Fleet Diversity, Allocation, and Excessive Shares in the Northeast Multispecies Fishery: Draft White Paper

New England Fishery Management Council
September 30, 2010
Ensure that holders don’t acquire “an excessive share” of privileges by:

- Establishing a maximum share (expressed as a percentage) AND
- Other measures necessary to “prevent an inequitable concentration.”
Fleet Consolidation

- Can happen naturally or directed to achieve a desired outcome

- Trade-off between over-consolidation and fleet efficiency/profitability

- What constitutes an “acceptable” fleet size?
  - Maintain some character (e.g. geographic diversity) of current fleet
  - Create more crew employment, economic benefit to communities

- Should fleet characteristics be considered?
Overview

June 23, 2010 Council motion:

1) Maintain inshore and offshore fleets;

2) To the extent possible, maintain a diverse groundfish fishery, including different gear types, vessel sizes, geographic locations, and levels of participation;

3) Maintain a balance in the geographic distribution of landings to protect fishing communities and the infrastructure they provide and

4) Prohibit any person from acquiring excessive access to the resource, through in order to prevent extraction of disproportionate economic rents from other permits holders.
Paper Outline

- Introduction
- Groundfish Fleet Diversity
  - Definitions of Fleet Diversity
  - Baselines for the Northeast Groundfish Fishery
- Design Considerations for Accumulation Limits
  - Types of Accumulation Limits
    - Ownership (Control) Limits
    - Vessel (Usage Limits)
    - Sector Limits
  - Other Considerations for Accumulation Limits
- Summary
- Accumulation Limits in Other Fisheries
Definitions of Fleet Diversity

- Very difficult to find actual definitions in other fisheries
- Gear type, geographic area, and boat size were considered in some other management decisions
- Other types of diversity could be considered, including fishing strategies and differences in output, or product type and quality
- “Diversity” was generally not predefined, and strict definitions were found to conflict with adaptive management strategies
Baselines: How can we describe changes in the fishery?

- Six characteristics:
  - Homeport state
  - Landing port
  - Gear
  - Vessel size
  - Area fished
  - Owners (work pending)

- Two general time periods:
  - Pre-limited entry (1982 – 1993)
  - Post limited entry (1994 – 2008)

- Data issues: small ports/vessels may be under-surveyed before 1994
Metrics

- Data summaries: landings, number of permits, areas fished, etc.
- “Species richness”: combinations of landing port/gear/vessel size
- Diversity index: based on similar studies in ecology and economics
"Richness"
(maximum=460)

Number of "Species"

Year (Calendar or fishing)

82 85 86 87 90 92 2001 2002 2003 2004 2005 2006 2007 2008
Diversity Index

- Builds on Simpson’s Diversity Index and Hirschman-Herfindahl Index
- Reduces changes in concentration to one number
- Increase means more concentration

\[
SDI = \sum_{i=1}^{N} S^2
\]
SDI Groundfish Landings by Length Group

Year

Index

1982
1985
1986
1987
1990
1992
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40

SDI
Length Group

<table>
<thead>
<tr>
<th>Over 75 feet</th>
<th>50 to less than 75 feet</th>
<th>30 to less than 50 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Graph showing Length Group](image-url)
Note: Unknown gear increased in 2004 with the implementation of electronic dealer reporting.
Baselines: Summary

- Data exists to characterize how the distribution of groundfish landings has changed over time
- Still need to summarize ownership
- What else would the Council like to see?
Considerations for Accumulation Limits

- Two reasons for use – to prevent market control or achieve management goals
- Three types of limits: by ownership, usage, or sector
- Ownership issues may be separate from “diversity”
- Different caps are appropriate for achieving different management goals
- Other tools to consider: community set-asides, owner-onboard requirements, etc.
Types of Accumulation Limits

- **Vessel Usage Limits**
  - Aimed at keeping a minimum number of vessels, maintaining some of character and geography of today’s fleet.
  - Questions on fleet consolidation would need to be addressed.

- **Control Limits**
  - Meant to ensure that no person captures an unreasonable share of a public resource.
  - Buffer against anticompetitive effect of concentrated ownership.

- **Sector Limit**
Other Considerations: Species vs. Aggregate Limits

- **Species-specific**
  - Substitutes for a stock, regional distinctiveness, and underutilization would generally drive higher limits

- **Aggregate Limit**
  - Could counter effect of relatively high species-specific limits
  - Assume entities divest their least valuable species first to stay under the aggregate limit
  - Weighted formula automatic or changed by Council action?
Other Considerations: Control Date

- Sets a date after which acquisition of permits will not count toward quota share holdings on date cap is set

- Puts industry on notice

- This motion failed at April Council: “to direct the Groundfish Committee to provide recommendations to the Council at its June meeting on establishing an accumulation limit control date.”
<table>
<thead>
<tr>
<th>Problem category</th>
<th>Management objective:</th>
<th>Appropriate measures may include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rationalization</td>
<td>Reduce excess capacity</td>
<td>Use allocation criteria, not accumulation limits</td>
</tr>
<tr>
<td></td>
<td>Allow market to determine participation</td>
<td>Absence of accumulation caps</td>
</tr>
<tr>
<td>Diversity</td>
<td>Comply with NS 4</td>
<td>Vague; Any limits could be used</td>
</tr>
<tr>
<td></td>
<td>Provide opportunity for entry</td>
<td>Control limits; New entrant set-aside</td>
</tr>
<tr>
<td></td>
<td>Ensure geographic diversity of fleet</td>
<td>Control limits; Usage limits; Sector limits with area-based membership rules</td>
</tr>
<tr>
<td></td>
<td>Protect rural communities</td>
<td>Community development set-asides</td>
</tr>
<tr>
<td></td>
<td>Preserve historic access</td>
<td>Vague; Usage limits; Size-horsepower restrictions</td>
</tr>
<tr>
<td></td>
<td>Protect shoreside infrastructure</td>
<td>Measures to promote geographic diversity; Processor/dealer quotas</td>
</tr>
<tr>
<td>Ownership</td>
<td>Ensure access to reasonable number of participants</td>
<td>Control limits; Owner-onboard requirements; Usage limits</td>
</tr>
<tr>
<td></td>
<td>Prevent windfall to small number of individuals at expense of others</td>
<td>Sector limits; Control limits</td>
</tr>
<tr>
<td></td>
<td>Prevent market control and price-fixing by small number of owners</td>
<td>N/A: not a concern in the multispecies fleet</td>
</tr>
</tbody>
</table>
Accumulation Limits in Other Fisheries

- Very difficult to gather data, especially on the development and objectives of accumulation limits

- Most catch share fisheries do have individual limits

- Wide range of limits in other fisheries, from none to 1% to 49%.

- Other tools are often used in conjunction with accumulation caps to limit control of quota
Conclusions / Next Steps

- MSA requires caps for LAPPs in the interest of fairness
- Fleet size and attribute goals should be considered when choosing type of cap
- Balance efficiency with appropriate amount of consolidation
- Different types of caps affect outcomes
Questions for Consideration:

1) Is any additional baseline information needed?

2) What types of analysis can be performed to inform the Council’s consideration of accumulation limits?
QUESTIONS?