Dr. Christopher Moore
Executive Director
Mid-Atlantic Fishery Management Council
800 North State Street, Suite 201,
Dover, DE 19901
Email: cmoore@mafmc.org

Dear Dr. Moore,

Canada and the United States (U.S.) have a longstanding and productive relationship in collaborative fisheries science and management, as exemplified by the number of bilateral mechanisms we have in place as well as a healthy ongoing dialogue on fisheries issues of mutual concern. Canada values and appreciates the ongoing scientific collaboration between Canadian and U.S. scientists and scientific processes; this work affects a number of important transboundary fish stocks, including Atlantic mackerel. We believe it is important to make use of every opportunity to contribute to each others' understanding of this stock and the fishing pressures upon it so we all have a strong foundation for science-based decision-making.

As the United States is conducting a stock assessment of Atlantic mackerel, Canada wishes to share the results of the Atlantic mackerel stock assessment completed by Fisheries and Oceans Canada (DFO) earlier in 2023, especially as these findings pertain to its transboundary nature. The full report can be found here: https://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2023/2023_015-eng.html

DFO applies the Precautionary Approach Framework when making decisions regarding harvest levels in Canadian fisheries. Stock status can be defined based on zones (healthy, cautious, critical), which are delineated by reference points; the Limit Reference Point (LRP) is the boundary between the critical and cautious zones, and an Upper Stock Reference Point (USR) is the boundary between the cautious and healthy zones. The LRP represents the stock status below which serious harm is occurring to the stock and there may also be resultant impacts to the ecosystem, associated species and a long-term loss of fishing opportunities.

The Canadian stock assessment for Atlantic mackerel is on a two-year assessment schedule and assesses the northern contingent of the Northwest Atlantic (NWA) mackerel stock. This differs from the U.S. assessment, which assesses the combined NWA stock with both southern and northern contingents.

The latest Canadian stock assessment took place in February 2023 (with data up to 2022) and found that the northern contingent of Atlantic mackerel has been in or near the critical zone, below the stock's LRP, since 2011. This is akin to the stock being in an overfished state. The spawning stock biomass has continued to decline since the last stock assessment in 2021 and was estimated to be at its lowest-observed values of 40 per cent of the LRP in 2021 and 42 per cent of the LRP in 2022.

The age structure of the northern contingent continues to see a loss of older, more fecund individuals from the population compared to the pre-2000 period. The age structure collapsed during a time of high fishing mortality. The last notable recruitment event occurred in 2015 but fish belonging to this cohort only represented a minor proportion (3 per cent or less) of the stock's abundance in 2021 and 2022. This stock typically had fish aged 1-10+, and the erosion of the age structure of the population has increased over time. There were very few fish over age 5 in 2021 and 2022 (3 per cent or less). The age structure of the population in 2021 and 2022 was not dominated by a particular cohort.

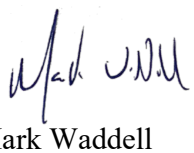
The 2023 assessment included an initial investigation of predation pressure on mackerel by various predators in Canadian and U.S. waters, which suggests an overall increase in predation-induced mackerel mortality over the last few decades, with high interannual variability. As additional data on predation of mackerel by various predators becomes available, values used for estimating biomass of mackerel that they consume will be refined.

As part of new Canadian legal requirements to rebuild stocks that are in the critical zone, the 2023 stock assessment estimated the minimum time required for the stock to rebuild in the absence of all fishing. Rebuilding the northern contingent stock to above the LRP with a 75 per cent likelihood in the absence of all fishing (F=0; no Canadian spawned fish removed from the water) was estimated to be 6 to 7 years. However, an alternative minimum time to rebuild the stock that accounts for removals beyond control will be used, with an estimate of 7-9 years.

Both contingents mix in winter in deeper warmer waters, on the edge of the continental shelf from Sable Island, Nova Scotia to the waters off Cape Lookout, North Carolina. During this time, they are subject to the U.S. fishing fleet. There is small but significant genetic differentiation between the northern and southern contingents. The level of mixing during winter remains highly uncertain, but is likely large and variable between years. In the latest Canadian assessment, the assumption was that the proportion of northern contingent fish within U.S. landings ranged from 20-80 per cent, in accordance with the most recent knowledge on stock mixing.

With the results of Canada's 2023 stock assessment, DFO has announced the continued closure of the commercial and bait Atlantic mackerel fisheries for the 2023 season to support the rebuilding of this stock. We continue to value the open exchange of information that we have enjoyed with U.S. officials on small pelagic stocks for the purposes of science and management, including Canadian scientists' participation in the U.S. stock assessment, and we look forward to further strengthening collaboration on this species. Canada is optimistic that the Atlantic mackerel stock can rebuild, and we urge the United States to continue the positive steps it has already taken in its rebuilding efforts for this important transboundary stock.

Kind regards,



Mark Waddell
Director General, Fisheries Policy
Fisheries and Oceans Canada