	13.51	13.40	11.53	13.39	12.96	13.17	10.15	12.99	12.14	12.94	11.54	12.58	14.77	15.08	12.50	14.93	13.77	14.07	13.50	13.91
2	22.93	20.64	14.50	21.80	23.06	23.83	12.50	23.49	16.47	16.75	14.07	16.59	20.68	21.61	12.50	21.06	17.68	17.03		17.37
3	25.34	25.56		25.48	31.31	31.43		31.37	25.29	29.09		27.74	24.98	24.59		24.73	26.28	27.23		26.91
4	33.61	33.31		33.41	36.64	36.62		36.63	33.61	34.70		34.17	31.66	30.75		31.13	34.31	35.11		34.76
5	37.57	39.21		38.53	42.37	41.22		41.48	39.85	39.40		39.52	36.91	37.57		37.32	39.43	41.20		40.72
6	44.31	43.42		43.73	47.12	46.49		46.70	45.12	44.79		44.94	41.07	41.85		41.63	43.24	44.80		44.10
7	50.04	48.67		49.03	51.58	52.40		52.11	52.07	50.62		51.04	48.58	48.96		48.80	49.53	50.18		49.93
8	55.13	53.43		53.53	56.19	56.47		56.43	54.02	55.95		55.16	55.20	56.59		55.98	54.46	54.90		54.78
9		57.13		57.13	58.50	60.69		60.57	59.66	58.82		59.04	57.66	58.45		58.25	59.57	58.01		58.62
10		61.02		61.02		63.25		63.25	61.61	61.10		61.41	62.45	60.69		61.24	61.82	61.50		61.73
11		63.39		63.39		64.50		64.50	64.50	64.50		64.50	61.50	64.47		64.10		62.10		62.10
12		71.71		71.71		72.19		72.19		63.61		63.61	68.48	69.92		69.45		64.50		64.50
13		78.50		78.50		77.50		77.50		73.79		73.79		71.44		71.44		72.50		72.50
14		87.50		87.50		82.50		82.50		75.50		75.50		77.40		77.40		77.50		77.50
15		88.68		88.68						88.20		88.20		76.68		76.68				
16														76.04		76.04		87.50		87.50
17						95.50		95.50												
18														79.50		79.50				
19																				
20																				
Total	25.23	30.33	11.55	28.02	28.49	31.73	10.16	30.31	24.00	27.33	12.63	25.78	30.85	33.07	12.50	32.18	27.30	32.39	13.50	30.16

	2007				2008				2009				2010				2011			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																				
1	14.75	14.96	12.92	14.80	12.33	12.77	12.05	12.54	13.49	12.98	11.82	13.03	13.26	12.91	14.00	13.09	14.65	15.16	13.17	14.88
2	24.42	25.10		24.83	22.25	22.06		22.16	21.47	21.23		21.34	22.06	22.56		22.33	23.46	23.44		23.45
3	26.81	26.69		26.74	26.80	25.73		26.06	26.24	24.56		25.29	25.18	25.03		25.08	29.13	29.26		29.21
4	33.54	34.10		33.79	32.52	33.04		32.85	31.73	32.01		31.89	31.97	31.97		31.97	32.87	33.09		32.99
5	38.38	39.95		39.42	38.30	38.15		38.22	38.53	38.96		38.70	38.49	38.55		38.52	38.60	39.62		39.21
6	43.78	45.29		44.75	43.30	44.90		44.39	44.86	44.70		44.76	44.03	43.93		43.96	45.54	44.62		45.05
7	49.28	49.84		49.68	48.92	49.72		49.43	49.80	50.20		50.10	48.89	49.20		49.10	51.33	51.33		51.33
8	54.65	54.19		54.32	54.54	54.08		54.17	53.30	55.15		54.90	54.07	54.76		54.62	56.53	54.66		55.02
9		57.46		57.46	56.81	56.19		56.34	57.12	58.17		58.00	56.15	56.84		56.79	56.78	58.14		57.97
10	61.05	61.36		61.28	57.50	59.84		59.72	58.50	61.05		60.03	58.30	59.79		59.63	61.50	61.16		61.17
11		65.60		65.60	63.50	62.90		62.96	62.43	63.66		63.32		62.40		62.40	61.50	63.34		63.29
12		68.74		68.74		63.25		63.25		67.16		67.16		65.39		65.39	67.50	65.30		65.54
13						69.00		69.00		66.86		66.86		67.40		67.40		63.40		63.40
14		72.50		72.50		71.50		71.50		72.77		72.77		72.72		72.72		75.62		75.62
15						80.94		80.94		75.57		75.57		76.19		76.19		77.38		77.38
16		84.50		84.50		85.92		85.92		83.50		83.50						85.57		85.57
17																		86.50		86.50
18														94.50		94.50				
19																				
20																				
Total	31.59	37.34	12.92	35.04	38.07	42.21	12.05	40.65	35.89	41.16	11.82	39.01	38.67	43.07	14.00	41.64	34.36	39.15	13.17	37.18

TABLE 10.-Greenland halibut mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0											2.53	2.53								
1	56.55	44.11	12.86	44.25	66.73	56.01	19.75	54.81	33.43	28.91	14.71	29.77	14.69	13.93	10.45	13.89	16.47	17.18	13.45	16.48
2	116.19	90.71	54.44	103.16	126.63	111.44	70.48	118.89	93.56	89.74	45.51	91.18	59.74	47.35		52.97	72.15	75.92	20.95	74.19
3	210.65	184.05		196.79	216.07	199.69		207.33	248.40	218.64		235.53	128.63	150.58		141.39	102.12	138.28		122.55
4	343.22	296.07		306.12	307.90	300.76		303.58	313.10	327.53		320.789	282.32	262.15		270.66	271.96	351.48		321.30
5	477.91	474.14		475.79	416.64	461.62		444.53	409.22	473.15		452.20	427.90	463.68		449.67	474.57	549.96		518.19
6	655.66	691.54		677.57	598.59	618.72		611.69	609.82	591.51		596.56	569.60	645.43		620.11	676.20	739.46		719.83
7	1039.74	904.80		927.81	910.39	891.49		897.31	822.33	886.29		859.87	730.54	839.28		801.57	869.70	1020.42		971.90
8	1026.08	1215.64		1156.61	1069.28	1143.26		1120.75	1140.19	1164.85		1158.54	1328.46	1174.58		1199.73	1427.84	1443.38		1442.29
9	1712.22	1824.90		1803.51	1386.01	1376.62		1378.47	1348.28	1405.65		1395.92	1413.25	1563.75		1533.36	1628.57	1759.76		1735.49
10	1955.36	2451.90		2427.15	1432.74	1924.36		1771.37	1232.46	1904.19		1707.55	1905.57	2159.81		2106.74	1741.34	2059.38		1981.96
11	2237.75	2337.64		2335.75	2039.82	2276.20		2223.67	2111.90	2448.25		2362.51	2208.37	2378.52		2363.60	1929.96	2341.88		2269.44
12	2352.23	3300.22		3135.63	2253.06	2917.28		2867.21	2463.10	2940.32		2912.86	2245.01	2715.93		2653.68	2073.82	2719.39		2673.75
13		3942.66		3942.66		3684.55		3684.55		3877.33		3877.33	2312.31	3242.15		3199.58	2352.00	3656.76		3543.88
14		4190.79		4190.79		3909.22		3909.22		4188.33		4188.33	2772.46	3964.91		3872.13	4033.42	4068.04		4067.64
15		3887.49		3887.49		4480.36		4480.36		4594.01		4594.01		5205.90		5205.90		4770.13		4770.13
16		6092.92		6092.92		5136.80		5136.80		6339.81		6339.81		5334.32		5334.32		5906.19		5906.19
17		7169.24		7169.24		6438.79		6438.79		7771.36		7771.36		6423.59		6423.59		6596.90		6596.90
18		5376.62		5376.62		7159.28		7159.28		8870.58		8870.58		6830.30		6830.30				
19														8552.11		8552.11		8790.83		8790.83
20		7425.48		7425.48																
Total	232.20	308.61	12.96	264.67	303.57	365.55	22.83	337.54	299.38	352.89	7.97	328.98	420.62	613.57	10.45	534.70	235.78	384.60	13.51	312.93

	2002				2003				2004				2005				2006			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																				
1	15.16	14.44	9.15	14.58	13.64	14.67	5.75	13.99	10.36	12.15	8.85	11.35	20.40	24.66	12.40	22.85	16.77	17.32	15.20	17.02
2	85.12	64.56	18.23	74.96	91.26	98.95	11.06	95.57	32.38	33.31	16.10	32.74	61.94	81.27	12.40	69.97	39.71	35.77		37.83
3	115.32	119.77		118.13	233.58	239.55		236.64	127.49	187.69		166.28	109.33	113.89		112.30	128.14	147.05		140.62
4	292.89	280.11		284.52	384.32	389.32		387.08	276.74	315.37		296.34	235.20	229.40		231.85	296.98	335.57		318.55
5	420.87	483.24		457.46	603.57	567.97		575.95	474.56	478.78		477.67	384.54	423.10		408.67	463.22	558.91		533.21
6	705.62	677.06		686.90	848.07	832.07		837.28	707.95	723.66		716.51	540.86	602.50		585.18	614.40	718.56		671.84
7	1043.65	978.53		995.47	1139.15	1223.51		1193.47	1111.11	1087.07		1094.00	940.73	972.27		958.57	955.05	1039.83		1007.25
8	1413.34	1331.03		1336.18	1491.39	1556.30		1546.84	1261.22	1510.72		1408.99	1371.22	1504.91		1446.10	1261.22	1386.76		1351.91
9		1645.43		1645.43	1696.71	1957.74		1942.74	1714.45	1774.27		1759.06	1567.35	1668.79		1643.60	1666.78	1648.82		1655.80
10		2045.34		2045.34		2235.61		2235.61	1901.04	2010.19		1944.89	2030.67	1869.10		1919.39	1871.62	1984.49		1901.68
11		2325.25		2325.25		2380.78		2380.78	2200.49	2398.03		2258.79	1926.64	2255.28		2214.16		2048.31		2048.31
12		3573.05		3573.05		3442.28		3442.28		2297.05		2297.05	2733.13	2920.33		2858.54		2314.58		2314.58
13		4688.33		4688.33		4308.25		4308.25		3746.17		3746.17		3122.04		3122.04		3376.88		3376.88
14		6704.09		6704.09		5272.40		5272.40		4034.69		4034.69		4024.01		4024.01		4188.75		4188.75
15		7010.77		7010.77						6945.38		6945.38		3923.74		3923.74				
16														3829.26		3829.26		6199.50		6199.50
17						8458.35		8458.35												
18														4337.35		4337.35				
19																				
20																				
Total	222.00	406.07	9.20	326.40	290.81	443.31	5.78	381.40	187.38	285.66	11.97	240.78	328.36	425.37	12.40	387.33	270.93	426.46	15.20	358.38

TABLE 10 (Cont.).-Greenland halibut mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2010. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2010 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	2007				2008				2009				2010				2011			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																				
1	21.41	22.91	15.24	21.99	11.68	13.02	10.61	12.32	14.41	13.49	9.59	13.25	15.43	14.90	18.07	15.21	22.46	22.03	14.78	21.84
2	104.32	115.53		111.03	77.06	74.84		76.00	64.28	65.95		65.16	76.25	87.16		82.10	95.27	91.15		93.04
3	138.93	140.89		140.14	139.51	122.38		127.67	122.58	108.77		114.79	116.02	121.57		119.68	187.43	188.60		188.13
4	283.54	303.54		292.31	255.60	274.67		267.76	224.73	249.65		238.52	241.83	256.94		249.63	268.08	280.46		274.97
5	437.41	507.44		484.01	433.41	439.94		437.05	429.07	476.92		448.51	439.61	469.98		455.60	441.14	504.31		478.78
6	666.30	752.32		721.42	639.14	743.15		709.89	688.92	731.20		716.36	670.10	711.16		701.67	738.52	744.42		741.65
7	962.80	1017.87		1002.51	941.57	1034.12		1000.93	961.06	1063.47		1039.59	935.43	1020.04		993.89	1062.71	1178.60		1149.87
8	1337.24	1325.29		1328.75	1328.94	1352.57		1348.21	1191.16	1440.76		1406.66	1277.41	1422.79		1394.05	1421.57	1443.77		1439.49
9		1590.23		1590.23	1506.93	1529.10		1524.03	1473.86	1705.16		1666.99	1436.23	1593.95		1583.05	1438.81	1752.95		1714.79
10	1894.70	1958.27		1941.94	1561.24	1868.77		1853.03	1590.33	1993.62		1832.51	1615.10	1870.06		1842.35	1838.17	2070.73		2066.60
11		2416.31		2416.31	2144.93	2197.84		2192.93	1966.45	2283.68		2196.79		2142.01		2142.01	1838.17	2322.39		2309.29
12		2801.55		2801.55		2236.83		2236.83		2712.89		2712.89		2488.30		2488.30	2451.34	2567.09		2554.59
13						2962.25		2962.25		2674.14		2674.14		2727.39		2727.39		2327.47		2327.47
14		3315.34		3315.34		3322.76		3322.76		3523.82		3523.82		3470.22		3470.22		4166.80		4166.80
15						5013.75		5013.75		3976.49		3976.49		4112.45		4112.45		4465.00		4465.00
16		5391.71		5391.71		6042.88		6042.88		5497.86		5497.86						6252.48		6252.48
17																		6426.37		6426.37
18														7954.55		7954.55				
19																				
20																				
Total	381.58	598.44	15.24	513.79	560.48	789.72	10.61	707.71	452.37	734.08	9.59	623.77	550.78	796.19	18.07	716.67	465.50	773.98	14.78	656.58

TABLE 11.- American plaice mean catch (kg) and SD by stratum. Spanish Spring Surveys in NAFO Div. 3NO: 1997-2011. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

	1997		1998		1999		2000		2001		2002		2003		2004	
Stratum	A. Plaice Mean	A. Plaice SD	A. Plaice Mean	A. Plaice SD	A. Plaice Mean	A. Plaice SD	A. Plaice Mean	A. Plaice SD	A. Plaice Mean	A. Plaice SD	A. Plaice Mean	A. Plaice SD	A. Plaice Mean	A. Plaice SD	A. Plaice Mean	A. Plaice SD
353	47.97	25.084	267.95	103.830	388.97	37.624	426.02	210.639	451.08	185.936	630.50	240.448	470.86	217.828	418.60	276.823
354	34.16	18.447	381.49	146.407	184.12	100.017	147.44	84.780	172.21	144.326	207.67	77.048	806.33	68.178	220.64	173.634
355	14.02	4.617	134.67	132.931	60.82	30.122	60.01	1.539	206.75	85.065	100.75	40.659	112.14	7.297	23.50	9.758
356	8.15	4.133	14.23	5.343	31.47	23.877	28.11	24.368	83.56	40.362	53.95	51.548	159.80	99.561	0.66	0.893
357	1.86	1.051	2.33	0.484	3.06	1.913	0.55	-	76.85	105.720	5.18	2.015	59.40	76.650	0.84	1.190
358	4.44	4.415	6.73	1.265	9.06	15.047	298.64	437.609	35.80	28.161	27.67	21.202	26.50	16.096	27.72	15.234
359	30.12	15.773	198.60	199.740	484.88	84.636	659.75	139.208	347.89	328.624	177.40	129.497	459.09	433.737	440.97	296.394
360	26.15	17.839	107.53	64.858	263.77	91.624	324.76	269.238	261.79	173.177	143.72	117.177	229.12	120.612	283.51	168.955
374	8.40	3.170	4.00	0.906	44.00	1.495	5.60	0.440	14.95	1.909	3.42	1.630	15.33	4.207	89.95	46.315
375	1.85	-	5.93	3.550	42.21	15.545	30.11	9.300	4.77	1.680	1.41	1.073	9.96	10.915	73.12	19.172
376	12.53	8.741	82.92	73.283	119.90	62.748	250.98	179.289	46.95	32.487	47.96	50.207	62.92	55.173	195.37	112.407
377	20.96	-	47.18	59.694	86.16	117.320	27.02	29.064	21.09	10.204	34.05	39.527	48.61	30.816	84.23	73.928
378	1.87	1.583	5.22	2.199	7.14	4.199	19.74	22.646	2.75	1.287	8.10	6.364	9.42	8.040	34.30	14.001
379	1.78	1.568	2.65	1.804	0.78	0.308	2.30	1.146	0.84	0.092	5.75	5.445	3.47	4.667	0.71	-
380	1.41	0.079	1.69	0.945	2.22	0.066	1.74	0.402	2.97	0.638	7.25	1.768	6.68	0.735	2.01	2.174
381	1.55	0.895	8.41	10.927	0.59	0.231	2.03	1.269	2.35	0.154	3.81	2.821	7.70	3.111	29.64	18.611
382	0.59	0.340	4.35	3.017	2.25	0.610	1.92	0.562	3.02	0.929	1.09	0.904	2.12	0.643	55.76	49.674
721	13.40	12.225	7.68	6.464	20.06	10.378	4.21	4.725	115.20	86.974	18.20	12.445	222.75	273.155	0.00	0.000
722	46.66	65.850	1.99	2.375	2.43	0.704	1.21	1.715	30.29	35.511	30.10	42.568	14.31	15.493	1.02	1.442
723	8.79	5.464	10.04	8.619	34.05	29.946	10.67	7.344	36.15	39.244	7.20	0.849	2.10	2.687	0.68	0.955
724	13.33	17.024	10.84	2.528	9.89	10.466	12.31	1.803	26.47	26.158	47.05	41.931	7.02	7.050	0.00	0.000
725	1.31	0.882	0.62	-	2.48	0.073	8.64	8.707	3.37	0.368	3.55	4.313	3.34	0.049	19.30	27.294
726	n.s.	n.s.	2.95	2.726	39.96	47.051	8.24	4.177	1.80	0.430	2.83	0.948	0.00	0.000	0.00	0.000
727	9.37	-	9.02	3.782	7.56	7.651	4.59	2.089	8.46	5.277	2.85	1.061	42.85	21.001	0.37	0.338
728	32.09	23.965	15.58	4.617	37.93	22.294	22.82	0.178	5.85	1.143	9.58	13.467	40.45	23.264	0.00	0.000
752	112.70	128.072	49.95	7.102	35.68	10.927	128.14	25.680	15.79	7.922	0.00	-	27.05	12.516	0.00	0.000
753	56.78	41.643	146.98	13.280	14.74	4.969	169.96	216.964	60.01	68.290	3.60	5.091	0.00	0.000	0.00	0.000
754	5.50	6.447	2.67	3.782	0.00	0.000	0.00	0.000	1.26	1.781	8.60	14.206	0.00	0.000	0.00	0.000
755	n.s.	n.s.	0.39	0.550	0.05	0.090	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
756	75.68	-	199.76	258.188	124.34	44.457	31.68	11.829	11.58	8.167	11.73	12.551	1.83	0.884	0.00	0.000
757	626.06	753.372	82.24	100.918	17.07	3.782	5.12	6.827	105.18	148.295	31.15	13.223	5.17	7.304	0.00	0.000
758	0.60	0.447	4.03	5.695	0.31	0.438	1.32	1.649	0.16	0.220	1.27	0.523	0.00	0.000	0.00	0.000
759	n.s.	n.s.	0.00	0.000	0.34	0.484	1.99	2.814	0.26	0.374	0.00	0.000	0.00	-	0.00	0.000
760	17.16	-	8.04	5.519	20.30	28.275	43.59	58.396	37.80	37.618	4.75	6.718	0.00	0.000	0.00	0.000
761	1.21	1.954	3.47	1.605	0.00	0.000	0.19	0.264	0.25	0.346	1.90	1.577	0.00	0.000	0.01	0.007
762	0.00	0.000	0.00	0.000	18.49	26.142	0.00	0.000	0.00	0.000	0.30	0.424	0.00	0.000	0.00	0.000
763	n.s.	n.s.	0.08	0.110	0.00	0.000	0.30	0.606	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
764	0.17	0.237	0.25	0.352	0.00	0.000	0.00	0.000	0.35	0.205	0.50	0.707	0.63	0.884	0.00	0.000
765	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.05	0.071	0.64	0.792	0.00	-	0.00	0.000
766	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.44	0.616	0.00	0.000	0.00	0.000	0.00	0.000
767	n.s.	n.s.	0.00	0.000	0.00	0.000	0.11	0.156	0.00	0.000	0.05	0.071	0.00	0.000	0.57	0.799

TABLE 11 (cont.).- American plaice mean catch (kg) and SD by stratum. Spanish Spring Surveys in NAFO Div. 3NO: 1997-2011. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

