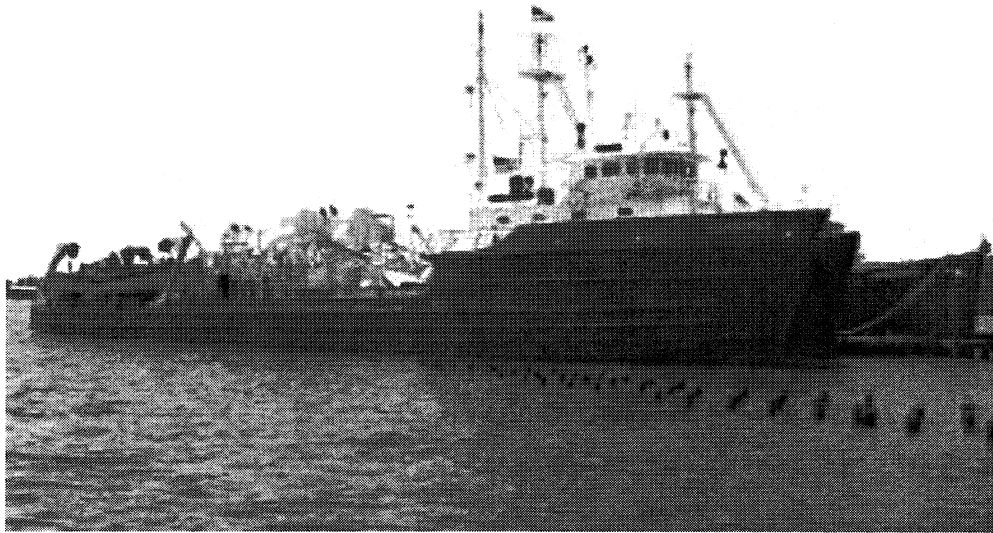


**An Assessment of the Social and Economic Importance  
Of Menhaden (*Brevoortia tyrannus*) (Latrobe, 1802)  
In Chesapeake Bay Region**

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## Executive Summary

Recreational anglers and various conservation associations have long been concerned about the harvesting of menhaden in Chesapeake Bay. Their concerns include the fact that menhaden are filter feeders, whose overharvest could affect water quality, and that menhaden are forage fish for various recreationally important predators, such as striped bass, weakfish<sup>1</sup>, speckled trout, bluefish, as well as various marine mammals and seabirds. Equally important is the fact that the reduction fishery solely operated by OMEGA Protein is also believed to be vital to the social and economic wellbeing of Northumberland County, and in particular, Reedville, VA. In addition, the bait fisheries have recently increased their harvest of menhaden in response to reductions in the supply of herring for use as bait in the lobster and other fisheries.

These competing concerns have fueled a debate about menhaden harvesting that has resulted in every coastal state of the Northwest Atlantic having some type of regulation that either limits or prohibits the harvesting of menhaden by purse seine or for reduction purposes in their coastal waters. Massachusetts, Virginia, New York, and North Carolina are the only states that presently permit harvesting for reduction or by purse seine. None of these concerns have, however, been quantified in terms of their economic impacts or economic, social, or ecological values.

As a consequence, the Virginia Marine Resources Commission requested a study be done by the Virginia Institute of Marine Science of the social and economic importance of the fishery to Chesapeake Bay region. The emphasis of the study was to document how reallocating the Bay quota might affect the social wellbeing and economies of the region and to determine the economic value of menhaden in the region. That is, does the menhaden resource generate more benefits from the fishery or from the ecological services it provides to the various Bay resources?

The county profiles and limited interviews with employees of OMEGA Protein indicate that the menhaden fishery, dominated by the reduction industry, is a key component of the multi-cultural, ethnic, and racial communities bordering Chesapeake Bay. This is particularly true for Northumberland County and Reedville, Virginia where OMEGA Protein is headquartered. Of the 519 full and part time jobs generated by OMEGA Protein, 347 contributed to the local Northumberland County economy. In the event of a closure, the loss of the reduction industry alone would generate a 14.3% and 8.1% decline in total county output and employment; respectively. In addition, a financial simulator model was developed to conduct an assessment of different Bay-wide quotas affect on sales, income, and employment in the Maryland and Virginia region. This model found that a zero Bay quota with constant costs results in losses of \$10 million as compared to a \$7.3 million profit if costs are allowed to decline with quota reductions. Restricting coastal ocean quotas from a high of 141.1 to 50.0 thousand metric tons further reduces sales from \$59.5 to \$21.2 million and profits from \$14.2 to 2.3 million. This latter result assumes that overall costs would rise 75% as a result of the exclusively offshore operations while allowing operating cost or expenditures for fuel, repair and maintenance, and food to decline with declines in production levels.

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<sup>1</sup>Reportedly the age-structure of weakfish in the Bay has contracted (primarily ages 0-3) this species does not exert much predation pressure on menhaden.