



Mid-Atlantic Fishery Management Council
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Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: August 31, 2018
To: Chris Moore
From: Jason Didden
Subject: *Illex* ABC

In May 2018 the SSC reviewed the 2019-2020 *Illex* ABC and made no changes, so the earlier multi-year Acceptable Biological Catch (ABC) specification of 24,000 metric tons (MT) would remain. Staff also recommended no changes at that time.

Since then, the strength of the 2018 fishery, in combination with several other data sources led the Council to request that NMFS add 2,000 MT to the 2018 ABC and that the SSC consider an increase to the 2019-2020 *Illex* ABCs.

The rapid pace of landings in 2017 and 2018 suggests that *Illex* squid were highly available to the U.S. fishery in these years (Figure 1). Due to the species' overall range (from Southern Labrador to Florida (Dawe and Hendrickson, 1998), movement patterns, and short lifespan, true measures of abundance and productivity are not available and may never be known. However, the fishery performance suggests that *Illex* squid were very plentiful in 2017 and 2018 despite several prior years of low landings. The fishery closed September 15th in 2017 and August 15th in 2018 but can operate into October if unconstrained.

Canadian component landings have been low in recent years despite their separate 34,000 MT TAC: 113 MT in 2013, 111 MT in 2014, 11 MT in 2015, 8 MT in 2016, and 355 MT in 2017. The Canadian component is considered to be "in a state of low productivity" (<https://www.nafo.int/Portals/0/PDFs/Advice/2016/sqi.pdf>).

Fishery independent information suggests that *Illex* availability and/or abundance may have been relatively high recently (Figures 2-6).

Given the available information, Council staff recommends a 10% increase in the 2019 ABC to 26,400 MT and then an increase for 2020 to 28,800 MT (20% above 24,000) so that the potential of this fishery can be more fully evaluated. The remarkable robustness of the 2018 fishery after the relatively high catch in 2017 suggests that modest catch increases are not likely to cause a problem with stock status.

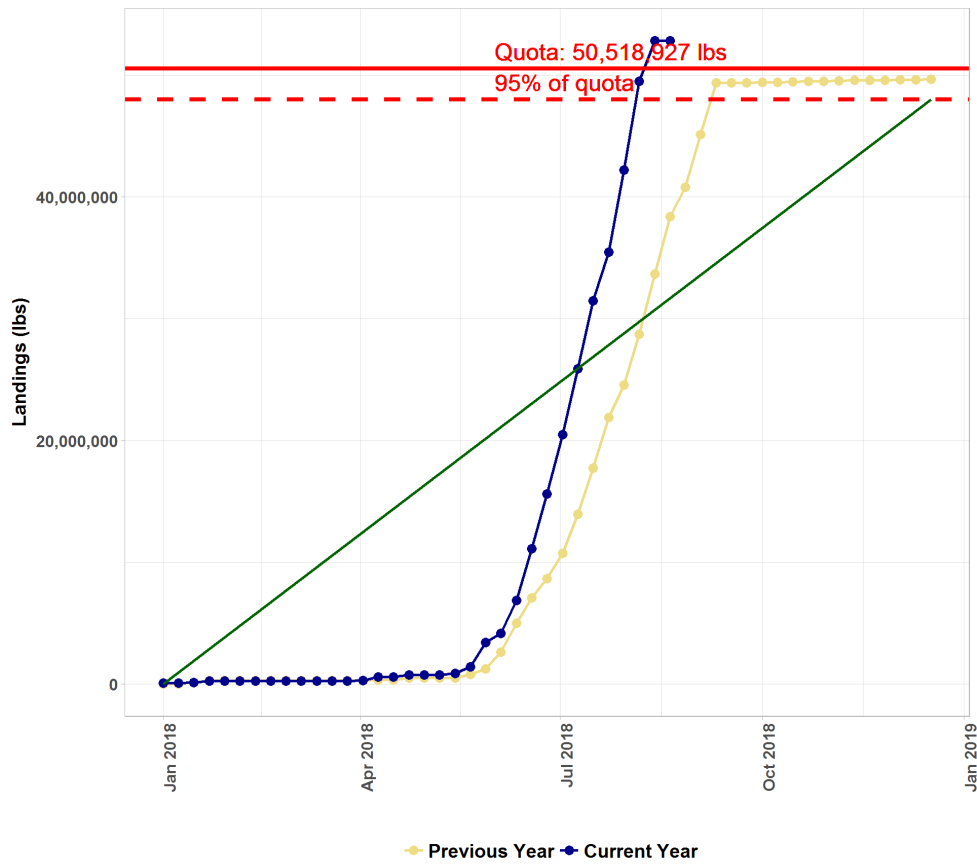


Figure 1. 2018 (Blue) and 2017 (Orange) *Illex* Quota Monitoring Reports thru 8/29/18 (<https://www.greateratlantic.fisheries.noaa.gov/aps/monitoring/illexsquid.html>)

