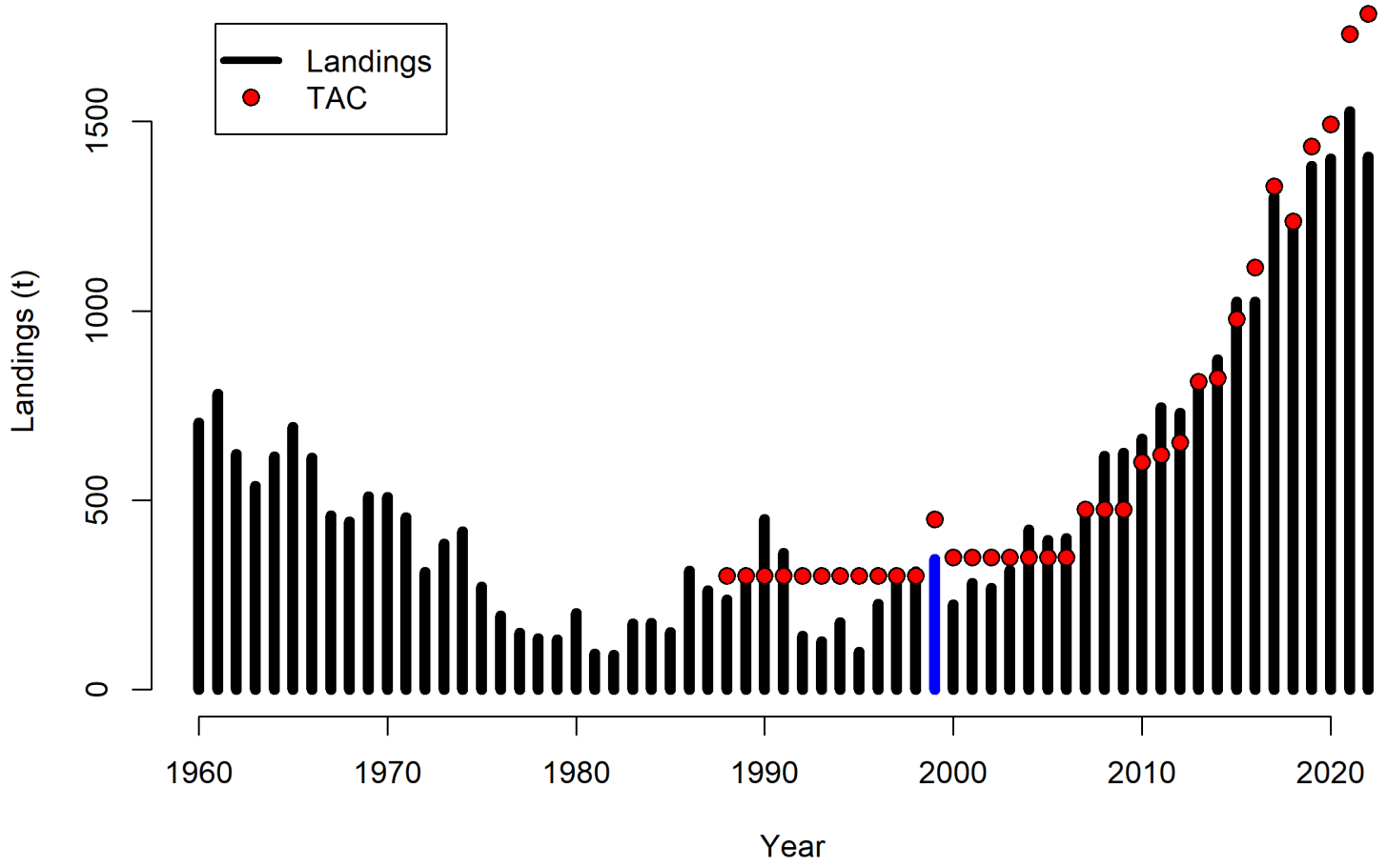
4RST Gulf of St. Lawrence Atlantic Halibut Stock Assessment Summary

