

SSC Economic Work Group

Review of RSA Workshop 2 (Funding)
& Preliminary Plan for Workshop 3
(Enforcement)

Wednesday, September 8, 2021

Credit where credit is due...

- Dr. Jorge Holzer – Presentation Part 2, subgroup lead, simulation development
- Dr. Mark Holliday – Presentation Part 1, overview of bilateral agreements
- Dr. Olaf Jensen – Pros and cons of compensation fishing

FIRST PART OF THE PRESENTATION

(Mark Setting the Stage)

Workshop 2 Goals:

How the program will be administered

Discuss funding mechanisms

Tie projects to mgt./assessment needs

SSC Econ Workgroup Task:

The original RSA auction approach was “complex” – evaluate it and alternatives that may be more efficient, and generate more money for research.

WHAT DO WE WANT TO ACCOMPLISH IN PART ONE OF THE PRESENTATION?

1. Highlight that the objectives set for the RSA program will determine which is the best approach for the Council
2. Gather information and discuss possible program objectives that stakeholders consider important
3. Identify the two main feasible approaches for the design of the RSA program

PRIMARY Objective: Maximize revenues to fund research projects

ADDITIONAL/SECONDARY objectives that may be important

- i. Maximize revenues from RSA quota
- ii. Ensure fairness in access to RSA quota
- iii. Foster collaboration between scientific and fishing communities
- iv. Ensure compliance with the reporting and use of the RSA quota

Disclaimer: Since there are no specific Council goals or objectives yet for a new RSA program, this SSC input is intended to inform a range of likely options; SSC contribution to or review of a specific Council option remains at the Council's discretion.

Trigger question:

Based on the presentation you just saw, are there “additional” objectives besides revenue generation that are important to consider in a new RSA program/funding mechanism?

Some discussion on:

- “maximizing benefits” per NS1
- equity in the context of who historically bid in RSA auction
- details of original RSA auctions

Final objectives will be identified in Workshop 4 (November 16)

Two main alternative approaches for implementing the RSA program given the identified objectives:

1. Bilateral arrangements between research PIs and industry members
2. Competitive markets (different auction formats)

COMPETITIVE MARKETS (AUCTIONS)

HOW DO AUCTIONS ADDRESS EACH SECONDARY/ADDITIONAL OBJECTIVE?

- i. Maximize revenues from RSA quota
- ii. Ensure fairness in access to RSA quota
- iii. Foster collaboration between scientific and fishing communities
- iv. Ensure compliance with the reporting and use of the RSA quota

COMPETITIVE MARKETS (AUCTIONS)

HOW DO AUCTIONS ADDRESS EACH SECONDARY OBJECTIVE?

i. Maximize revenues from RSA quota:

- ✓ properly designed & implemented markets will maximize revenue (i.e., through competition)
- ii. Ensure fairness in access to RSA quota
- iii. Foster collaboration between scientific and fishing communities
- iv. Ensure compliance with the reporting and use of the RSA quota

COMPETITIVE MARKETS (AUCTIONS)

HOW DO AUCTIONS ADDRESS EACH SECONDARY OBJECTIVE?

- i. Maximize revenues from RSA quota
- ii. Ensure fairness in access to RSA quota:**
 - depends on the definition of fairness: if understood as equal access to the quota, competitive markets will not achieve this objective. If understood as access based on willingness to pay, they will achieve it.
- iii. Foster collaboration between scientific and fishing communities
- iv. Ensure compliance with the reporting and use of the RSA quota

COMPETITIVE MARKETS (AUCTIONS)

HOW DO AUCTIONS ADDRESS EACH SECONDARY OBJECTIVE?

- i. Maximize revenues from RSA quota
- ii. Ensure fairness in access to RSA quota
- iii. Foster collaboration between scientific and fishing communities:**
 - markets for quota may not always achieve this objective as they decouple research from the harvest of the RSA quota
- iv. Ensure compliance with the reporting and use of the RSA quota

COMPETITIVE MARKETS (AUCTIONS)

HOW DO AUCTIONS ADDRESS EACH SECONDARY OBJECTIVE?