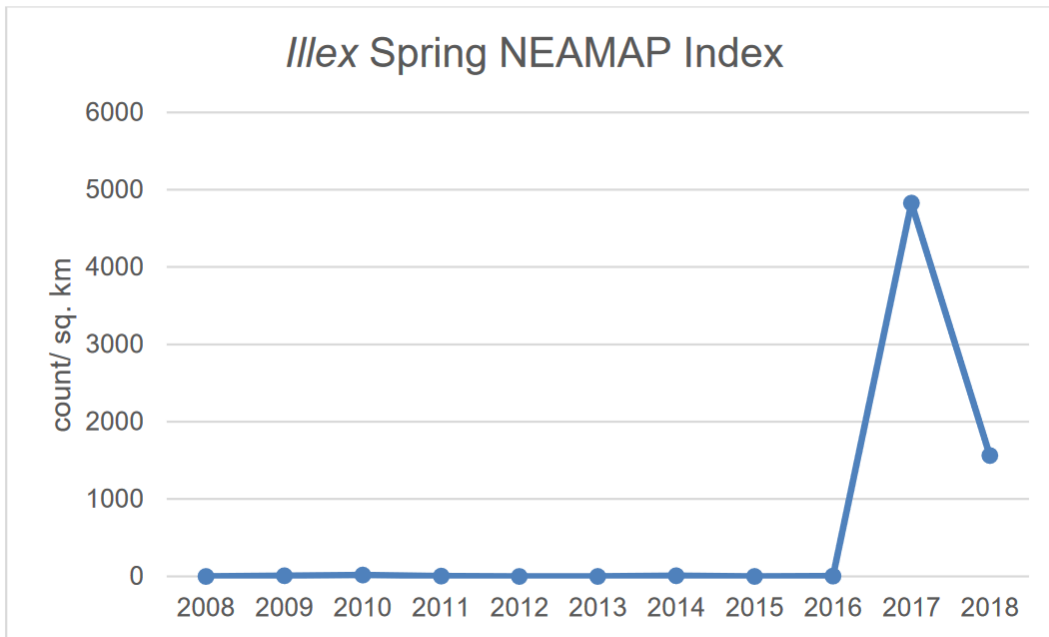


Figure 2. Spring NEAMAP Index for *Illex* Squid

Notes from VIMS/NEAMAP staff: Includes all survey regions in which *Illex* have ever been caught on a NEAMAP spring cruise (Rhode Island Sound down to the mouth of the Delaware Bay), so no positive tows for *Illex* were thrown out. The index is a CPUE, where catch is in count, and effort is area swept (in square km) for each tow. So the CPUE is count/sq km. The CVs are very high (all greater than 250%). The 2008-2016 count numbers are all less than 17/sq km.