Gulf Groundfish Advisory Committee, March 15 2023

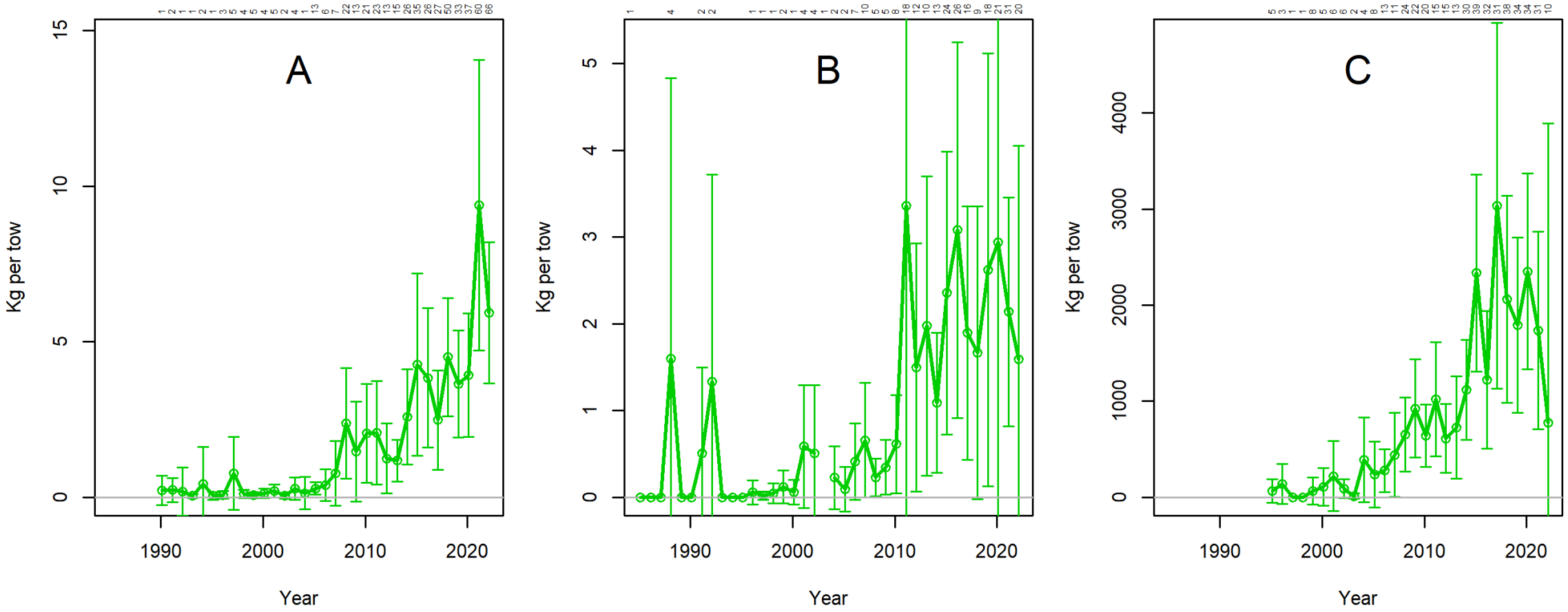
Summary 1

Atlantic halibut landings have been increasing since the early 2000s and have reached the highest values since 1960. For the 2021-2022 and 2022-2023 management years, preliminary landings are 1526 t and 1407 t respectively.



