

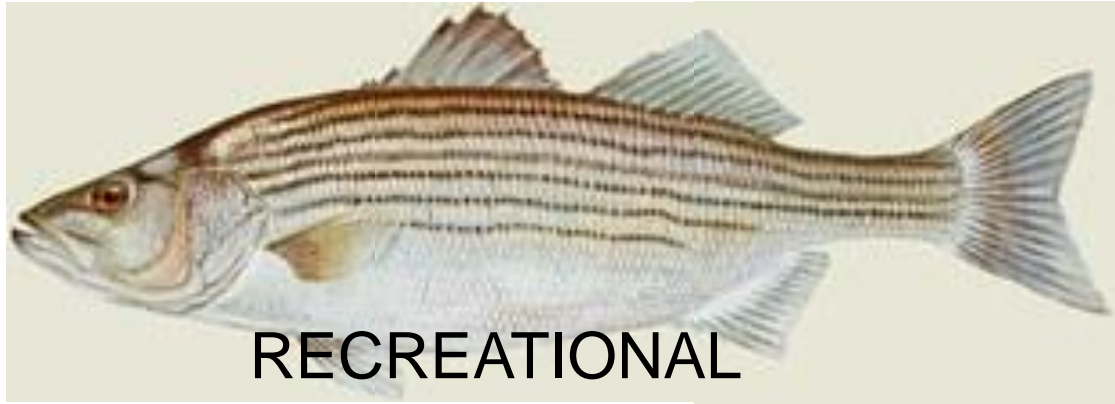
A satellite-style map of the Chesapeake Bay region, showing the intricate network of waterways and the surrounding landmasses. The water is a deep blue, while the land is a mix of light and dark green, indicating different vegetation and terrain. The title 'The Purpose of the Bay' is centered over the map.

The Purpose of the Bay

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University of Maryland
Department of Agricultural & Resource Economics