NEFSC Spring Survey Indices for *Illex* Squid 1968-2018

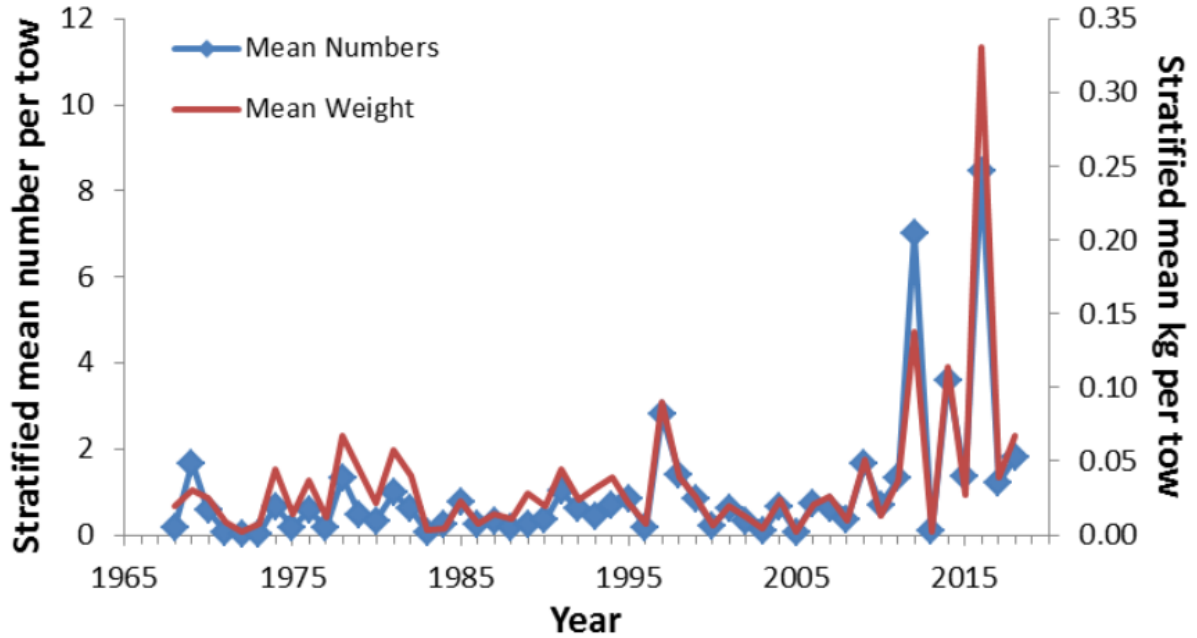


Figure 3. *Illex illecebrosus* relative biomass (stratified mean kg per tow) and abundance (stratified mean number per tow) indices derived using data from the NEFSC spring surveys, 1968-2018.

NEFSC staff Note: this survey occurs when the species is migrating onto the shelf, so the species is likely not fully available to the survey gear during at least some years.

