



NOAA
FISHERIES

Office of
Science and
Technology

Northeast Region Allocations

Overview of NER Allocations and Scup
Allocation Case Study

September 23, 2014

Overview

- Review of NER allocations that may be subject to review
 - Commercial only
 - Commercial and Recreational
- Scup Allocation Case Study
 - SSC Panel Review

Allocations in the NER

- New England FMC
 - Atlantic Sea Scallops – General Category IFQ
 - Commercial only
 - Northeast Multispecies
 - Commercial only for 8 species (14 stocks plus Georges Bank cod)
 - Commercial/Recreational for Gulf of Maine Cod
 - Criterion established to trigger consideration of explicit recreational allocation

Allocations in NER (continued)

- Mid-Atlantic FMC
 - Golden Tilefish IFQ
 - Commercial only
 - Surfclam/Ocean quahog IFQ
 - Commercial only
 - Bluefish
 - Commercial/Recreational
 - Provision for in-season transfer of TAC
 - Summer Flounder/Black Sea Bass/Scup
 - Commercial/Recreational
 - Summer flounder state allocations

Scup Allocation Case Study

- Background
 - Scup rebuilding plan implemented in 1999
 - Lower overall TAC
 - Restrictive recreational measures
 - Persistent recreational overages
 - Commercial fishery underage
 - 2009 Stock assessment scup resource rebuilt
 - MAFMC consider reallocation
 - Commercial/Recreational
 - Seasonal commercial allocation
 - Contracted with GCG to develop analytical tool
 - Subsequent change in ACL was so large that neither commercial nor recreational allocations were binding
 - Convened expert panel review of the tool

Scup Allocation Case Study

- Allocation tool consisted of 4 modules
 - Recreational marginal benefit
 - Commercial fishery producer surplus
 - Consumer surplus (compensating variation)
 - Party/Charter producer surplus
- Conceptual framework accepted by review panel
 - Note that recreational module had been previously reviewed so TOR omitted that module
- Concerns with the empirical application

Commercial Producer Surplus Module

- Estimated cost function
- Derived demand for quota following Squires and Kirkley, (1996); Carter et al (2008)
- Simulated marginal value of scup quota up to the total quota by adding additional trips (days-at-sea)
 - Cost data from observer program; really accounting net return and not a true measure of quasi-rent

Commercial Producer Surplus

- Recommendations
 - Treatment of costs really a means for imputing trip costs and not a well-behaved cost function
 - Substitute vessel characteristics as fixed factor in revenue function
 - Trips used in the simulation need to be consistent with the data used to estimate marginal demand for quota
 - Simulation forced all quota to be harvested, yet quota is not binding, raises issue about the model since MB should be zero
 - Model provides compensated supply and marginal value for all species groups. Means that change in scup quota changes marginal value of species groups; likewise for a change in quota for other species.

Consumer Surplus Module

- Used Synthetic Inverse Demand
 - Recommendations
 - Need to properly identify the market structure for species and region of interest
 - Need to identify substitute species in the same local/regional market of species of interest
 - Similarly imports need to be associated with region

Party/Charter Producer Surplus

- Used NMFS survey data to estimate net return
 - Recommendations
 - Cost and earnings data not a measure of producer surplus
 - Need to account for opportunity cost of owner and capital
 - Need to consider whether mean is best estimator given probable skewed distributions
 - Need to examine representativeness of sample
 - If not simple random sample the estimators need to account for the sampling design
 - Party/charter trips catch many species so entire producer surplus cannot be attributed solely to scup

Summary Recommendations

- Need to distinguish between accounting profit/quasi-rent and producer surplus
- Allocation change in scup meant the quotas were not binding and allocation tool is not informative
- Need to consider valid range over which empirical estimates may be considered reliable
- Surplus estimates from empirical data are conditional on the data generating process, valuing changes in quota allocations are not independent of existing regulation
 - For commercial technical inefficiencies due to regulation
 - For recreational, bag, season, size limit