



NOAA
FISHERIES

Tab B, No. 4(a)

Gulf of Mexico IFQ Programs

Goals and Objectives



What lead us here

- January Council Motion: No later than June 2023, the Council should conduct a *review of IFQ program goals and objectives, and recommend changes*. Based on the newly updated goals and objectives, the Council should then initiate an amendment to address program changes consistent with the resulting goals and objectives corresponding with the themes presented in Tab B, No. 5(c) at the January 2023 Gulf Council meeting.
 - Modification of program's goals
 - Transparency & effectiveness of IFQ share and allocation markets
 - Access, concentration, and control of shares and allocation
 - Reducing discards
 - Share distribution
 - Exploratory innovations
 - Loan program



What lead us here

- April Council meeting
 - Directed staff to draft, for reaction and input from the Council, a list of potential new goals and objectives pertaining to participation, equity, and access, and how to balance such new goals with reducing capacity.
- *Equity* is the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment.
 - Underserved Communities refers to communities that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.
 - These include geographic communities as well as populations sharing a particular characteristic, history, or identity.
 - Specific to the fisheries context, underserved groups within fishing communities may include, for example, subsistence fishery participants and their dependents, fishing vessel crews, and fish processor and distribution workers.
- [NOAA's Equity and Environmental Justice Strategy](#)¹

¹ See slide 18-21 for definitions from the EEJ Strategy

Magnuson-Stevens Act LAPP goals - 303A(c)(1)

- Overarching goals for all NMFS Catch Share programs.
 - If established in a fishery that is overfished or subject to a rebuilding plan, assist in its rebuilding.
 - If established in a fishery that is determined to have overcapacity, contribute to reducing overcapacity.
 - Promote:
 - Fishing safety
 - Fishery conservation and management
 - Social and economic benefits

Original Programs' Goals

	Combined Programs' Goals
	Reduce overcapacity
Benefits from mitigating derby conditions	Increase market stability
	Eliminate quota closures
	Increase flexibility for fishing operations
	Improve safety at sea
	Cost-effective, enforceable management
Benefits of IFQ	Eliminate quota overages
	Reduce bycatch and discard mortality
	Balance social, economic, and biological benefits

- Programs are over a decade old
 - RS-IFQ = 16 years
 - GT-IFQ = 13 years
- Original goals were based on:
 - overarching catch share goals
 - specific fishery needs
- Programs are analyzed annually and each program had 2 reviews
- Reviews determine that the programs were largely successful in meeting program goals and review criteria

Original Programs' Goals

	Goal	IFQ program review conclusion
	Reduce overcapacity	Moderately successful – IFQ studies show that overcapacity remains high ²
Benefits from mitigating derby conditions	Increase market stability	Successful – steady year round fresh fish supply at higher prices (no seasonal gluts)
	Eliminate quota closures	Successful – no commercial closures
	Increase flexibility for fishing operations	Successful – improved trip planning and reduction in operating costs
	Improve safety at sea	Successful – reduced at sea fatalities and options to fish in favorable weather conditions
	Cost-effective, enforceable management	Successful – effective monitoring and enforcement
	Benefits of IFQ	Eliminate quota overages
Reduce bycatch and discard mortality		Successful – reduced discards of IFQ sp.
	Balance social, economic, and biological benefits	Moderately successful – Challenges exist with new entrants, high allocation price, etc.

² See slide 22 for citations

Catch Share Review Outcomes

Performance Criteria	IFQ program review conclusion
Data collection gaps	Largely successful – Data gaps exist mainly in the collection of accurate price information
Participation	Limited success – Increased participation in red snapper fishery (increased allocation holders and vessels since program start) and limited reduction in overcapacity
Share and allocation transferability & caps	Largely successful – Highly unequal share distribution based on unequal landings that set the shares; market concentration was low but future studies should look at vertical integration
Catch and sustainability	Successful – year round fishing, no overages, reduced discards
Safety at sea	Successful – Improved safety at sea, less fatalities, choice of when to fish based on weather
Price information	Largely successful – increased ex-vessel prices, year round availability
New Entrants	Limited success – New entrants have replaced original fishermen; more information needed on barriers to entry