- i. Maximize revenues from RSA quota
- ii. Ensure fairness in access to RSA quota
- iii. Foster collaboration between scientific and fishing communities
- iv. Ensure compliance with the reporting and use of the RSA quota:**
 - allocating the quota to many vessels and then allowing leasing, makes enforcement challenging (and expensive)

SECOND PART OF THE PRESENTATION
(Jorge's Scenario Analysis)

WHAT DO WE WANT TO ACCOMPLISH IN THIS PART OF THE PRESENTATION?

1. Highlight that even if the primary objective of the RSA program is to maximize revenue, auction format an implementation matter
2. Illustrate the point above using scenario analysis with different assumptions on auction design & implementation
3. Discuss ancillary benefits for management of using competitive markets (auctions) to allocate RSA quota
4. Get feedback from the RSC on any other feasible simulation scenarios that may be of interest and other information of value

SCENARIO ANALYSIS: REVENUE COMPARISONS

SCENARIO ANALYSIS: PRELIMINARIES

SIMULATION EXERCISES:

- Little granular data available on auctions (i.e., individual bids or winner bids per auction) from former RSA Program
 - ✓ *Required a change in the initially planned analyses*
- Simulations use a calibrated model based on the summary data provided by the National Fisheries Institute (NFI)
 - ✓ *NFI data used in the model include average winning bid (\$) by year and species; average participants by year and species*
- Simulated scenarios are hypothetical and illustrate relative performance on revenue generation (rather than actual \$ amounts raised)
- Simulations only explore a few plausible scenarios (i.e., not an exhaustive list)
- Each scenario is replicated 1,000 times

SCENARIO ANALYSIS

HYPOTHETICAL SCENARIOS FOR REVENUE COMPARISON:

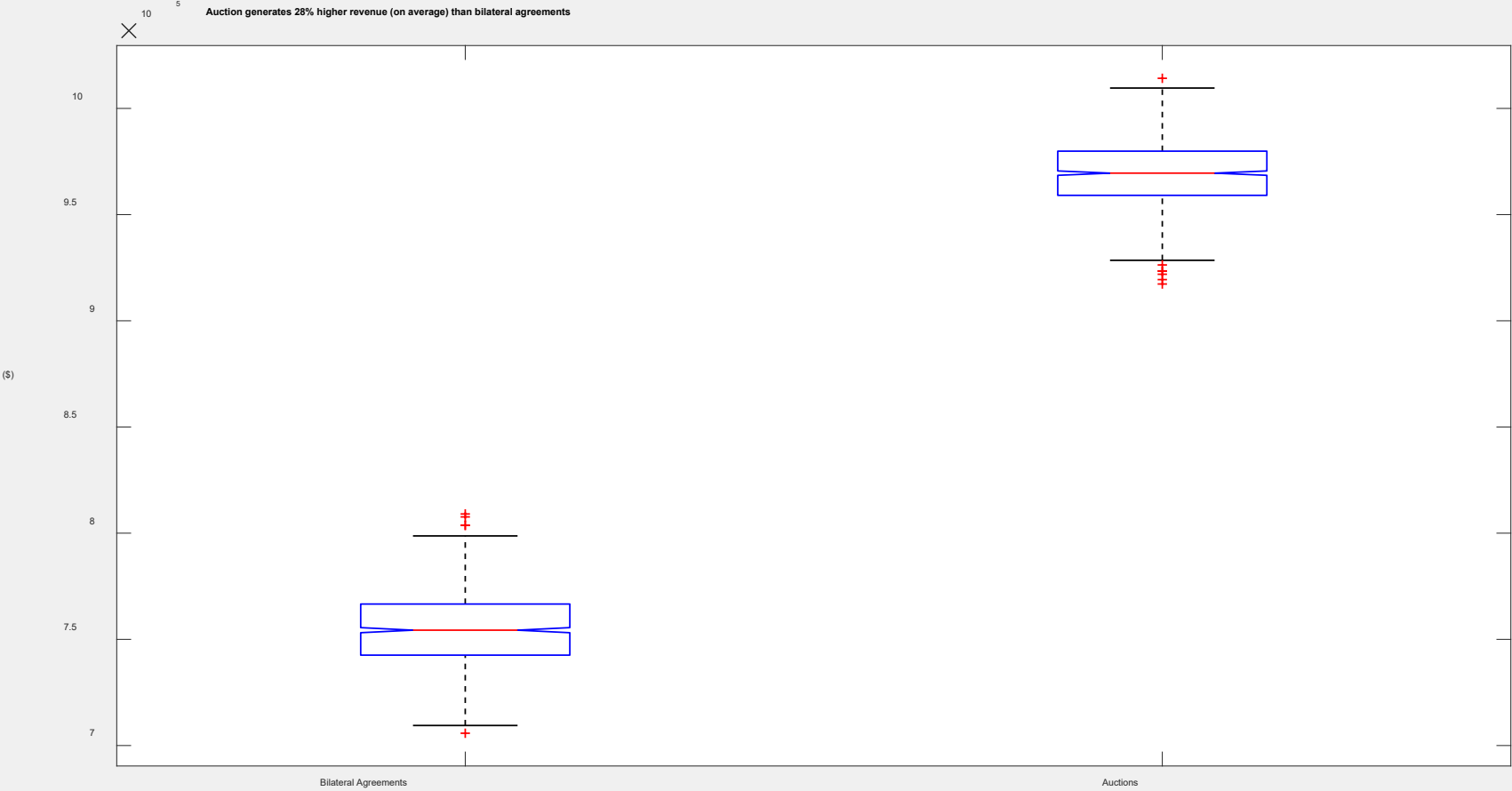
- Baseline case (benchmark)
- Separate auctions for recreational and commercial bidders
- High administrative costs & entry cost
- Possibility of collusion in the auction