	2005		2006		2007		2008		2009		2010		2011	
Stratum	A. Plaice Mean catch	A. Plaice SD	A. Plaice Mean catch	A. Plaice SD	A. Plaice Mean catch	A. Plaice SD	A. Plaice Mean catch	A. Plaice SD	A. Plaice Mean catch	A. Plaice SD	A. Plaice Mean catch	A. Plaice SD	A. Plaice Mean catch	A. Plaice SD
353	224.63	106.622	321.42	64.587	115.27	45.889	336.90	112.352	124.75	50.324	76.65	23.688	176.17	63.063
354	220.46	151.511	134.53	130.027	73.70	29.781	103.03	62.742	96.97	70.613	91.98	96.365	32.62	22.351
355	73.44	60.161	32.85	27.506	24.70	8.344	20.48	4.273	13.40	1.697	8.31	7.368	28.07	12.968
356	8.37	11.257	4.38	6.194	0.42	0.598	0.96	0.040	1.19	1.677	0.00	0.000	0.00	0.000
357	0.00	0.000	6.82	9.378	0.62	0.939	1.70	0.314	0.80	1.131	1.43	1.371	0.02	0.034
358	26.52	20.817	22.10	19.361	34.98	32.739	39.39	42.958	21.82	15.033	16.08	2.094	8.95	5.537
359	371.26	369.519	329.81	332.590	399.00	357.447	375.96	201.963	446.02	401.637	270.83	295.542	95.47	71.945
360	293.79	173.170	562.23	459.478	297.23	200.496	466.27	307.740	174.64	109.378	307.45	267.987	474.90	575.535
374	126.47	116.171	120.64	27.344	214.10	141.421	466.75	331.138	136.26	21.008	150.65	21.991	813.15	131.168
375	56.44	35.364	55.90	18.748	55.44	62.196	160.00	97.194	132.23	107.005	89.90	54.310	150.59	82.346
376	177.42	92.305	136.03	74.695	122.53	76.602	144.19	139.315	87.85	85.740	83.39	80.946	62.48	86.031
377	317.45	167.514	242.64	52.446	275.55	170.625	638.00	162.069	487.92	674.127	199.40	52.609	119.65	57.205
378	10.15	7.734	21.65	15.203	31.32	27.407	20.67	18.717	78.74	72.917	123.25	139.936	20.06	25.512
379	1.37	1.923	0.12	0.171	1.04	1.440	0.19	0.269	10.85	15.344	0.00	0.000	0.29	0.403
380	0.35	0.488	0.00	0.000	1.77	0.750	22.59	22.712	9.50	6.647	372.20	419.031	8.46	3.168
381	57.15	57.629	6.43	6.824	155.55	150.119	54.85	20.860	3.85	0.502	13.08	11.066	71.75	9.405
382	36.82	11.832	44.32	11.998	15.69	11.851	21.36	17.470	0.63	0.824	102.97	138.921	98.66	90.796
721	0.00	0.000	0.00	0.000	0.00	-	0.00	0.000	0.60	0.849	0.00	0.000	0.23	0.318
722	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
723	0.00	0.000	0.04	0.049	0.00	0.000	0.81	1.147	0.17	0.240	0.01	0.016	0.00	0.000
724	0.00	0.000	0.00	0.000	0.00	0.000	2.39	3.374	0.00	0.000	0.00	0.000	0.00	0.000
725	5.45	7.707	1.02	1.385	2.66	3.638	0.22	0.311	0.66	0.933	0.18	0.234	0.00	0.000
726	0.00	-	0.20	0.287	0.22	0.311	0.00	0.000	51.30	72.549	0.00	0.000	0.00	0.000
727	0.00	0.000	0.00	0.000	0.00	0.000	2.80	0.431	547.30	-	59.95	13.364	0.69	0.219
728	0.00	-	0.00	0.000	0.00	0.000	0.00	0.000	246.60	306.319	0.00	0.000	0.00	0.000
752	0.00	0.000	0.07	0.092	0.72	0.346	0.00	0.000	0.05	0.064	0.00	0.000	0.00	0.000
753	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	-	n.s.	n.s.	0.00	0.000
754	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	-	0.00	0.000	0.00	0.000
755	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	-	0.00	-	0.00	0.000
756	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
757	0.00	0.000	0.14	0.191	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
758	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
759	0.00	0.000	0.00	0.000	n.s.	n.s.	0.00	0.000	0.00	-	0.00	0.000	0.00	0.000
760	6.10	8.627	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
761	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
762	0.00	0.000	0.00	0.000	n.s.	n.s.	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
763	0.00	0.000	0.00	0.000	n.s.	n.s.	0.00	0.000	n.s.	n.s.	n.s.	n.s.	0.00	0.000
764	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	-	n.s.	n.s.	0.00	0.000
765	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
766	0.00	0.000	0.00	0.000	n.s.	n.s.	0.00	0.000	0.19	0.269	0.00	0.000	0.00	0.000
767	0.00	-	0.00	0.000	n.s.	n.s.	0.00	0.000	n.s.	n.s.	n.s.	n.s.	0.00	0.000

TABLE 12.- Stratified mean catches (Kg) by stratum and year and SD by year of American plaice (1997-2011). n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2010 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
353	12903.67	72078.57	104632.35	114599.70	121339.62	169604.50	126660.44	112602.50	60426.37	86461.08	31006.73	90626.10	33558.20	20618.85	47390.00
354	8402.49	93846.24	45293.87	36269.52	42363.66	51086.00	198357.18	54277.44	54233.57	33093.23	18130.20	25346.20	23855.44	22627.08	8025.50
355	1037.72	9965.35	4500.63	4440.80	15299.50	7455.50	8298.36	1739.00	5434.56	2430.90	1827.80	1515.63	991.60	614.94	2077.18
356	382.89	668.59	1478.94	1321.33	3927.32	2535.65	7510.60	30.95	393.39	205.86	19.88	44.98	55.74	0.00	0.00
357	304.55	382.45	502.29	90.77	12602.58	848.70	9741.60	138.01	0.00	1118.23	101.68	279.46	131.20	235.26	3.94
358	999.88	1513.72	2037.49	67195.07	8055.00	6225.00	5962.50	6236.25	5966.25	4972.28	7870.50	8862.75	4910.10	3618.23	2014.50
359	12680.29	83608.73	204132.53	277756.52	146459.89	74685.40	193275.09	185648.37	156301.96	138849.75	167979.00	158277.96	187774.42	114018.73	40191.07
360	72766.01	299247.75	734066.28	903798.01	728547.66	399985.01	637653.48	789018.07	817625.50	1564674.81	827191.09	1297629.41	486023.12	855641.30	1321651.99
374	1796.59	856.16	9415.49	1197.73	3199.30	731.88	3279.55	19249.30	27063.51	25815.89	45817.40	99884.50	29158.57	32239.10	174014.10
375	500.53	1606.63	11438.83	8160.97	1291.77	381.21	2698.26	19816.42	15294.34	15149.44	15024.24	43360.00	35834.33	24362.90	40808.99
376	16719.30	110620.38	159942.67	334810.31	62631.30	63978.64	83931.28	260619.58	236676.28	181467.22	163455.02	192352.13	117198.30	111236.54	83346.05
377	2095.72	4718.47	8616.07	2702.20	2108.50	3405.00	4861.00	8422.50	31745.00	24263.50	27555.00	63800.00	48792.00	19940.00	11965.00
378	259.32	726.10	991.91	2744.49	382.25	1125.90	1308.69	4767.70	1411.06	3009.35	4353.48	2872.44	10944.86	17131.75	2788.34
379	188.36	281.25	82.40	243.73	88.51	609.50	367.82	75.26	145.22	12.83	109.76	20.14	1150.10	0.00	30.21
380	134.92	162.68	213.43	167.31	285.07	696.00	641.28	193.20	33.12	0.00	169.92	2168.64	912.00	35731.20	812.16
381	222.76	1211.16	84.85	291.71	338.05	547.92	1108.80	4268.16	8229.60	925.20	22399.20	7898.40	553.68	1882.80	10332.00
382	202.64	1493.12	770.56	657.24	1037.19	372.73	726.30	19126.54	12628.40	15200.90	5382.01	7328.02	214.72	35318.02	33839.44
721	871.09	499.21	1303.60	273.96	7488.00	1183.00	14478.75	0.00	0.00	0.00	0.00	0.00	39.00	0.00	14.63
722	3919.11	167.16	203.73	101.86	2544.36	2528.40	1201.62	85.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00
723	1362.72	1556.71	5277.38	1653.10	5603.25	1116.00	325.50	104.63	0.00	5.43	0.00	125.71	26.35	1.71	0.00
724	1653.48	1343.68	1226.09	1526.83	3281.87	5834.20	869.86	0.00	0.00	0.00	0.00	295.86	0.00	0.00	0.00
725	137.94	65.30	260.04	907.63	353.82	372.75	350.18	2026.50	572.25	107.21	279.25	23.10	69.30	19.37	0.00
726	n.s	212.68	2876.79	593.27	129.33	203.76	0.00	0.00	0.00	14.62	15.84	0.00	3693.60	0.00	0.00
727	899.68	865.65	725.35	440.29	811.92	273.60	4113.60	35.42	0.00	0.00	0.00	268.32	52540.80	5755.20	65.76
728	2502.92	1215.08	2958.88	1780.30	455.96	747.05	3155.10	0.00	0.00	0.00	0.00	0.00	19234.80	0.00	0.00
752	14763.59	6543.72	4674.08	16785.97	2068.61	0.00	3543.55	0.00	0.00	8.52	94.52	0.00	5.90	0.00	0.00
753	7835.24	20283.24	2033.90	23454.24	8281.50	496.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n.s	0.00
754	989.34	481.33	0.00	0.00	226.67	1548.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
755	n.s	149.64	19.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
756	7643.89	20175.92	12558.72	3200.13	1169.09	1184.23	184.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
757	63857.75	8388.77	1741.19	522.51	10728.11	3177.30	526.83	0.00	0.00	13.77	0.00	0.00	0.00	0.00	0.00
758	59.81	398.64	30.63	130.83	15.39	125.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
759	n.s	0.00	43.44	252.73	33.57	0.00	0.00	0.00	0.00	0.00	n.s	0.00	0.00	0.00	0.00
760	2643.21	1237.81	3126.85	6713.38	5821.20	731.50	0.00	0.00	939.40	0.00	0.00	0.00	0.00	0.00	0.00
761	206.83	592.85	0.00	31.90	41.90	324.05	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
762	0.00	0.00	3918.87	0.00	0.00	63.60	0.00	0.00	0.00	0.00	n.s	0.00	0.00	0.00	0.00
763	n.s	20.29	0.00	79.13	0.00	0.00	0.00	0.00	0.00	0.00	n.s	0.00	n.s	n.s	0.00
764	16.71	24.87	0.00	0.00	34.50	50.00	62.50	0.00	0.00	0.00	0.00	0.00	0.00	n.s	0.00
765	0.00	0.00	0.00	0.00	6.20	79.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
766	0.00	0.00	0.00	0.00	62.68	0.00	0.00	0.00	0.00	0.00	n.s	0.00	27.36	0.00	0.00
767	n.s	0.00	0.00	17.44	0.00	7.90	0.00	89.27	0.00	0.00	n.s	0.00	n.s	n.s	0.00
TOTAL	240961	747210	1331180	1814913	1199115	804322	1315194	1488572	1435120	2097800	1338783	2002980	1057695	1300993	1779371
$\overline{Y}$	25.80	72.25	128.72	175.49	115.95	77.77	127.17	143.93	138.77	202.84	141.82	193.67	106.59	134.33	172.05
S.D.	5.09	6.51	6.85	19.24	12.31	7.46	10.79	13.03	12.92	29.01	15.31	20.39	11.31	22.27	34.95

TABLE 13.- Survey estimates (by the swept area method) of American plaice biomass (t) and SD by stratum and year in NAFO Div. 3NO. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduiña* data. 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
353	1075	6200	8719	9651	10666	14245	11385	10009	5143	6987	2557	7967	2918	1833	4077
354	723	7903	4165	3054	3766	4302	17632	4720	4616	2729	1495	2204	2120	2011	698
355	89	901	393	382	1275	631	726	152	483	196	152	137	85	54	179
356	34	60	129	117	327	218	668	3	34	17	2	4	5	0	0
357	28	32	43	7	1034	71	852	12	0	92	8	24	23	21	0
358	89	130	175	5907	700	541	530	567	513	428	642	771	432	322	175
359	1103	7192	16836	23702	12775	6530	17099	16424	13445	11393	13753	13871	16345	9704	3489
360	6203	25808	59988	75434	60151	34903	56586	68313	70333	127046	69585	110908	42774	73604	111356
374	153	73	773	100	267	64	292	1656	2366	2185	3818	8592	2592	2866	15468
375	43	140	968	670	115	32	245	1761	1316	1249	1239	3898	3150	2009	3401
376	1479	9578	13124	27901	5422	5612	7461	22347	20164	14890	13794	17041	10349	9888	7078
377	180	413	718	236	184	298	432	774	2731	2054	2296	5488	4337	1715	1029
378	25	62	87	236	32	97	116	424	125	251	374	239	957	1523	232
379	18	24	7	22	8	53	32	6	12	1	9	2	101	0	3
380	13	14	18	14	28	62	56	17	3	0	14	193	80	3025	71
381	20	106	7	25	29	48	97	379	708	81	1867	691	48	154	889
382	18	131	64	53	88	33	64	1659	1104	1297	445	641	19	3038	3008
721	79	49	107	23	605	102	1287	0	0	0	0	0	3	0	1
722	367	16	18	9	219	214	109	8	0	0	0	0	0	0	0
723	130	134	461	134	467	96	28	9	0	0	0	11	2	0	0
724	147	130	109	131	279	519	77	0	0	0	0	27	0	0	0
725	13	8	23	86	30	33	31	180	48	9	25	2	6	2	0
726	n.s.	21	256	54	11	19	0	0	0	1	1	0	323	0	0
727	96	74	61	42	72	24	378	3	0	0	0	24	4670	480	6
728	234	118	255	170	40	65	280	0	0	0	0	0	1682	0	0
752	1358	572	402	1628	197	143	310	0	0	1	8	0	1	0	0
753	733	1865	178	2157	775	43	0	0	0	0	0	0	0	n.s.	0
754	90	46	0	0	23	6	0	0	0	0	0	0	0	0	0
755	n.s.	15	2	0	0	0	0	0	0	0	0	0	0	0	0
756	703	1793	1116	316	102	104	17	0	0	0	0	0	0	0	0
757	6307	813	150	49	923	282	48	0	0	1	0	0	0	0	0
758	6	37	3	12	1	11	0	0	0	0	0	0	0	0	0
759	n.s.	0	4	24	3	0	0	0	0	0	n.s	0	0	0	0
760	252	116	278	639	509	64	0	0	82	0	0	0	0	0	0
761	20	57	0	3	4	29	0	0	0	0	0	0	0	0	0
762	0	0	373	0	0	6	0	0	0	0	n.s	0	0	0	0
763	n.s.	2	0	8	0	0	0	0	0	0	n.s	0	n.s.	n.s.	0
764	2	2	0	0	3	4	6	0	0	0	0	0	0	n.s.	0
765	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0
766	0	0	0	0	6	0	0	0	0	0	n.s	0	2	0	0
767	n.s.	0	0	2	0	1	0	8	0	0	n.s	0	n.s.	n.s.	0
TOTAL	21827	64635	110010	152997	101137	69511	116842	129432	123227	170910	112086	172735	93025	112247	151160
S.D.	4495	5946	5825	16740	10841	7097	9777	12335	11396	24806	13032	17696	10258	18089	29753

TABLE 14.- Length weight relationships in the calculation of American plaice biomass. The equation is $Weight = a(l + 0.5)^b$ Spanish Spring Surveys in NAFO Div. 3NO: 1997-2011. To calculate the parameters for the indeterminate individuals, we used the total data (males + females + indeterminate individuals)

		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Males	a	0.0043 E = 0.1296	0.0041 E = 0.1200	0.0049 E = 0.2799	0.0024 E = 0.1281	0.0064 E = 0.1556	0.0041 E = 0.0660	0.0037 E = 0.0752	0.0075 E = 0.1483	0.0027 E = 0.0882	0.0061 E = 0.1501	0.0050 E = 0.0603	0.0042 E = 0.0551	0.0054 E = 0.0842	0.0027 E = 0.1264	0.0047 E = 0.0919
	b	3.1794 E = 0.0378	3.1943 E = 0.0348	3.1454 E = 0.0817	3.3523 E = 0.0382	3.0742 E = 0.0485	3.1930 E = 0.0205	3.2287 E = 0.0234	3.0284 E = 0.0468	3.3274 E = 0.0274	3.0860 E = 0.0458	3.1406 E = 0.0185	3.1878 E = 0.0173	3.1082 E = 0.0261	3.3231 E = 0.0398	3.1560 E = 0.0276
		R^2 = 0.995 N = 1050	R^2 = 0.996 N = 573	R^2 = 0.983 N = 183	R^2 = 0.995 N = 321	R^2 = 0.992 N = 188	R^2 = 0.988 N = 384	R^2 = 0.998 N = 622	R^2 = 0.992 N = 411	R^2 = 0.997 N = 311	R^2 = 0.996 N = 434	R^2 = 0.999 N= 645	R^2 = 0.999 N= 429	R^2 = 0.997 N= 305	R^2 = 0.995 N= 382	R2 = 0.997 N= 557
Females	a	0.0027 E = 0.1058	0.0027 E = 0.0595	0.0048 E = 0.1420	0.0020 E = 0.0981	0.0039 E = 0.0624	0.0032 E = 0.0628	0.0030 E = 0.0549	0.0047 E = 0.0807	0.0027 E = 0.0634	0.0049 E = 0.0781	0.0048 E = 0.0719	0.0031 E = 0.0579	0.0027 E = 0.0690	0.0027 E = 0.1016	0.0036 E = 0.0637
	b	3.3263 E = 0.0291	3.3218 E = 0.0162	3.1704 E = 0.0389	3.4049 E = 0.0271	3.2256 E = 0.0177	3.2752 E = 0.0178	3.2918 E = 0.0157	3.1757 E = 0.0228	3.3290 E = 0.0177	3.1703 E = 0.0219	3.1754 E = 0.0206	3.2870 E = 0.0163	3.3232 E = 0.0191	3.3332 E = 0.0287	3.2453 E = 0.0181
		R^2 = 0.998 N = 1396	R^2 = 0.999 N = 937	R^2 = 0.993 N = 201	R^2 = 0.998 N = 402	R^2 = 0.998 N = 370	R^2 = 0.998 N = 703	R^2 = 0.999 N = 960	R^2 = 0.997 N = 765	R^2 = 0.998 N = 569	R^2 = 0.999 N = 757	R^2 = 0.9974 N= 1000	R^2 = 0.999 N= 768	R^2 = 0.997 N= 559	R^2 = 0.996 N= 695	R2 = 0.998 N= 1038
Indet.	a	0.0026 E = 0.0928	0.0028 E = 0.0602	0.0022 E = 0.1531	0.0020 E = 0.0817	0.0054 E = 0.0866	0.0035 E = 0.0599	0.0032 E = 0.0581	0.0069 E = 0.1315	0.0025 E = 0.0523	0.0045 E = 0.0483	0.0041 E = 0.0493	0.0030 E = 0.0428	0.0048 E = 0.1173	0.0033 E = 0.0545	0.0039 E = 0.0613
	b	3.3370 E = 0.0255	3.3153 E = 0.0164	3.3812 E = 0.0431	3.4049 E = 0.0226	3.1409 E = 0.0248	3.2527 E = 0.0171	3.2795 E = 0.0167	3.0712 E = 0.0382	3.3552 E = 0.0148	3.1868 E = 0.0138	3.2121 E = 0.0142	3.2912 E = 0.0122	3.1692 E = 0.0337	3.2755 E = 0.0156	3.2285 E = 0.0176
		R^2 = 0.997 N = 2446	R^2 = 0.999 N = 1513	R^2 = 0.989 N = 386	R^2 = 0.997 N = 726	R^2 = 0.996 N = 573	R^2 = 0.998 N = 1087	R^2 = 0.998 N = 1587	R^2 = 0.990 N = 1226	R^2 = 0.999 N = 884	R^2 = 0.999 N = 1213	R^2 = 0.999 N= 1699	R^2 = 0.999 N= 1212	R^2 = 0.990 N= 876	R^2 = 0.999 N= 1091	R2 = 0.998 N= 1597

TABLE 15.- American plaice length distribution. Estimated numbers per haul stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels. (*) indicates untransformed data.

	1997				1998				1999				2000				2001			
Length (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.045
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	2.401	2.422
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.031	1.194	1.245
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.087	5.812	22.898	0.203	10.681	0.227	11.111	0.280	1.972	0.217	2.469
12	0.000	0.000	0.000	0.000	0.007	0.008	0.000	0.015	0.000	4.272	4.272	8.543	11.240	11.450	0.117	22.807	3.620	4.188	0.757	8.565
14	0.073	0.049	0.000	0.121	0.009	0.000	0.000	0.009	0.289	1.667	0.190	2.146	30.021	34.561	0.000	64.582	5.797	7.593	0.398	13.788
16	0.136	0.242	0.000	0.378	0.546	0.263	0.000	0.809	1.474	2.739	0.000	4.212	59.167	75.997	0.000	135.164	10.535	10.617	0.031	21.183
18	0.648	0.705	0.023	1.377	0.044	0.146	0.000	0.190	0.210	0.894	0.000	1.104	24.333	41.298	0.005	65.635	48.738	38.461	0.010	87.210
20	1.215	0.750	0.000	1.966	0.370	0.163	0.000	0.533	0.398	0.508	0.000	0.906	4.514	5.307	0.000	9.821	69.747	56.807	0.000	126.554
22	2.337	1.371	0.000	3.708	1.053	0.693	0.000	1.746	0.765	0.857	0.000	1.622	2.416	2.785	0.000	5.201	36.774	35.802	0.000	72.576
24	2.605	1.883	0.000	4.489	3.474	2.310	0.000	5.784	2.904	0.468	0.000	3.372	1.722	1.695	0.000	3.417	7.776	13.101	0.000	20.877
26	4.484	2.641	0.000	7.126	5.241	3.713	0.000	8.954	10.069	2.129	0.000	12.197	2.762	0.685	0.000	3.447	3.211	3.416	0.000	6.627
28	8.809	2.201	0.000	11.010	8.847	4.872	0.000	13.719	19.126	7.192	0.000	26.318	7.298	1.581	0.000	8.879	4.639	1.994	0.000	6.633
30	7.228	3.773	0.000	11.001	11.342	5.977	0.000	17.319	29.710	11.614	0.000	41.323	18.574	3.666	0.000	22.240	11.353	1.499	0.000	12.852
32	5.657	4.242	0.000	9.898	10.173	8.235	0.000	18.408	24.357	10.595	0.000	34.952	25.029	7.213	0.000	32.242	18.793	2.218	0.000	21.012
34	3.662	4.350	0.000	8.012	7.537	13.315	0.000	20.852	16.253	10.386	0.000	26.638	15.779	13.921	0.000	29.699	15.703	4.001	0.000	19.705
36	1.897	4.574	0.000	6.471	4.471	15.805	0.000	20.276	9.405	18.159	0.000	27.564	9.881	16.429	0.000	26.310	8.760	9.830	0.000	18.591
38	0.964	3.885	0.000	4.849	2.240	15.381	0.000	17.621	4.435	20.646	0.000	25.081	4.817	18.573	0.000	23.390	3.802	11.082	0.000	14.884
40	0.359	3.021	0.000	3.381	0.785	12.615	0.000	13.400	1.846	23.474	0.000	25.320	2.094	26.863	0.000	28.957	1.392	13.048	0.000	14.440
42	0.205	1.968	0.000	2.173	0.462	8.995	0.000	9.457	0.370	18.287	0.000	18.657	1.180	25.649	0.000	26.828	0.889	13.008	0.000	13.897
44	0.182	1.128	0.000	1.310	0.117	6.272	0.000	6.388	0.467	12.030	0.000	12.497	0.465	19.940	0.000	20.404	0.354	11.312	0.000	11.666
46	0.039	0.666	0.000	0.705	0.119	3.702	0.000	3.821	0.043	6.881	0.000	6.924	0.266	13.733	0.000	13.999	0.060	8.611	0.000	8.672
48	0.006	0.433	0.000	0.438	0.025	2.391	0.000	2.416	0.020	4.457	0.000	4.478	0.233	8.588	0.000	8.821	0.000	5.567	0.000	5.567
50	0.003	0.385	0.000	0.388	0.000	1.132	0.000	1.132	0.000	3.395	0.000	3.395	0.031	6.231	0.000	6.263	0.000	3.461	0.000	3.461
52	0.000	0.158	0.000	0.158	0.000	0.476	0.000	0.476	0.000	1.747	0.000	1.747	0.092	3.692	0.000	3.784	0.000	1.021	0.000	1.021
54	0.000	0.122	0.000	0.122	0.023	0.380	0.000	0.404	0.000	1.360	0.000	1.360	0.000	3.440	0.000	3.440	0.000	1.245	0.000	1.245
56	0.000	0.047	0.000	0.047	0.000	0.301	0.000	0.301	0.000	0.938	0.000	0.938	0.000	1.172	0.000	1.172	0.010	0.755	0.000	0.765
58	0.000	0.037	0.000	0.037	0.000	0.314	0.000	0.314	0.000	0.432	0.000	0.432	0.000	1.290	0.000	1.290	0.000	0.546	0.000	0.546
60	0.000	0.034	0.000	0.034	0.000	0.306	0.000	0.306	0.000	0.401	0.000	0.401	0.000	1.120	0.000	1.120	0.000	0.335	0.000	0.335
62	0.000	0.054	0.000	0.054	0.000	0.103	0.000	0.103	0.000	0.047	0.000	0.047	0.000	1.168	0.000	1.168	0.000	0.250	0.000	0.250
64	0.000	0.057	0.000	0.057	0.000	0.122	0.000	0.122	0.000	0.298	0.000	0.298	0.000	0.637	0.000	0.637	0.000	0.045	0.000	0.045
66	0.000	0.008	0.000	0.008	0.000	0.045	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.078	0.000	0.078
68	0.000	0.011	0.000	0.011	0.000	0.091	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.004
70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.086	0.000	0.086	0.000	0.016	0.000	0.016
72	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.018	0.000	0.000	0.000	0.000
74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
76	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.054	0.000	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	40.511	38.798	0.023	79.332	56.883	108.124	0.000	165.008	122.141	183.012	10.273	315.426	222.117	359.467	0.348	581.933	252.254	261.936	5.053	519.242
Nº samples (*):				116				108				93				96				81
Nº Ind. (*):	8297	5729	3	14029	4640	7390	0	12030	4541	7742	4	12287	3732	7721	5	11458	4996	7906	114	13016
Sampled catch:				1390				1617				1858				1697				3388
Range (*):				14-68				13-68				10-77				11-72				5-70
Total catch:				4209				8540				10565				15533				11477
Total hauls (*):				128				124				114				118				123

TABLE 15 (cont.).- American plaice length distribution. Estimated numbers per haul stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels. (*) indicates untransformed data.

