



UPDATE OF COMMERCIAL FISHING INDICATORS FOR GREENLAND HALIBUT IN THE GULF OF ST. LAWRENCE IN 2013

Context

The stock assessment of Greenland Halibut (*Reinhardtius hippoglossoides*) in the Gulf of St. Lawrence (4RST) is conducted every two years, with the most recent assessment completed in February 2013 (DFO 2013a). An update of the resource's main indicators was done on October 18, 2013, and was the subject of a Science Response Report (DFO 2013b). Following this update, Fisheries Management made a second request to Science to obtain information on fisher performance during the 2013 season. An update of the commercial fishing indicators (distribution of fishing effort and catch rates) is presented in this supplement to the Science Response. This update was prepared to give Fisheries Management an overview of the changes in commercial fishing indicators for 2013.

This Science Response Report results from the Science Special Response Process of February 25, 2014, on the update of the commercial fishing indicators for Greenland Halibut in the Gulf of St. Lawrence in 2013.

Analysis

On January 10, 2014, directed fishery landings of Greenland Halibut were 2 272 t out of a potential allocation of 3 607 t, or 63% of this allocation. The total fishing effort for 2013 was comparable to that of 2012; however, the spatial distribution of the effort changed (Figure 1). In 2013, the effort was spread over a larger area. An expansion of the fishing effort eastward in the Laurentian Channel, as well as to the south and north of Anticosti Island was observed. However, the fishing effort in the area southwest of Esquiman was lower in 2013 than in 2012.

The commercial fishery catch rate is used as an indicator of fishery performance and not as an abundance index for exploitable stock. This indicator is standardized to account for possible changes in the fishery with respect to the NAFO sub-area fished, gillnet soak times and the seasonal pattern of activities.

The catch rate in 4RST in 2013 declined by 43% from 2012 (Figure 2). This decline can be observed in the three geographic fishing areas in the Gulf: the western Gulf, northern Anticosti and Esquiman. The declines were of 35%, 51% and 56% respectively in these three areas. This downward trend has been evident since 2009. The 2013 catch rates are now lower than the historical average.

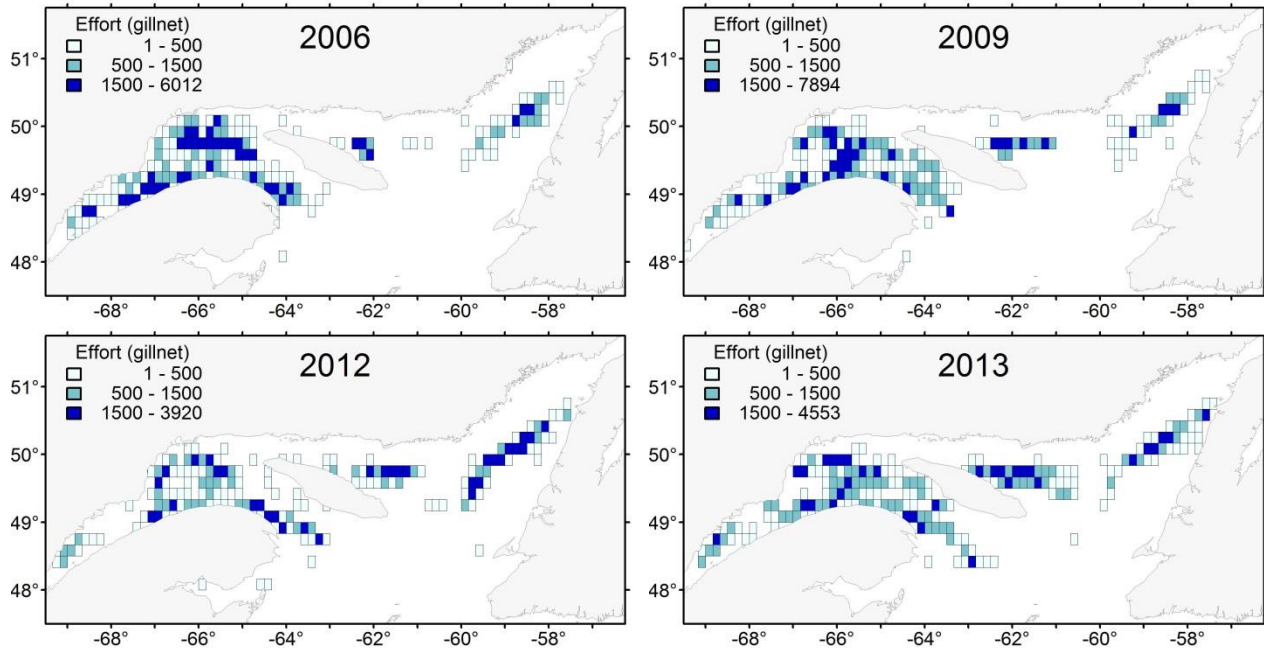


Figure 1. Distribution of the directed Greenland Halibut fishing effort, total number of gillnets hauled per fishing grid in 2006, 2009, 2012 and 2013 (partial data: the proportion of catches that are georeferenced is 87%, 86%, 90% and 85% respectively for 2006, 2009, 2012 and 2013).