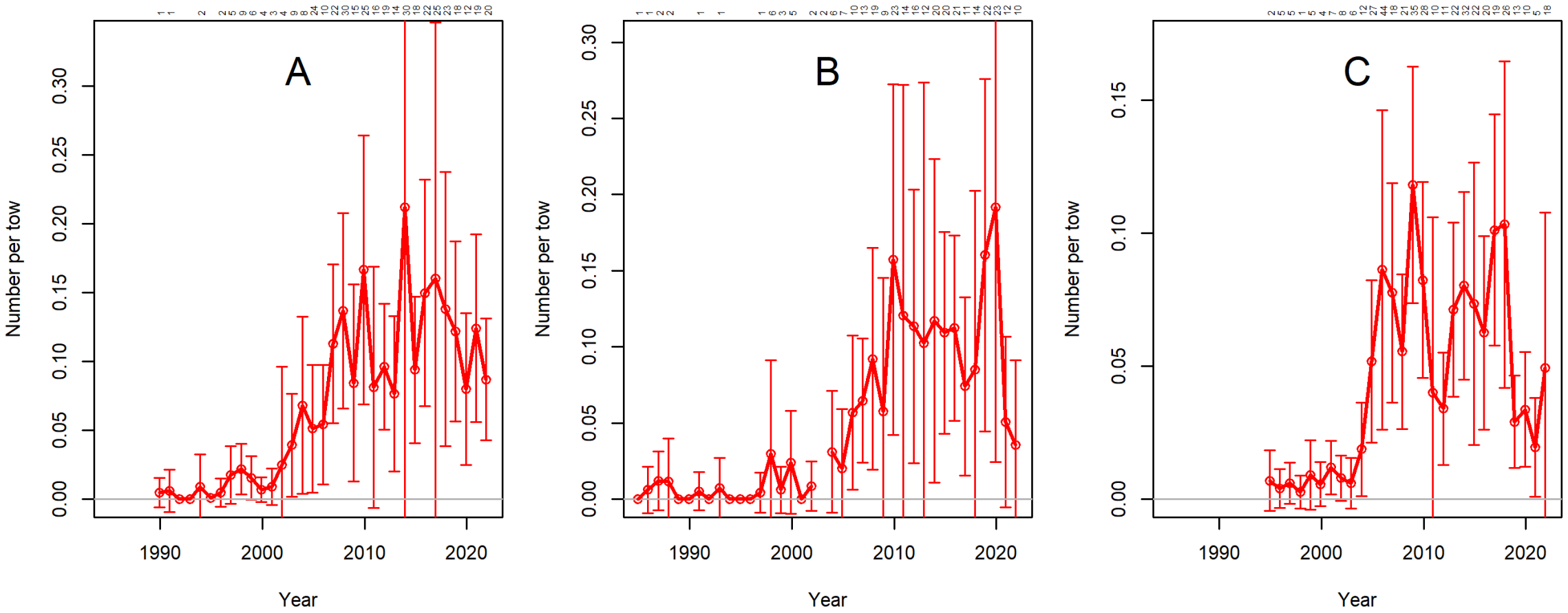
Summary 2

The biomass indices of commercial-sized Atlantic halibut (greater than 85 cm) from trawl surveys in 2021 and 2022 are among the highest in historical series.