	2002				2003				2004				2005				2006			
Length (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.052	0.052	0.188	0.044	0.287	0.519	0.084	0.090	8.701	8.875	0.014	0.007	0.513	0.534	0.043	0.000	0.096	0.139
8	0.005	0.133	0.013	0.152	0.356	0.223	0.056	0.635	1.027	0.746	49.783	51.556	0.172	0.400	1.875	2.446	0.019	0.010	0.095	0.124
10	0.853	1.420	0.091	2.365	0.074	0.142	0.065	0.280	0.133	0.271	6.226	6.630	1.474	1.177	0.099	2.750	0.072	0.060	0.000	0.131
12	4.606	6.883	0.135	11.625	0.814	0.891	0.000	1.705	1.164	1.209	0.004	2.377	29.728	22.828	0.062	52.618	2.843	2.168	0.000	5.011
14	3.250	3.490	0.027	6.768	1.576	1.005	0.000	2.581	6.529	4.615	0.000	11.145	46.137	45.635	0.056	91.828	8.939	8.049	0.000	16.989
16	1.688	2.104	0.000	3.792	6.969	5.441	0.000	12.410	3.692	3.184	0.000	6.875	22.245	20.487	0.000	42.733	15.983	14.714	0.000	30.697
18	6.588	6.831	0.000	13.420	17.873	13.925	0.000	31.798	1.904	1.239	0.000	3.143	6.715	6.709	0.000	13.424	68.546	51.271	0.000	119.817
20	10.751	8.917	0.000	19.668	7.441	7.791	0.000	15.232	4.051	3.190	0.000	7.241	6.343	5.253	0.000	11.596	95.356	94.226	0.000	189.583
22	26.930	17.681	0.000	44.611	14.162	8.973	0.000	23.135	18.341	8.930	0.000	27.271	3.618	3.026	0.000	6.644	33.891	37.382	0.000	71.273
24	34.971	33.222	0.000	68.193	35.284	11.606	0.000	46.890	18.592	14.481	0.000	33.073	7.908	3.341	0.000	11.249	16.301	12.507	0.000	28.808
26	21.342	29.173	0.000	50.515	62.238	21.586	0.000	83.823	27.188	10.344	0.000	37.532	17.567	6.709	0.000	24.276	18.093	10.179	0.000	28.272
28	7.317	13.800	0.000	21.117	42.882	44.576	0.000	87.458	46.289	14.760	0.000	61.048	31.709	13.734	0.000	45.444	32.376	6.712	0.000	39.087
30	5.530	4.861	0.000	10.391	17.283	42.818	0.000	60.100	36.904	23.718	0.000	60.622	46.328	13.928	0.000	60.256	57.378	11.702	0.000	69.080
32	7.801	1.697	0.000	9.498	11.921	19.885	0.000	31.805	17.960	43.845	0.000	61.804	32.463	16.433	0.000	48.896	48.434	22.092	0.000	70.526
34	7.563	1.390	0.000	8.953	11.256	8.363	0.000	19.618	10.580	42.211	0.000	52.791	14.535	26.469	0.000	41.005	26.510	20.787	0.000	47.297
36	5.397	1.575	0.000	6.973	8.333	3.467	0.000	11.800	6.172	20.482	0.000	26.654	7.360	35.775	0.000	43.134	12.445	26.465	0.000	38.909
38	2.528	4.239	0.000	6.767	4.505	2.965	0.000	7.470	3.628	6.955	0.000	10.583	3.353	24.246	0.000	27.600	4.025	37.156	0.000	41.181
40	1.263	6.464	0.000	7.726	1.685	4.476	0.000	6.161	1.587	4.815	0.000	6.402	0.745	10.301	0.000	11.046	1.775	28.755	0.000	30.530
42	0.411	8.085	0.000	8.496	0.475	7.659	0.000	8.135	0.582	5.407	0.000	5.990	0.202	4.700	0.000	4.903	0.304	12.994	0.000	13.297
44	0.164	6.918	0.000	7.081	0.147	6.731	0.000	6.877	0.183	6.655	0.000	6.838	0.057	3.419	0.000	3.477	0.216	6.821	0.000	7.037
46	0.031	5.848	0.000	5.878	0.063	6.855	0.000	6.917	0.109	7.216	0.000	7.325	0.164	3.433	0.000	3.597	0.014	3.300	0.000	3.314
48	0.018	3.791	0.000	3.810	0.000	5.653	0.000	5.653	0.000	5.071	0.000	5.071	0.090	2.990	0.000	3.080	0.037	3.481	0.000	3.518
50	0.024	2.186	0.000	2.210	0.000	3.517	0.000	3.517	0.008	3.552	0.000	3.559	0.107	2.272	0.000	2.379	0.000	3.394	0.000	3.394
52	0.051	1.614	0.000	1.666	0.000	3.150	0.000	3.150	0.000	2.925	0.000	2.925	0.049	1.634	0.000	1.683	0.000	2.126	0.000	2.126
54	0.000	1.152	0.000	1.152	0.000	2.273	0.000	2.273	0.000	2.326	0.000	2.326	0.000	1.531	0.000	1.531	0.000	1.451	0.000	1.451
56	0.000	0.720	0.000	0.720	0.000	1.159	0.000	1.159	0.059	1.604	0.000	1.663	0.000	1.546	0.000	1.546	0.000	2.357	0.000	2.357
58	0.000	0.351	0.000	0.351	0.000	0.804	0.000	0.804	0.000	1.066	0.000	1.066	0.000	0.905	0.000	0.905	0.000	1.581	0.000	1.581
60	0.000	0.231	0.000	0.231	0.000	0.447	0.000	0.447	0.000	0.271	0.000	0.271	0.000	0.753	0.000	0.753	0.000	0.763	0.000	0.763
62	0.000	0.139	0.000	0.139	0.000	0.073	0.000	0.073	0.000	0.294	0.000	0.294	0.000	0.407	0.000	0.407	0.000	0.300	0.000	0.300
64	0.000	0.020	0.000	0.020	0.000	0.222	0.000	0.222	0.000	0.162	0.000	0.162	0.000	0.174	0.000	0.174	0.000	0.200	0.000	0.200
66	0.000	0.101	0.000	0.101	0.000	0.032	0.000	0.032	0.000	0.132	0.000	0.132	0.000	0.302	0.000	0.302	0.000	0.088	0.000	0.088
68	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.049	0.000	0.049	0.000	0.081	0.000	0.081	0.000	0.019	0.000	0.019
70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.015
72	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.014
74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
76	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.006
Total	149.083	175.044	0.319	324.447	245.522	236.752	0.407	482.682	206.765	241.817	64.714	513.296	279.087	280.604	2.603	562.294	443.600	423.144	0.191	866.936
Nº samples (*):				108				91				75				70				73
Nº Ind. (*):	5873	7234	12	13119	6122	7333	9	13464	5076	7561	1353	13990	6097	8494	62	14653	5942	8030	20	13992
Sampled catch:				3675				3885				4614				4556				5906
Range (*):				7-68				6-66				6-68				6-69				6-77
Total catch:				9201				13955				13729				13193				17334
Total hauls (*):				125				118				120				119				120

TABLE 15 (cont.).- American plaice length distribution. Estimated numbers per haul stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels. (*) indicates untransformed data.

	2007				2008				2009				2010				2011			
Length (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.159	0.159	0.000	0.000	0.000	0.000	0.000	0.000	0.084	0.084	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.357	0.306	2.373	3.036	0.022	0.000	0.394	0.416	0.009	0.009	1.252	1.269	0.020	0.007	0.195	0.221	0.000	0.000	0.000	0.000
8	0.756	0.622	1.006	2.384	0.594	0.777	0.399	1.770	0.323	0.255	1.828	2.406	0.040	0.106	0.000	0.146	0.000	0.078	0.000	0.078
10	0.117	0.112	0.045	0.275	16.878	13.351	7.196	37.425	0.624	0.443	0.831	1.899	5.652	5.813	0.000	11.465	0.063	0.066	0.000	0.128
12	0.273	0.273	0.019	0.565	13.308	12.346	4.442	30.097	1.056	0.761	0.151	1.968	13.825	12.833	0.000	26.658	0.195	0.220	0.000	0.415
14	0.409	0.230	0.000	0.639	3.366	2.820	0.067	6.252	3.309	2.975	0.097	6.380	9.208	9.087	0.000	18.295	3.230	1.081	0.010	4.321
16	1.201	1.058	0.000	2.259	1.881	1.781	0.000	3.662	6.313	7.598	0.068	13.978	5.606	5.537	0.000	11.142	15.370	10.447	0.000	25.816
18	7.895	7.011	0.000	14.906	2.321	1.569	0.043	3.934	3.348	4.013	0.000	7.361	10.834	9.345	0.000	20.179	18.082	20.344	0.000	38.426
20	18.350	11.397	0.000	29.748	10.242	6.556	0.000	16.798	2.673	2.552	0.000	5.225	16.893	14.650	0.000	31.543	15.116	10.105	0.000	25.222
22	44.794	25.820	0.000	70.614	35.516	17.364	0.000	52.881	5.638	3.474	0.000	9.112	15.894	10.922	0.000	26.817	24.201	10.896	0.000	35.098
24	49.297	38.741	0.000	88.038	64.851	29.146	0.000	93.997	13.784	5.481	0.000	19.265	24.252	9.510	0.000	33.762	41.480	24.442	0.000	65.922
26	25.290	24.747	0.000	50.037	63.778	56.716	0.000	120.494	23.336	12.973	0.000	36.309	40.883	7.316	0.000	48.199	51.597	23.269	0.000	74.867
28	20.585	12.655	0.000	33.240	33.117	50.360	0.000	83.477	21.745	23.534	0.000	45.279	56.452	16.059	0.000	72.511	75.074	14.248	0.000	89.322
30	25.139	7.487	0.000	32.626	34.622	22.353	0.000	56.975	17.699	24.519	0.000	42.217	39.702	24.479	0.000	64.181	69.544	17.391	0.000	86.935
32	25.351	7.517	0.000	32.868	32.584	12.761	0.000	45.345	13.522	15.402	0.000	28.924	25.227	25.449	0.000	50.677	39.504	31.733	0.000	71.236
34	16.904	10.904	0.000	27.809	20.248	10.758	0.000	31.007	11.775	8.900	0.000	20.675	11.550	20.411	0.000	31.961	20.299	39.746	0.000	60.045
36	6.664	14.769	0.000	21.433	11.713	15.283	0.000	26.996	5.686	8.568	0.000	14.254	3.882	10.721	0.000	14.603	8.914	26.537	0.000	35.451
38	4.007	18.315	0.000	22.321	3.739	20.729	0.000	24.468	2.408	11.090	0.000	13.498	1.226	8.739	0.000	9.965	1.757	14.690	0.000	16.447
40	1.327	21.746	0.000	23.074	1.600	26.714	0.000	28.314	0.838	15.607	0.000	16.445	0.395	9.650	0.000	10.046	0.875	10.742	0.000	11.616
42	0.463	15.291	0.000	15.754	0.410	22.139	0.000	22.548	0.306	13.462	0.000	13.768	0.081	8.885	0.000	8.965	0.077	10.603	0.000	10.679
44	0.137	7.011	0.000	7.148	0.284	14.339	0.000	14.623	0.034	9.311	0.000	9.346	0.000	7.461	0.000	7.461	0.000	7.054	0.000	7.054
46	0.118	4.045	0.000	4.163	0.155	7.483	0.000	7.638	0.031	4.344	0.000	4.376	0.047	4.639	0.000	4.686	0.092	4.441	0.000	4.533
48	0.044	2.998	0.000	3.041	0.138	4.261	0.000	4.399	0.027	2.823	0.000	2.850	0.044	2.760	0.000	2.804	0.000	2.439	0.000	2.439
50	0.051	1.920	0.000	1.970	0.059	2.428	0.000	2.487	0.037	1.730	0.000	1.768	0.000	2.054	0.000	2.054	0.007	1.475	0.000	1.482
52	0.010	1.822	0.000	1.832	0.000	2.126	0.000	2.126	0.027	1.477	0.000	1.504	0.000	2.767	0.000	2.767	0.000	1.232	0.000	1.232
54	0.000	1.783	0.000	1.783	0.000	1.597	0.000	1.597	0.000	1.421	0.000	1.421	0.000	1.539	0.000	1.539	0.000	0.637	0.000	0.637
56	0.000	1.473	0.000	1.473	0.000	1.754	0.000	1.754	0.000	1.246	0.000	1.246	0.000	1.358	0.000	1.358	0.000	0.856	0.000	0.856
58	0.000	1.065	0.000	1.065	0.000	1.454	0.000	1.454	0.000	0.855	0.000	0.855	0.007	1.021	0.000	1.028	0.000	0.926	0.000	0.926
60	0.000	0.707	0.000	0.707	0.000	0.928	0.000	0.928	0.000	0.745	0.000	0.745	0.000	0.580	0.000	0.580	0.000	0.469	0.000	0.469
62	0.000	0.475	0.000	0.475	0.000	0.843	0.000	0.843	0.000	0.262	0.000	0.262	0.000	0.520	0.000	0.520	0.000	0.341	0.000	0.341
64	0.000	0.449	0.000	0.449	0.000	0.486	0.000	0.486	0.000	0.256	0.000	0.256	0.000	0.473	0.000	0.473	0.000	0.146	0.000	0.146
66	0.000	0.068	0.000	0.068	0.000	0.089	0.000	0.089	0.000	0.070	0.000	0.070	0.000	0.000	0.000	0.000	0.000	0.035	0.000	0.035
68	0.000	0.039	0.000	0.039	0.000	0.030	0.000	0.030	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.025	0.000	0.025
70	0.000	0.015	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.008	0.000	0.000	0.000	0.000
72	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.012	0.000	0.000	0.000	0.000
74	0.000	0.015	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.019	0.000	0.000	0.000	0.000
76	0.000	0.000	0.000	0.000	0.000	0.028	0.000	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	249.539	242.885	3.602	496.025	351.426	361.373	12.541	725.340	134.548	186.163	4.328	325.039	281.719	234.732	0.195	516.645	385.477	286.713	0.010	672.200
Nº samples (*):				75				75				76				57				70
Nº Ind. (*):	5356	6995	163	12514	5439	7861	247	13547	4571	6451	263	11285	3817	5613	12	9442	5295	7616	1	12912
Sampled catch:				4342				4318				3964				2795				3668
Range (*):				5-75				6-77				3-69				6-74				8-69
Total catch:				12282				17867				11219				9215				14415
Total hauls (*):				111				122				109				95				122

TABLE 16.- American plaice age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1																	0.02	0.02	1.76	1.80
2	0.05	0.05		0.10	0.14	0.01		0.15		16.05	5.74	21.79	19.25	31.09	0.19	50.52	10.71	12.12	2.68	25.51
3	1.06	0.89	0.01	1.96	0.28	0.16		0.45	0.78	9.11	4.49	14.37	73.87	115.31	0.16	189.34	135.76	120.45	0.60	256.81
4	2.49	2.31	0.01	4.80	2.83	3.04		5.87	1.78	2.32	0.04	4.14	36.19	31.67	0.00	67.85	38.91	39.15	0.01	78.07
5	2.99	3.15	0.00	6.14	4.14	4.44		8.58	10.45	2.44		12.89	5.46	5.54	0.00	11.00	2.09	2.72		4.81
6	11.99	7.93		19.92	8.52	5.73		14.25	24.16	13.76		37.92	12.33	7.31		19.64	9.78	1.66		11.44
7	15.93	9.81		25.74	14.20	15.79		29.99	15.93	16.22		32.15	24.53	25.18		49.71	18.82	11.77		30.59
8	5.19	8.49		13.68	19.26	29.24		48.49	28.20	14.33		42.53	20.83	18.66		39.49	12.20	16.30		28.50
9	0.78	3.77		4.55	6.22	27.61		33.83	31.52	29.00		60.52	23.00	28.90		51.90	14.72	12.44		27.17
10	0.00	1.26		1.26	0.92	12.76		13.68	7.40	42.71		50.12	5.44	41.54		46.98	6.82	13.62		20.44
11	0.03	0.45		0.48	0.27	5.12		5.39	1.74	18.72		20.46	0.86	28.23		29.09	2.40	18.80		21.20
12		0.40		0.40	0.04	1.93		1.97	0.20	8.99		9.19	0.34	13.21		13.56		8.26		8.26
13		0.12		0.12	0.06	0.89		0.95		5.00		5.00	0.02	6.36		6.38		2.27		2.27
14		0.11		0.11		1.03		1.03		1.87		1.87		0.97		0.97		0.96		0.96
15		0.03		0.03		0.19		0.19		1.20		1.20		3.32		3.32		0.76		0.76
16		0.04		0.04		0.09		0.09		0.48		0.48		1.59		1.59	0.01	0.21		0.22
17										0.39		0.39		0.48		0.48		0.20		0.20
18		0.01		0.01		0.05		0.05		0.35		0.35						0.17		0.17
19		0.01		0.01		0.05		0.05										0.02		0.02
20										0.05		0.05		0.10		0.10		0.01		0.01
21																				
22																				
23																				
Total	40.51	38.80	0.02	79.33	56.88	108.12	0.00	165.01	122.14	183.01	10.27	315.43	222.12	359.47	0.35	581.93	252.25	261.94	5.05	519.24

	2002				2003				2004				2005				2006			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	0.00	0.01	0.04	0.05	0.14	0.27	0.25	0.65	0.17	0.84	55.58	56.59	0.03	0.41	1.28	1.71	0.02	0.00	0.05	0.07
2	4.54	6.04	0.20	10.78	2.75	1.28	0.16	4.19	8.18	3.18	9.13	20.50	38.79	36.13	1.26	76.18	5.21	4.16	0.07	9.44
3	10.72	14.24	0.08	25.04	19.77	15.58		35.35	6.48	6.59	0.00	13.07	69.41	60.61	0.06	130.08	60.27	50.37	0.01	110.64
4	75.72	89.62		165.33	36.63	21.35		57.98	19.63	15.40		35.03	8.67	8.40		17.07	75.01	73.94		148.95
5	21.83	16.57		38.40	119.14	116.03		235.17	45.07	31.73		76.80	27.91	12.71		40.63	39.42	33.00		72.41
6	7.53	3.88		11.40	25.58	30.85		56.43	98.55	106.16		204.71	57.34	34.11		91.46	38.48	20.24		58.72
7	8.07	1.98		10.04	18.36	4.17		22.53	16.71	30.43		47.14	50.92	70.21		121.13	37.44	26.08		63.52
8	13.57	5.27		18.84	12.33	4.58		16.91	7.92	4.91		12.83	13.57	28.80		42.37	27.97	25.85		53.82
9	4.41	9.87		14.28	8.42	11.00		19.43	2.88	8.29		11.17	9.76	8.06		17.82	15.48	24.12		39.60
10	1.65	7.22		8.86	1.94	6.17		8.11	1.02	10.93		11.95	2.39	3.72		6.11	3.44	14.08		17.51
11	0.98	9.69		10.67	0.44	8.06		8.50	0.00	6.44		6.44	0.21	4.18		4.39	0.71	7.41		8.12
12	0.06	7.39		7.45	0.02	10.40		10.41	0.09	7.80		7.90	0.05	4.25		4.29	0.03	4.39		4.42
13		1.84		1.84		3.88		3.88		4.39		4.39	0.05	3.25		3.30	0.00	2.37		2.37
14		1.03		1.03		1.73		1.73	0.02	3.78		3.80		2.38		2.38		1.56		1.56
15		0.09		0.09		0.78		0.78	0.02	0.64		0.66		1.76		1.76		1.01		1.01
16		0.27		0.27		0.48		0.48	0.02	0.19		0.21		0.82		0.82		0.52		0.52
17		0.05		0.05		0.11		0.11						0.09		0.09		0.21		0.21
18						0.04		0.04		0.08		0.08		0.63		0.63		0.15		0.15
19		0.01		0.01						0.02		0.02		0.08		0.08		0.03		0.03
20																		0.02		0.02
21																				
22																				
23																				
Total	149.08	175.04	0.32	324.45	245.52	236.75	0.41	482.68	206.77	241.82	64.71	513.30	279.09	280.60	2.60	562.29	303.48	289.49	0.13	593.10