STAC RETREAT
March 27, 2012
Rose Haven, MD

Society's Changing Values of Fish



COMMERCIAL

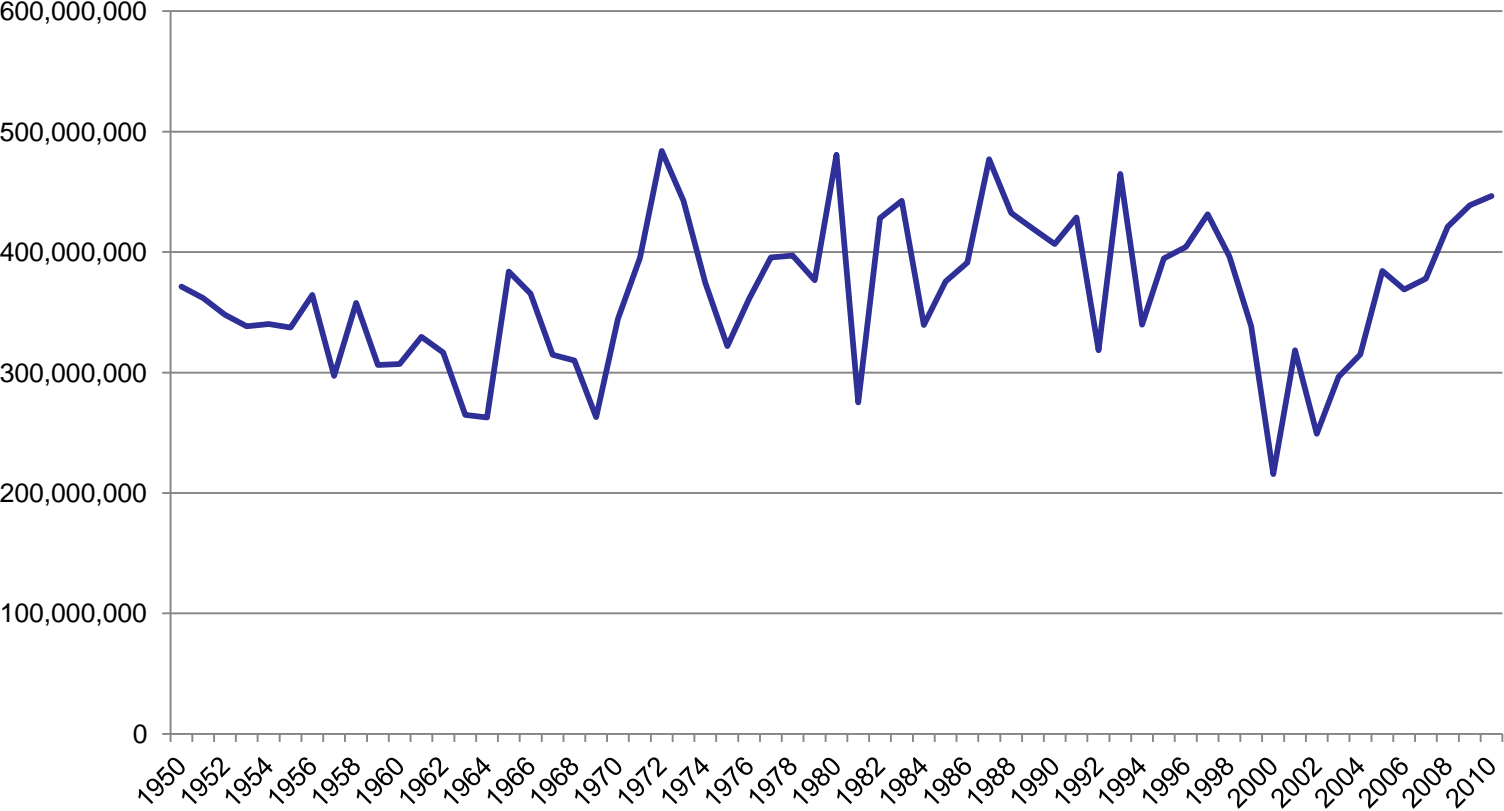
ECOLOGICAL



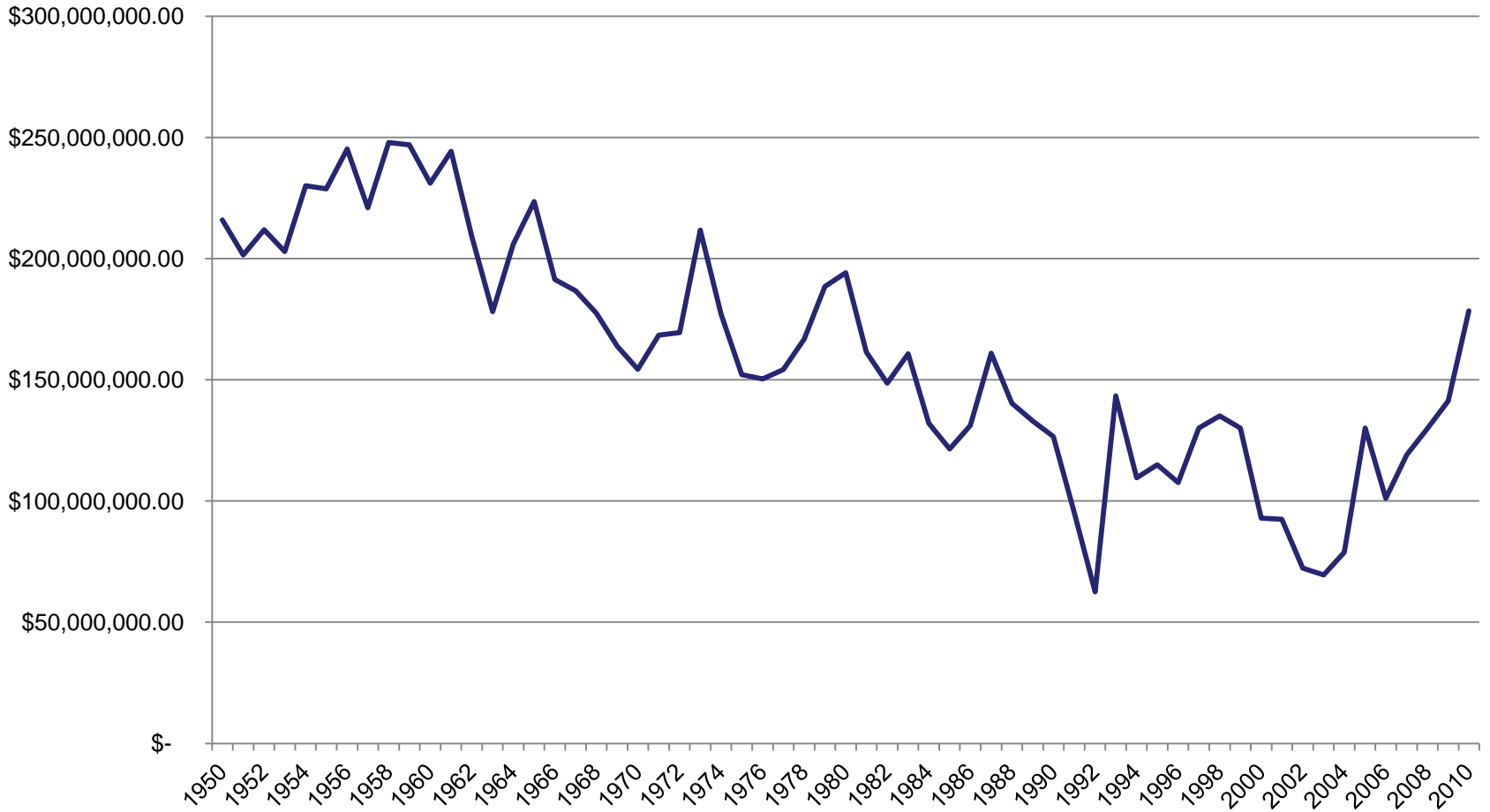
COMMERCIAL VALUE

- Has Declined Over Time
 - Substitutes
 - Globalization
 - Aquaculture
- What Is Future Role?

