

Summary Information on Greenland Halibut Distribution in NAFO Subarea 2 and Divisions 3KLMNO

Doug S. Butterworth and Rebecca A. Rademeyer

February 2009

This document has selected some spatial plots of survey and industry catch rates and catches to assist an understanding of the Greenland halibut distribution.

Figure 1 shows the location of most of the Canadian catch of Greenland halibut in 2006 and 2007 (Brodie *et al.*, 2008), while Figure 2 plots the distribution of Greenland halibut from Canadian fall surveys for these two years (Healey, 2008).

Catch per haul distribution for the 2007 summer survey on Flemish Cap is shown in Figure 3 (Vázquez and González-Troncoso, 2008).

Figure 4 plots the Spanish Scientific Observers Program data CPUE for 2001 to 2006 (González-Troncoso, Sacau and González-Costas, 2007). Figures 5 and 6 show the distribution of catches based on the Spanish Scientific Observers Program data and Spanish survey data respectively (González-Costas, pers. commn).

References

- Brodie WB, Power D and Healey BP. 2008. The Canadian fishery for Greenland halibut in SA 2 + Div. 3KLMNO, with emphasis on 2007. NAFO SRC Doc. 08/47, Ser. No. N5549.
- González-Troncoso D, Sacau M and González-Costas F. 2007. A study of Spanish Greenland halibut commercial effort and CPUE in 3LMNO using GIS with comparisons to the Spanish Div. 3NO survey and EU Flemish Cap survey catches. NAFO SRC Doc. 07/54, Ser. No N5406.
- Healey BP. 2008. Greenland halibut (*Reinhardtius hippoglossoides*) in NAFO Subarea 2 and Divisions 3KLMNO: Stock Trends based on annual Canadian Research Vessel survey results during 1978-2008. NAFO SRC Doc. 08/32, Ser. No. N5533.
- Vásquez A and González-Troncoso D. 2008. Results from Bottom Trawl Survey on Flemish Cap of June-july 2007. NAFO SRC Doc. 08/34, Ser. No.5535.