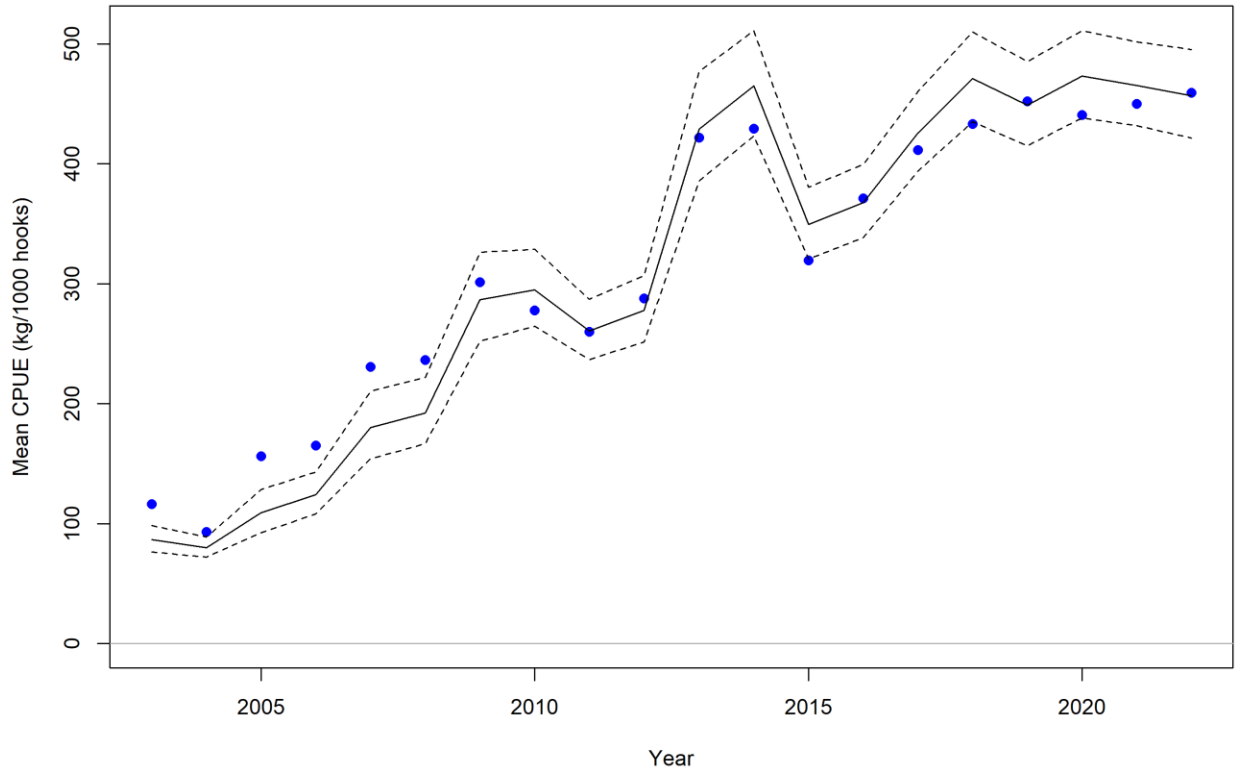
Summary 3

Abundance indices of Atlantic halibut pre-recruits (65 to 85 cm) from trawl surveys show high values since the mid-2000s.