Goals vs Objectives

- Goals are long-term visions and outcomes
 - Ambitious yet attainable
 - Give direction to what you want to achieve
 - May have multiple objectives to a goal
- Objectives are specific short-term tasks to achieve your goals
 - Measure your progress to achieving goals
 - Should be clear, specific, measureable, achievable, and have a timeframe – often called SMART objectives

Draft Goals

- Based on Council discussion, the reviews, and public testimony these are potential IFQ program goals:
 - Maintain flexible fishing options and economic stability within the IFQ Programs
 - Increase IFQ market transparency (eliminates information asymmetries)
 - Improve technical efficiency (reduce costs per unit harvest)
 - Reduce IFQ discards
 - Improve opportunities for participants to enter the program

Draft Goal 1

Maintain flexible fishing options and economic stability within the IFQ Programs

Draft Objectives

- Economic stability³ is supported through year-round fishing that avoids fluctuations in ex-vessel prices caused by market gluts
- Flexibility fishing measures⁴ are periodically evaluated to ensure current catch and sustainability concerns are addressed

³ See slides 23-24 for market stability information

⁴ See slides 25-26 for current flexibility measures

Draft Goal 2

Increase IFQ market transparency

Draft Objectives

- Create a NOAA administered marketplace for requests to buy or sell shares and allocation
- Reduce information asymmetry⁵ through the timely release of average share, allocation, and ex-vessel prices

⁵ See slide 27 for information asymmetry

Draft Goal 3

Improve technical efficiency⁶ (reduce costs per unit of harvest)

Draft Objectives

- Develop non-market driven measures to reduce overcapacity
- Examine market concentrations to determine if share and allocation caps need to be modified

⁶ See slide 28 for NS5 guidelines on efficiency, slide 29 for capacity studies

Draft Goal 4

Reduce IFQ discards

Draft Objectives

- Improve collection of discard information from IFQ vessels⁷
- Create an allocation bank to further reduce bycatch and discards of IFQ species
- Evaluate additional or new flexibility measures to reduce discards

