

Chesapeake Bay Stock Assessment Committee

Blue Crab Harvest Reporting Document

Created: December 2021



Purpose

In the [2020-2021 Blue Crab Logic & Action Plan](#), Action 1.3 states that the Chesapeake Bay Stock Assessment Committee (CBSAC) will “evaluate current harvest reporting efforts, provide recommendations to jurisdictions, and identify barriers to implementation” in order to improve blue crab harvest reporting and characterization of catch composition. The purpose of this document is to address Action 1.3 by recording management jurisdictions’ efforts to track blue crab harvest and providing recommendations for improving the accuracy of commercial and recreational landings data.

Background

The Chesapeake Bay blue crab population is managed by three jurisdictions: the State of Maryland, the Commonwealth of Virginia, and the Potomac River Fisheries Commission. The management framework for blue crabs is based on female-specific biological reference points related to abundance and exploitation rate. If the abundance of mature females falls below the management threshold, the population is considered overfished, and if the exploitation rate surpasses the exploitation threshold, overfishing is occurring. To accurately assess the exploitation rate, and consequently the status of the stock, managers require reliable catch information from the commercial and recreational fisheries. The harvest reporting measures implemented by each jurisdiction to collect these data are described in the following section.

Current Efforts

Maryland

The Maryland Department of Natural Resources (MDNR) requires commercial crabbers to report their harvest to obtain an accurate estimate of exploitation. Historically, crabbers have reported their harvest by entering details of daily catch and effort in a logbook that is mailed in to MDNR at the end of each month. To improve harvest reporting, MDNR implemented a voluntary [electronic reporting \(e-reporting\) program](#) for commercial crabbers in 2012. Crabbers who opt into the e-reporting program are required to hail in and out each day and provide details about their catch, either through the online system or a 24-hour call center, and in return have a flexible day off. E-reporting has been verified in the past using dockside monitors, but monitoring is dependent on funding availability, which is often sparse. In 2019, approximately 11% of commercially-licensed crabbers opted into the e-reporting program. While harvest data are collected more quickly via e-reporting, this information cannot be verified for accuracy without dockside monitors. However, enforcement of reporting compliance is easier using this tool.

MDNR has also made efforts to characterize catch composition (i.e., sex, size, life stage). In 2002, MDNR established the [Cooperative Data Collection Program](#) in which commercial crabbers voluntarily sample their own catch or allow MDNR observers to ride along and sample the catch. Admission into this voluntary program is selective in order to provide maximum coverage of the region and gears used in the fishery. The data collected provide information about the spatial and temporal patterns of commercial blue crab harvest and catch composition. A total of 25 commercial crabbers in 14 different Bay regions participated in the program in 2020.

MDNR generates estimates of recreational blue crab harvest using [Ashford's random phone surveys](#) of license holders and coastal homeowners. To improve understanding of recreational harvest, MDNR has also added crabs to their voluntary [online angler survey](#). The survey provides information about gear, effort, and catch; however, the survey for blue crabs does not receive much input.

Virginia

The Virginia Marine Resources Commission (VMRC) implemented mandatory harvest reporting for blue crabs in 1993, which requires all commercial harvesters to report daily harvest on a monthly basis. Paper reporting requires harvesters to fill out forms to report their harvest (or lack thereof), and send them in to VMRC by the 5th of the following month. Commercial harvesters are notified within 60 days if reports have not been received, which helps maintain a high level of compliance. Recreational harvesters with 5-pot licenses are required to report their daily catches on an annual basis; however, compliance is very low. Most recreational blue crab harvest in VA is likely by people with up to two crab pots who are not required to get a license or report to VMRC.

In 2009, VMRC initiated an online reporting portal in which harvesters could report harvest or no activity. Online reporting significantly improves the accuracy and efficiency of data collection and all blue crab harvest must be reported online starting in 2022. Since the move towards required online reporting, the percentage of trips reported online increased from 37% in 2020 to 81% in 2021. VMRC staff are promoting online reporting through mail outs, and offer guidance through online tutorials and phone consultations. Enforcement of delinquent mandatory reports has also increased, and penalties include 1-2 years of probation, which means that any further harvest violations will incur stronger penalties.

To further validate harvest data, buyers are required to maintain their records for three years, and VMRC conducts annual buyer audits to compare harvest amounts. VMRC also offers voluntary surveys to buyers to gather information about ex-vessel prices; however, the response rate is low which creates high variance in the data.

Potomac River

The Potomac River Fisheries Commission (PRFC) requires weekly harvest reporting for commercial crabbers and strongly enforces the mandate. If a crabber is noncompliant, they are called before the Commission who may then suspend or revoke harvesting privileges. Currently, commercial crabbers are required to submit paper reports or emails of scanned PDF reports to PRFC. In 2021, PRFC received a grant from the Atlantic Coastal Cooperative Statistics Program (ACCSP) to develop a pilot project for electronic harvest reporting, which is expected to start in 2022. Additional funding from this grant is under consideration, which would be necessary to maintain the e-reporting program in subsequent years. PRFC sells very few recreational crabbing licenses and does not obtain estimates of recreational blue crab harvest.

Challenges

The primary challenges to gathering accurate estimates from blue crab harvest reporting programs across the Bay is compliance and catch verification. MDNR and VMRC have tried to simplify the reporting process and increase accountability by implementing electronic reporting (e-reporting) programs with dockside monitoring. The 2022 e-reporting pilot program at PRFC will have similar aims in improving blue crab harvest reporting. However, e-reporting programs have their own challenges. For

example, crabber demographics tend to be composed of older generations that are averse to or lack computers or mobile devices capable of online reporting. In Maryland, this has been addressed by incorporating a call center option into the reporting platforms. Some crabbers harvest in rural areas where internet and mobile connectivity are not available to report online in real time. The other major challenge for e-reporting programs is the lack of funding and staff resources to conduct dockside monitoring for catch verification. Catch verification is key to ensuring accurate harvest estimates and quantifying uncertainty in harvest reports.

Motivating crabbers to use best reporting practices is another challenge for gathering accurate harvest estimates. For example, in Virginia, the peeler fishery primarily reports crabs that are harvested and sold, but not the dead discards or crabs used for bait, whereas all peelers removed from the system should be reported regardless of their intended use or ultimate disposition. Educating and promoting best reporting practices is challenging, but an integral part of ensuring compliance and accurate reporting.

Recommendations

The ideal blue crab harvest reporting system would be mandatory, fully-verified, and electronic for timely and accurate reports, following the guidelines outlined in the [ACCSP Fisheries Data Collection Standards](#). The reports should include a section where dead discards and bait crabs can be taken into account. There should be long-term funding for dockside monitors to verify catch throughout the Bay. Additionally, trip level reporting requirements for dealers, not just harvesters, in all jurisdictions would help with harvest verification.