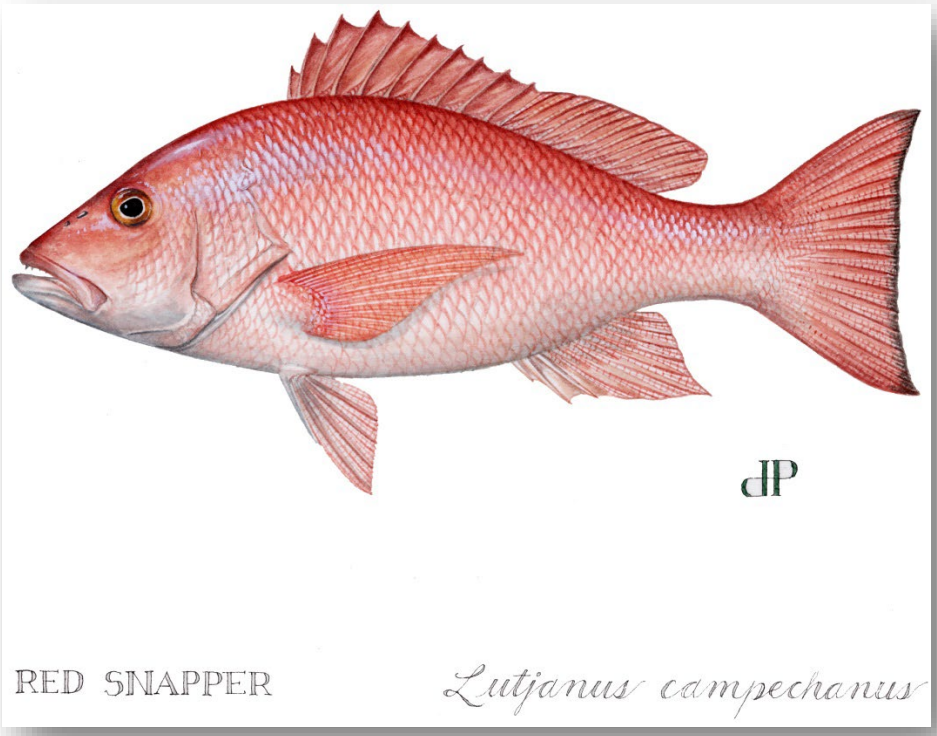
Gulf of Mexico Red Snapper Individual Fishing Quota Report (2021 update)



National Marine Fisheries Service
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

SERO Catch Share support toll free number: 1-866-425-7627
St. Petersburg local number: 727-824-5305
https://secatchshares.fisheries.noaa.gov/
E-mail: NMFS.SER.CatchShare@noaa.gov

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Message from the Assistant Regional Administrator

The Red Snapper Individual Fishing Quota (IFQ) Program (RS-IFQ) annual report is a living document that builds upon previously summarized information and provides a current overview of the RS-IFQ program. This report is not a full comprehensive review of the program, as comprehensive reviews are completed every 5 to 7 years.[1] The first 5-year (2007- 2011) review was completed in 2013 and can be found on the Catch Share website,[2] under Additional Information. A joint 5-year assessment of both the RS-IFQ and Grouper-Tilefish IFQ programs was completed in 2021 and covered 2012-2018 years for both programs.

Outreach efforts for the IFQ programs were virtual in 2020 and continued to be virtual in 2021 due to the pandemic. Since the transition of the Catch Share online system to a new platform in 2020, there have been a variety of improvements to the system. IFQ customer support held a virtual shareholder workshop to review the system's updates and improvements. A panel of staff members from the Permits, Law Enforcement, and Fishery Finance offices were also present at the workshop to answer questions. IFQ customer support continues to hold virtual dealer outreach meetings. Ten IFQ dealers in Florida participated in virtual meetings in 2021. Future dealer outreach will be held on a quarterly basis during 2022 for participants throughout the Gulf of Mexico states. We will resume in-person dealer visits as long as pandemic-related travel restrictions for federal employees remain lifted. The Catch Up on Catch Shares IFQ newsletter was also re-launched in October 2021, and is being distributed quarterly. The newsletter provides available resources pertaining to the Catch Share online system and information to other relevant fishery management issues, including articles on topics such as community perspectives, upcoming actions, system functions, IFQ data, and links to upcoming events and websites.