⁷ See slide 30

Draft Goal 5

Improve opportunities
for participants to
enter the program

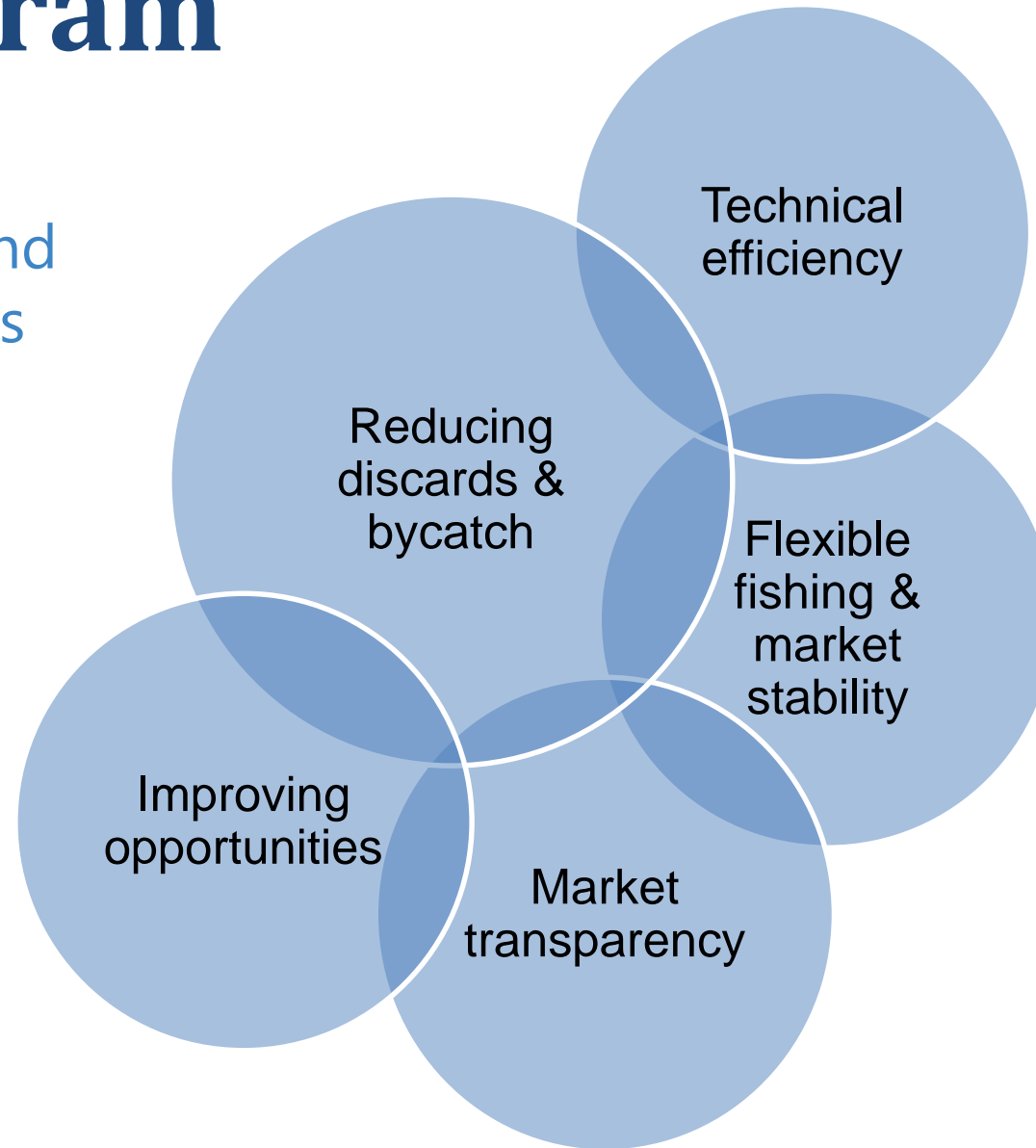
Draft Objectives

- Implement an adaptive catch share model that redistributes shares to accounts harvesting IFQ species
- Limit share ownership (maintaining and obtaining shares) to accounts that are harvesting IFQ species
- Identify barriers inhibiting or limiting participation by surveying participants and those wanting to enter the fishery⁸
- Create an allocation bank to reduce barriers to fishing privileges
- Distribute NMFS' held shares

⁸ See slides 31-32 for more information on participation in red snapper program

Venn Diagram

Many of these goals and the potential objectives overlap in concept





Further Discussion

- Do you agree or disagree with the presented goals and objectives?
- Do you have suggested changes to the goals and objectives?
- Do you have additional goals or objectives you want discussed?

Additional Information

These slides provide additional in-depth information for the Council about topics referred to in this presentation.

NOAA's Equity and Environmental Justice Strategy

- Environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, gender, sexual orientation, national origin, tribal affiliation, religion, disability, or income during the development, implementation, and enforcement of environmental laws, regulations, and policies, including but not limited to:
 - Equitable protection from environmental and health hazards;
 - Equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices; and
 - Equitable opportunity and access to decision-making processes for underserved communities.

NOAA's Equity and Environmental Justice Strategy

- Meaningful involvement means:
 - Communities have an opportunity to participate in decisions about activities that may affect their environment and/or health;
 - The communities' contribution will inform NMFS' decisions;
 - Community concerns will be considered in the decision-making process; and
 - Decision-makers will seek out and facilitate the involvement of those potentially affected.
- Communities in the strategy are groups of individuals, representatives from organizations or interest groups, or governmental entities that have a strong interest in or are affected by NOAA Fisheries' work and policies.

NOAA's Equity and Environmental Justice Strategy

- Underserved communities could include but are not limited to: women and girls; Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders, and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, queer, and other (LGBTQ+) persons; persons with disabilities; persons who live in rural or urban areas; and persons otherwise adversely affected by persistent poverty or inequality.
- Specific to the fisheries context, underserved groups within fishing communities may include, for example, subsistence fishery participants and their dependents, fishing vessel crews, and fish processor and distribution workers.
- Finally, territorial and commonwealth communities in American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands may also be categorized as underserved.