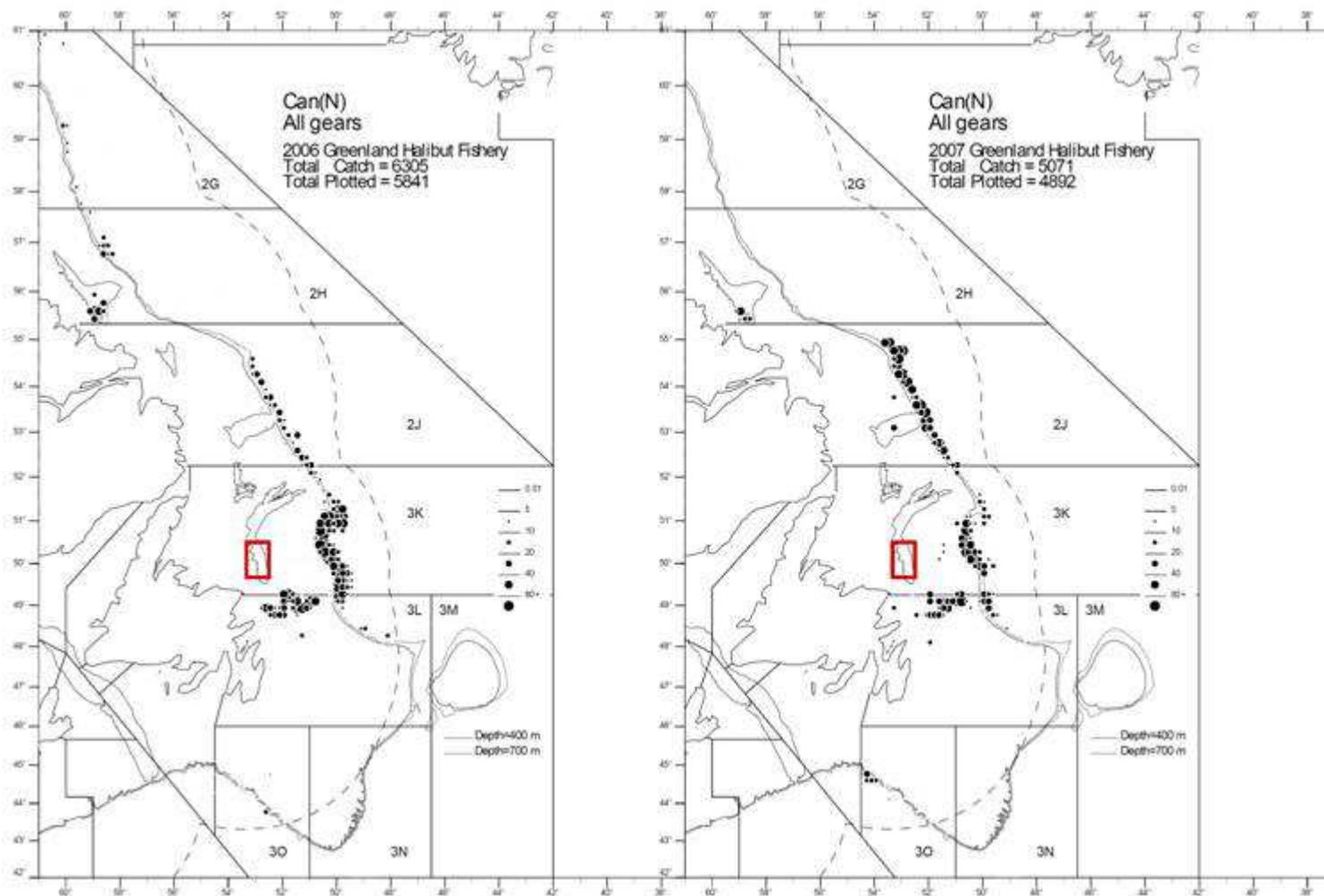


Figure 1

Fig. . Distribution of Can(N) Greenland halbut catch (tons) from the 2006 and 2007 fisheries. Represented is catch from directed fisheries and by-catch from other fisheries aggregated by 10-minute square for all gears from Div. 2G to Div. 3O where position was recorded on the logbook. Also shown is the area in Div. 3K closed to GILLNETs since early 2002 due to snow crab bycatch.

