SETTING THE STAGE:
ECONOMICS OF SHARED ENVIRONMENTAL OCEAN RESOURCES IN THE MID-ATLANTIC

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Mid-Atlantic Regional Ocean Forum
OVERVIEW

- ECONOMIC PERSPECTIVE ON:
  - WHAT RESOURCES?
  - HOW ARE THEY VALUED?
  - REGIONAL IMPLICATIONS?
SHARED IMPACT DRIVERS

- POPULATION GROWTH
- RESOURCE UTILIZATION
- ENERGY DEVELOPMENT
- SEA-LEVEL RISE/HAZARDS – CLIMATE CHANGE
FISHERIES ISSUES

- **DIRECT HARVESTING**
  - **SHARED MIGRATORY STOCK**
    - Inshore – Territorial – EEZ
    - States
  - **HETEROGENOUS IMPACTS OF FISHING PRESSURE**
    - LIFE STAGES
    - FISHING GEAR

- **INDIRECT HARVESTING EFFECTS**
  - **FOOD WEB**
  - **HABITAT**
COMMERCIAL FISHERIES

- PRODUCER AND CONSUMER WELFARE CHANGES (WILLINGNESS-TO-PAY)
  - HEALTH OF RESOURCE
  - MANAGEMENT STRATEGIES
## COMMERCIAL FISH LANDINGS

<table>
<thead>
<tr>
<th></th>
<th>0-3 MILES</th>
<th>3-200 MILES</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>POUNDS</td>
<td>476 million</td>
<td>251 million</td>
<td>727 million</td>
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<tr>
<td>DOLLARS</td>
<td>$147 million</td>
<td>$254 million</td>
<td>$401 million</td>
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- Menhaden make up 65% of the landings by weight
- Sea Scallops make up 30% of the landed value
- Blue Crab make up 14% of the value
AQUACULTURE

- SHELLFISH
  - CLAMS
  - OYSTERS

- OFFSHORE CAGES?
RECREATIONAL FISHERIES

- PRODUCER WELFARE – CHARTER/PARTY BOATS

- RECREATIONAL FISHING VALUATION (NON-MARKET)
  - RANDOM UTILITY MODELS
  - STATED PREFERENCE SURVEYS
PARTY CHARTER BOAT TRIPS - 2007

<table>
<thead>
<tr>
<th></th>
<th>INSHORE</th>
<th>&lt; 3 MILES</th>
<th>&gt; 3 MILES</th>
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<tbody>
<tr>
<td>PARTY</td>
<td>199,133</td>
<td>171,969</td>
<td>254,982</td>
<td>12,869</td>
<td>638,952</td>
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<td>CHARTER</td>
<td>409,678</td>
<td>157,822</td>
<td>182,172</td>
<td>10,287</td>
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<tr>
<td>TOTAL</td>
<td>608,811</td>
<td>329,751</td>
<td>437,154</td>
<td>23,156</td>
<td>1,398,911</td>
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- What are the regional economic impacts from expenditures on 1.4 million trips?

- What are the net welfare benefits (profits to charters) and consumer surplus to fishermen (willingness-to-pay minus costs)?
PRIVATE BOAT FISHING TIPS - 2007

<table>
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<th>TRIPS</th>
<th>INSHORE</th>
<th>&lt; 3 MILES</th>
<th>&gt; 3 MILES</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIPS</td>
<td>8,879,416</td>
<td>2,924,144</td>
<td>747,538</td>
<td>12,551,097</td>
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</table>

- What are the regional economic impacts from expenditures on 12.5 million trips?

- What are the net welfare benefits of these non-market fishing trips?

- How do these welfare benefits change with change in the health of stocks and management actions?
ENDANGERED, THREATENED & CHARISMATIC SPECIES

- **NON-CONSUMPTIVE VALUE**
  - WHALE-WATCHING
  - BIRD WATCHING

- **EXISTENCE VALUE**
  - WILLINGNESS-TO-PAY FOR CHANGE IN THE STATUS
• U.S. RESIDENTS PARTICIPATING IN VISITS TO MID-ATLANTIC BEACHES
  
  13,045,555

• Number of Beach Days in Mid-Atlantic
  
  27,936,000

SOURCE: NATIONAL SURVEY ON RECREATION & THE ENVIRONMENT (2000); LEEWORTHY (2001)
WATERFRONTS

• TYPES
  ○ HOMES
  ○ BUSINESSES

• THREATS
  ○ QUALITY
    ▪ VIEW
    ▪ WATER QUALITY
  ○ SEA-LEVEL RISE
  ○ ACCESS
THE CHALLENGE

- RESOURCES ARE LINKED
  - PHYSICALLY
  - BIOLOGICALLY

- HUMAN LINK
  - MARKET BOUNDARIES ARE GLOBAL
QUESTIONS OR COMMENTS?