



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northeast Fisheries Science Center
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January 7, 2021

Christopher M. Moore, Ph.D.
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Mid-Atlantic Fishery Management Council
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Mr. Robert E. Beal
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Executive Director
New England Fishery Management Council
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Dear Chris, Bob, and Tom,

The Northeast Fisheries Science Center will begin to add actual swept-area in the calculation of bottom trawl survey indices from the NOAA Ship *Henry Bigelow*. This decision is based on a recommendation provided by the Northeast Trawl Advisory Panel (NTAP). Previously, swept-area was assumed constant based on standardized tow duration and tow speed and an assumed trawl wingspread.

In 2019, NTAP advised that this assumption be tested and the group designed and conducted a field experiment to evaluate the effect of trawl gear wingspread on the gear's ability to catch fish.¹ There was a small increase in total catch with wider wingspread: the wider the wingspread, the greater the area swept, and the more fish captured. When catches were adjusted for area swept, there was no additional detectable effect of wingspread on gear efficiency. This study was based on 170 paired tows using a twin-trawl set-up aboard the F/V *Karen Elizabeth*, which has been successfully used in other gear efficiency studies conducted by NTAP and the NEFSC.² The results were reviewed and

¹ [Science Spotlight](https://www.fisheries.noaa.gov/feature-story/2019-net-spread-study-targets-flatfish-reveals-subtle-differences) <https://www.fisheries.noaa.gov/feature-story/2019-net-spread-study-targets-flatfish-reveals-subtle-differences>

² <https://www.fisheries.noaa.gov/new-england-mid-atlantic/science-data/improving-bottom-trawl-survey-northeast>

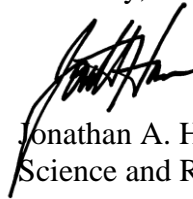


discussed by NTAP in January 2020.³ A manuscript that describes the experiment, the data, and the analyses is currently going through the NEFSC internal review process.

Based on these results and the NTAP recommendation, we will start using actual swept-area in the calculation of trawl survey indices. This effort will occur in two steps. The first step is to make the calculations on an assessment-by-assessment basis starting with some of the stock assessments planned for 2021. Plans for management track assessments will be reviewed by the Assessment Oversight Panel in 2021 and any changes will be worked through the management track process. Although we do not have standardized software in place, we will prioritize incorporation of swept-area biomass indices in 2021 research track assessments, may be able to incorporate this approach in some management track assessments in 2021, and will strive to incorporate this approach as soon as possible for any stocks that are particularly affected by swept area estimates (e.g., flatfish). The second step is to make changes to databases and data systems to include the calculations in the standard generation of trawl survey indices. The second step will move forward as funding becomes available. We will use actual swept-area indices in more management track assessments as soon as standardized reviewed software is available.

This change in how we will calculate trawl survey indices speaks to our commitment to collaborate with our industry partners to improve how we do our science. We continue to work with NTAP on our bottom trawl survey and on improving the collection of fishery-independent data in the region.

Sincerely,



Jonathan A. Hare, Ph.D.
Science and Research Director

cc: Michael Pentony, GARFO
Sarah Bland, GARFO
Michael Simpkins, NEFSC
Amanda McCarty, NEFSC

³https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/5e616145b1a782617d31a35d/1583440197608/NTAP_Meeting_Summary_01.31.2020.pdf