SCENARIO ANALYSIS

BASELINE CASE ASSUMPTIONS:

- English auctions (species-lot level)
- 150 bidders, 40 summer flounder quota lots of 10,000 lb. each
- Common auctions for recreational and commercial bidders
- Reserve price (\$1.5/lb.)
- Low entry cost (\$100/vessel) & admin fee (4% of auction proceeds)
- Bidding data & quota awards available to MAFMC

Baseline Case

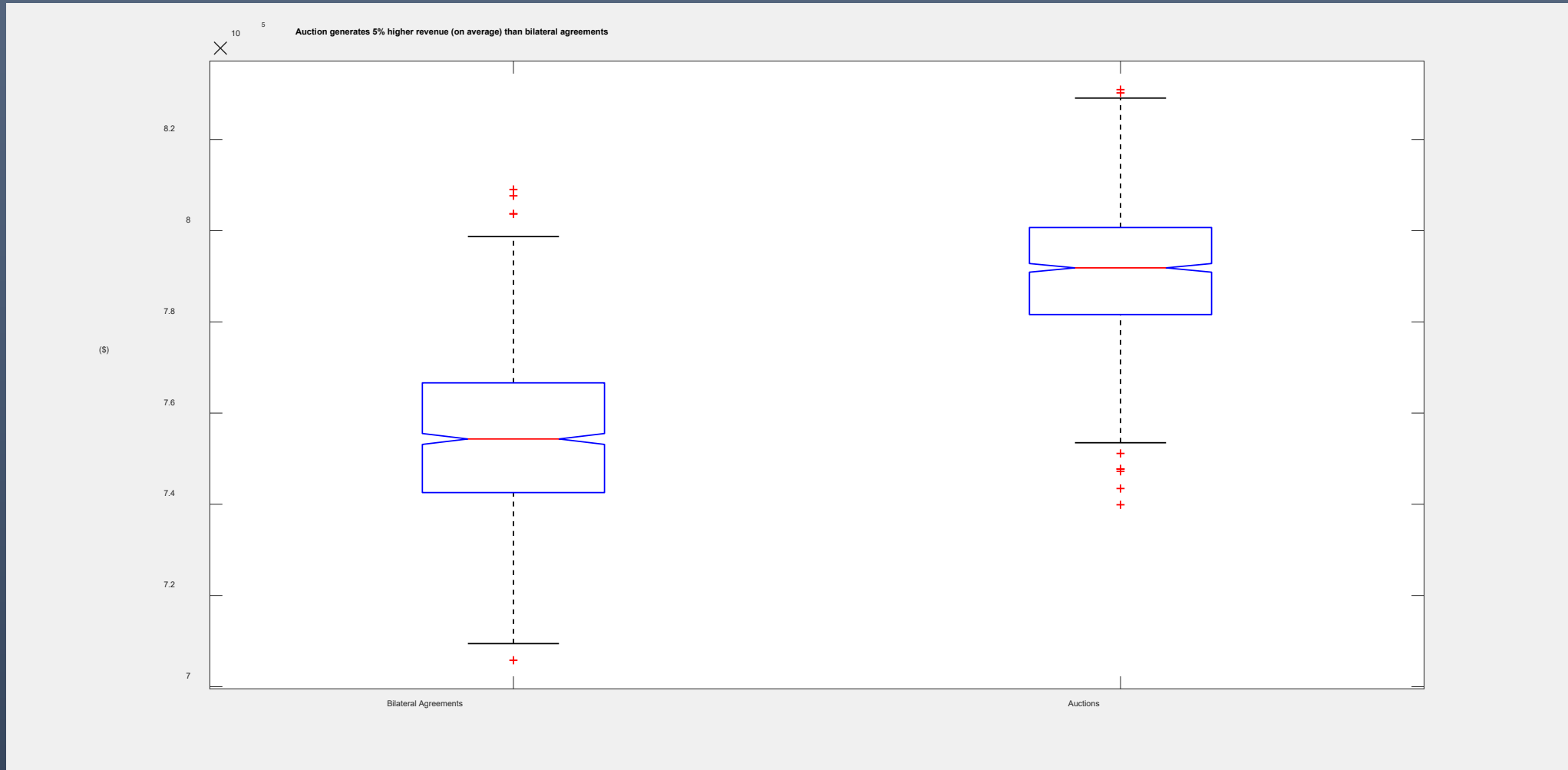


SCENARIO ANALYSIS

SCENARIO 4 ASSUMPTIONS:

- English auctions (species-lot level)
- 40 summer flounder quota lots of 10,000 lb. each
- Separate auctions for recreational and commercial bidders
- 60 bidders in rec. auction & 90 bidders in comm. auction
- Reserve price (\$1.5/lb.)
- High entry cost (\$500/vessel) & admin fee (12.5% of auction proceeds)
- Bidding data & quota awards available to MAFMC

Scenario 4: Sector-Specific Auctions with High Admin & Entry Costs



SCENARIO ANALYSIS: SUMMARY

SCENARIO	COMPARISON (EXCESS REVENUE IN THE AUCTION)
BASELINE CASE	28%
SEPARATE COM. & REC. RSA AUCTIONS	15%
AUCTION WITH HIGH ADMIN. AND ENTRY COSTS	17%
AUCTION WITH COLLUSION	20%
SEPARATE COM. & REC. AUCTIONS WITH HIGH ADMIN. AND ENTRY COSTS	5%

- The performance of the preferred mechanism will critically depend on design & implementation!

