

Characterizing trends in participation and diversification in small-scale coastal fisheries of Virginia, USA.

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The small-scale coastal fisheries of Virginia account for a significant portion of the state's total annual landings and employ thousands of individuals. Despite the value of these fisheries, the number of commercial licenses sold has declined more than 15% since 1994. Declines are attributed to various factors, but indicate potential shifts in participation and resource dependence that may be consequential. Similar to other occupations dependent on natural resources, small-scale fishers are vulnerable to shocks and often employ diversification strategies within and outside of the fishing sector. Using state license, permitting, and landings data, this research investigates changes in participation and diversification in capture fisheries and marine-related sectors through structural change, discrete choice, and multiple correspondence analyses. Preliminary results indicate the percentage of fishers diversifying into more than one capture fishery (i.e. blue crab (*Callinectes sapidus*), clam (*Mercenaria mercenaria*), oyster (*Crassostrea virginica*), or finfish species) is less than half of those licensed and has not varied widely since 1994, despite overall declines in participation. The number of fishers diversifying into marine-related sectors, however, has increased, likely due to aquaculture expansion. Analyses suggest that fishers participating in blue crab fisheries are more similar to those participating in finfish fisheries (in terms of permit holdings) than those in clam or oyster fisheries. Results also indicate that fishers participating in chartering are less similar to fishers participating in other marine-related sectors. Understanding individual decision-making behavior and livelihood strategies of small-scale coastal fishers is integral in addressing the socio-economic impacts of environmental and management changes.