TABLE 16 (Cont.).- American plaice age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2010. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2010 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	2007				2008				2009				2010				2011			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	0.33	1.04	3.57	4.94	0.09	2.68	1.04	3.81	0.04	0.26	2.30	2.61	0.01	0.11	0.19	0.32		0.08		0.08
2	0.90	0.27	0.02	1.20	29.90	24.70	10.55	65.15	1.87	0.67	1.01	3.55	21.82	20.14		41.96	4.51	1.91	0.00	6.42
3	5.85	4.69	0.01	10.55	5.62	4.12	0.92	10.66	14.41	15.56	1.01	30.98	10.92	17.21		28.13	46.51	37.72	0.01	84.24
4	94.05	64.74		158.79	22.17	11.54	0.03	33.75	2.42	4.30	0.01	6.74	38.74	29.11		67.85	45.42	25.50		70.92
5	46.57	51.08		97.64	174.32	108.29	0.00	282.61	31.55	18.96		50.51	29.59	13.91		43.50	77.52	39.25		116.78
6	21.39	12.24		33.62	46.47	75.53		121.99	40.02	57.15		97.16	81.49	27.39		108.88	103.49	33.67		137.16
7	39.20	21.94		61.14	22.46	14.48		36.95	16.48	18.60		35.08	73.32	67.68		141.00	75.62	52.47		128.10
8	22.85	22.24		45.09	32.67	42.44		75.11	12.25	7.40		19.65	17.64	12.07		29.71	24.96	57.45		82.41
9	14.83	41.97		56.80	15.13	23.78		38.91	7.33	9.84		17.17	5.61	8.05		13.66	6.20	8.63		14.83
10	1.96	8.95		10.92	1.94	30.63		32.57	5.88	17.25		23.13	1.62	7.94		9.56	1.10	8.87		9.97
11	1.54	2.22		3.75	0.51	8.40		8.91	1.91	18.63		20.54	0.75	8.69		9.44	0.13	8.63		8.76
12	0.08	2.99		3.07	0.16	4.53		4.69	0.23	7.79		8.02	0.11	11.00		11.11	0.00	6.35		6.36
13	0.01	2.23		2.24		1.69		1.69	0.10	1.40		1.50	0.09	3.41		3.50		2.18		2.18
14		2.27		2.27		2.44		2.44	0.02	1.09		1.11	0.00	1.34		1.34		0.90		0.90
15		1.92		1.92		2.36		2.36	0.02	2.29		2.31		1.39		1.39		0.35		0.35
16		0.79		0.79		2.46		2.46	0.03	1.92		1.95		2.58		2.58		0.76		0.76
17		0.41		0.41		0.73		0.73		1.62		1.62		1.55		1.55		0.91		0.91
18		0.66		0.66		0.02		0.02		0.86		0.86		0.52		0.52		0.29		0.29
19		0.00		0.00		0.24		0.24		0.37		0.37		0.49		0.49		0.56		0.56
20		0.23		0.23		0.01		0.01		0.20		0.20		0.01		0.01		0.16		0.16
21						0.29		0.29												
22																		0.07		0.07
23														0.15		0.15				
Total	249.54	242.88	3.60	496.03	351.43	361.37	12.54	725.34	134.55	186.16	4.33	325.04	281.72	234.73	0.19	516.65	385.48	286.71	0.01	672.20

TABLE 17.- American plaice mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1																	9.00	7.20	7.08	7.10
2	16.20	16.36		16.28	16.88	13.00		16.68		11.05	11.31	11.12	15.47	15.70	11.39	15.60	15.13	14.58	9.83	14.31
3	20.00	19.84	19.00	19.92	16.90	17.00		16.93	16.63	14.09	12.64	13.77	16.41	16.23	12.13	16.30	20.78	20.88	12.84	20.81
4	22.71	23.32	19.00	23.00	24.68	26.67		25.71	19.69	19.26	15.00	19.40	18.45	18.96	19.00	18.69	21.21	21.58	17.72	21.39
5	24.88	25.92	19.00	25.41	26.09	27.79		26.97	28.04	27.20		27.88	21.51	20.88	19.00	21.19	29.82	29.77		29.79
6	28.79	30.21		29.35	29.13	28.81		29.00	29.95	30.69		30.22	30.78	32.45		31.40	31.33	34.37		31.77
7	31.63	34.77		32.82	31.33	33.73		32.59	31.27	32.35		31.81	32.24	35.87		34.08	33.26	36.76		34.61
8	35.20	38.91		37.50	33.54	36.78		35.49	32.33	35.83		33.51	33.57	37.63		35.49	34.31	39.83		37.46
9	40.00	41.66		41.38	35.26	40.19		39.28	33.76	38.53		36.05	35.23	40.61		38.22	35.60	40.82		37.99
10	49.00	45.60		45.60	39.49	42.52		42.31	36.58	41.18		40.50	39.01	42.85		42.41	35.60	43.15		40.63
11	47.61	47.57		47.57	44.30	45.94		45.86	40.90	44.01		43.75	42.80	45.58		45.50	36.57	45.57		44.55
12		51.85		51.85	46.10	49.16		49.09	43.85	46.89		46.83	50.18	48.57		48.61		47.80		47.80
13		56.49		56.49	50.67	51.38		51.34		49.44		49.44	51.00	52.68		52.68		51.72		51.72
14		62.46		62.46		59.22		59.22		53.85		53.85		54.91		54.91		50.96		50.96
15		62.46		62.46		58.52		58.52		56.43		56.43		59.15		59.15		58.43		58.43
16		63.31		63.31		63.83		63.83		57.41		57.41		60.23		60.23	57.00	61.94		61.72
17										61.54		61.54		62.98		62.98		58.49		58.49
18		68.56		68.56		68.67		68.67		62.71		62.71						61.80		61.80
19		69.00		69.00		69.00		69.00										65.00		65.00
20										77.00		77.00		71.34		71.34		71.00		71.00
21																				
22																				
23																				
Total	30.05	34.53	19.00	32.24	31.58	37.85		35.69	31.84	35.48	11.91	33.30	23.60	29.26	11.78	27.09	24.09	28.07	9.24	25.95

TABLE 17 (Cont.).- American plaice mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	2002				2003				2004				2005				2006			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	9.00	9.00	7.07	7.52	7.64	8.67	7.45	7.99	8.51	8.78	8.79	8.79	8.50	8.97	8.47	8.58	7.20	9.00	7.25	7.25
2	13.03	12.65	11.48	12.79	14.00	13.17	8.61	13.54	14.09	14.28	9.73	12.18	14.01	14.60	9.09	14.21	15.50	15.99	8.41	15.66
3	18.06	18.13	13.27	18.08	19.79	19.55		19.68	18.31	16.23	13.00	17.26	15.94	15.81	14.15	15.88	19.54	19.60	9.00	19.57
4	23.99	24.99		24.53	22.84	21.16		22.22	24.11	25.41		24.68	22.82	20.41		21.64	21.01	21.26		21.14
5	26.15	27.62		26.79	27.20	29.31		28.24	26.66	27.17		26.87	27.26	27.98		27.49	25.10	24.24		24.71
6	29.59	30.84		30.01	29.74	31.44		30.67	29.90	33.11		31.57	30.21	31.40		30.66	29.99	32.29		30.78
7	32.15	37.21		33.14	31.52	35.54		32.26	33.18	34.84		34.25	32.14	35.83		34.28	31.96	35.60		33.45
8	34.40	39.20		35.74	35.69	38.92		36.56	35.47	38.87		36.78	34.35	38.45		37.14	33.27	38.01		35.55
9	35.89	41.82		39.99	36.88	42.31		39.95	39.32	42.08		41.36	34.79	40.92		37.56	34.26	39.76		37.61
10	38.57	44.54		43.43	39.04	46.18		44.48	41.33	44.53		44.25	39.18	44.52		42.43	35.99	41.53		40.44
11	41.10	46.24		45.77	38.37	46.69		46.26	51.00	46.82		46.82	44.85	47.50		47.38	38.10	45.00		44.40
12	52.00	49.28		49.30	45.00	49.13		49.12	45.10	49.10		49.06	49.73	48.33		48.34	45.38	49.22		49.19
13		50.73		50.73		52.73		52.73		51.99		51.99	53.00	51.06		51.09	48.62	52.74		52.70
14		55.21		55.21		53.75		53.75	57.00	55.83		55.84		54.96		54.96		55.82		55.82
15		57.62		57.62		58.22		58.22	57.00	64.15		63.94		57.83		57.83		58.33		58.33
16		63.51		63.51		61.98		61.98	57.00	51.00		51.57		58.81		58.81		59.62		59.62
17		63.00		63.00		61.00		61.00						65.00		65.00		60.67		60.67
18						63.00		63.00		63.48		63.48		65.10		65.10		62.83		62.83
19		66.96		66.96						69.00		69.00		66.93		66.93		65.88		65.88
20																		73.07		
21																				
22																				
23																				
Total	25.86	29.44	11.45	27.78	27.26	31.64	7.91	29.39	28.32	33.90	8.92	28.50	24.69	28.90	8.91	26.72	25.66	29.05	7.99	27.31

	2007				2008				2009				2010				2011			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	8.28	8.63	7.51	7.80	8.74	10.42	9.11	10.02	8.81	8.93	7.87	7.99	7.66	8.88	7.00	7.69		9.00		9.00
2	8.73	13.00	11.78	9.77	12.10	12.37	11.74	12.14	12.60	13.37	9.58	11.89	13.24	13.12		13.18	16.16	16.05	15.00	16.13
3	19.17	18.93	13.00	19.05	14.17	15.11	12.19	14.36	18.12	17.55	11.40	17.61	16.21	17.19		16.81	19.57	20.49	15.00	19.98
4	24.00	24.58		24.24	24.35	22.67	17.78	23.77	21.12	21.49	13.78	21.34	21.23	21.69		21.43	24.41	22.72		23.80
5	25.25	26.01		25.64	25.76	26.73	19.00	26.13	27.04	27.33		27.15	24.70	24.59		24.67	27.08	26.82		26.99
6	29.07	28.88		29.00	30.17	29.87		29.98	28.23	30.61		29.63	28.65	29.79		28.94	29.31	30.66		29.64
7	31.74	36.82		33.57	33.56	34.22		33.82	31.41	33.60		32.57	30.12	33.14		31.57	31.87	34.16		32.81
8	33.21	39.08		36.10	34.40	39.42		37.23	34.91	36.27		35.42	32.90	37.02		34.57	34.11	36.67		35.89
9	33.69	40.65		38.83	34.66	41.07		38.58	35.04	40.47		38.15	34.42	39.21		37.24	34.78	40.27		37.97
10	39.69	43.42		42.75	37.09	43.22		42.85	33.37	42.26		40.00	37.12	43.52		42.44	39.28	43.59		43.11
11	37.86	49.04		44.46	42.38	45.32		45.15	35.65	42.54		41.90	36.90	43.61		43.08	41.35	44.11		44.07
12	47.89	50.89		50.81	44.01	51.17		50.93	40.24	45.40		45.25	41.65	45.67		45.63	51.00	46.54		46.55
13	53.00	53.38		53.38		52.71		52.71	44.37	49.62		49.28	45.53	46.45		46.42		50.62		50.62
14		52.62		52.62		51.62		51.62	45.00	54.34		54.20	59.00	53.81		53.81		51.91		51.91
15		55.83		55.83		56.20		56.20	45.00	47.41		47.39		54.31		54.31		55.65		55.65
16		61.37		61.37		57.16		57.16	49.00	54.05		53.98		55.63		55.63		56.43		56.43
17		58.62		58.62		56.56		56.56		58.50		58.50		60.22		60.22		58.78		58.78
18		58.48		58.48		69.00		69.00		59.13		59.13		58.48		58.48		60.50		60.50
19		75.00		75.00		55.87		55.87		52.45		52.45		56.86		56.86		61.07		61.07
20		65.21		65.21		77.00		77.00		65.71		65.71		75.00		75.00		63.13		63.13
21						63.66		63.66												
22																		63.00		63.00
23														59.00		59.00				
Total	27.33	32.44	7.55	29.69	26.68	31.69	11.57	28.92	28.26	34.00	9.10	31.29	26.38	30.64	7.00	28.31	27.89	31.80	15.00	29.56

TABLE 18.- American plaice mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1																	5.52	2.36	2.58	2.61
2	30.58	30.09		30.32	34.08	13.56		33.00		9.81	8.24	9.40	24.78	26.73	8.24	25.92	28.14	24.01	8.97	24.16
3	60.98	59.53	48.25	60.25	34.14	33.05		33.75	34.19	23.00	12.02	20.17	29.96	28.38	10.43	28.98	74.66	74.78	17.85	74.58
4	90.53	102.43	48.25	96.16	115.88	160.85		139.18	65.34	60.28	21.02	62.07	45.19	47.76	45.86	46.39	80.14	84.04	45.36	82.09
5	122.41	143.19	48.25	133.03	142.60	176.64		160.21	180.39	180.47		180.40	85.85	67.41	45.86	76.56	224.47	241.89		234.33
6	192.63	236.88		210.25	197.61	195.48		196.75	219.78	253.61		232.06	240.11	293.64		260.03	259.90	361.60		274.64
7	259.54	373.88		303.10	252.15	331.81		294.09	253.60	300.02		277.02	282.85	409.54		347.02	312.53	459.67		369.14
8	368.81	542.51		476.56	311.29	438.62		388.05	282.41	415.58		327.29	323.42	484.21		399.40	345.34	585.81		482.85
9	548.18	678.61		656.33	368.71	590.74		549.92	323.00	523.92		419.27	379.83	622.11		514.73	385.35	636.37		500.33
10	1019.79	911.38		911.53	526.59	713.13		700.57	414.67	642.60		608.93	537.06	743.81		719.87	392.43	762.73		639.11
11	933.18	1064.95		1055.90	746.72	910.89		902.75	585.62	796.73		778.79	724.88	923.47		917.61	425.17	899.33		845.69
12		1384.64		1384.64	841.32	1137.44		1130.94	726.28	971.49		966.25	1221.32	1139.85		1141.90		1053.94		1053.94
13		1843.51		1843.51	1157.79	1325.51		1315.68		1140.42		1140.42	1283.48	1494.13		1493.61		1356.99		1356.99
14		2580.03		2580.03		2111.99		2111.99		1495.55		1495.55		1707.48		1707.48		1291.89		1291.89
15		2565.46		2565.46		2027.53		2027.53		1727.69		1727.69		2232.76		2232.76		1981.57		1981.57
16		2681.12		2681.12		2684.74		2684.74		1828.20		1828.20		2334.60		2334.60	1607.50	2379.43		2344.69
17										2283.43		2283.43		2736.30		2736.30		1989.94		1989.94
18		3491.89		3491.89		3415.05		3415.05		2413.08		2413.08						2364.16		2364.16
19		3564.93		3564.93		3468.37		3468.37										2776.59		2776.59
20										4610.97		4610.97		4149.65		4149.65		3691.44		3691.44
21																				
22																				
23																				
Total	233.91	421.32	48.25	325.51	268.47	527.64		438.29	276.33	519.04	9.94	408.48	153.75	393.67	9.49	301.87	142.91	305.31	7.85	223.52

	2002				2003				2004				2005				2006			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	4.53	4.27	2.03	2.55	2.77	3.78	2.40	3.05	5.04	4.74	5.53	5.52	3.49	4.05	3.33	3.51	2.78	5.14	2.58	2.65
2	15.31	13.47	10.57	14.19	20.82	14.97	4.43	18.40	23.80	22.39	8.27	16.66	18.32	21.44	4.47	19.57	30.35	33.38	4.18	31.48
3	48.02	51.69	16.15	50.00	61.32	57.36		59.58	53.80	34.33	18.13	43.98	29.37	29.28	18.27	29.32	61.78	64.12	5.00	62.84
4	107.46	126.02		117.52	96.29	73.44		87.88	118.24	148.37		131.49	103.39	67.26		85.60	77.10	81.96		79.51
5	141.66	175.42		156.23	162.64	209.46		185.74	162.74	177.90		169.00	165.83	187.83		172.71	138.74	133.07		136.15
6	213.89	247.39		225.28	219.41	263.99		243.78	224.80	324.26		276.38	234.71	271.80		248.54	229.61	310.73		257.57
7	273.99	454.37		309.50	265.20	406.54		291.34	311.03	377.96		354.24	285.75	415.68		361.06	275.74	413.68		332.37
8	336.57	541.72		393.92	386.93	539.83		428.35	375.48	540.09		438.48	357.86	519.53		467.77	312.24	504.70		404.67
9	388.21	662.77		577.97	432.35	692.92		579.94	507.87	698.52		649.34	371.97	637.50		492.07	342.78	580.80		487.76
10	482.17	812.73		751.27	515.51	927.79		829.32	597.92	832.90		812.86	558.48	852.01		737.11	401.15	670.26		617.44
11	584.61	928.89		897.25	489.24	958.75		934.29	1108.14	964.46		964.56	885.54	1066.20		1057.75	480.60	871.24		837.04
12	1234.38	1142.20		1142.96	804.42	1130.44		1129.93	764.27	1117.01		1112.85	1209.09	1120.37		1121.31	808.17	1152.76		1150.11
13		1256.80		1256.80		1432.20		1432.20		1335.85		1335.85	1480.60	1334.19		1336.37	986.79	1423.36		1422.33
14		1645.89		1645.89		1516.23		1516.23	1551.96	1679.11		1678.45		1711.56		1711.56		1692.58		1692.58
15		1875.93		1875.93		1958.44		1958.44	1551.96	2585.25		2554.39		2022.18		2022.18		1940.19		1940.19
16		2589.45		2589.45		2416.37		2416.37	1551.96	1243.96		1273.41		2136.98		2136.98		2083.56		2083.56
17		2499.50		2499.50		2266.74		2266.74						2953.40		2953.40		2198.82		2198.82
18						2520.70		2520.70		2522.62		2522.62		2986.58		2986.58		2446.73		2446.73
19		3061.95		3061.95						3248.73		3248.73		3266.33		3266.33		2836.06		2836.06
20																		3941.25		
21																				
22																				
23																				
Total	156.68	311.92	11.07	240.29	180.42	351.16	3.20	264.02	206.83	417.77	5.92	280.87	166.30	329.92	4.24	247.20	165.03	307.24	3.61	234.41

TABLE 18 (Cont.).- American plaice mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2010. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2010 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

	2007				2008				2009				2010				2011			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	4.27	4.78	2.89	3.38	4.29	6.95	4.95	6.34	4.71	3.91	3.66	3.70	2.48	3.96	1.95	2.68		4.55		4.55
2	4.71	16.44	11.67	7.53	12.40	12.59	10.27	12.13	15.57	15.57	6.52	13.01	15.67	15.40		15.54	31.14	30.75	24.25	31.02
3	55.34	55.17	15.64	55.23	22.78	25.18	11.98	22.78	48.56	40.16	12.13	43.15	31.58	41.41		37.59	59.13	71.12	24.25	64.50
4	111.98	129.47		119.11	118.25	90.13	40.62	108.56	76.16	75.60	19.72	75.70	75.57	83.51		78.97	116.44	100.29		110.63
5	134.70	157.85		146.81	136.06	153.88	48.66	142.89	158.84	165.60		161.38	120.76	127.07		122.78	160.54	165.41		162.18
6	207.31	222.78		212.94	223.30	228.00		226.21	178.31	240.78		215.05	193.81	233.50		203.80	204.22	251.70		215.88
7	266.40	459.13		335.57	312.76	356.92		330.07	249.10	329.32		291.64	227.52	324.48		274.06	264.84	353.84		301.29
8	310.14	565.10		435.92	338.15	548.87		457.21	338.70	421.12		369.73	302.17	475.42		372.53	326.37	445.15		409.18
9	321.87	626.56		547.02	349.85	629.35		520.68	346.87	602.13		493.19	354.13	571. 13		481.94	349.18	597.46		493.65
10	531.30	771.08		727.92	440.91	738.16		720.46	302.78	687.49		589.67	448.76	794.39		735.76	513.39	767.22		739.25
11	468.28	1130.82		859.49	670.52	862.19		851.32	383.25	712.14		681.60	452.25	806.24		778.13	596.27	808.11		804.98
12	949.59	1286.96		1278.61	737.72	1308.02		1289.01	530.64	884.69		874.41	660.13	945.59		942.77	1147.96	956.16		956.23
13	1299.93	1488.33		1487.52		1407.83		1407.83	743.40	1171.05		1143.31	913.54	1007.58		1005.11		1254.19		1254.19
14		1443.88		1443.88		1373.08		1373.08	739.15	1582.24		1569.22	2072.08	1601.32		1601.91		1362.43		1362.43
15		1706.32		1706.32		1794.17		1794.17	739.15	1060.60		1058.23		1649.72		1649.72		1707.06		1707.06
16		2291.03		2291.03		1865.85		1865.85	963.13	1562.03		1553.62		1821.56		1821.56		1767.68		1767.68
17		2011.95		2011.95		1830.42		1830.42		2032.21		2032.21		2347.71		2347.71		2033.34		2033.34
18		1986.34		1986.34		3377.64		3377.64		2087.80		2087.80		2134.58		2134.58		2226.77		2226.77
19		4294.54		4294.54		1713.65		1713.65		1471.99		1471.99		1982.77		1982.77		2295.91		2295.91
20		2759.42		2759.42		4844.08		4844.08		2950.82		2950.82		4806.14		4806.14		2545.69		2545.69
21						2614.61		2614.61												
22																		2517.27		2517.27
23														2159.97		2159.97				
Total	183.20	395.68	2.98	285.93	176.11	364.62	10.04	267.16	197.81	429.98	6.34	328.23	171.12	367.51	1.95	260.28	188.71	347.68	24.25	256.51

TABLE 19.- Atlantic cod mean catch (kg) and SD by stratum. Spanish Spring Surveys in NAFO Div. 3NO: 1997-2011. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