ANCILLARY BENEFITS OF MARKETS (AUCTIONS)

ANCILLARY BENEFITS

- Beyond revenue generation, competitive markets (auctions) for RSA quota may generate additional benefits and information valuable for management

ANCILLARY BENEFITS (AUCTIONS)

INFORMATION ON QUOTA DEMAND FROM REC. AND COMMERCIAL SECTOR

INFORMATION ON SPECIES' HARVEST COMPLEMENTARITIES

WILLINGNESS TO PAY FOR ALTERNATIVE REGULATORY WAIVERS

HIGHER LIKELIHOOD RSA QUOTA GETS USED EACH SEASON

INCREASED EFFICIENCY

Preliminary Plan for Workshop 3

Enforcement:

- Subgroup Lead: Dr. Lee Anderson
- Lead: Office of Law Enforcement, GARFO
 - Economic WG will play a supporting role
 - E.g. James Fletcher Proposal
 - Proposal to use National United Fisherman's Association to gather RSA revenue
 - Only for fisheries with trip-level landings caps
 - Creates incentive similar to that exploited in original RSA program

Questions?

The performance of the preferred mechanism will depend on design & implementation

OBJECTIVE (REVENUE MAXIMIZATION)	BILATERAL AGREEMENTS	MARKETS (AUCTIONS)
BASELINE CASE		✓
SEPARATE COM. & REC. RSA AUCTIONS		✓
AUCTION WITH HIGH ADMIN. AND ENTRY COSTS	✓	
AUCTION WITH COLLUSION	✓	

Maximize revenues from RSA quota

- Under National Standard 1 Council is to provide the greatest overall benefit to the Nation
- Starting point: maximize revenues in the conversion of quota pounds into dollars, to conduct the greatest amount of research possible
- Utilize mechanisms that encourage fishermen to pay the fair-market values for the quota poundage
- Council adopt a data collection program to compute willingness to pay for RSA quota: must be able to evaluate the return on RSA program investment over time

Ensure fairness in access to RSA quota

- RSA may unintentionally impact access by different segments, sectors as they may not be economically able to compete to obtain RSA quota
- May want to intentionally favor/subsidize some fishermen, gears, states, etc. via RSA quota as a policy choice
- National Standards 4 & 5 relevant to fair, equitable, efficiency and economic allocations
- NOAA legal counsel can advise on the legal versus policy constraints of "equitable" versus "equal" treatment
- Other than open-competition allocations will reduce total revenues

Foster collaboration between scientific and fishing communities

- Goal of original RSA was to get fishermen conducting research; not to maximize research dollars
- Success might be measured by # vessels, industry orgs./members, # outside science orgs.
- Varying degrees of research collaboration, starting with NOAA's "white boats" to decoupled commercial RSA vessels, etc.
- Greater number of RSA participants > (generally) administrative and enforcement costs, reducing net RSA benefits

Ensure compliance with the reporting and use of the RSA quota

- Minimize inefficiencies & transaction costs in quota sales, the costs of tracking quota possession/use over time, and the overall execution/administration of the RSA program – all eat into the RSA revenue
- There have been significant advances in electronic reporting systems since the original RSA program ended -- the adoption and use of technologies that eliminate duplicative and ineffective reporting systems is promising
- Compliance and reporting costs were not separately accounted for in the original RSA – topics for discussion in Workshop 3!

BILATERAL AGREEMENTS

- i. Grant recipient and industry partner share proceeds from harvesting RSA quota (e.g., scallop program)
- ii. Vessel harvesting RSA quota involved in research & data collection
- iii. Researchers work with small group of vessels they know due to geographic proximity or other reason
- iv. Higher revenue possible for PIs who establish and leverage strong partnerships with industry
- v. Challenge in absence of additional information on harvesters' willingness-to-pay: determining initial price for RSA quota in the negotiation (i.e., the split of the proceeds)

COMPETITIVE MARKETS (AUCTIONS)

- i. Mechanisms for selling (or buying) items by offering them up for bid and selling to the highest bidders
- ii. Foster competition among bidders to increase grant recipient's revenue (thick markets)
- iii. Allow for price discovery when value of items is unknown
- iv. Many alternative types of auction markets: different settings call for different designs
- v. Auctions' performance determined by transparency and participants' trust of process