Barriers to EEJ

- Unawareness of underserved communities
- Structural barriers
- Barriers to engagement and accessing services
- System complexity
- Gaps in expertise
- Gaps in representation

Overcapacity Citations

- Agar, Juan, William C. Horrace, and Christopher F. Parmeter (2022). Overcapacity in Gulf of Mexico reef fish IFQ fisheries: 12 years after the adoption of IFQs. *Environmental and Resource Economics*, 82: 483–506.
- Solís D, del Corral J, Perruso L, Agar JJ (2015). Individual fishing quotas and fishing capacity in the US Gulf of Mexico red snapper fishery. *Australian Journal of Agricultural Resource Economics*, 59(2):288–307.
- Solís D, del Corral J, Perruso L, Agar JJ (2014) Evaluating the impact of individual fishing quotas (IFQs) on the technical efficiency and composition of the US Gulf of Mexico red snapper commercial fishing fleet. *Food Policy* 46:74–83.
- Gulf of Mexico Fishery Management Council (2018) Grouper-Tilefish Individual Fishing Quota Program 5-year review. pp 168.



Market stability

- “Thin” markets refers to a period of time characterized by a low number of buyers and sellers leading to price volatility and/or uncertainty.
 - The low volume trading reduces visibility in price and volume of data, impairing price discovery. This can lead to asymmetric information to participants.
 - Regulatory response in other fields is often mandatory price reporting
- “Deep” market refers to high volume trading with a small price spread
- A stable market refers to when the volume of sales shows little change when prices vary.
- Price stability occurs when prices have no significant fluctuations (large swings)



IFQ Market Stability

- Allocation
 - Intra-annual (within a year) price variation is low
 - Inter-annual (across years) price variation is low
 - Exceptions occur when quotas significantly increase or decrease
 - Volume of transfers increased over time with low price variations
- Shares
 - Inter-annual prices stable outside of large quota changes (GG, RG)
 - Volume of transfers low across years
- Ex-Vessel
 - Inter-annual prices stable and steadily increasing



Current flexibility measures

- 10% overage – applies only to account with shares
 - Shareholder can land 10% over the *remaining* allocation on the ‘last’ fishing trip the year
 - Can not exceed the equivalent amount of allocation from shares
- SWG/DWG flexibility measures
 - Warsaw grouper and speckled hind are DWG. If all of the DWG allocation in a shareholder’s account is exhausted, these species may be landed using SWG allocation.
 - Scamp is a SWG. If all the SWG allocation in a shareholder’s account is exhausted, scamp may be landed using DWG allocation.
 - The remaining species in the SWG and DWG categories do not have these flexibility measures.

Current flexibility measures

- Gag/red grouper multi-use
 - A portion of the allocation from shares may be converted to red or gag multi-use and used to land either species
 - The proportion converted is based on a formula
 - Multi-use can not be transferred or landed while there is still allocation in the primary category allocation of the shareholder account and associated vessel account(s)
 - System automatically applies multi-use if landings exceed primary category
 - Gag: Gag allocation, gag multi-use allocation, red grouper multi-use allocation

$$\text{Gag multi - use allocation} = \frac{(\text{Red grouper ACL} - \text{Red grouper commercial quota})}{\text{Gag commercial quota}}$$












Information Asymmetry

- Asymmetric information occurs when one party to an economic transaction possess more or better information than the other party
 - Asymmetry creates a power imbalance in transactions and markets do not operate efficiently
- Information asymmetry is often a result of lack of transparency
- Asymmetric information can affect IFQ buyers, sellers, and lenders
- Released IFQ price information often outdated
 - Final average IFQ prices released annually
 - Preliminary average price information released in mid-year in Catch Up On Catch Share newsletter