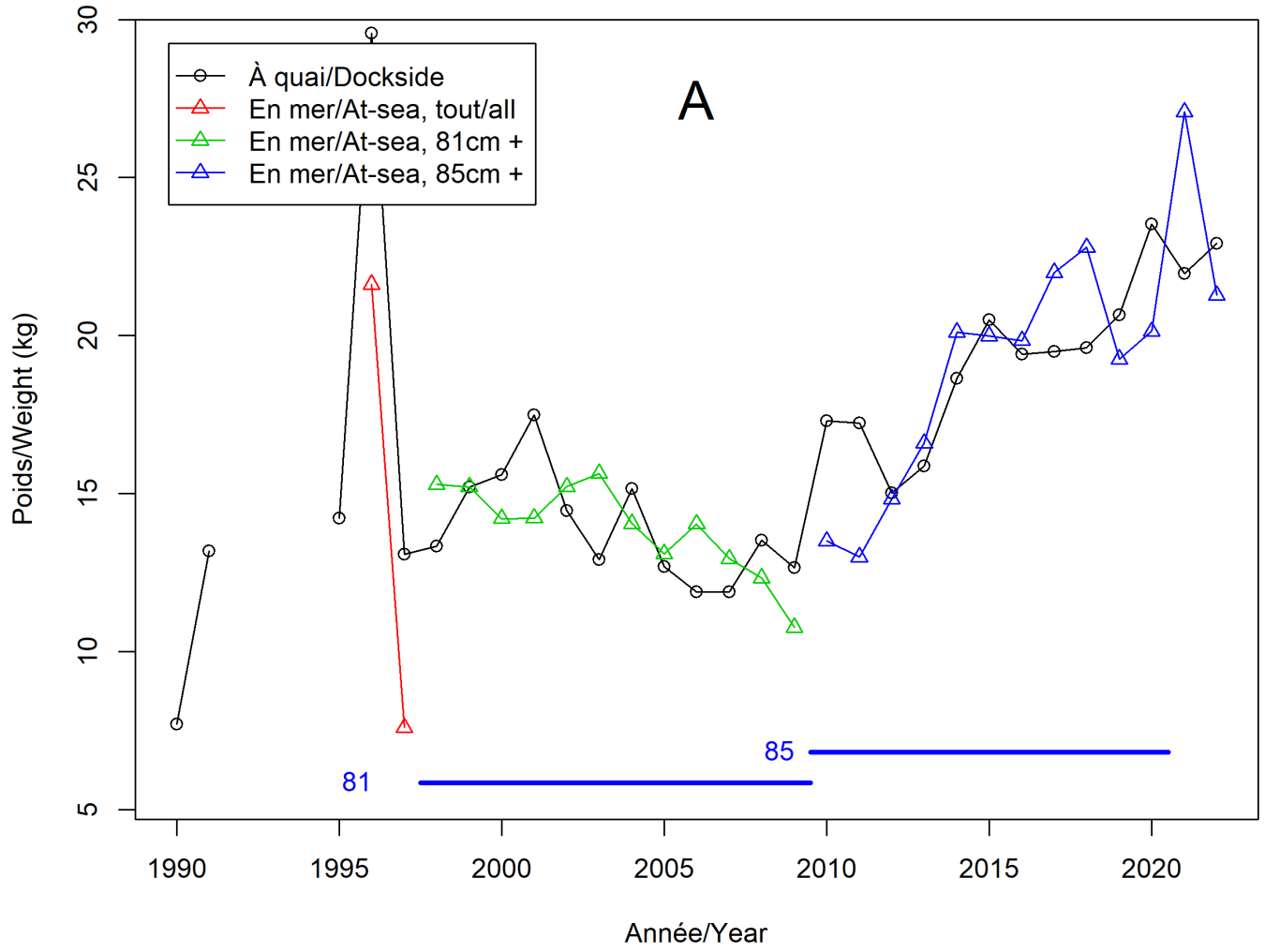
Summary 4

The catch per unit effort of the Atlantic halibut in the directed longline fishery increased from the early 2000s to the mid-2010s. Since then, it has been high and stable at about 450 kg per 1000 hooks.