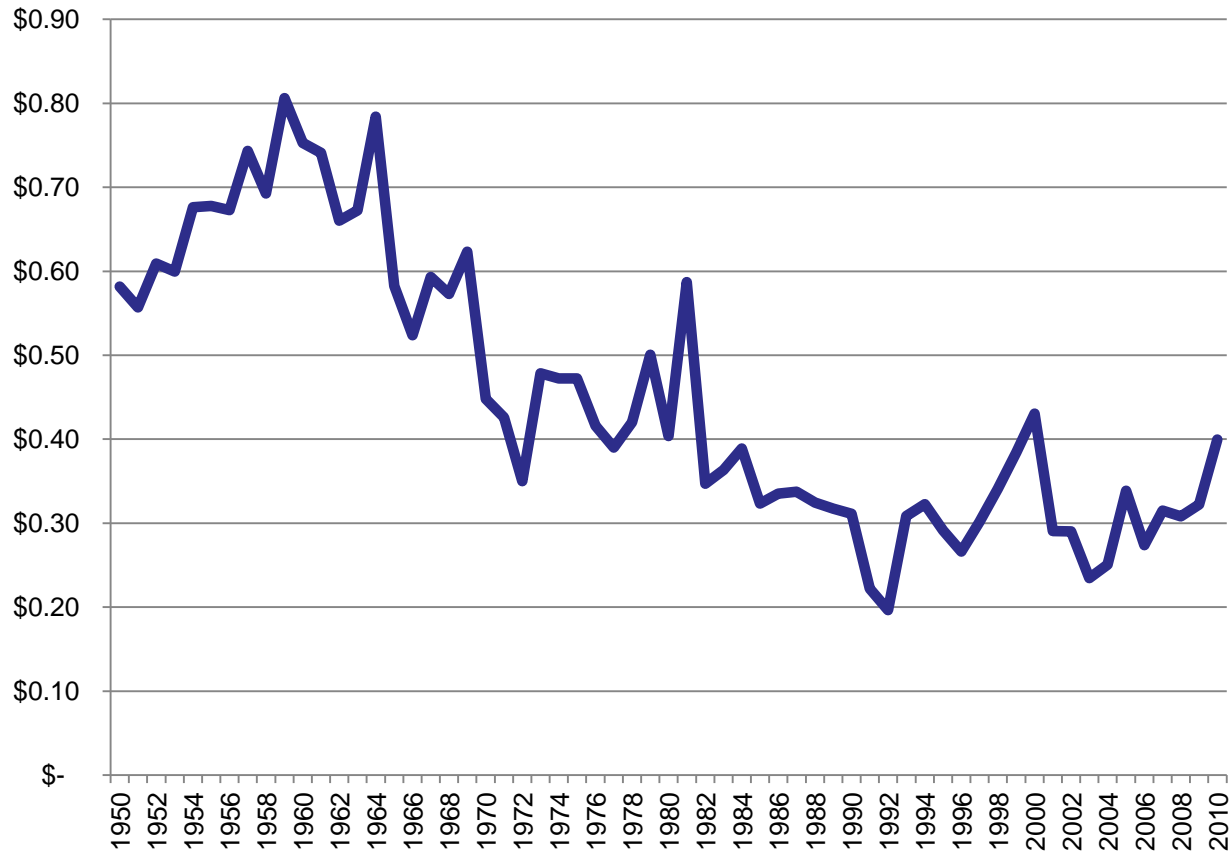
Chesapeake Seafood Landings

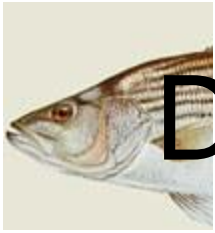


Real Value of CB Seafood

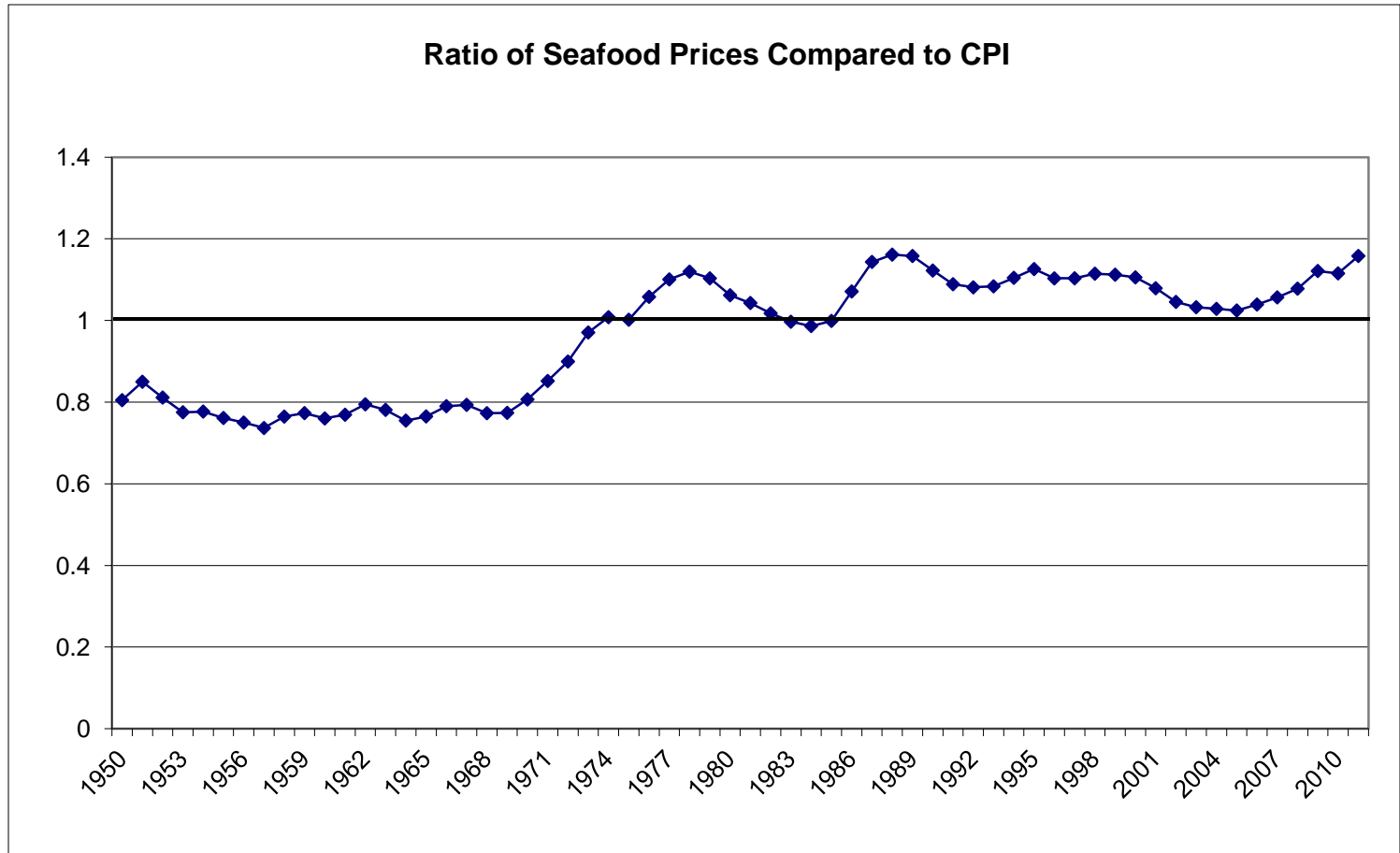


Chesapeake Prices (\$2010)