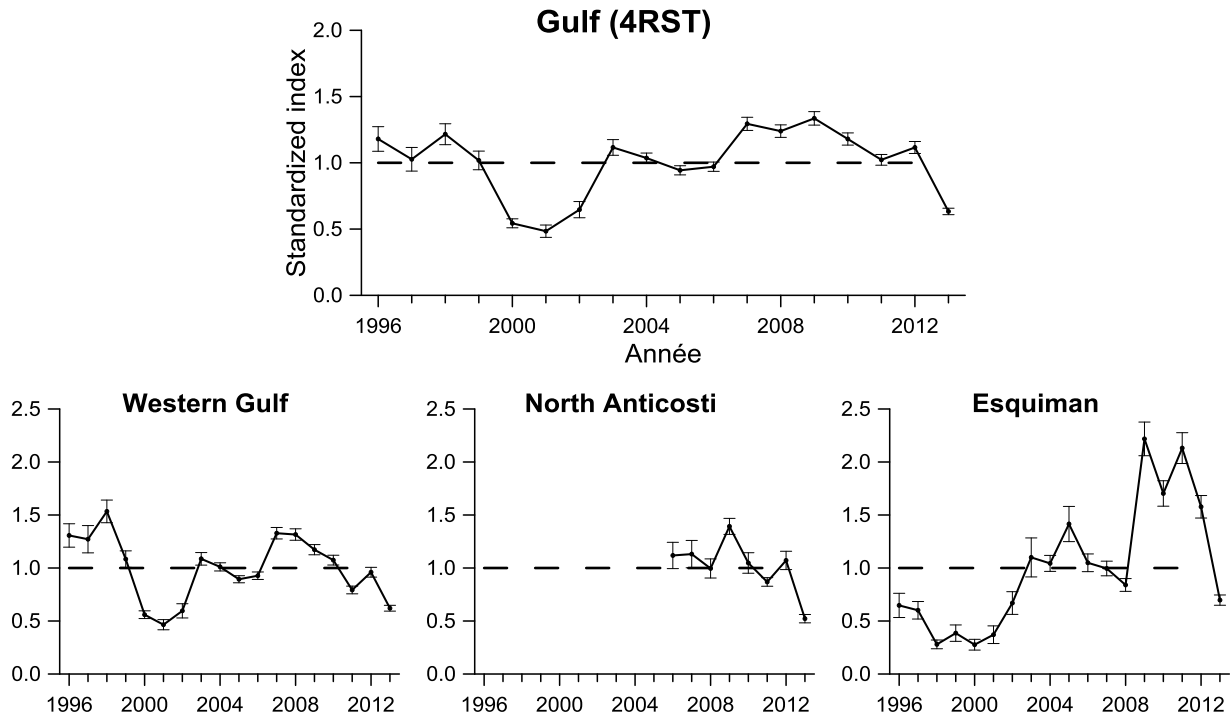


Figure 2. Standardized indices of fishery performance for the Gulf (4RST) and by fishing area. The dotted horizontal line represents the series average.

Conclusions

The 43% decline in the commercial catch rate in 2013 is comparable to the decline in abundance indicators from the surveys presented in the last update (DFO 2013b). The abundance of pre-recruits (40–43 cm) and recruits (> 44 cm) in the 2013 DFO survey decreased by 28% and 41%, respectively, compared to 2012.

The two principal sources of data used for the stock assessment, namely, data from the research surveys and the commercial fishery, show similar trends and indicate a significant reduction of the same size as the abundance of commercial-size Greenland Halibut in 4RST in 2013. Furthermore, the age classes that should contribute to the fishery in 2014 are of average or low abundance.

Given the significant decreases observed for the various indicators, the recommendations from the 2013 Science Advisory Report (DFO 2013a) are no longer valid. In light of these two updates, it is unlikely that the stock status will improve in 2014.

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Sources of information

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DFO. 2013a. Assessment of Greenland Halibut in the Gulf of St. Lawrence (4RST) in 2012. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2013/039.

DFO. 2013b. Update of main indicators of the stock status of Greenland Halibut in the Gulf of St. Lawrence (4RST) in 2013. DFO Can. Sci. Advis. Sec. Sci. Resp. 2013/025.

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