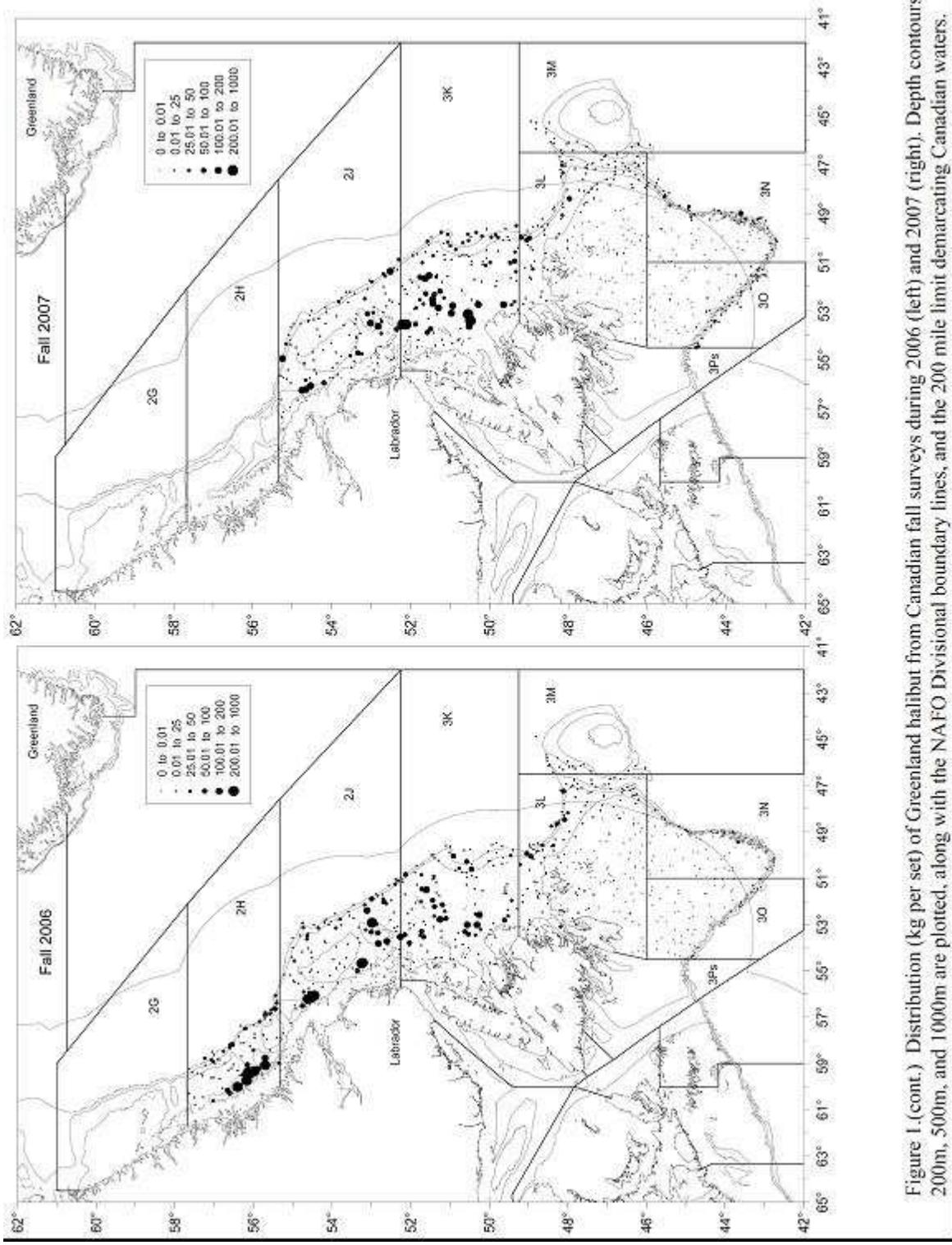


Figure 1.(cont.) Distribution (kg per set) of Greenland halibut from Canadian fall surveys during 2006 (left) and 2007 (right). Depth contours at 200m, 500m, and 1000m are plotted, along with the NAFO Divisional boundary lines, and the 200 mile limit demarcating Canadian waters.