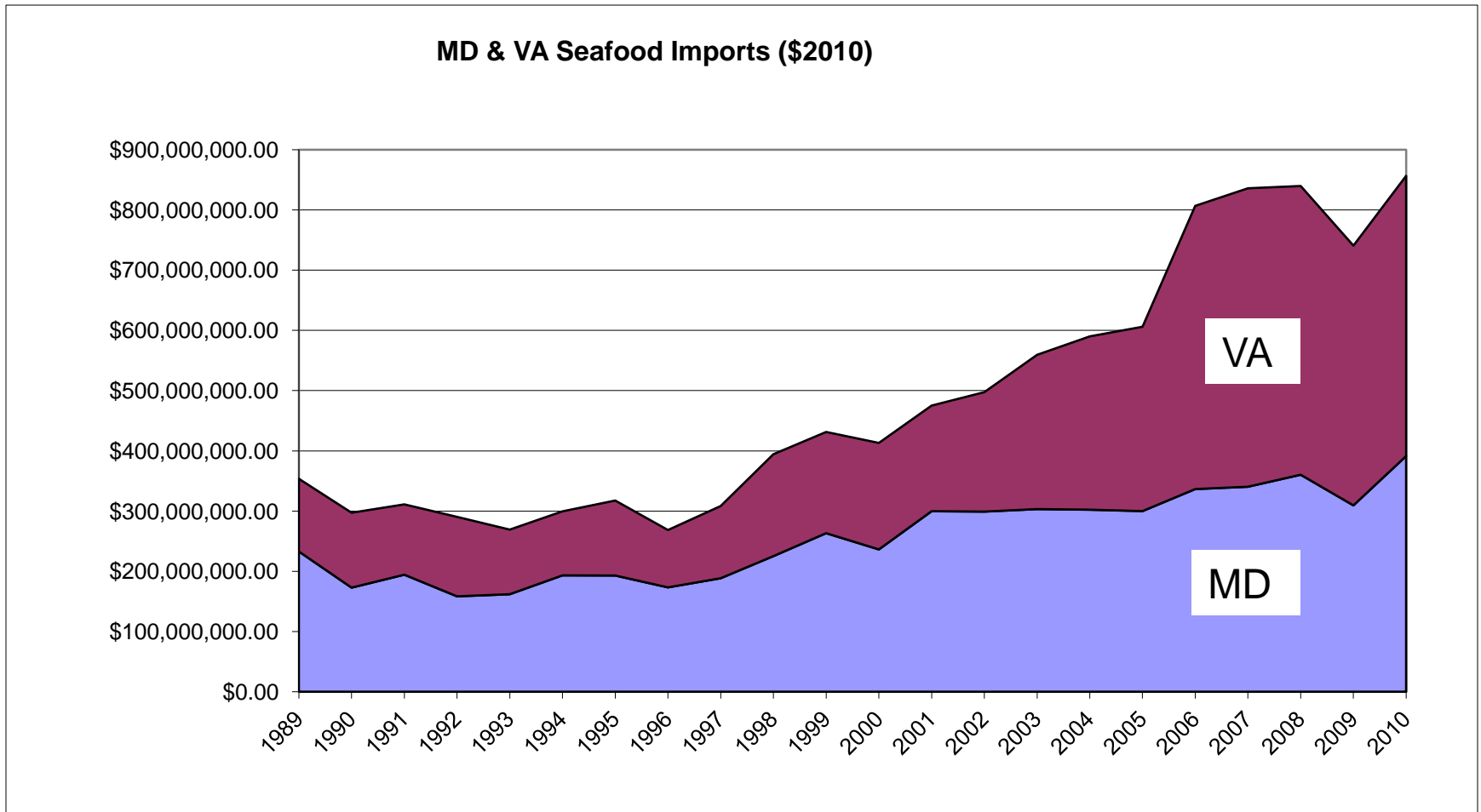


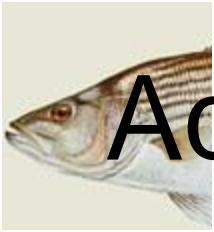
Demand for All Seafood Is Up



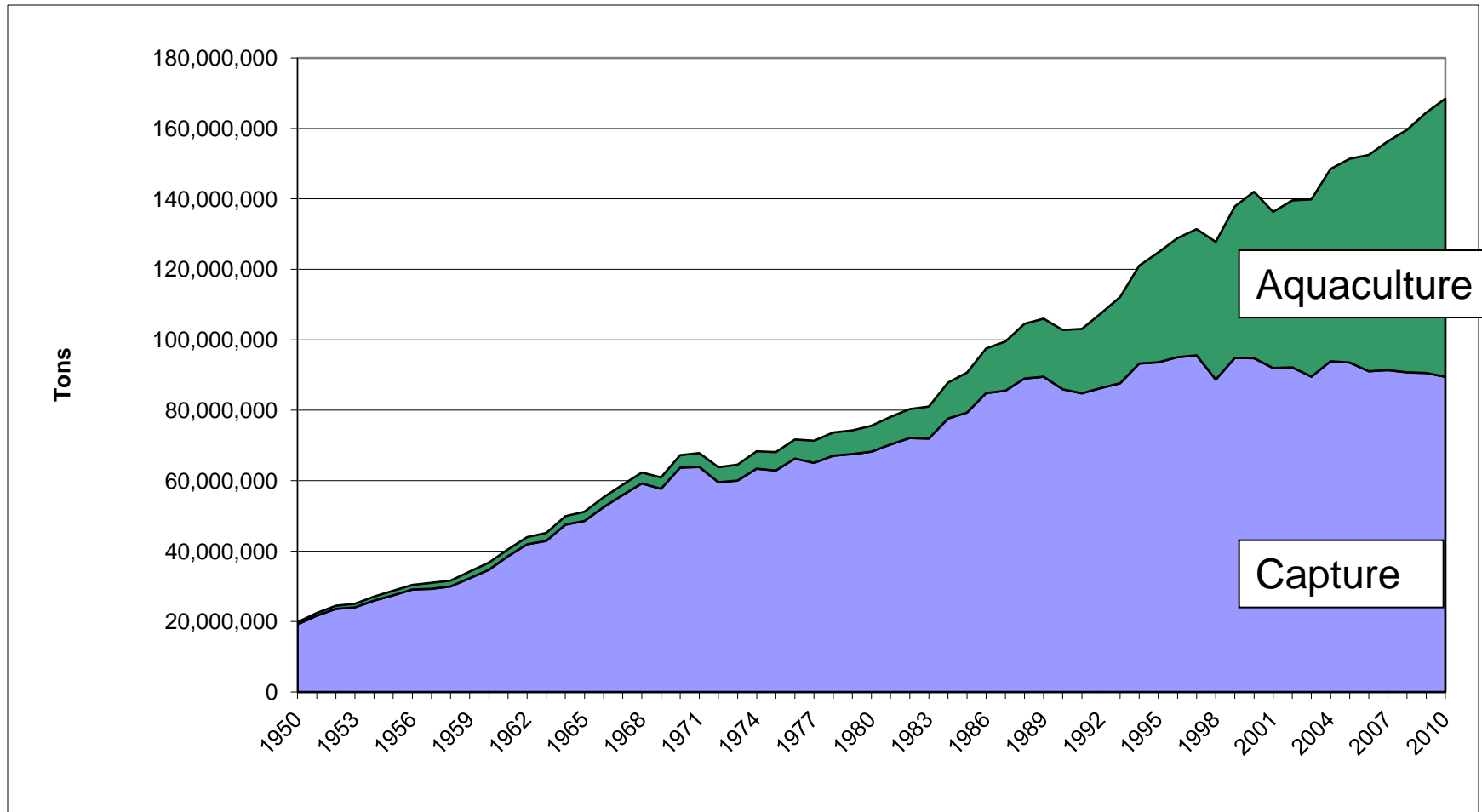


Imports Playing a Greater Role

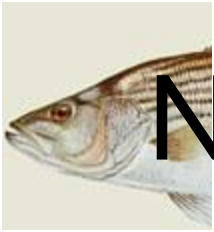




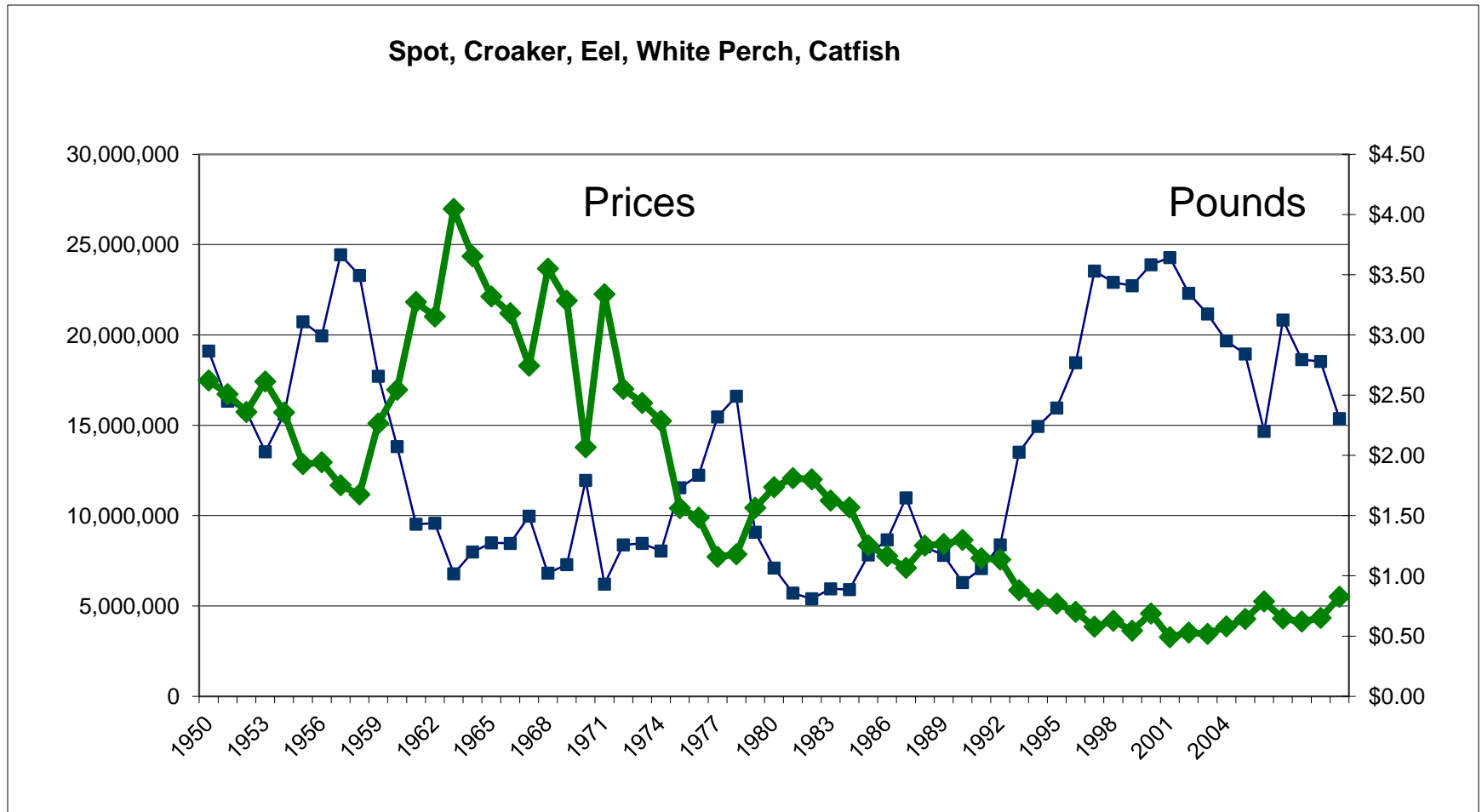
Aquaculture Meeting Demand

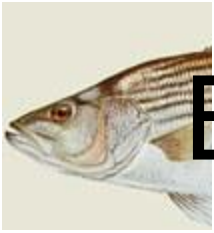