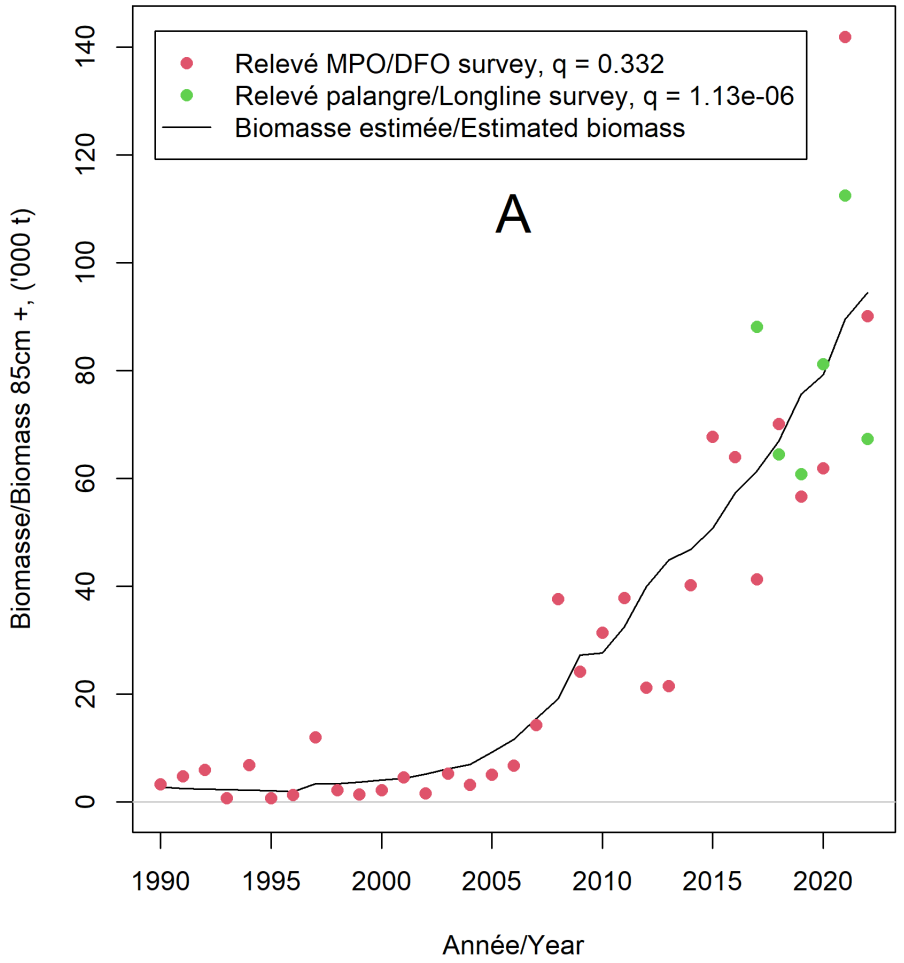
Summary 5

The average size and weight of landed Atlantic halibut are increasing since 2006.