Figure 2

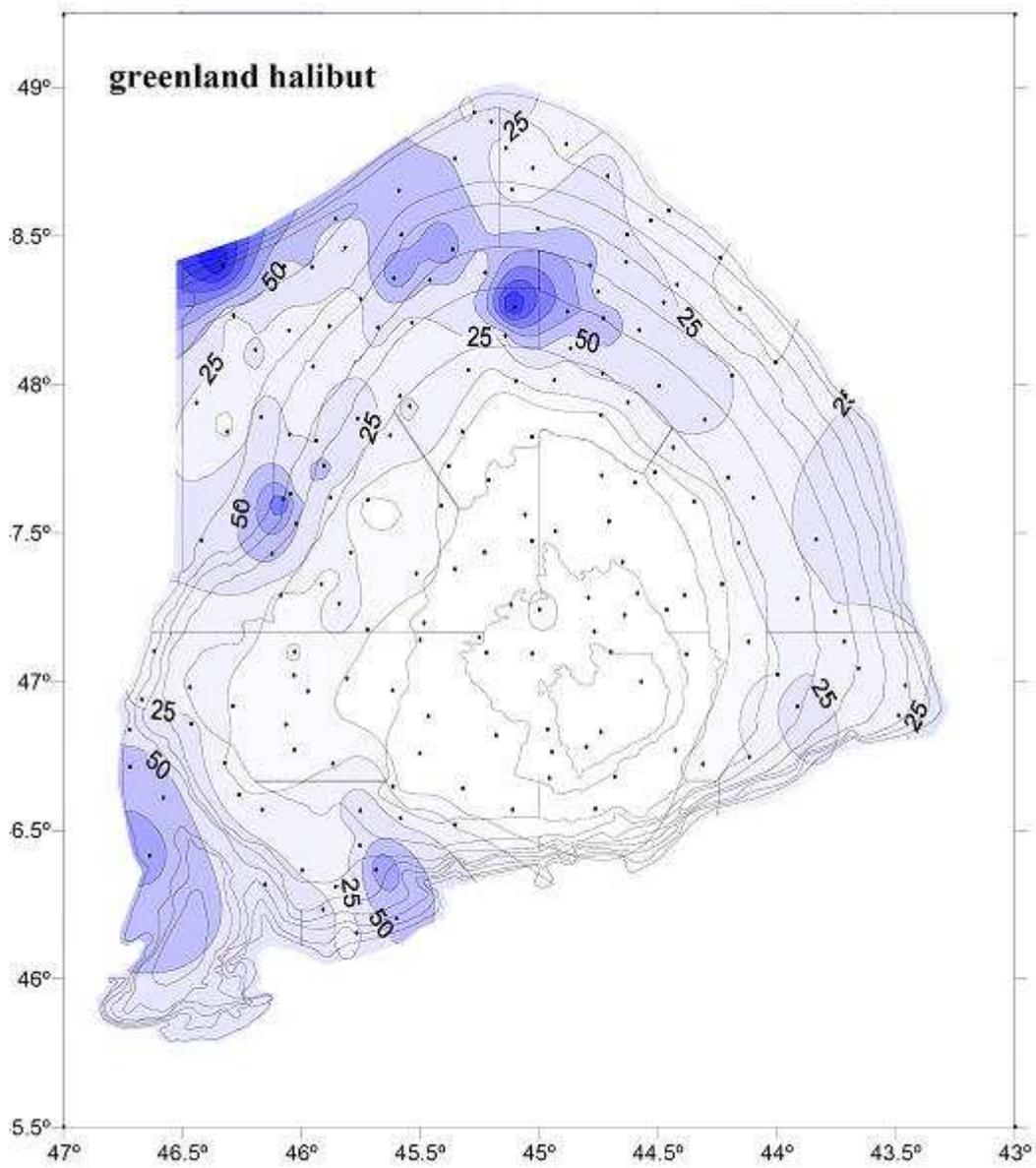


Figure 9 - Greenland halibut (*Reinhardtius hippoglossoides*) catch distribution in the 2007 survey in Kg.