Source: FAO

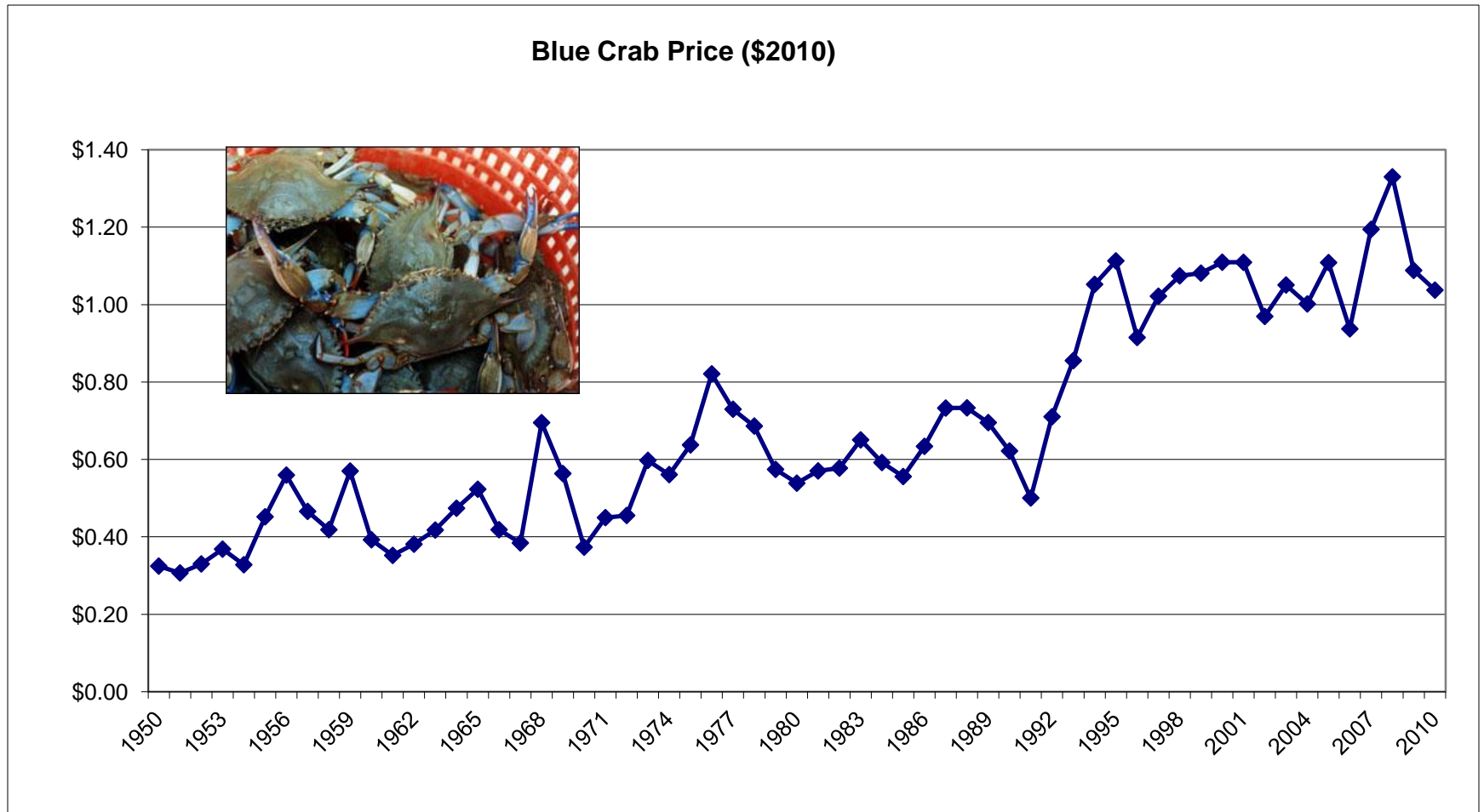


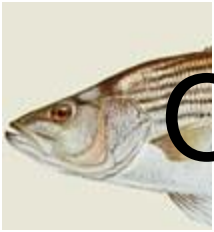
Not Chesapeake Production





Except for “Iconic” Species



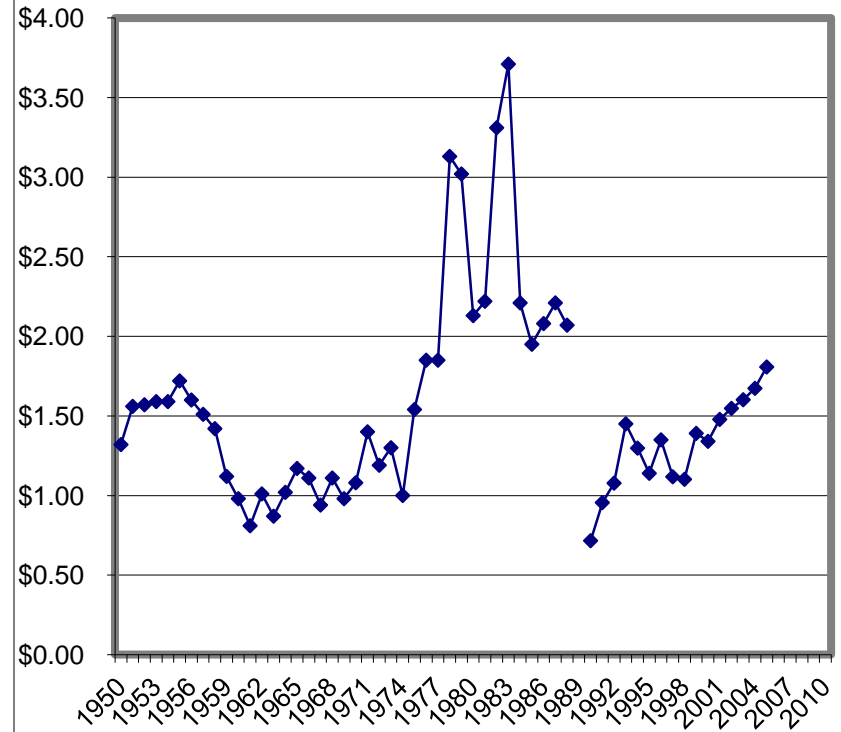


Or At Least Hold Their Own

Oyster Prices



Striped Bass Prices





Future of Commercial Fisheries in Chesapeake Bay

- Restored Ecosystem
 - More fish available (?), but of what value?
- Role of Sustainable Aquaculture
 - Shellfish
 - What about algae?
 - Conflicting use (spatial) may limit expansion
- Limited Specialized Market
 - Premium for Local Oysters, Crabs...
 - How persistent and pervasive will “locavore” movement be?

