The Recreational Fishing Benefits of Block Island

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Veritas Economics

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Spokane, Washington

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The Wind Farm
Biological Data - Scientific

- Otter trawl tow
- 20-minute tows once monthly
- Between turbines
- Three study blocks
- Slight increase in black sea bass
High Relief Seabed to Surface Structure
Structure Attracts Marine Life
Recreational Data - Anecdotal

- Increase in Pressure
  - Was 10-20 boats
  - Now 75-100
- Reports of increased abundance
- Reports of species not typically observed (cod, mahi)
- Visual reports from divers
Virtual Analysis Models

- Virtual Fish Population A
  - Calculated fishing death amounts
  - Estimated natural mortality
  - Specified population dynamic model
  - Used to model population

- Virtual Catch and Effort Model
  - Specified fishing preference function
  - Specified costs
  - Catch and effort from origin sites over time
  - Used to model catch and effort at turbines
Virtual Behavior Analysis Model

- Boat cost functions
- Destination site locations
- Fishing preference function

Origin catch and effort
Destination catch and effort
Marine Recreational Information Program (MRIP) (MRIP) Data

- Marine Recreational Information Program (MRIP)
  - Identifies boat ramps, marinas, and other sites where anglers are interviewed
  - Collects recreational saltwater fishing catch and effort data from anglers
  - Produces state level catch and effort estimates

- No fine scale catch and effort estimates
Marine Recreational Information Program

- Fishing Effort Survey (FES)
- Access Point Angler Intercept Survey (APAIS)
- For-Hire Survey (FHS)
- Large Pelagics Survey (LPS)
  - Large Pelagics Intercept Survey (LPIS)
  - Large Pelagics Telephone Survey (LPTS)
  - Large Pelagics Biological Survey (LPBS)
FES Survey

- Address-based sampling to collect effort data from households in coastal states.
- Address samples are augmented with fishing license information to allow for targeted sampling of known angler households.
- The FES is mailed out once week before the end of each two-month wave.
- Data are collected for a period of 13 weeks.
- FES data are used to estimate the number of private boat and shore fishing trips taken by anglers residing in coastal states.
Access Point Angler Intercept Survey

- APAIS data are used to estimate mean catch per angler trip, as well as coverage adjustments for the FES and FHS
- The survey is conducted at public marine fishing access sites where anglers are intercepted and interviewed at the completion of their trips
  - Boat ramps, piers, beaches, marinas
- The data collected include
  - Individual angler trip information about catch (species identification, quantity of each species caught, fish length and weight)
  - Other trip characteristics, including mode of fishing (shore, private boat, etc.), trip duration, and area fished
<table>
<thead>
<tr>
<th>SITE_NAME</th>
<th>Freq.</th>
<th>Percent</th>
<th>Cum.</th>
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MRIP data used to identify catch and effort from potential departure points.
Distances between launches and harbors used to identify origins within traveling distance of windmills.
Conclusions

- Existing data not made for evaluating destination specific catch and effort
- MRIP in a calibrated behavior model shows promise
  - Catch rate increases from nearby origins
  - Can’t tell yet with trips
- Need information on open water fishing preferences
- Add new questions to APAIS
  - Boat size/type
  - Visit windfarm
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