	1997		1998		1999		2000		2001		2002		2003		2004	
Stratum	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD
353	0.00	0.000	0.00	0.004	6.26	8.593	8.59	9.984	7.33	8.145	0.00	0.003	0.00	0.000	10.21	8.691
354	0.00	0.000	17.67	29.046	4.92	3.192	18.44	27.099	16.07	3.315	0.01	0.012	7.63	13.221	4.76	3.335
355	4.29	5.711	27.05	3.662	6.39	2.549	94.83	76.209	56.11	64.898	0.96	0.370	3.02	2.390	5.09	3.267
356	7.80	0.495	6.23	0.247	41.19	0.346	16.34	17.172	149.60	76.650	15.20	10.889	15.61	1.605	2.97	0.714
357	91.55	174.202	7.45	0.742	10.12	11.461	9.15	-	27.20	36.062	6.65	1.909	5.28	7.460	13.30	17.727
358	1.77	1.655	4.46	4.030	9.98	4.006	184.88	194.829	3.42	2.592	2.63	1.429	207.22	260.186	14.41	12.455
359	1.13	2.385	0.39	0.858	7.25	11.394	18.26	17.367	176.35	433.935	2.72	3.436	1.03	1.522	29.83	54.712
360	0.11	0.226	0.22	0.700	2.33	3.801	2.16	3.561	11.36	27.470	0.82	2.887	1.14	2.952	3.55	4.484
374	0.06	0.099	0.00	0.000	0.58	0.594	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
375	0.00	-	0.78	0.403	0.97	0.579	0.00	0.000	0.00	0.000	0.47	0.503	0.48	0.826	0.05	0.081
376	0.00	0.000	0.20	0.187	0.62	0.545	0.90	1.852	0.04	0.119	0.00	0.000	0.65	1.987	0.60	0.733
377	0.27	-	1.89	2.375	0.21	0.302	0.02	0.027	0.00	0.000	0.00	0.000	1.25	1.768	19.60	24.020
378	2.34	3.316	3.46	0.940	7.76	5.951	10.65	11.169	11.98	15.726	1.45	2.051	19.18	19.141	17.75	3.989
379	3.68	0.307	8.30	5.847	5.22	4.147	41.12	54.683	9.54	9.001	24.83	32.492	4.35	0.481	23.95	-
380	0.36	0.515	2.33	1.361	38.58	48.720	8.21	3.236	6.00	2.895	0.31	0.035	1.09	0.976	7.77	2.305
381	0.07	0.099	0.21	0.187	0.87	0.388	1.74	0.730	0.66	0.891	0.04	0.057	0.00	0.000	5.47	4.150
382	0.00	0.000	0.32	0.336	0.05	0.036	0.71	0.561	0.12	0.145	0.04	0.076	0.00	0.000	0.47	0.888
721	20.98	7.052	0.61	0.866	88.29	106.743	28.34	17.122	4.85	6.859	1.01	1.430	9.40	13.287	2.20	3.111
722	0.31	0.139	0.00	0.000	0.00	0.000	0.90	1.277	0.00	0.000	0.00	0.000	1.73	2.447	0.00	0.000
723	9.90	2.425	4.39	3.736	16.87	20.735	22.02	12.010	676.15	932.179	55.60	69.155	0.65	0.919	1.94	2.744
724	1.30	1.269	1488.84	2101.820	0.02	0.032	0.70	0.341	6.16	10.254	49.80	70.428	10.46	14.786	0.00	0.000
725	23.50	17.734	30.86	-	13.65	19.102	4.34	3.857	1367.61	1856.733	9.25	7.849	2.17	3.062	0.29	0.403
726	n.s.	n.s.	4.74	5.617	0.81	0.492	8.85	12.221	1.83	2.593	1122.95	1569.289	0.00	0.000	0.00	0.000
727	0.12	-	2.66	2.821	9.20	4.701	9.16	10.803	10.40	4.810	2.80	3.960	7.45	9.405	0.00	0.000
728	1.17	0.569	1.54	2.177	0.00	0.000	0.90	1.267	0.00	0.000	21.40	30.264	0.00	0.000	0.00	0.000
752	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
753	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
754	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
755	n.s.	n.s.	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
756	0.00	-	0.32	0.449	0.24	0.334	0.36	0.257	0.04	0.057	0.00	0.000	0.00	0.000	0.00	0.000
757	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	64.40	91.075	0.00	0.000	0.00	0.000
758	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	2.80	3.960	0.00	0.000	0.00	0.000
759	n.s.	n.s.	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	-	0.00	0.000
760	0.00	-	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
761	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.17	0.236	0.00	0.000	0.00	0.000
762	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.15	0.212	0.00	0.000	0.00	0.000
763	n.s.	n.s.	0.00	0.000	0.00	0.000	1.08	2.170	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
764	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
765	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	-	0.00	0.000
766	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
767	n.s.	n.s.	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000

TABLE 19 (cont.).- Atlantic cod mean catch (kg) and SD by stratum. Spanish Spring Surveys in NAFO Div. 3NO: 1997-2011. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

	2005		2006		2007		2008		2009		2010		2011	
Stratum	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD	A. cod Mean catch	A. cod SD
353	4.20	3.962	11.53	7.341	0.14	0.138	0.04	0.070	0.00	0.000	0.00	0.000	10.99	9.954
354	6.76	8.311	10.98	14.032	16.81	14.624	64.76	69.913	25.17	21.163	12.41	0.576	12.26	12.012
355	1.97	0.255	3.04	0.078	41.34	12.820	2.30	3.253	3.63	4.448	17.89	15.203	14.17	3.217
356	1.43	1.478	3.88	3.247	0.96	1.351	13.45	13.011	2.94	3.585	4.98	7.036	5.19	2.135
357	3.98	4.603	12.75	8.400	1.42	1.323	6.31	8.917	14.29	15.293	28.52	31.314	8.33	11.780
358	22.75	17.967	82.54	80.442	113.84	43.776	249.58	302.829	50.33	41.797	78.96	86.769	35.08	43.032
359	57.31	134.609	372.36	643.214	3.17	4.658	224.94	196.538	520.11	821.106	850.41	1569.067	357.90	431.217
360	2.47	4.698	7.35	8.119	2.42	4.606	10.10	14.465	162.21	719.968	6.17	9.104	355.05	1005.533
374	0.11	0.148	0.00	0.000	0.00	0.000	0.57	0.812	0.00	0.000	0.00	0.000	754.30	636.113
375	0.00	0.000	13.53	15.862	1.71	1.646	18.64	29.958	0.00	0.000	0.86	1.495	62.03	5.590
376	0.76	0.963	6.84	11.380	0.68	1.167	11.60	9.917	0.67	0.921	1.35	2.777	4.92	10.028
377	61.19	64.955	90.62	69.919	698.56	987.885	234.80	189.646	11.89	16.568	13.30	18.809	460.46	585.704
378	8.59	10.087	90.32	85.680	85.98	23.723	213.40	239.992	709.31	0.269	3328.75	3276.804	76.89	57.007
379	5.70	7.078	6.30	8.627	3.13	0.394	2.26	1.965	54.61	74.091	38.85	28.919	17.25	12.459
380	27.53	24.784	8.70	1.697	4.20	5.945	21.80	11.738	4.11	1.727	61.05	53.245	29.15	24.678
381	3.63	3.765	8.43	1.167	2.19	0.354	4.49	6.242	0.02	0.028	1.65	0.997	51.35	57.912
382	0.97	0.639	0.75	1.033	0.00	0.000	0.13	0.167	0.00	0.000	3.13	0.792	567.93	1113.893
721	0.00	0.000	0.00	0.000	0.00	-	1.24	1.747	1.00	1.414	0.00	0.000	0.00	0.000
722	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
723	0.00	0.000	0.00	0.000	3.15	4.455	5.54	7.835	17.29	8.641	0.00	0.000	5.18	7.326
724	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
725	1.47	2.073	0.00	0.000	11.89	11.823	0.61	0.863	2.19	3.090	11.62	16.433	1.65	2.333
726	0.00	-	0.00	0.000	0.00	0.000	0.00	0.000	1.38	1.945	0.00	0.000	0.00	0.000
727	0.00	0.000	0.00	0.000	0.00	0.000	0.39	0.554	5.01	-	1.32	0.771	0.00	0.000
728	0.00	-	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
752	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.25	0.354	0.00	0.000	0.00	0.000
753	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	-	n.s.	n.s.	0	0
754	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	-	0.00	0.000	0.00	0.000
755	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	-	0.00	-	0.00	0.000
756	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
757	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
758	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
759	0.00	0.000	0.00	0.000	n.s.	n.s.	0.00	0.000	0.00	-	0.00	0.000	0.00	0.000
760	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
761	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
762	0.00	0.000	0.00	0.000	n.s.	n.s.	0.00	0.000	0.00	0	0.00	0.000	0.00	0.000
763	0.00	0.000	0.00	0.000	n.s.	n.s.	0.00	00.00	n.s.	n.s.	n.s.	n.s.	0	0
764	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	-	n.s.	n.s.	0	0
765	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
766	0.00	0.000	0.00	0.000	n.s.	n.s.	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
767	0.00	-	0.00	0.000	n.s.	n.s.	0.00	0.000	n.s.	n.s.	n.s.	n.s.	0.00	0.000

TABLE 20.- Stratified mean catches (Kg) by stratum and year and SD by year of Atlantic cod (1997-2011. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
353	0.00	0.59	1684.29	2310.56	1972.67	0.40	0.00	2746.49	1129.80	3100.67	36.76	10.85	0.00	0.00	2956.31
354	0.00	4347.10	1209.44	4536.47	3954.04	1.64	1877.80	1172.11	1662.39	2700.42	4134.28	15931.78	6190.92	3052.25	3016.37
355	317.46	2001.63	472.57	7017.36	4152.14	71.15	223.48	376.66	145.78	224.59	3058.79	170.20	268.25	1323.86	1048.25
356	366.75	292.75	1935.74	768.05	7031.20	714.40	733.44	139.36	66.98	182.17	44.89	632.15	137.95	233.83	243.93
357	15014.55	1222.35	1659.07	1500.68	4460.80	1090.60	865.10	2180.38	651.90	2091.00	232.33	1034.02	2344.22	4677.61	1366.12
358	397.76	1002.53	2246.51	41597.12	768.75	592.50	46625.25	3241.50	5119.50	18570.75	25614.00	56156.25	11325.00	17764.88	7893.00
359	473.87	164.50	3052.91	7687.04	74245.15	1146.52	435.31	12557.95	24128.71	156764.14	1334.99	94698.54	218966.47	358024.50	150676.50
360	301.58	616.24	6478.57	6017.33	31605.14	2283.17	3169.28	9886.61	6869.14	20449.63	6724.01	28119.71	451440.17	17174.89	988097.61
374	12.23	0.00	124.31	0.00	0.00	0.00	0.00	0.00	22.47	0.00	0.00	122.84	0.00	0.00	161420.20
375	0.00	211.79	261.73	0.00	0.00	126.47	129.18	12.65	0.00	3665.73	464.22	5050.09	0.00	233.96	16811.03
376	0.00	263.27	822.50	1202.94	50.03	0.00	864.70	801.87	1010.91	9129.90	911.39	15474.27	898.32	1798.42	6566.88
377	26.59	188.96	21.35	1.92	0.00	0.00	125.00	1959.50	6119.00	9062.00	69855.95	23480.00	1188.50	1330.00	46045.50
378	325.88	481.53	1078.58	1480.09	1665.22	201.55	2665.33	2466.56	1194.36	12553.79	11950.53	29662.60	98594.09	462696.25	10687.71
379	390.21	880.31	553.41	4358.29	1010.71	2631.45	461.10	2538.70	603.67	667.80	331.94	239.51	5788.66	4118.21	1828.50
380	34.94	223.39	3703.59	788.08	576.11	30.19	104.64	745.92	2642.40	835.20	403.58	2092.80	394.32	5860.80	2798.40
381	10.08	30.36	125.22	250.68	95.74	5.76	0.00	787.90	523.08	1213.20	315.36	646.06	2.88	237.60	7394.40
382	0.00	108.42	18.00	243.65	41.41	14.98	0.00	160.78	332.28	255.54	0.00	45.96	0.00	1073.59	194798.28
721	1363.56	39.80	5738.57	1842.35	315.25	65.75	610.68	143.00	0.00	0.00	0.00	80.28	65.00	0.00	0.00
722	26.16	0.00	0.00	75.84	0.00	0.00	145.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
723	1534.94	680.69	2614.28	3413.20	104803.25	8618.00	100.75	300.70	0.00	0.00	488.25	858.70	2679.95	0.00	802.90
724	161.20	184615.64	2.82	87.21	764.25	6175.20	1296.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
725	2467.77	3240.64	1432.94	455.78	143598.88	971.25	227.33	29.93	153.93	0.00	1248.45	64.05	229.43	1220.10	173.25
726	n.s	341.39	58.07	637.55	132.02	80852.04	0.00	0.00	0.00	0.00	0.00	0.00	99.00	0.00	0.00
727	11.42	255.30	883.49	879.12	998.37	268.80	715.20	0.00	0.00	0.00	0.00	37.58	480.96	126.24	0.00
728	91.43	120.09	0.00	69.87	0.00	1669.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
752	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.75	0.00	0.00
753	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n.s.	0
754	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
755	n.s	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
756	0.00	32.07	23.86	36.40	4.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
757	0.00	0.00	0.00	0.00	0.00	6568.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
758	0.00	0.00	0.00	0.00	0.00	277.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
759	n.s	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n.s	0.00	0.00	0.00	0.00
760	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
761	0.00	0.00	0.00	0.00	0.00	28.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
762	0.00	0.00	0.00	0.00	0.00	31.80	0.00	0.00	0.00	0.00	n.s	0.00	0.00	0.00	0.00
763	n.s	0.00	0.00	283.12	0.00	0.00	0.00	0.00	0.00	0.00	n.s	0.00	n.s	n.s.	0
764	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n.s.	0
765	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
766	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n.s	0.00	0.00	0.00	0.00
767	n.s	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n.s	0.00	n.s	n.s.	0
TOTAL	23328	201361	36202	87541	382245	114437	61375	42249	52376	241467	127150	274608	801127	880947	1604625
$\overline{Y}$	2.50	19.47	3.50	8.46	36.96	11.07	5.93	4.09	5.06	23.35	13.47	26.55	80.73	90.96	155.16
S.D.	1.54	17.82	0.75	2.58	17.97	7.82	3.29	0.95	2.16	9.39	7.44	5.71	46.81	43.41	64.42

TABLE 21.- Survey estimates (by the swept area method) of Atlantic cod biomass (t) and SD by stratum and year in NAFO Div. 3NO. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
353	0	0	140	195	173	0	0	244	96	251	3	1	0	0	254
354	0	366	111	382	351	0	167	102	141	223	341	1385	550	271	262
355	27	181	41	604	346	6	20	33	13	18	255	15	23	116	90
356	33	26	169	68	586	61	65	13	6	15	4	54	12	21	21
357	1357	102	140	121	366	91	76	191	56	172	19	89	403	416	121
358	35	86	194	3657	67	52	4144	295	440	1597	2091	4883	996	1579	686
359	41	14	252	656	6476	100	39	1111	2076	12863	109	8299	21377	30470	13082
360	26	53	529	502	2609	199	281	856	591	1660	566	2403	39731	1477	83252
374	1	0	10	0	0	0	0	0	2	0	0	11	0	0	14348
375	0	18	22	0	0	11	12	1	0	302	38	454	0	19	1401
376	0	23	67	100	4	0	77	69	86	749	77	1371	79	160	558
377	2	17	2	0	0	0	11	180	526	767	5821	2020	106	114	3961
378	31	41	95	127	141	17	237	219	106	1046	1028	2472	8620	41129	891
379	38	74	47	387	88	230	40	205	51	57	28	21	506	360	165
380	3	20	314	67	56	3	9	67	231	73	34	186	34	496	245
381	1	3	11	21	8	1	0	70	45	106	26	56	0	19	636
382	0	10	1	20	4	1	0	14	29	22	0	4	0	92	17315
721	123	4	471	156	25	6	54	13	0	0	0	7	6	0	0
722	2	0	0	7	0	0	13	0	0	0	0	0	0	0	0
723	146	59	229	276	8734	741	9	26	0	0	41	76	238	0	74
724	14	17902	0	8	65	549	115	0	0	0	0	0	0	0	0
725	239	376	125	43	12347	86	20	3	13	0	111	6	20	105	14
726	n.s.	33	5	58	11	7565	0	0	0	0	0	0	9	0	0
727	1	22	75	84	89	23	66	0	0	0	0	3	43	11	0
728	9	12	0	7	0	146	0	0	0	0	0	0	0	0	0
752	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
753	0	0	0	0	0	0	0	0	0	0	0	0	0	n.s.	0
754	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
755	n.s.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
756	0	3	2	4	0	0	0	0	0	0	0	0	0	0	0
757	0	0	0	0	0	584	0	0	0	0	0	0	0	0	0
758	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0
759	n.s.	0	0	0	0	0	0	0	0	0	n.s.	0	0	0	0
760	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
761	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
762	0	0	0	0	0	3	0	0	0	0	n.s.	0	0	0	0
763	n.s.	0	0	27	0	0	0	0	0	0	n.s.	0	n.s.	n.s.	0
764	0	0	0	0	0	0	0	0	0	0	0	0	0	n.s.	0
765	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
766	0	0	0	0	0	0	0	0	0	0	n.s.	0	0	0	0
767	n.s.	0	0	0	0	0	0	0	0	0	n.s.	0	n.s.	n.s.	0
TOTAL	2131	19444	3054	7576	32548	10502	5455	3712	4509	19921	10592	23817	72757	76856	137378
S.D.	1322	18206	655	2566	15903	7971	3016	848	1984	8109	5853	5221	40466	37369	54393

TABLE 22.- Length weight relationships in the calculation of Atlantic cod biomass. The equation is $Weight = a(l + 0.5)^b$ Spanish Spring Surveys in NAFO Div. 3NO: 1997-2011.

	1997	1998	1999	2000	2001	2002	2003	2004
a	0.0102 Error = 0.2480	0.0061 Error = 0.0748	0.0048 Error = 0.0788	0.0060 Error = 0.0706	0.0048 Error = 0.0893	0.0057 Error = 0.1025	0.0046 Error = 0.0581	0.0052 Error = 0.0698
b	2.9387 Error = 0.0629	3.0671 Error = 0.0197	3.1313 Error = 0.0203	3.0822 Error = 0.0179	3.1198 Error = 0.0228	3.0783 Error = 0.0274	3.1370 Error = 0.0153	3.1107 Error = 0.0185
	R^2 = 0.975 N = 431	R^2 = 0.997 N = 687	R^2 = 0.997 N = 430	R^2 = 0.997 N = 877	R^2 = 0.996 N = 488	R^2 = 0.995 N = 678	R^2 = 0.998 N = 516	R^2 = 0.997 N = 656

	2005	2006	2007	2008	2009	2010	2011
a	0.0052 Error = 0.0715	0.0058 Error = 0.0678	0.0059 Error = 0.0570	0.0047 Error = 0.0858	0.0052 Error = 0.0833	0.0051 Error = 0.0533	0.0047 Error = 0.0594
b	3.1238 Error = 0.0189	3.0965 Error = 0.0174	3.0762 Error = 0.0153	3.1341 Error = 0.0217	3.0937 Error = 0.0220	3.1215 Error = 0.0137	3.1390 Error = 0.0150
	R^2 = 0.997 N = 612	R^2 = 0.999 N = 1129	R^2 = 0.998 N= 1011	R^2 = 0.998 N= 1266	R^2 = 0.996 N= 795	R^2 = 0.998 N= 1007	R^2 = 0.998 N= 1541

TABLE 23.- Atlantic cod length distribution per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. (*) indicates untransformed data.

Length (cm.)	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.013	0.000	0.009	0.011	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.020	0.000
10	0.000	0.000	0.011	0.000	0.000	0.039	0.000	0.408	0.088	0.014	0.416	0.000	0.009	0.095	0.026
12	0.000	0.010	0.010	0.006	0.000	0.030	0.054	2.141	0.722	0.008	4.160	0.000	0.111	0.248	0.026
14	0.000	0.025	0.205	0.020	0.000	0.000	0.065	1.542	1.129	0.014	8.177	0.013	0.132	0.321	0.013
16	0.000	0.011	0.741	0.124	0.021	0.040	0.028	0.828	0.644	0.013	4.890	0.057	0.190	0.098	0.026
18	0.000	0.007	0.774	0.115	0.019	0.007	0.037	0.186	0.245	0.007	1.020	0.910	0.055	0.082	0.000
20	0.000	0.004	0.287	0.211	0.103	0.000	0.061	0.063	0.036	0.041	0.070	5.006	0.225	0.023	0.025
22	0.000	0.002	0.478	0.285	0.184	0.083	0.062	0.076	0.094	0.367	0.024	8.175	0.448	0.067	0.060
24	0.002	0.005	1.173	0.241	0.175	0.096	0.075	0.119	0.224	0.948	0.008	8.532	0.847	0.241	0.110
26	0.002	0.009	1.740	0.319	0.194	0.139	0.150	0.219	0.515	3.595	0.000	6.053	2.145	0.672	0.167
28	0.013	0.028	1.251	0.385	0.216	0.153	0.189	0.141	1.044	5.313	0.041	1.953	5.742	1.469	0.240
30	0.013	0.037	0.525	0.417	0.132	0.284	0.243	0.162	1.151	3.854	0.086	1.112	12.908	1.661	0.118
32	0.051	0.028	0.172	0.327	0.162	0.312	0.087	0.149	0.551	1.710	0.317	0.301	19.091	1.894	0.732
34	0.087	0.030	0.096	0.438	0.380	0.524	0.067	0.330	0.393	1.102	0.442	0.152	15.295	4.813	2.015
36	0.142	0.022	0.070	0.559	0.923	0.596	0.071	0.421	0.189	2.258	0.729	0.176	16.078	12.069	3.541
38	0.184	0.026	0.090	1.038	1.787	0.572	0.121	0.420	0.129	5.496	0.925	0.539	8.529	15.752	5.037
40	0.108	0.105	0.086	1.030	3.363	0.689	0.081	0.217	0.135	5.305	0.881	0.962	4.828	23.565	5.450
42	0.066	0.075	0.031	0.897	3.463	1.005	0.078	0.248	0.113	4.004	0.885	1.337	2.320	18.257	7.059
44	0.106	0.365	0.047	0.473	4.234	1.141	0.117	0.101	0.097	2.317	0.788	1.617	2.777	10.659	16.735
46	0.073	0.603	0.025	0.307	5.028	1.483	0.111	0.110	0.136	1.054	1.632	1.683	4.296	7.370	20.782
48	0.091	0.931	0.045	0.183	5.686	1.090	0.175	0.077	0.173	0.487	2.035	1.327	3.909	2.918	19.274
50	0.043	0.963	0.044	0.137	4.959	1.058	0.225	0.060	0.101	0.279	1.748	1.465	7.314	1.642	17.802
52	0.074	0.924	0.063	0.099	4.098	1.111	0.298	0.088	0.128	0.276	1.412	1.556	3.843	1.028	12.962
54	0.087	1.499	0.106	0.109	3.195	0.895	0.390	0.072	0.026	0.227	0.651	1.750	3.711	2.065	7.130
56	0.142	1.537	0.081	0.069	1.224	0.691	0.428	0.065	0.028	0.231	0.401	1.537	5.611	1.682	4.865
58	0.124	1.764	0.113	0.136	0.693	0.223	0.322	0.110	0.012	0.256	0.262	1.104	3.879	2.262	3.304
60	0.195	1.026	0.130	0.101	0.532	0.370	0.306	0.074	0.055	0.229	0.094	0.624	2.342	1.679	1.725
62	0.114	0.540	0.098	0.065	0.181	0.126	0.183	0.093	0.078	0.204	0.054	0.348	2.164	1.158	2.314
64	0.088	0.505	0.072	0.152	0.032	0.005	0.227	0.104	0.092	0.114	0.079	0.280	0.701	0.659	1.340
66	0.111	0.163	0.049	0.134	0.047	0.057	0.098	0.063	0.089	0.098	0.056	0.241	0.459	0.523	1.239
68	0.014	0.271	0.067	0.101	0.014	0.000	0.093	0.071	0.077	0.092	0.096	0.075	0.867	0.881	1.276
70	0.029	0.157	0.019	0.137	0.015	0.061	0.085	0.042	0.093	0.074	0.037	0.075	0.123	0.635	1.359
72	0.004	0.193	0.013	0.104	0.028	0.007	0.027	0.031	0.083	0.096	0.029	0.121	0.129	0.496	0.745
74	0.013	0.136	0.018	0.142	0.012	0.000	0.011	0.033	0.078	0.071	0.012	0.087	0.129	0.123	0.345
76	0.002	0.086	0.011	0.066	0.017	0.002	0.015	0.030	0.079	0.121	0.042	0.056	0.060	0.373	0.388
78	0.003	0.080	0.008	0.034	0.022	0.000	0.010	0.017	0.056	0.051	0.029	0.031	0.011	0.136	0.373
80	0.006	0.079	0.015	0.073	0.039	0.000	0.027	0.036	0.047	0.103	0.008	0.038	0.029	0.129	0.313
82	0.001	0.038	0.005	0.032	0.013	0.000	0.000	0.009	0.018	0.057	0.036	0.051	0.077	0.065	0.283
84	0.003	0.000	0.004	0.044	0.000	0.011	0.025	0.003	0.006	0.041	0.000	0.086	0.015	0.115	0.173
86	0.001	0.048	0.012	0.026	0.021	0.000	0.008	0.000	0.022	0.041	0.000	0.057	0.019	0.106	0.136
88	0.000	0.042	0.010	0.021	0.003	0.007	0.002	0.022	0.014	0.013	0.000	0.030	0.013	0.183	0.114
90	0.001	0.000	0.000	0.016	0.011	0.000	0.000	0.008	0.014	0.039	0.015	0.024	0.008	0.050	0.090
92	0.000	0.003	0.019	0.020	0.000	0.000	0.000	0.009	0.000	0.005	0.000	0.000	0.000	0.000	0.039
94	0.000	0.000	0.000	0.005	0.003	0.000	0.000	0.013	0.000	0.000	0.000	0.026	0.000	0.043	0.072
96	0.000	0.000	0.005	0.003	0.012	0.000	0.008	0.000	0.000	0.026	0.000	0.057	0.000	0.016	0.026
98	0.000	0.000	0.005	0.003	0.008	0.000	0.000	0.000	0.000	0.025	0.000	0.000	0.000	0.000	0.025
100	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.008	0.013	0.013
102	0.000	0.000	0.000	0.010	0.000	0.000	0.008	0.000	0.000	0.014	0.000	0.019	0.000	0.020	0.013
104	0.000	0.001	0.000	0.000	0.000	0.011	0.000	0.027	0.000	0.014	0.000	0.026	0.000	0.020	0.000
106	0.000	0.000	0.000	0.005	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.013	0.000	0.020	0.013
108	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
112	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000
114	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.020	0.043
116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
118	0.002	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000
120	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
124	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
126	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
128	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	1.997	12.378	8.847	9.220	41.290	12.930	4.684	9.035	9.005	40.718	32.605	49.717	131.444	118.451	139.982
Nº samples (*):	40	55	72	70	32	41	42	58	59	64	58	66	55	40	64
Nº Ind. (*):	742	967	2770	2753	1591	1030	539	939	1126	2909	2301	4404	2746	1814	5197
Sampled catch:	248	410	527	752	1107	776	654	554	778	2026	1115	3394	1417	1875	6381
Range (*):	24-118	12-104	9-121	13-118	8-132	9-104	12-106	10-105	11-91	7-104	9-114	14-118	11-100	9-114	10-116
Total catch:	572	3873	613	1274	3487	2806	846	554	794	3994	2182	3907	9165	12406	15136
Total hauls (*):	128	124	114	118	123	125	118	120	119	120	110	122	109	95	122