NS5 Guidelines

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- “The term ‘utilization’ encompasses harvesting, processing, marketing, and non-consumptive uses of the resource, since management decisions affect all sectors of the industry. In considering efficient utilization of fishery resources, this standard highlights one way that a fishery can contribute to the Nation's benefit with the least cost to society: Given a set of objectives for the fishery, an FMP should contain management measures that result in as efficient a fishery as is practicable or desirable.
 - “... an efficient fishery would harvest the OY with the minimum use of economic inputs such as labor, capital, interest, and fuel. Efficiency in terms of aggregate costs then becomes a conservation objective, where ‘conservation’ constitutes wise use of all resources involved in the fishery, not just fish stocks.”
 - “...management measures may be proposed that allocate fish among different groups of individuals or establish a system of property rights. Alternative measures examined in searching for an efficient outcome will result in different distributions of gains and burdens among identifiable user groups. An FMP should demonstrate that management measures aimed at efficiency do not simply redistribute gains and burdens without an increase in efficiency.”

Capacity

- Reduced fleet can harvest IFQ species
 - When operating at full efficiency 20% of the red snapper and 57% of the IFQ fleet could harvest the entire quota (Agar et al, 2022)
 - 1/5 of the fleet could harvest 100% of the red snapper commercial quota (Solis et al, 2015)
- Improvements in technical efficiency
 - During the program technical efficiency increased by 6% (RS) and 5% (IFQ-wide) and fleet capacity increased by 35% (RS) and 7% (IFQ-wide) (Agar et al, 2022)
 - Solis et al (2014) indicated the magnitude of the returns for the fleet is still high and have not realized the optimal configuration despite ability to obtain quota.

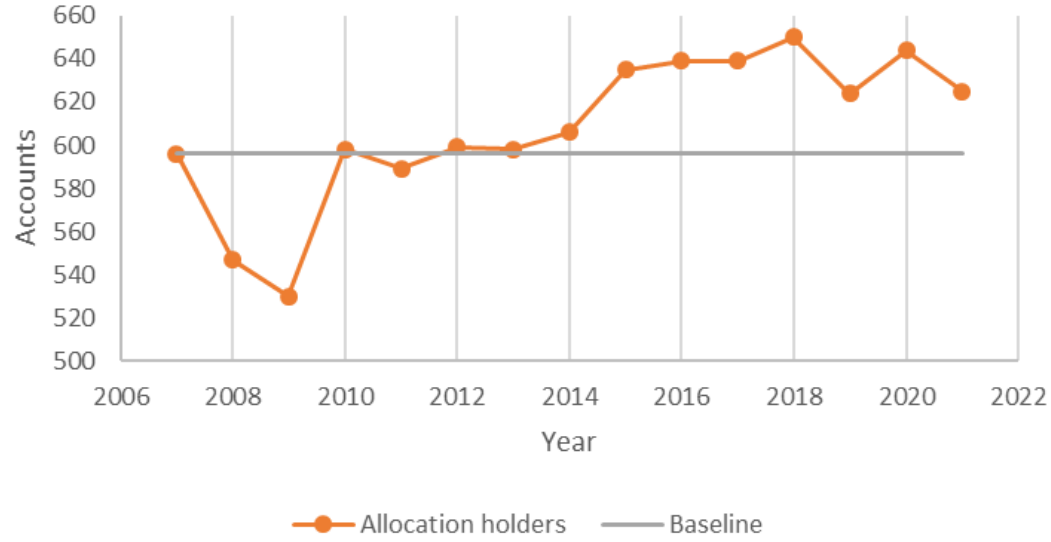
Avenues to address discards, mortality, and bycatch

- This goal will need data collection and analysis to more understand reasons and impacts
- Discards and bycatch affect cost to harvest (technical efficiency)
- Determine drivers of IFQ discards within IFQ fleet and among non-IFQ reef fish fishermen
 - Current discards are from the reef fish observer program with limited sampling
- Evaluate current and consider new mechanisms to reduce discards
 - Full retention
 - Red grouper – red snapper multi-use
 - Allocation banks
 - Size limits changes