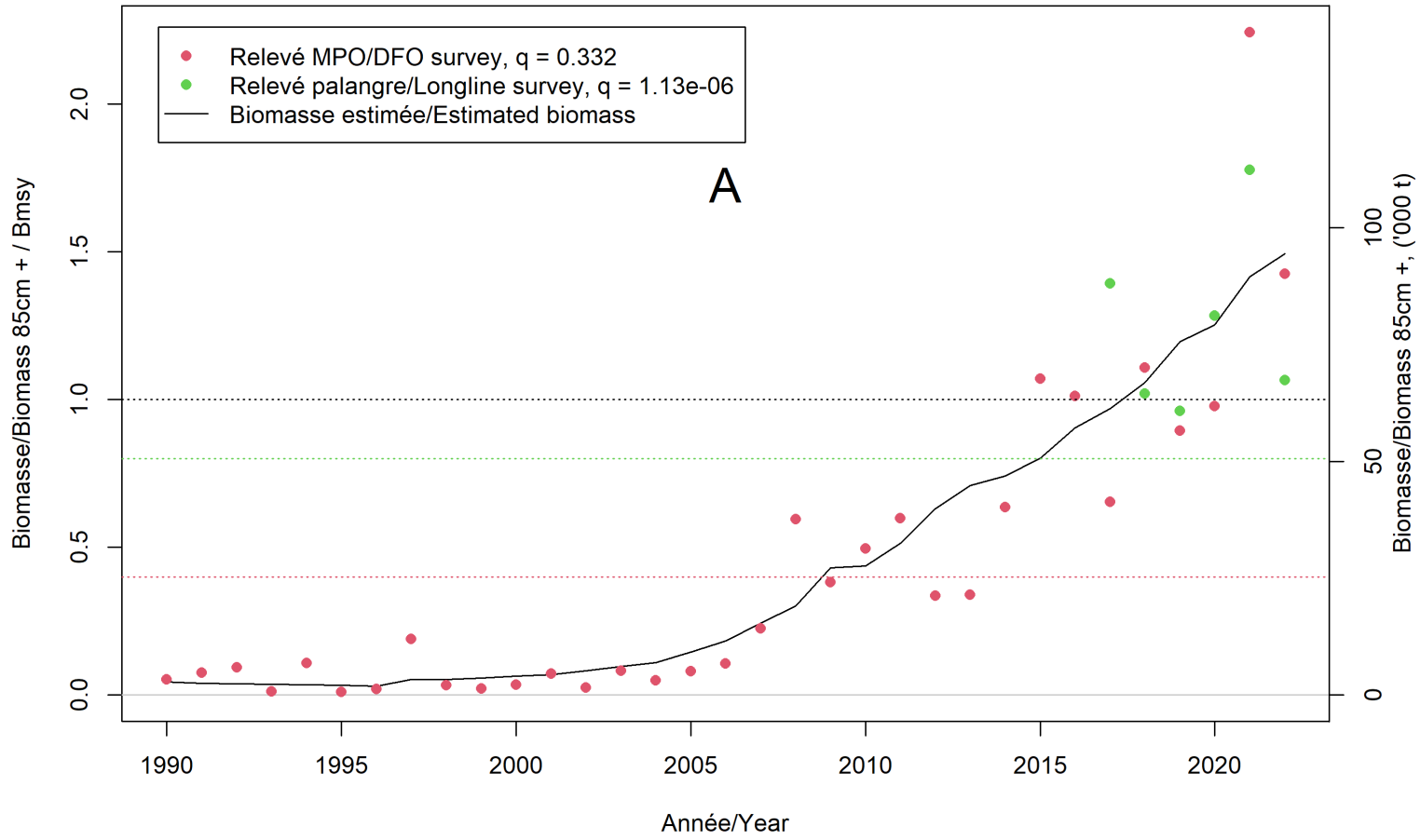
Summary 6

Adjustment of a delay-difference type assessment model, integrating DFO monitoring, longline survey and capture-mark-recapture work, shows that the biomass of the commercial-sized stock is growing to reach 94,482 t in 2022.