Figure 3

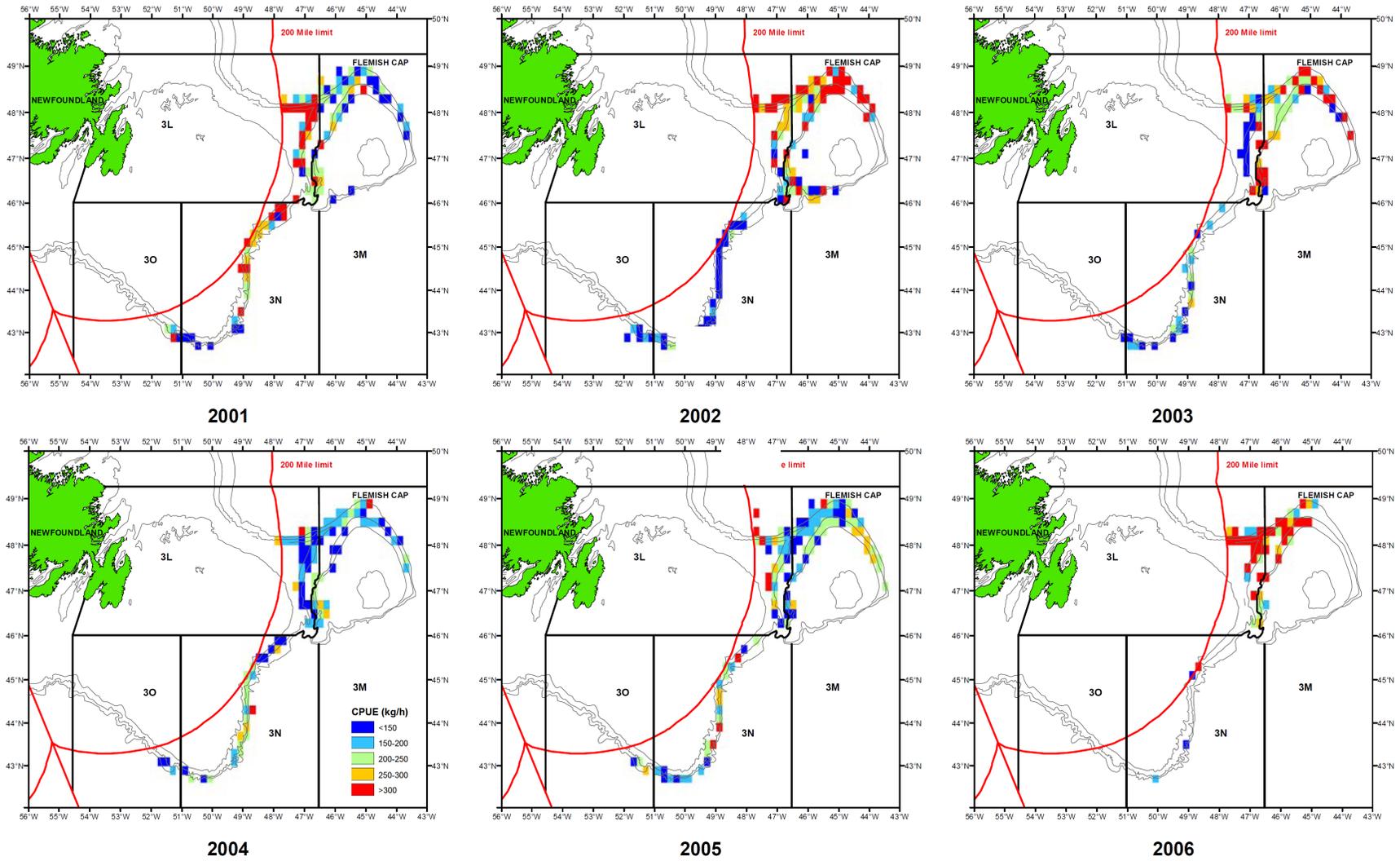


Figure 4

Figure 3 (cont.). Spanish Scientific Observers Program data (CPUE values per rectangle of 0.2 x 0.2 degrees)