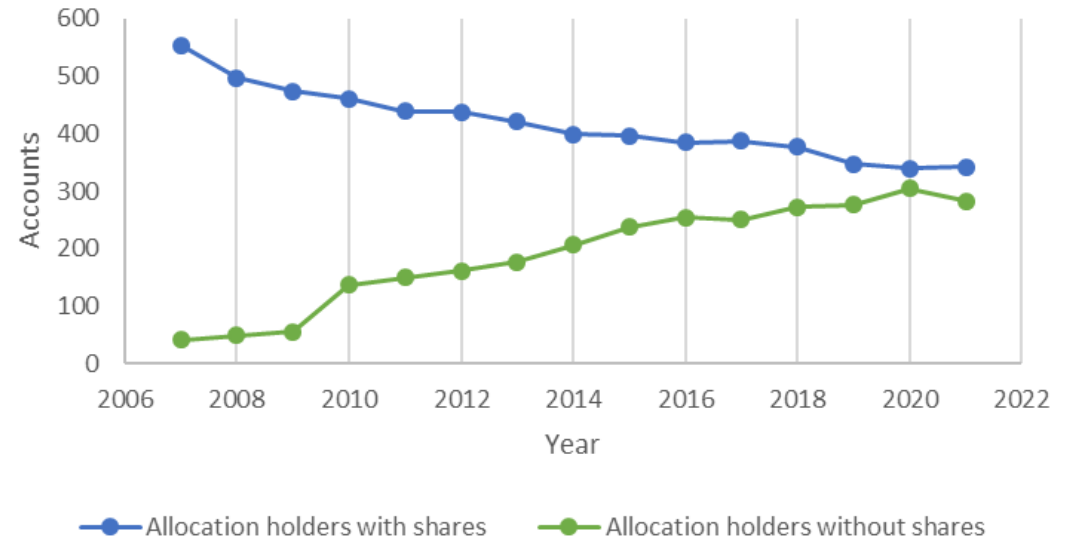
Participation Information

- Program participation is not limited (e.g., public participation)
 - Information is not gathered on the different types of public participants (e.g., crew, brokers, fishermen separating assets)
- Harvest of IFQ species is limited only by number of reef fish permits
 - Majority of active reef fish permits harvest IFQ species
 - Increased participation could result from latent and non-IFQ harvesting reef fish permits entering the fishery
- Increased participation in the red snapper program over time may not be accommodated by the increased quotas

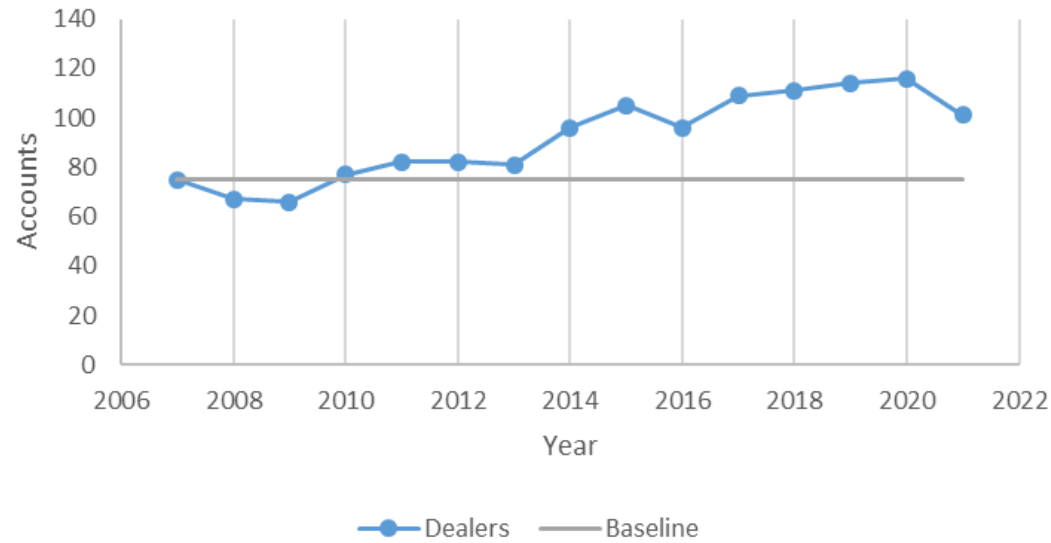
RS Allocation Holders



RS Allocation holders by Share Status



RS Dealers



RS Vessels