TABLE 24.- Atlantic cod age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

Age	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1	0.000	0.050	1.417	0.438	0.012	0.116	0.127	5.042	2.791	0.068	17.443	0.013	0.382	0.844	0.158
2	0.295	0.090	4.966	1.501	0.870	0.353	0.787	0.737	2.056	9.716	1.390	22.132	1.395	3.916	1.044
3	0.447	0.321	1.259	4.224	9.807	2.224	0.307	1.576	2.291	21.021	3.207	10.082	75.621	8.244	17.247
4	0.259	4.990	0.205	1.423	25.281	6.372	0.476	0.555	0.699	6.814	7.054	8.630	12.523	88.964	13.567
5	0.225	4.772	0.561	0.300	4.047	3.344	1.772	0.286	0.173	1.721	2.642	7.505	28.430	4.025	92.174
6	0.480	0.897	0.261	0.754	0.739	0.487	1.079	0.408	0.169	0.324	0.490	0.306	11.774	7.651	2.998
7	0.205	0.650	0.086	0.395	0.374		0.084	0.343	0.329	0.309	0.117	0.445	1.039	4.300	8.983
8	0.081	0.446	0.020	0.066	0.120	0.023	0.004	0.033	0.447	0.359	0.148	0.109	0.173	0.123	3.381
9		0.127	0.018	0.011	0.003	0.005	0.036	0.019	0.049	0.312	0.063	0.183	0.019	0.230	0.216
10		0.034	0.045	0.051	0.004		0.012	0.022	0.002	0.046	0.036	0.220	0.017	0.020	0.025
11		0.001	0.005	0.049	0.004	0.005		0.013			0.011	0.092	0.016		0.036
12				0.008	0.021					0.028			0.044	0.118	0.089
13	0.004										0.004		0.011	0.016	0.056
14															0.009
15															
16			0.006												
17															
18	0.001														
19					0.009										
20															
Total	1.997	12.378	8.847	9.220	41.290	12.930	4.684	9.035	9.005	40.718	32.605	49.717	131.444	118.451	139.982

TABLE 25.- Atlantic cod mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

Age	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1	24.50	15.48	17.27	19.27	11.11	13.67	14.36	14.23	15.14	13.45	15.01	14.50	14.99	14.26	17.28
2	37.57	29.74	25.63	27.96	25.86	26.58	26.99	25.82	28.25	28.10	18.79	23.42	24.11	29.75	30.18
3	40.76	40.31	32.20	38.57	41.21	36.38	34.75	37.53	32.67	37.16	38.74	27.25	34.26	36.73	40.31
4	48.37	52.17	43.64	45.68	49.50	46.04	44.65	42.17	45.45	43.30	47.93	46.57	38.48	41.70	46.63
5	55.16	57.93	57.53	57.18	51.93	54.01	55.38	54.55	51.01	54.08	51.96	55.13	52.09	50.43	49.70
6	61.00	63.23	64.01	67.27	56.83	61.33	63.21	62.71	55.93	61.29	60.27	65.44	58.90	60.59	56.02
7	62.94	70.22	71.24	74.72	65.90		67.68	71.36	70.67	69.49	64.17	66.11	61.82	67.50	64.34
8	69.04	75.36	76.15	82.35	71.93	84.06	76.50	72.78	73.95	77.04	71.06	81.59	69.55	74.96	71.67
9		79.22	75.90	87.04	98.50	104.50	99.47	77.67	75.99	80.39	77.69	82.06	85.91	85.55	84.98
10		87.91	92.79	88.66	84.99		85.50	93.16	84.50	89.18	79.01	93.88	86.22	105.50	88.82
11		104.50	97.50	92.61	107.80	104.50		105.50			81.81	91.09	85.70		95.87
12				97.45	108.04					103.36			86.58	102.88	99.54
13	105.23										114.50		81.50	97.45	109.24
14															95.50
15															
16			121.50												
17															
18	115.50														
19					132.50										
20															
Total	51.36	56.73	29.90	42.51	47.67	46.31	49.51	27.27	31.69	37.92	28.96	34.42	40.87	43.42	49.80

TABLE 26.- Atlantic cod mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2011. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2011 data are original R/V *Vizconde de Eza* data. For 2001 there are data from the two vessels.

Age	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1	123.3	28.8	37.0	57.3	13.2	22.1	20.1	21.1	26.6	21.6	25.5	20.4	23.2	21.9	44.84
2	440.6	215.0	128.4	183.8	132.4	148.2	151.8	135.9	183.4	180.9	52.3	94.5	101.9	206.9	215.45
3	573.4	532.5	261.6	484.3	537.0	382.4	322.2	423.2	290.0	445.2	469.1	151.5	299.6	398.0	531.57
4	964.4	1152.8	690.2	799.8	953.2	776.6	712.1	617.7	823.4	687.4	898.2	822.5	427.1	593.5	830.01
5	1385.2	1578.5	1600.5	1576.3	1103.5	1253.0	1396.2	1355.2	1142.0	1393.9	1139.7	1383.1	1087.1	1071.6	1023.97
6	1830.4	2053.0	2232.7	2636.6	1459.6	1846.1	2134.0	2146.9	1551.5	2021.9	1816.7	2329.7	1593.7	1911.1	1488.00
7	2008.0	2857.4	3134.4	3647.8	2488.0		2598.1	3227.0	3229.4	3012.4	2252.9	2471.5	1839.5	2758.9	2382.33
8	2624.0	3553.2	3909.4	4873.9	3321.8	4863.3	3730.8	3444.8	3671.9	4175.9	2991.4	4682.0	2667.9	3727.8	3272.56
9		4105.1	3841.7	5757.4	7949.9	9361.0	8695.4	3969.6	3911.7	4771.7	3929.9	4829.9	5016.4	5557.4	5515.32
10		5597.2	7009.8	6102.6	5075.9		5288.5	7534.5	5434.0	6492.7	4305.3	7430.2	5036.7	10478.0	6152.71
11		9509.6	8117.3	7275.5	10613.0	9361.0		10226.7			4534.6	6686.3	4940.7		8548.72
12				8236.0	10698.4					10028.8			5189.0	9980.2	8967.22
13	9402.3										12747.3		4217.2	8195.7	12107.82
14															7723.53
15															
16			16168.7												
17															
18	11746.5														
19					20050.7										
20															
Total	1253.40	1573.59	396.74	922.28	892.16	862.60	1269.17	451.53	561.24	573.46	413.10	534.08	614.21	767.91	1108.40

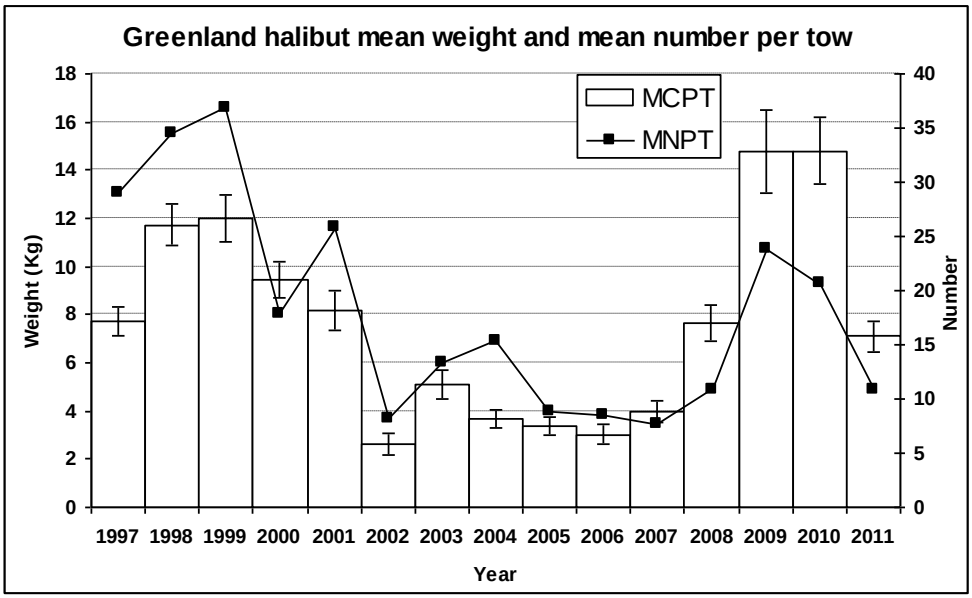

FIGURE 1.- Greenland halibut stratified mean catches in Kg and ±SD by year and mean number by year. Spanish Spring surveys in NAFO Div. 3NO: 1997-2011 (1997-2000 transformed data from C/V *Playa de Menduíña*; 2002-2011 original data from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels).

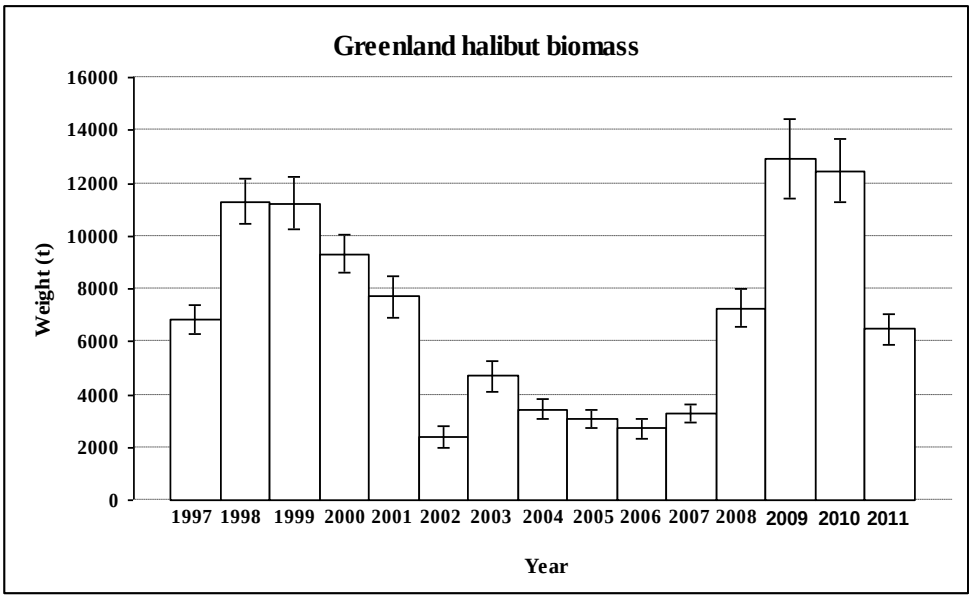

FIGURE 2.- Greenland halibut biomass calculated by the swept method in tons and ±SD by year. Spanish Spring surveys in NAFO Div. 3NO: 1997-2011 (1997-2000 transformed data from C/V *Playa de Menduíña*; 2002-2011 original data from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels).

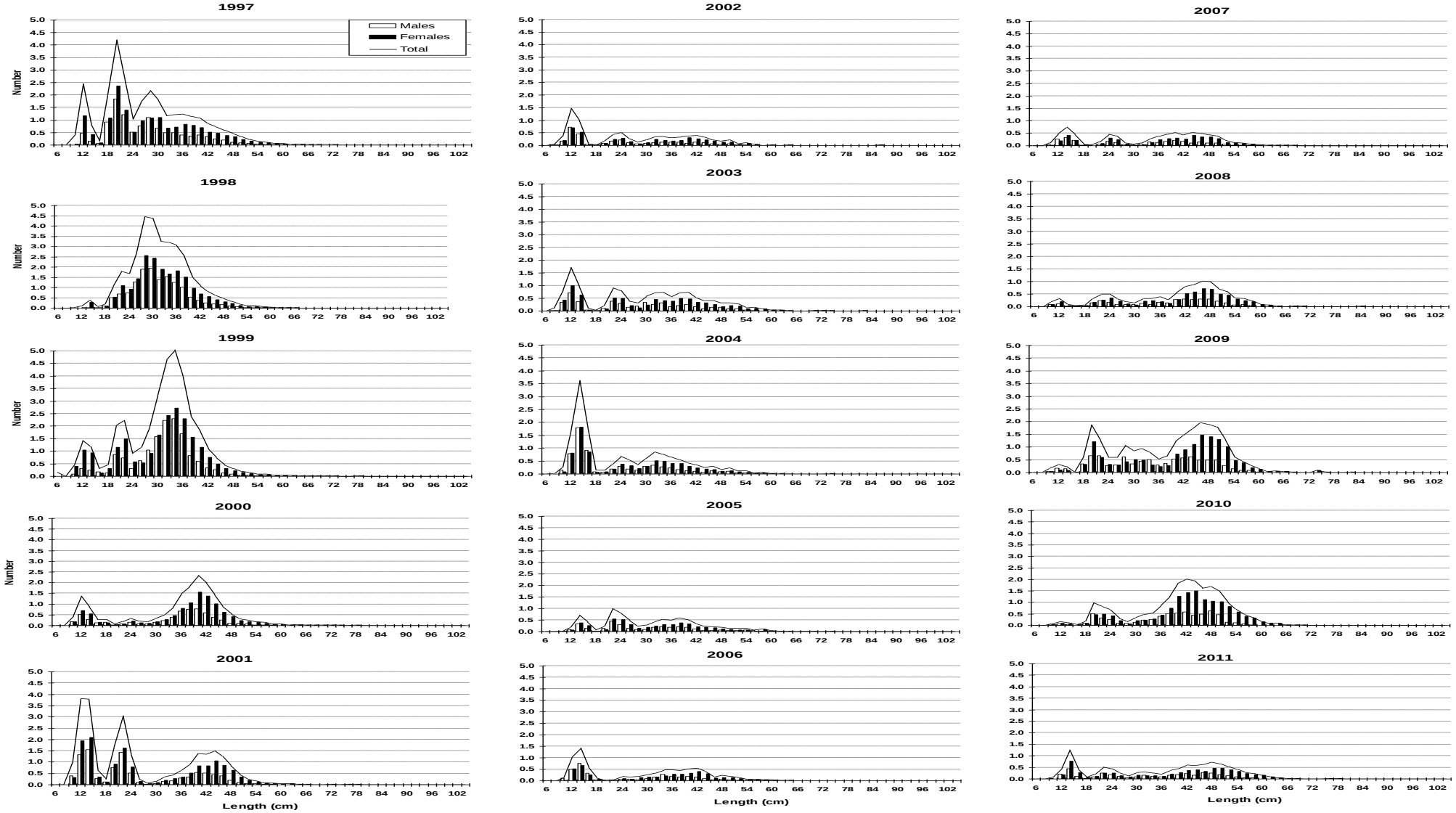

FIGURE 3.- Greenland halibut length distribution (cm) on NAFO 3NO: 1997-2011. Number per stratified mean catches. 1997-2000 data are transformed data from C/V *Playa de Menduíña*, and 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

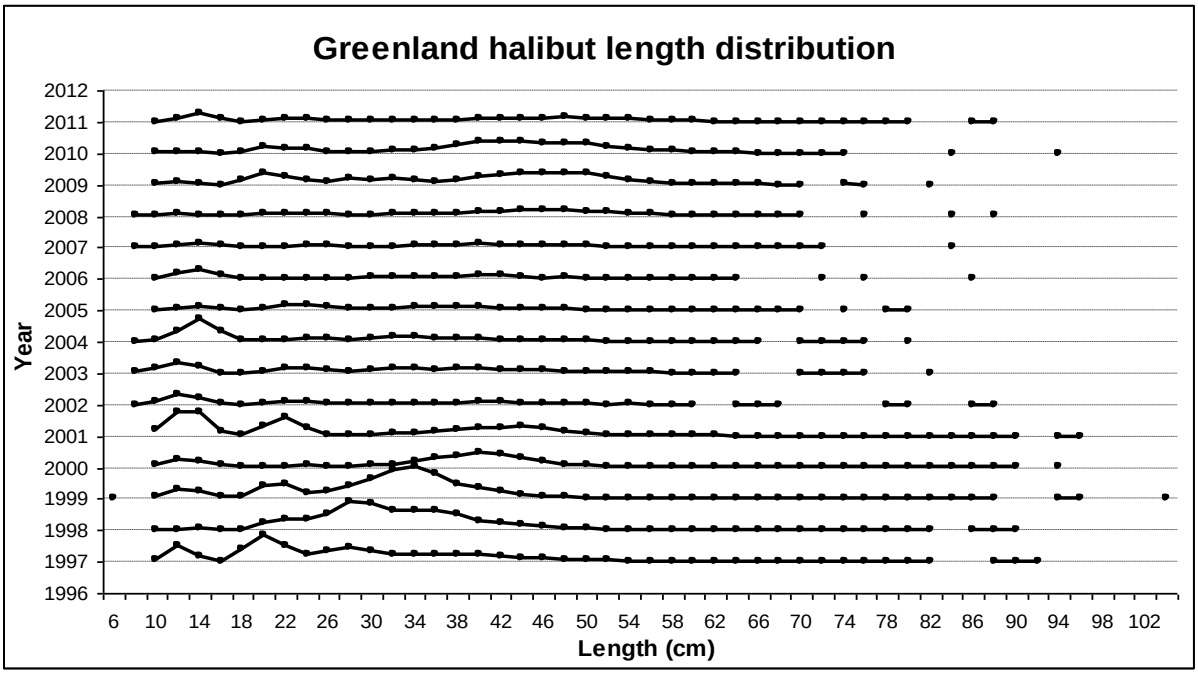

FIGURE 4.- Greenland halibut length distribution (cm) on NAFO 3NO: 1997-2011.