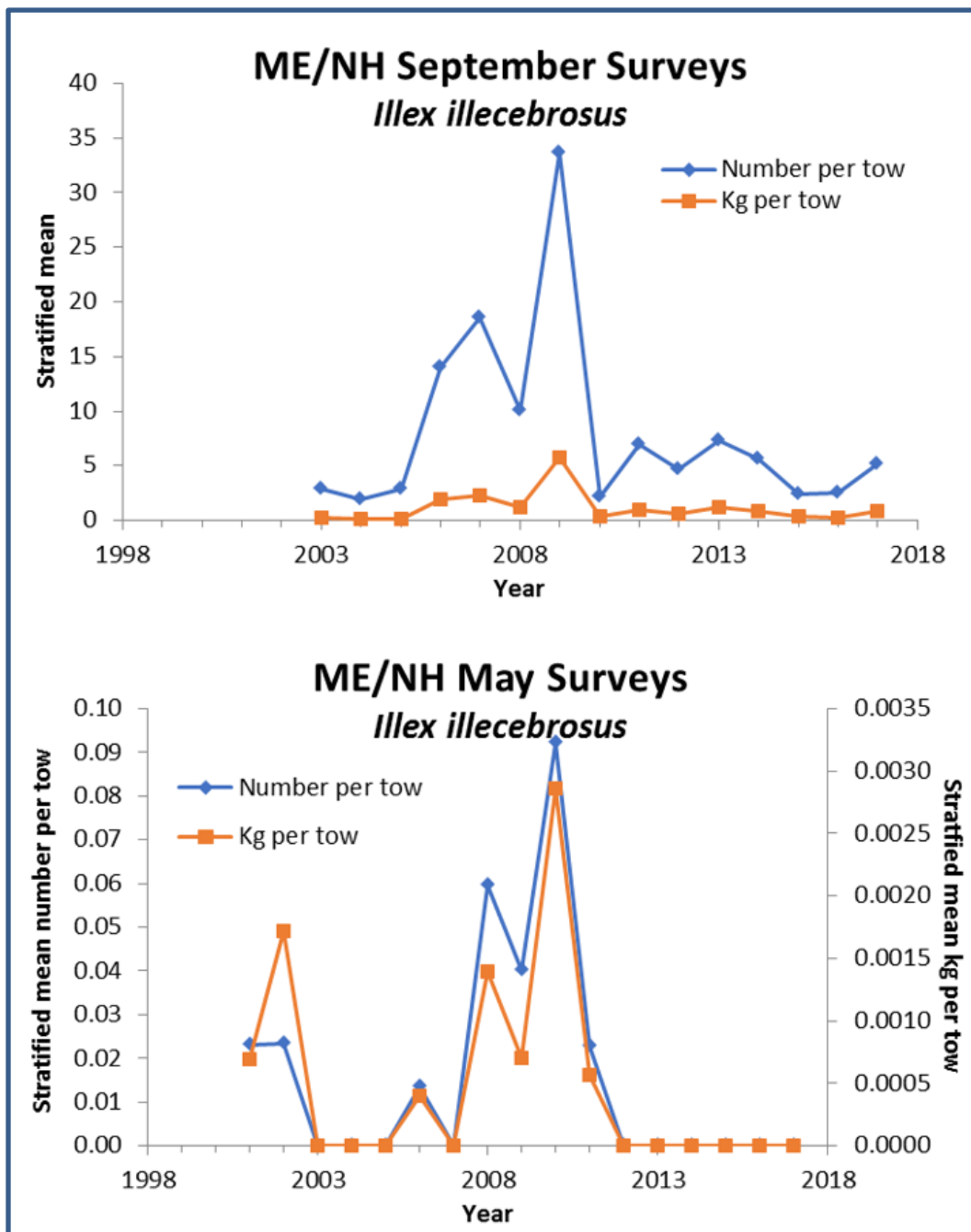


Figure 4. ME/NH September and May Surveys

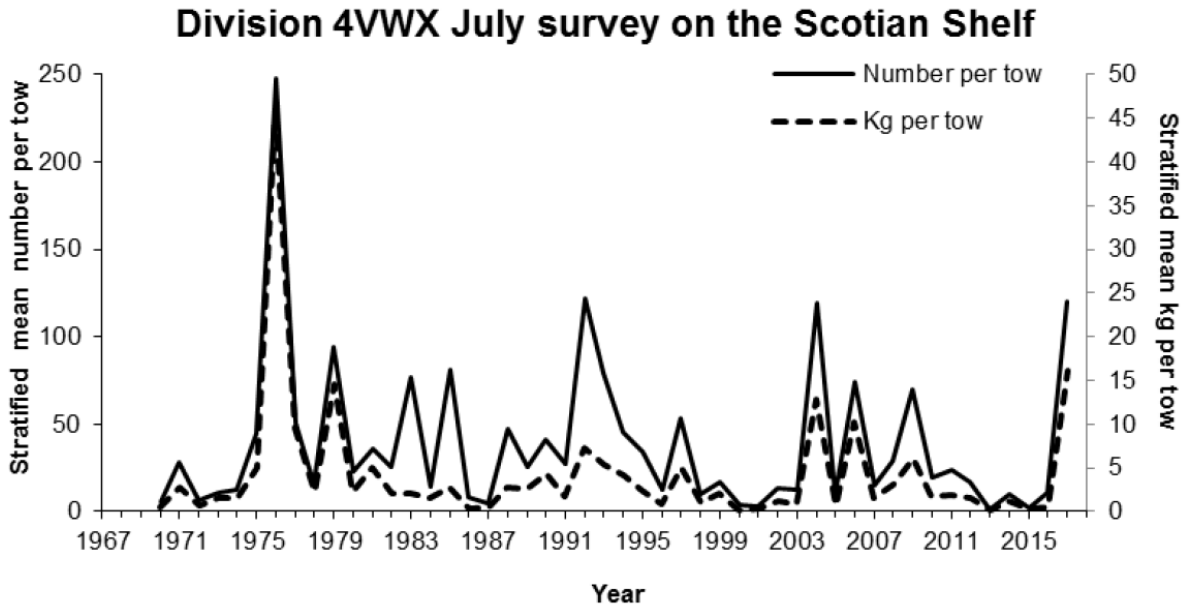


Figure 5. July Canadian 4VWX survey on the Scotian Shelf through 2017.

Note: The 2018 data point for that survey is unavailable because the Canada DFO had vessel technical problems.

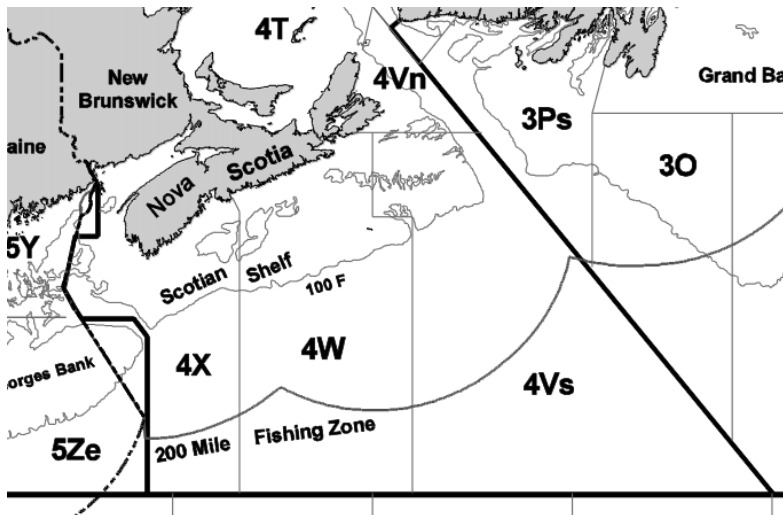


Figure 6. NAFO Areas.