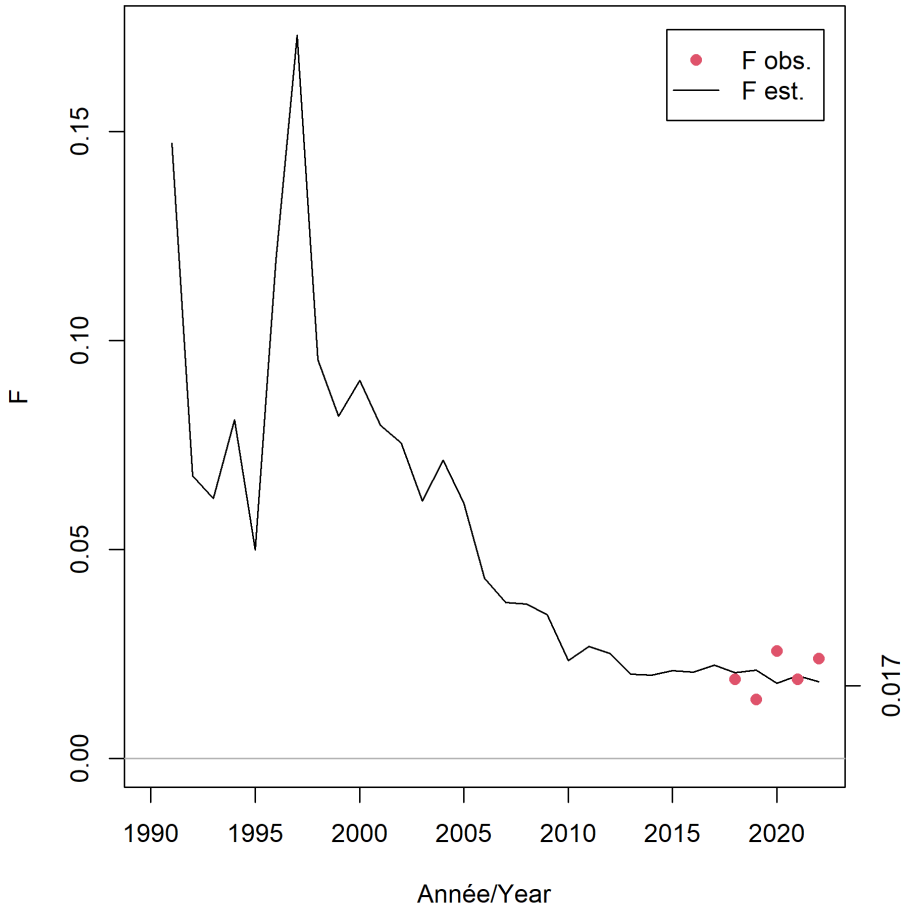
Summary 7

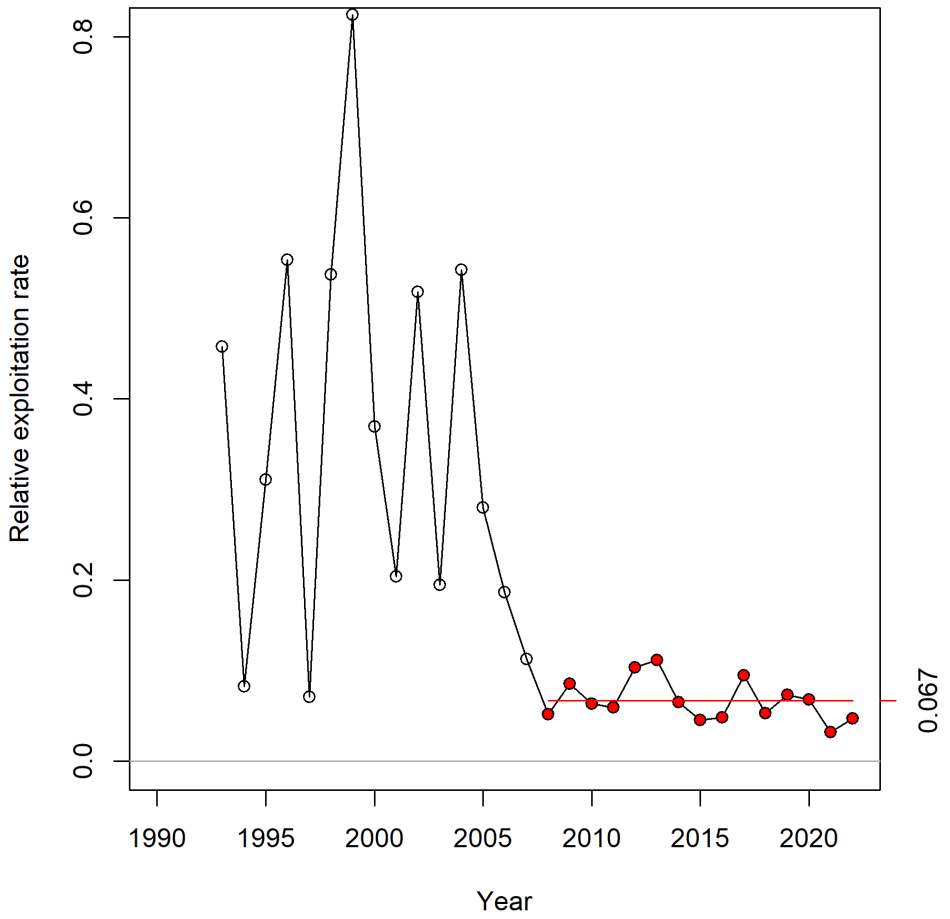
A limit reference point is set at 40% of the theoretical biomass at the maximum sustainable yield (BMSY), i.e. 25 291t. A upper stock reference point (USR) is proposed at 80% of the BMSY , i.e. 50,582t, and would place the stock in the healthy zone of the precautionary approach. However, the results of the model are sensitive to the adjustment parameters chosen.



Summary 8

The exploitation rates estimated by the model have been low for 15 years and are consistent with the values observed from capture-mark-recapture work and the relative exploitation rates obtained from the minimum trawlable biomass of DFO surveys.





Summary 9

The model's 2-year projections show that a significant increase in removals is not expected to cause a decrease of the stock biomass, which would remain within the healthy zone under the proposed USR. These projections are robust to different modelling scenarios.