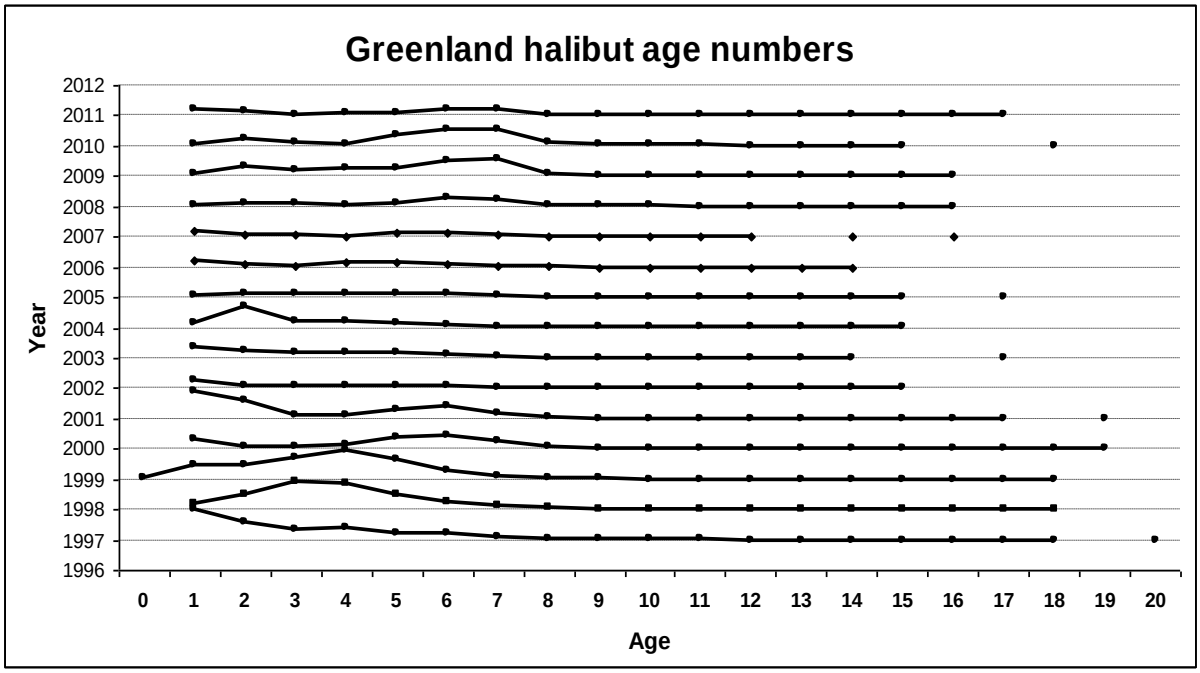

FIGURE 5.- Greenland halibut age distribution on NAFO 3NO: 1997-2011.

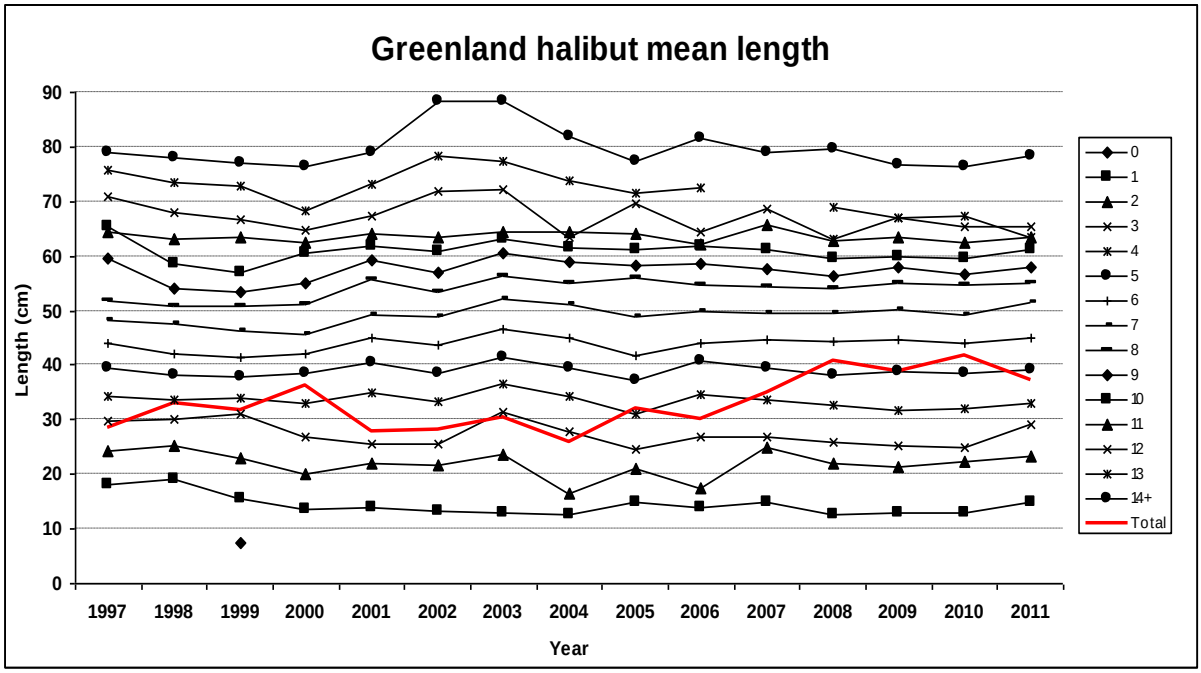

FIGURE 6.- Greenland halibut mean length (cm) at age on NAFO 3NO: 1997-2011. Ages from 0 to 14+.

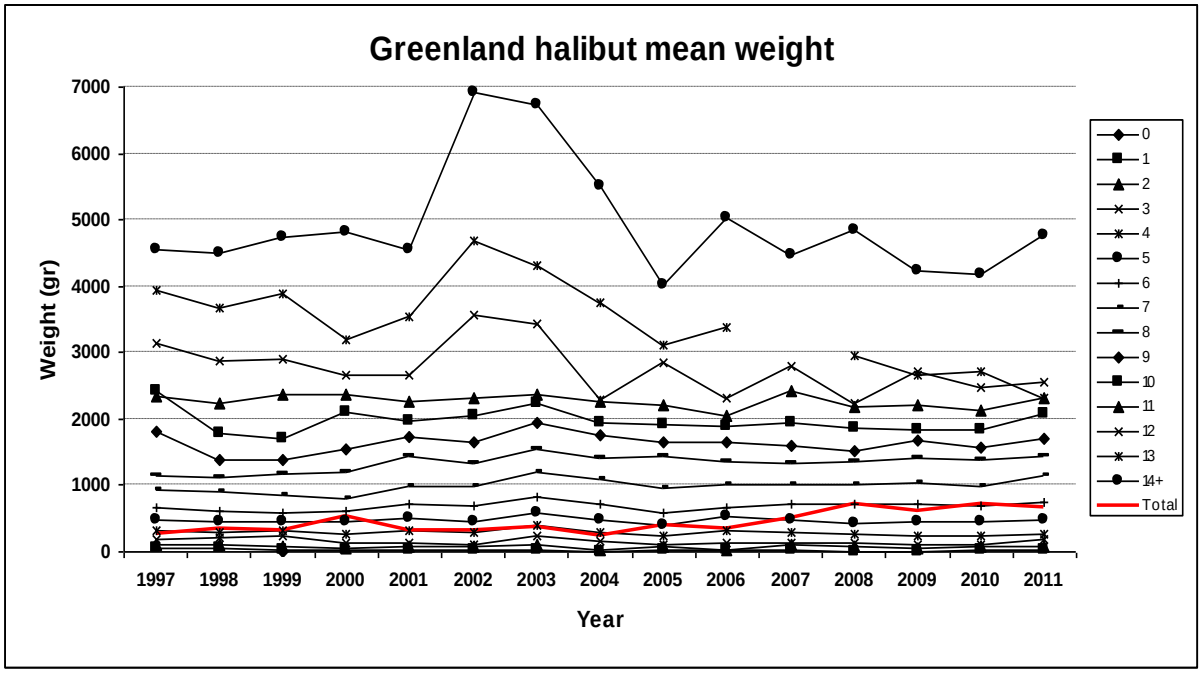

FIGURE 7.- Greenland halibut mean weight (gr) at age on NAFO 3NO: 1997-2011. Ages from 0 to 14+.

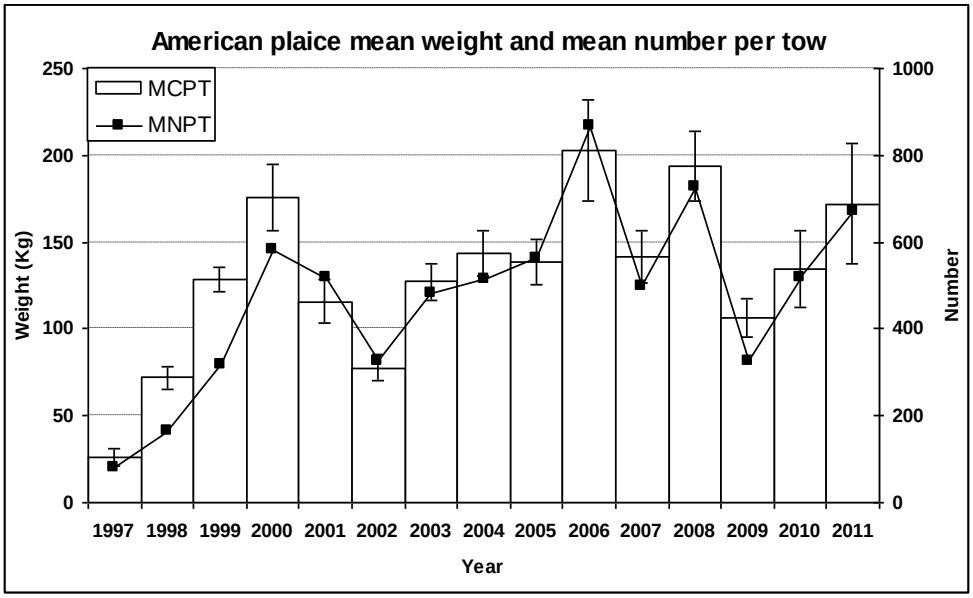

FIGURE 8.- American plaice stratified mean catches in Kg and ±SD by year and mean number by year. Spanish Spring surveys in NAFO Div. 3NO: 1997-2011 (1997-2000 transformed data from C/V *Playa de Menduíña*; 2002-2011 original data from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels).

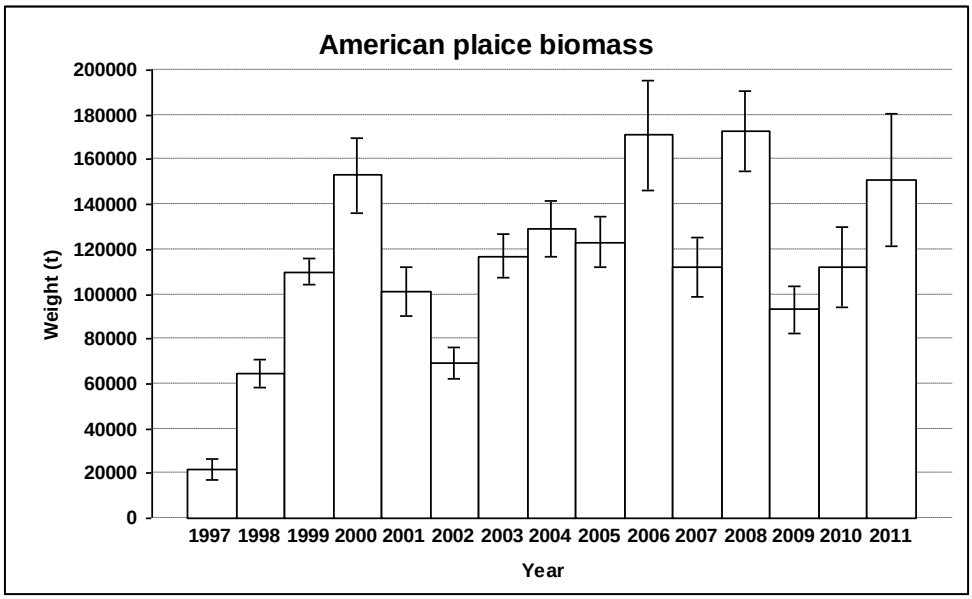

FIGURE 9.- American plaice biomass calculated by the swept method in tons and ±SD by year. Spanish Spring surveys in NAFO Div. 3NO: 1997-2011 (1997-2000 transformed data from C/V *Playa de Menduíña*; 2002-2011 original data from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels).

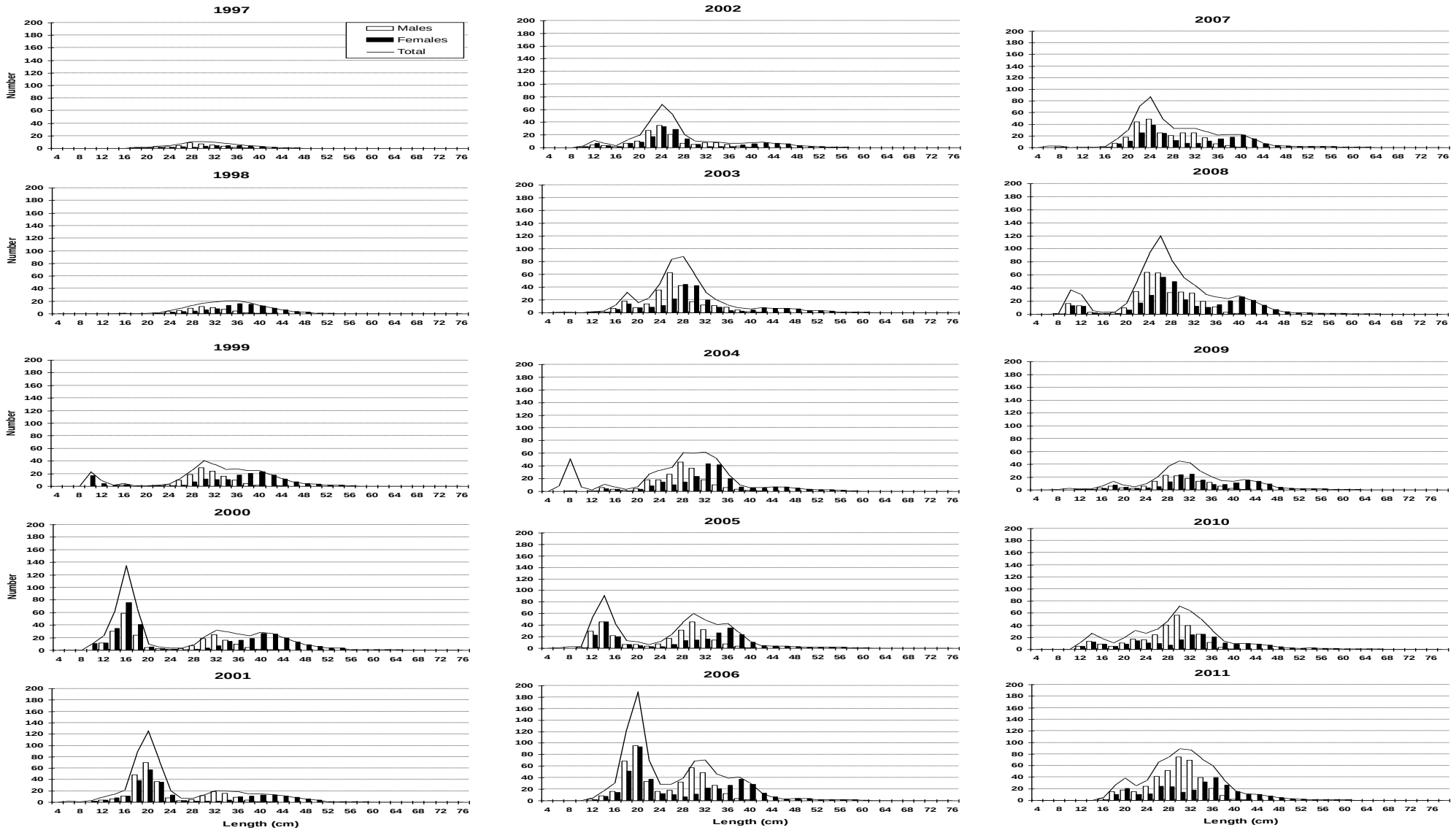

FIGURE 10.- American plaice length distribution (cm) on NAFO 3NO: 1997-2011. Estimated numbers per haul stratified mean catches. 1997-2000 data are transformed data from C/V *Playa de Menduíña*, and 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

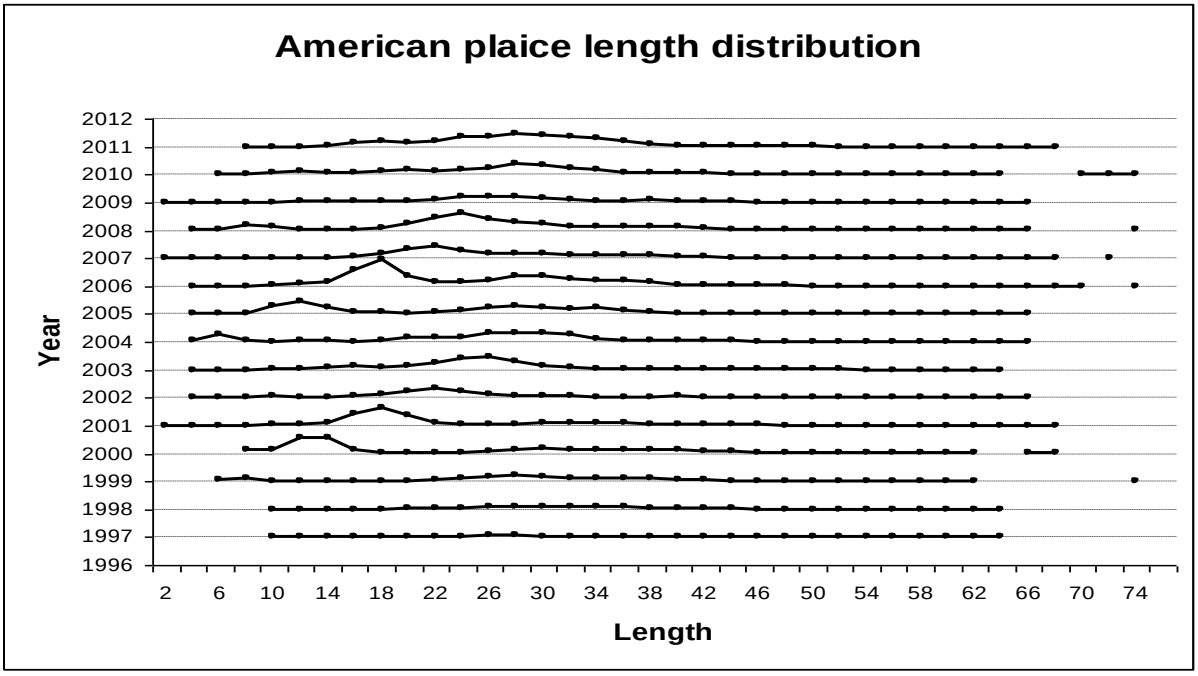

FIGURE 11.- Series of American plaice length distribution (cm) on NAFO 3NO: 1997-2011.

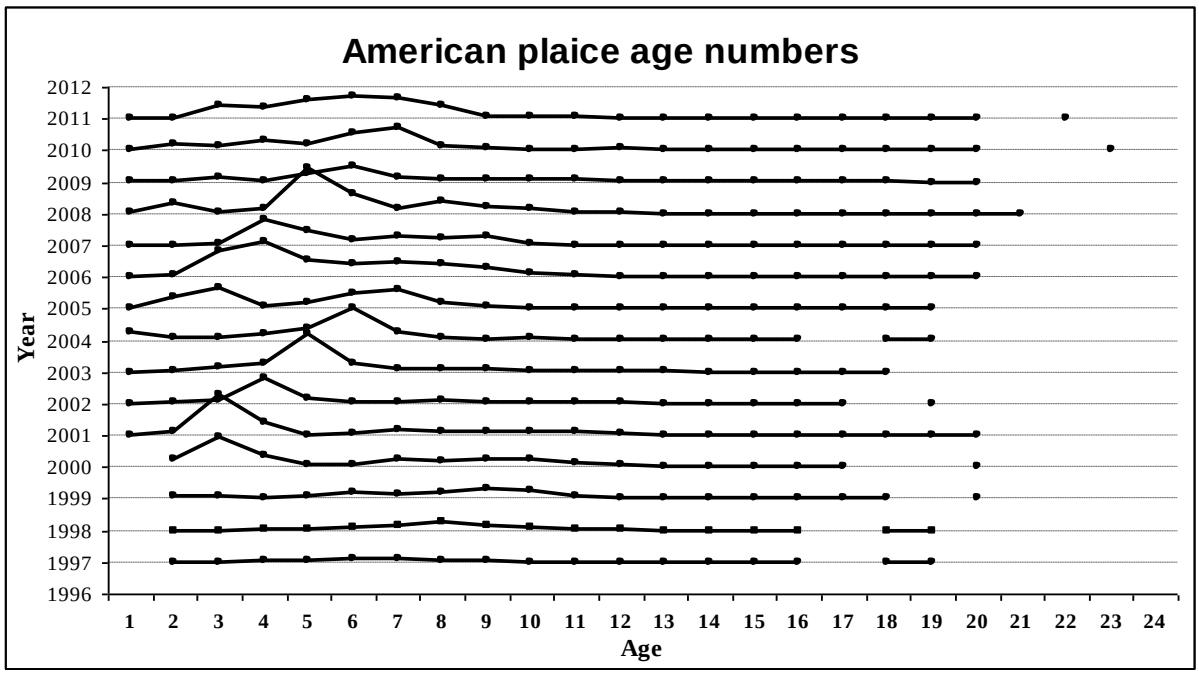

FIGURE 12.- American plaice age distribution on NAFO 3NO: 1997-2011.

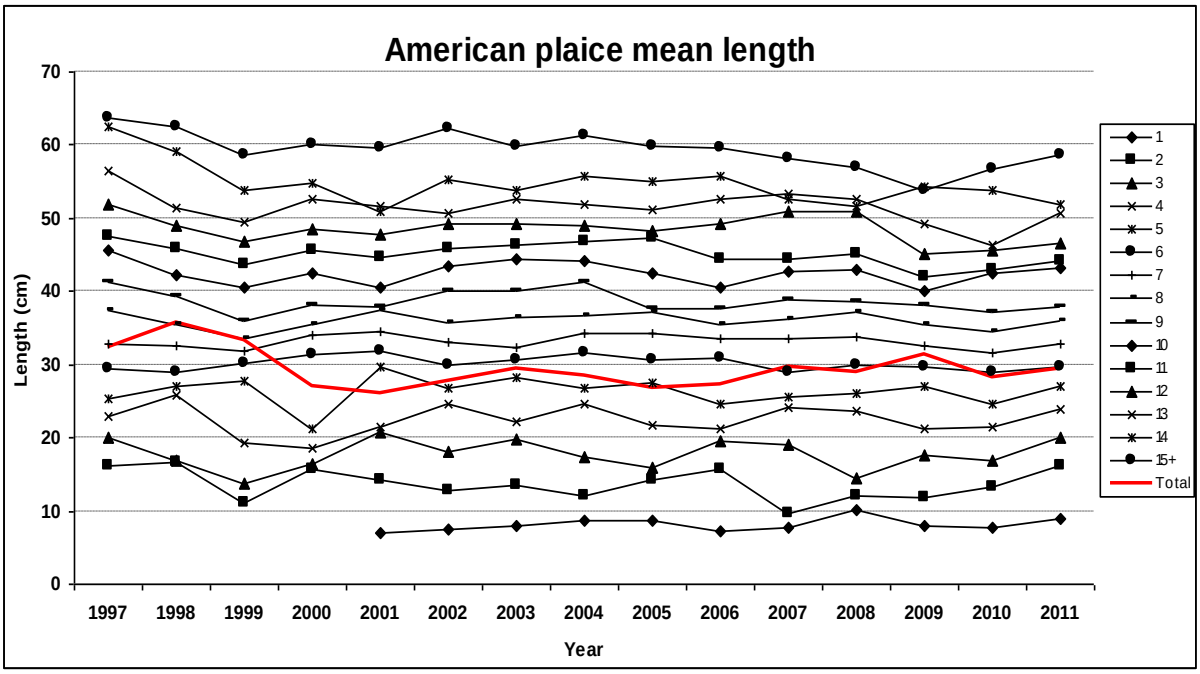

FIGURE 13.- American plaice mean length (cm) at age on NAFO 3NO: 1997-2011. Ages from 1 to 15+.