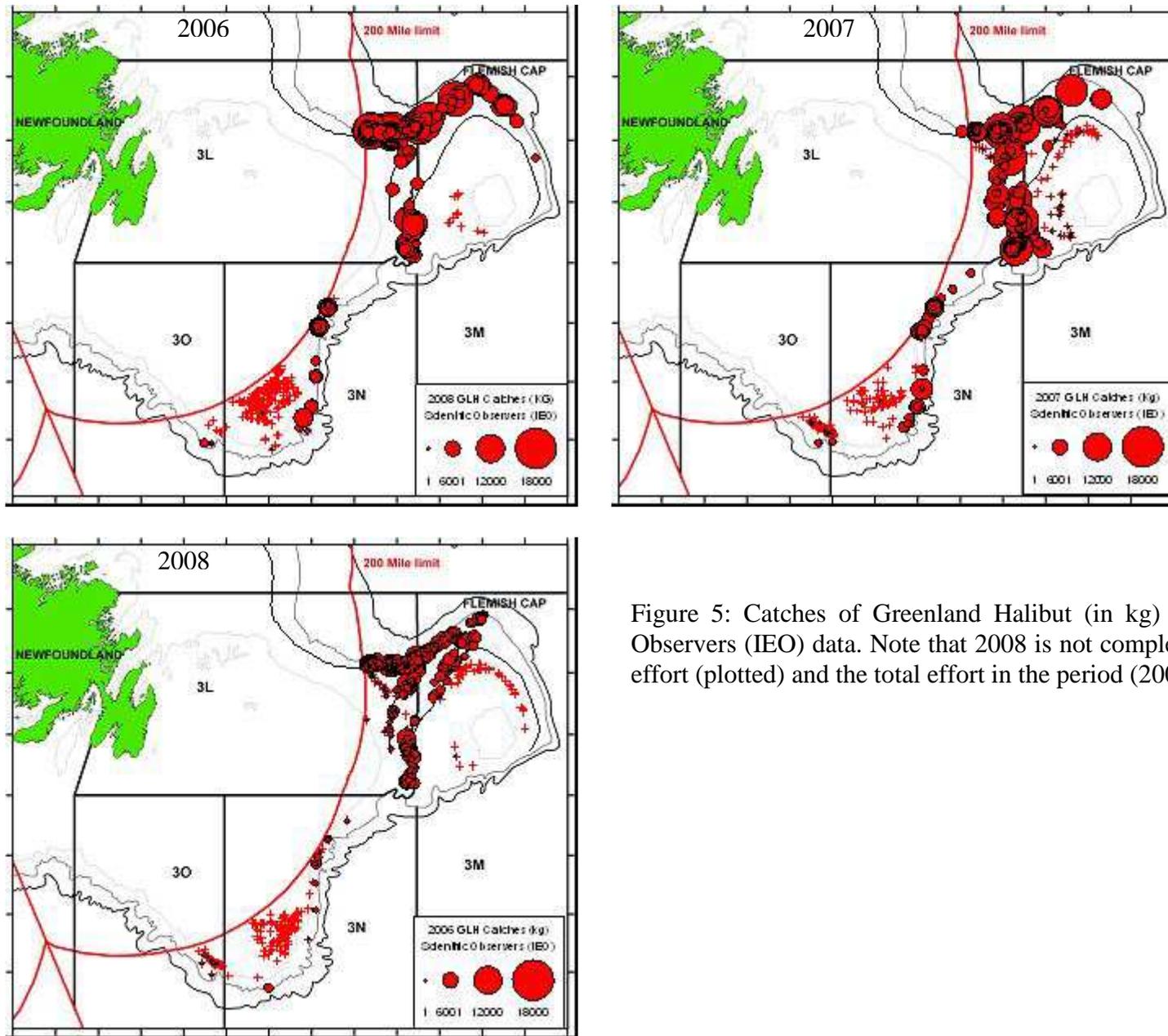


Figure 5: Catches of Greenland Halibut (in kg) based on the Spanish Scientific Observers (IEO) data. Note that 2008 is not complete. The coverage of the observed effort (plotted) and the total effort in the period (2006-2008) is around 15%.