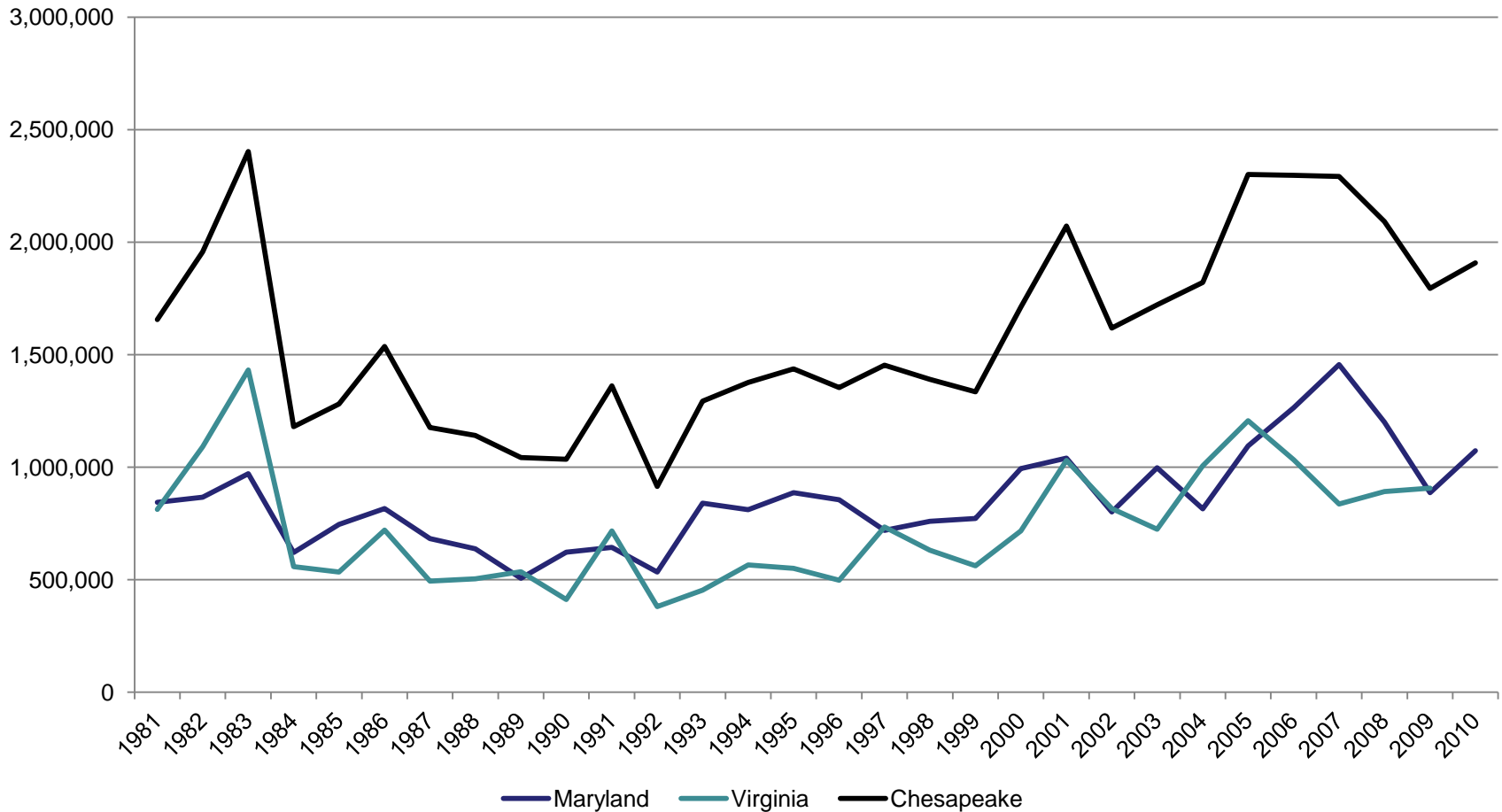


Recreational Value

- Has Increased in Recent Years
 - Wealthier society
 - Leisure time
- Limitations on Future Growth
 - Substitutes (again) compete for leisure time
 - Congestion
- Key Issue
 - Recreational vs. Commercial Allocation
 - Value of Catch vs. Keep