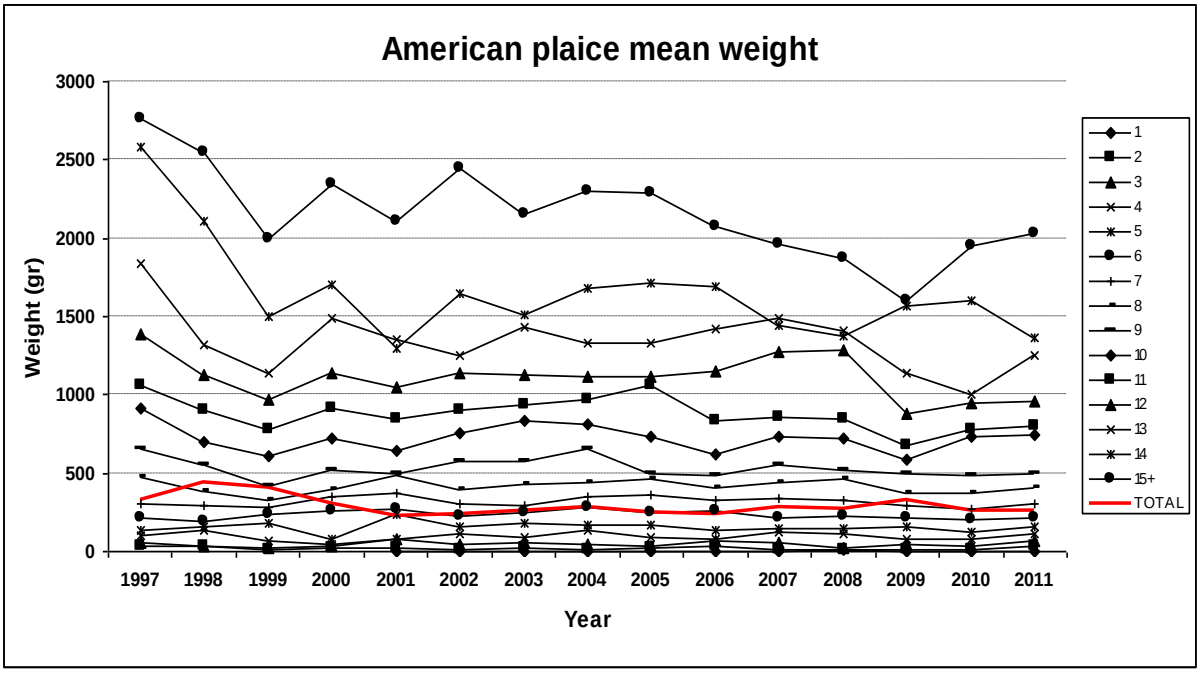

FIGURE 14.- American plaice mean weight (gr) at age on NAFO 3NO: 1997-2011. Ages from 1 to 15+.

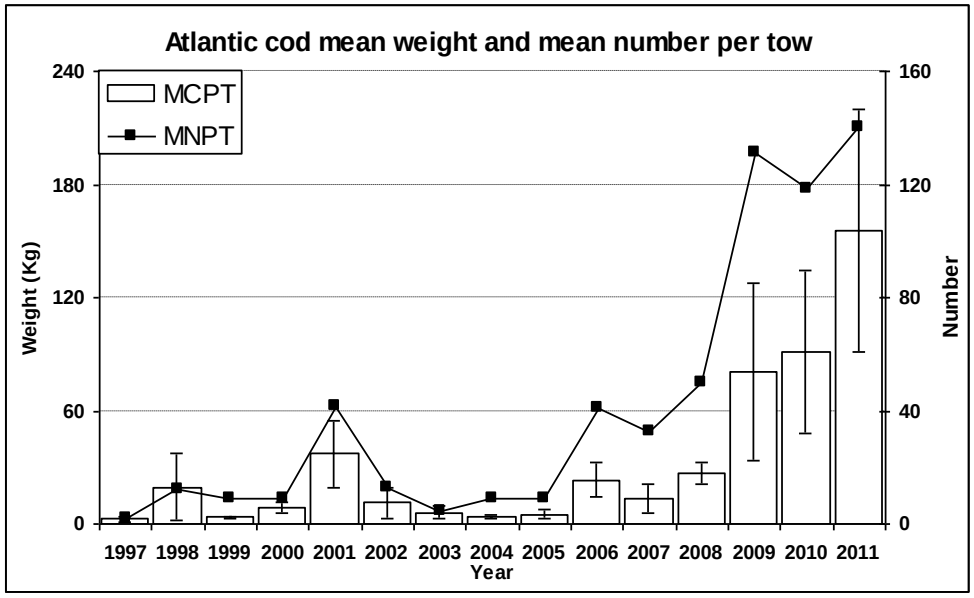

FIGURE 15.- Atlantic cod stratified mean catches in Kg and ±SD by year and mean number by year. Spanish Spring surveys in NAFO Div. 3NO: 1997-2011 (1997-2000 transformed data from C/V *Playa de Menduíña*; 2002-2011 original data from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels).

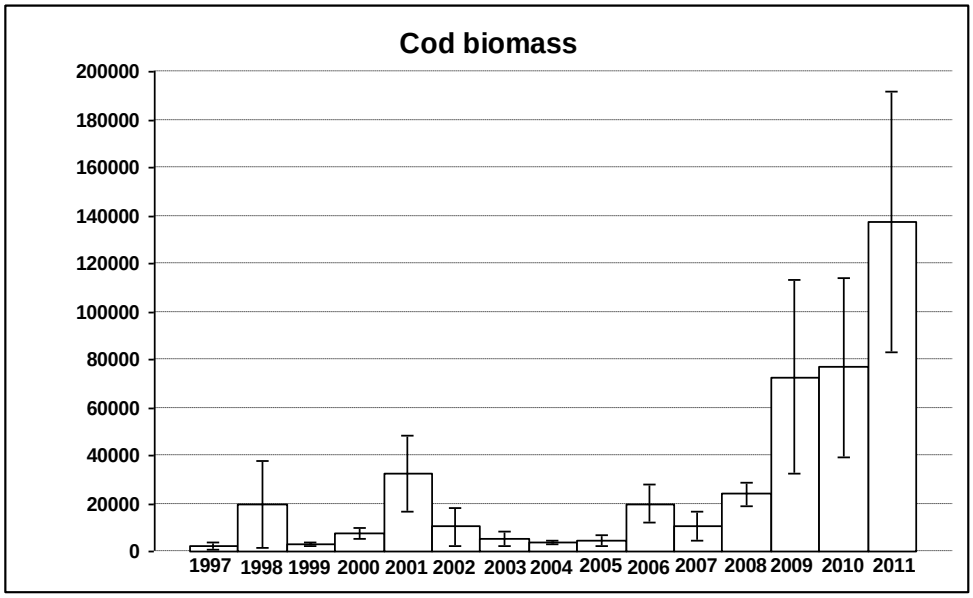

FIGURE 16.- Atlantic cod biomass calculated by the swept area method in tons and ±SD by year. Spanish Spring surveys in NAFO Div. 3NO: 1997-2011 (1997-2000 transformed data from C/V *Playa de Menduíña*; 2002-2011 original data from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels).

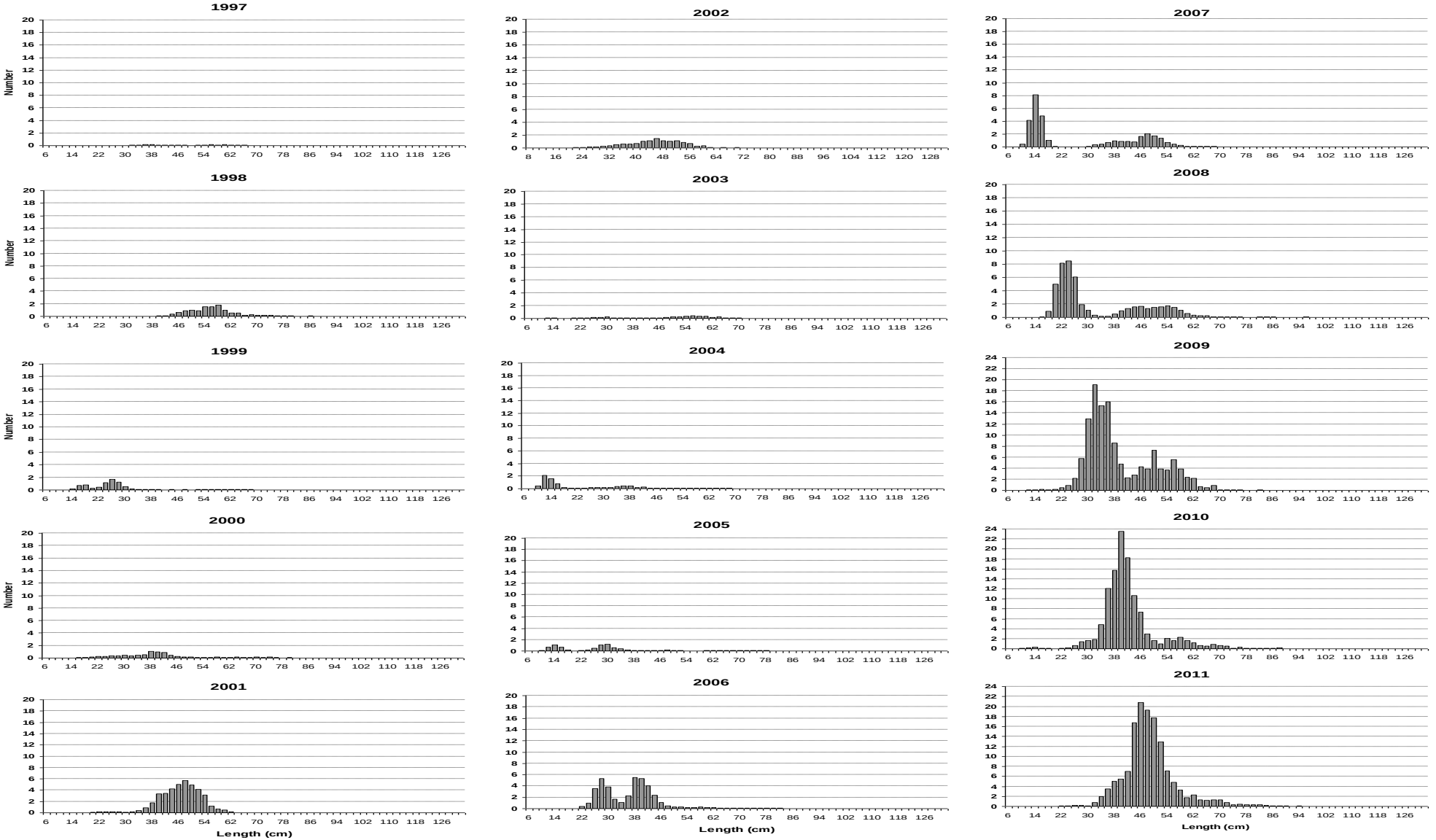

FIGURE 17.- Atlantic cod length distribution (cm) on NAFO 3NO: 1997-2011. Mean catches per tow numbers. 1997-2000 data are transformed data from C/V *Playa de Menduíña*, and 2002-2011 data are original from R/V *Vizconde de Eza*. For 2001 there are data from the two vessels.

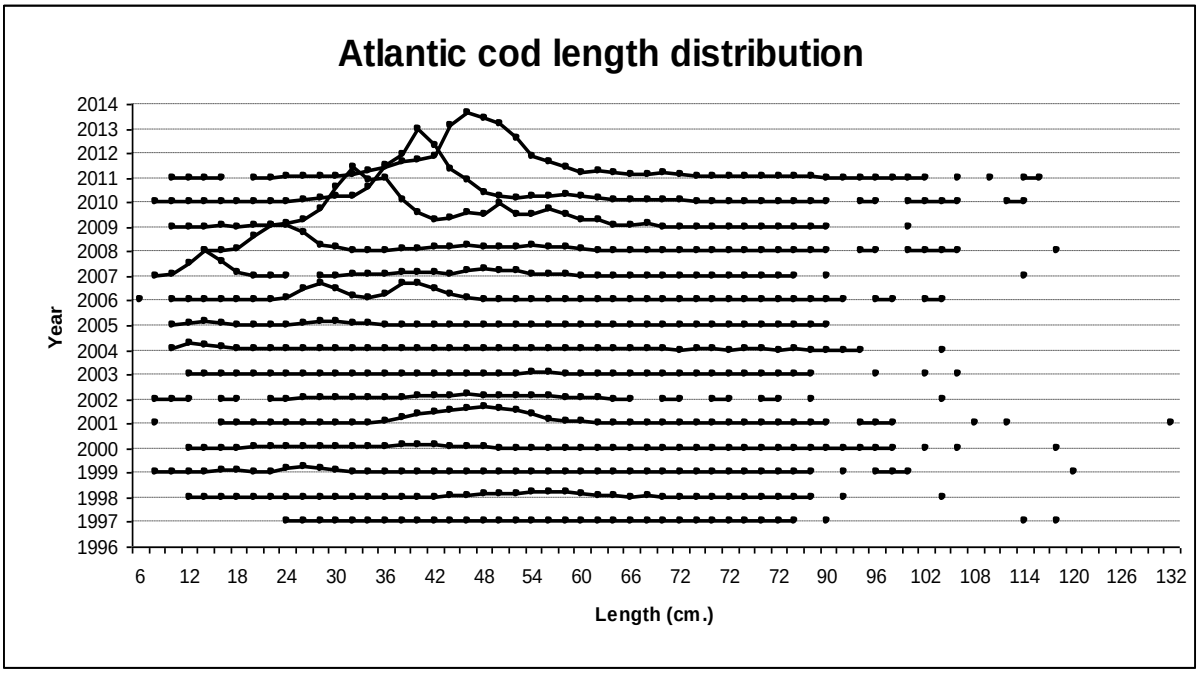

FIGURE 18.- Atlantic cod mean catches per tow length distribution (cm) on NAFO 3NO: 1997-2011.

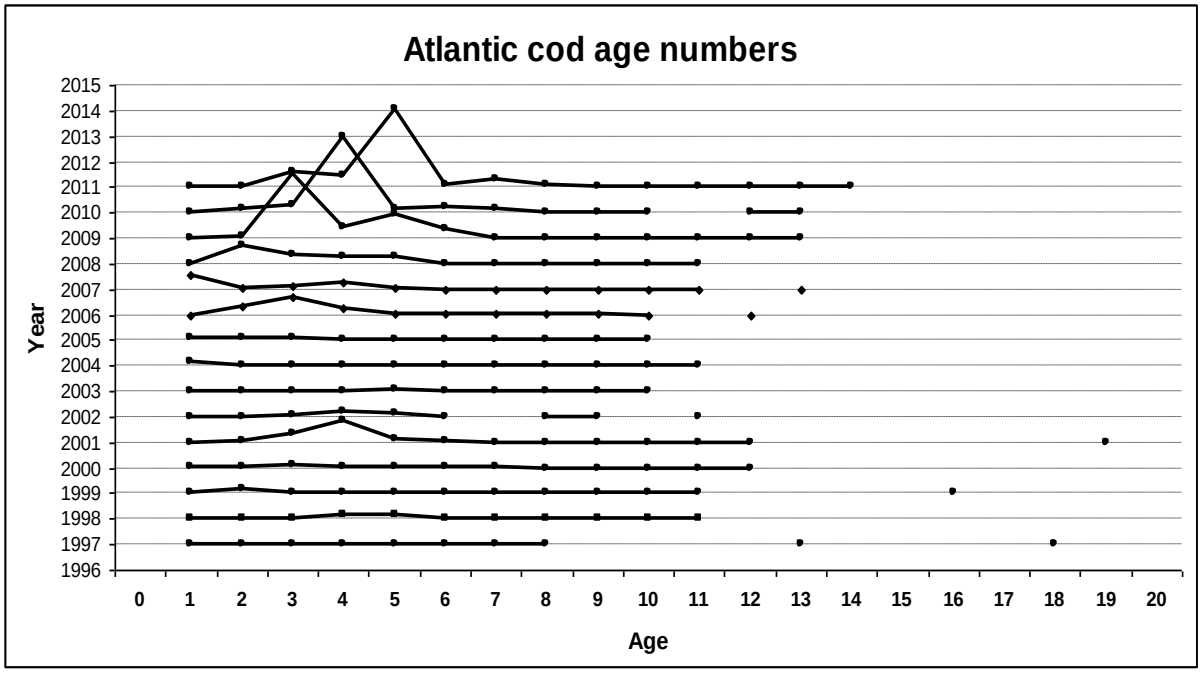

FIGURE 19.- Atlantic cod age distribution on NAFO 3NO: 1997-2011.

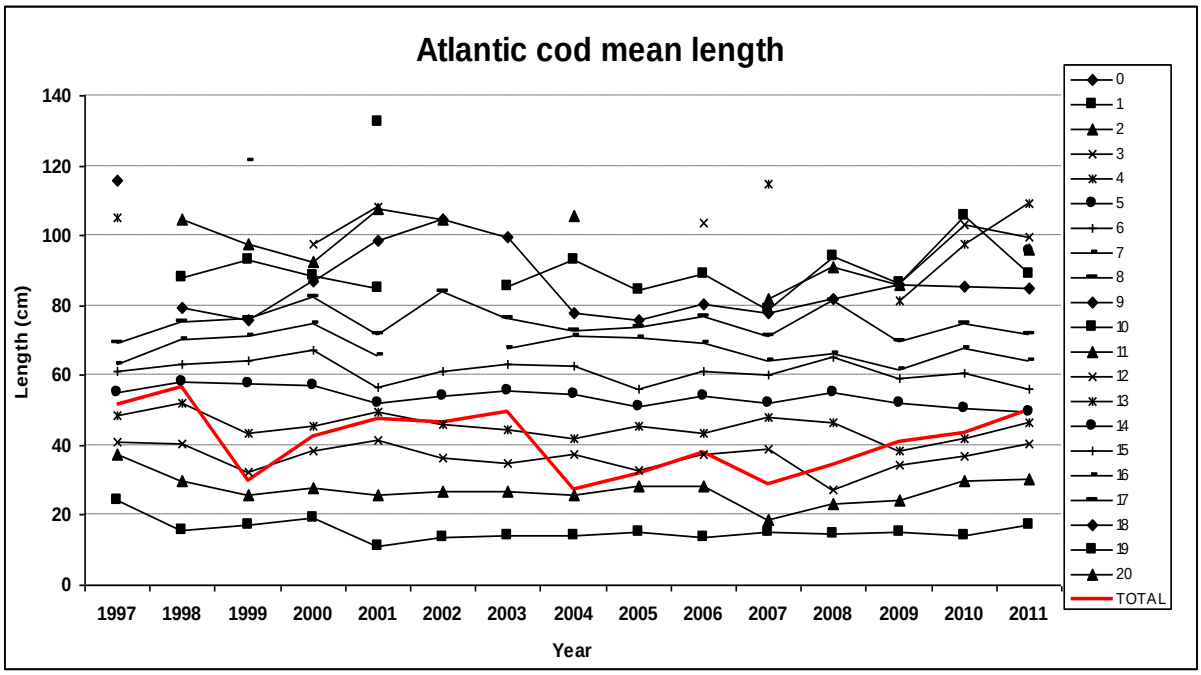

FIGURE 20.- Atlantic cod mean length (cm) at age on NAFO 3NO: 1997-2011. Ages from 1 to 20.

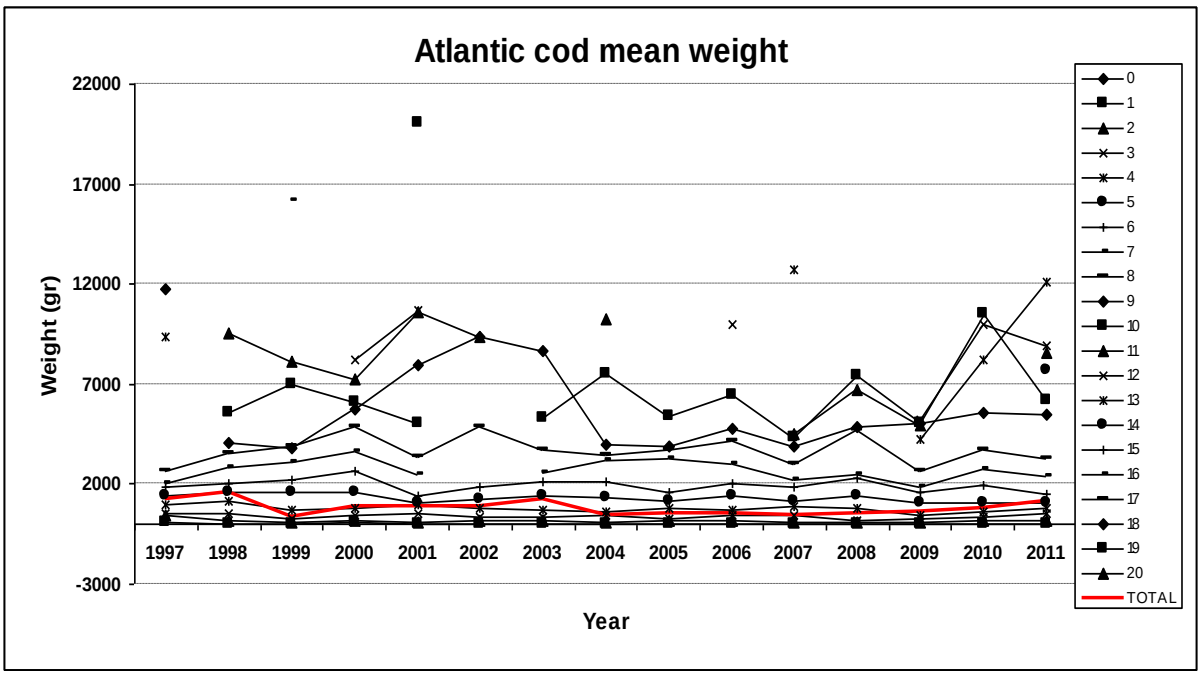

FIGURE 21.- Atlantic cod mean weight (gr) at age on NAFO 3NO: 1997-2011. Ages from 1 to 20.