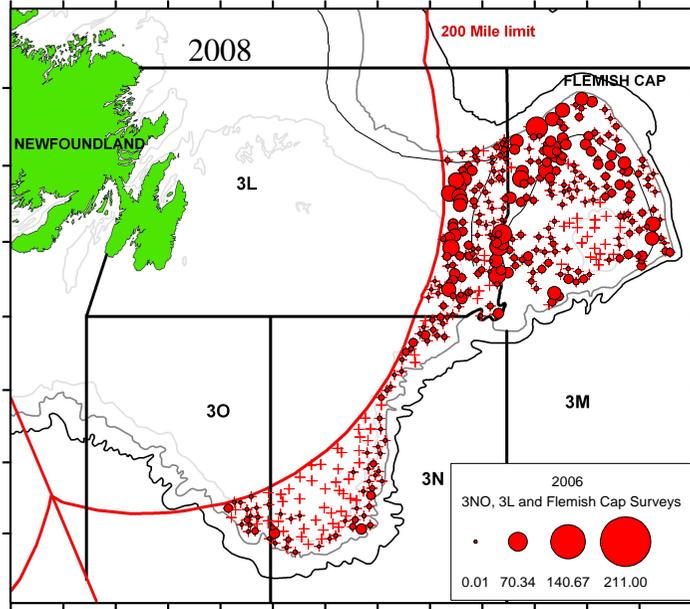
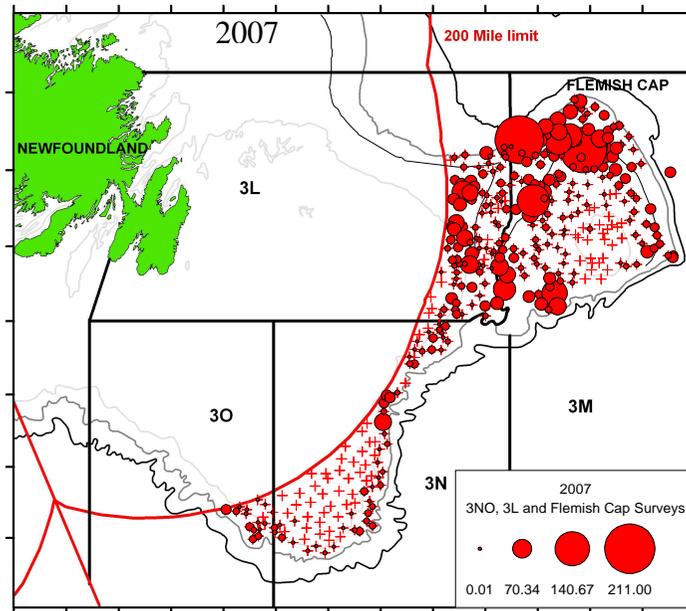
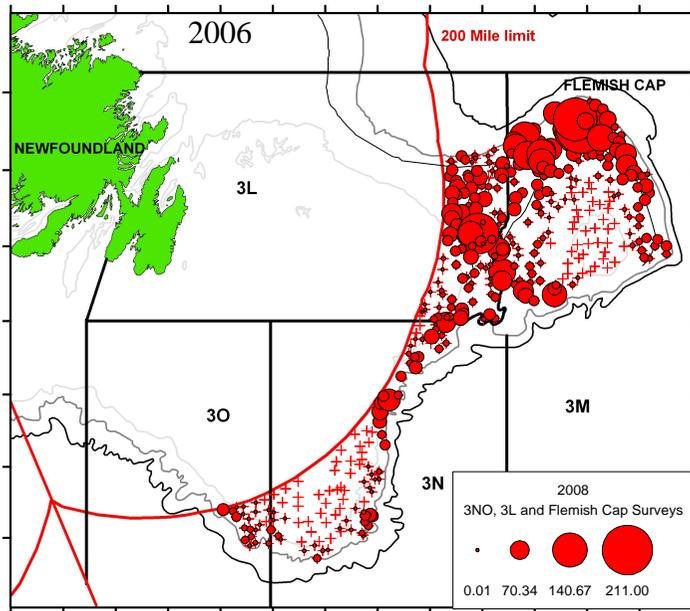


Figure 6: Catches (in kg) of Greenland Halibut based on the Spanish Survey data. Note that the hauls are 30 minutes and the depth coverage is till 1400 meters over this period (2006-2008). The 3NO and 3L Divisions have been surveyed with the Campelen while Division 3M with the Lofoten.