Number of Recreational Fishing Trips Has Been Increasing

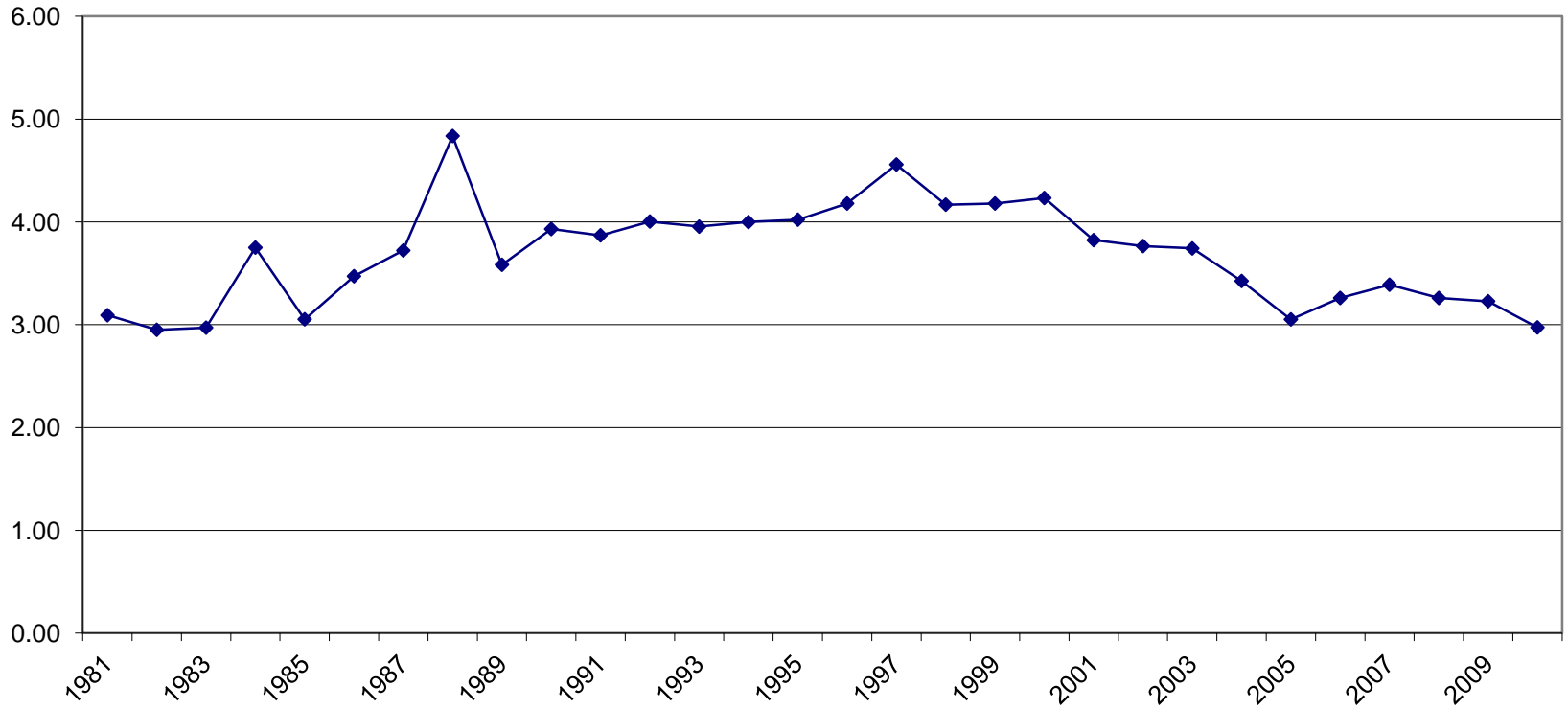


Source: NOAA Fisheries, Marine Recreational Fisheries Statistic Survey



Individual Anglers Taking Fewer Trips

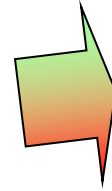
Trip Per Angler





Future of Recreational Fisheries In Chesapeake Bay

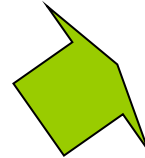
- Slowing Growth



- Value of Trips



- Expenditures



- Value of Keep

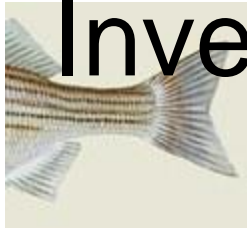




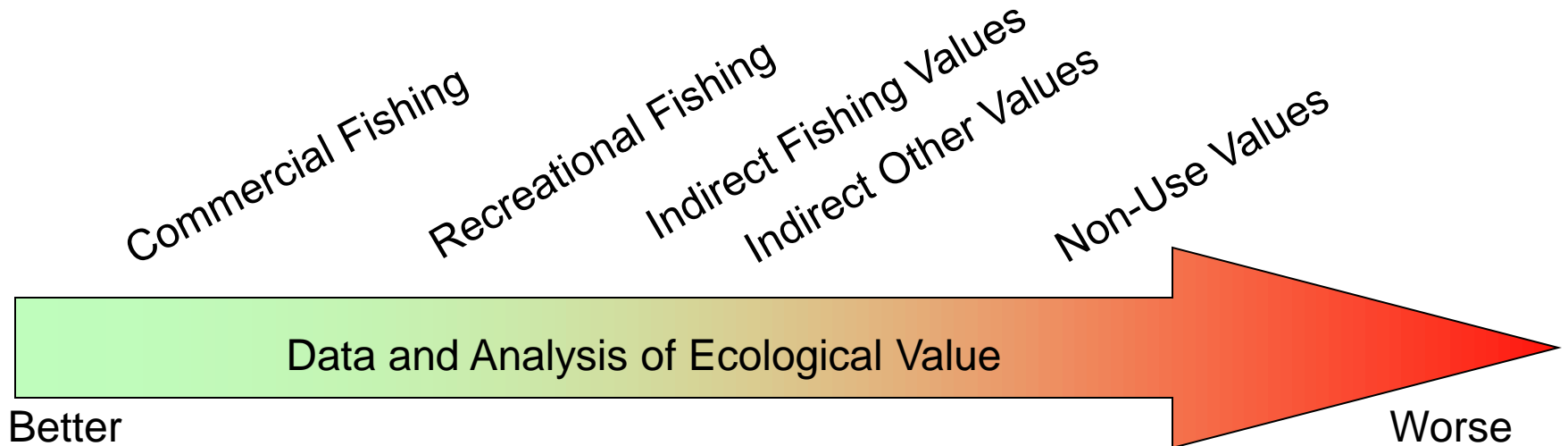
Ecological Value

Ecological Value = Direct Use Value + Indirect Use Value + Non Use Value

- Direct Use Value
 - Commercial Fishing (Market Value)
 - Recreational Fishing (Non-Market Value)
- Indirect Use Value
 - Linked to Fisheries with Direct Use Value
 - Prey, Habitat, Ecosystem Health
 - Linked to Non-Fisheries Bay Uses
 - Boating, Swimming, Quality of Waterfront Property
- Non-Use Value
 - Society's Willingness-To-Pay For Ecosystem Restoration Over and Above Direct and Indirect Use



Invest in Measuring Ecological Value



More For Every Use

- Sustainable Aquaculture
 - For seafood
 - For restoration
- Ecosystem Based Fisheries Management
 - Managing the Ecosystem For Fish
- Ecosystem Management
 - Managing Fish For the Ecosystem





Finding The Balance

- Allocation of fish between its role as seafood, recreation or contributor to ecological health
- Bay Restoration
 - For Seafood and Recreational Fishing
 - For Ecological Value of the Bay
 - Includes Seafood and Recreation
 - Other Direct Uses of the Bay
 - Indirect Use Values
 - Non Use Values