The 2021 red snapper commercial quota remained at 6.94 million pounds (mp) gutted weight (gw). Despite the pandemic, fishermen landed 99% of the quota. Sixty-four percent of RS-IFQ accounts landed red snapper, similar to last few years, with the majority of landings associated with accounts with shares (56%). The average ex-vessel price of red snapper increased slightly from $5.07/lb to $5.35/lb.

In 2021, 65% of shareholder accounts held a Gulf of Mexico commercial reef fish permit and also held 67% of all shares. The average 2021 share price ($45.37/equivalent lb) increased from $39.61/equivalent lb in 2020, and the average 2021 allocation price increased from $3.65/lb to $3.81/lb. Share and allocation price reporting improved slightly, but continued to be an area of concern.

The National Marine Fisheries Service (NMFS) is committed to the continued improvement of RS-IFQ program. Since the program began, stakeholder feedback and suggestions for the program have been used to improve the system. NMFS thanks everyone for their input and encourages them to continue to share their concerns and ideas.

Sincerely,

John C. McGovern, Ph.D.
Assistant Regional Administrator for Sustainable Fisheries

[1] The Guidance For Conducting Review of Catch Share Programs can be found here: https://www.fisheries.noaa.gov/national/laws-and-policies/catch-shares
[2] https://secatchshares.fisheries.noaa.gov/.

TABLE OF CONTENTS

List of Tables

List of Figures

ABBREVIATIONS

Abbreviation	Description
ABC	Acceptable biological catch
ALS	Accumulated landings system
BFT	Bluefin Tuna Individual Bycatch Quota program
FOIA	Freedom of information act
FMP	Fishery management plan
GDP	Gross domestic product
GSAD	Gulf and South Atlantic Dealer permit
GT-IFQ	Grouper-Tilefish Individual Fishing Quota
Gulf Council	Gulf of Mexico Fishery Management Council
Gulf	Gulf of Mexico
Gw	Gutted weight
HBC	Headboat Collaborative pilot program
HMS	Highly migratory species
IFQ	Individual Fishing Quota
JEA	Joint enforcement agreement
Lb	Pounds
LL	Longline gear
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
Mp	Million pounds
NMFS	National Marine Fisheries Service
OLE	Office of Law Enforcement
RA	Regional Administrator
Reef Fish FMP	Reef Fish Fishery Management Plan
Reef fish permit	Gulf of Mexico commercial reef fish harvesting permit
RFOP	Reef fish observer program
RS-IFQ	Red snapper Individual Fishing Quota
SEDAR	Southeast Data, Assessment, and Review
SEFSC	Southeast Fisheries Science Center, NMFS
SERO	Southeast Regional Office, NMFS
TL	Total length
USCG	United States Coast Guard
VL	Vertical line gear
VMS	Vessel Monitoring system

Program Overview and Regulations

Program Overview

The Red Snapper (RS) Individual Fishing Quota (IFQ) program is a single-species, single-share category program, where participants use an online account for all transactions (share and allocation transfers, landings, and cost recovery fees). For the first five years of the program (2007-2011), anyone who possessed a valid Gulf of Mexico (Gulf) federal dealer permit or a Gulf commercial federal reef fish permit (reef fish permit) was eligible to participate in the program. Beginning January 1, 2012, all U.S. citizens and permanent resident aliens were eligible to obtain a RS-IFQ shareholder account to purchase shares and allocation. Shares are a percentage of the red snapper commercial quota, while allocation refers to the poundage that is used to possess, land, or transfer during a given calendar year. The allocation is an annual amount that expires on December 31 each year. Only accounts with allocation and a valid Gulf reef fish permit can legally harvest red snapper. Appendices 1 and 2 contain a history of red snapper management and implementation of the RS-IFQ program.

There are three main account types in the RS-IFQ system: shareholder, vessel, and dealer accounts. Each shareholder and dealer account is composed of a unique set of entities (single or combination of individuals and/or business) and no two accounts are composed of the same set of entities. Shareholder accounts may hold shares and allocation or just hold allocation. A list of all shareholder accounts and the amount of shares held by each account is available through the Additional Information page on the IFQ website, titled IFQ Gulf Reef Fish Accounts (FOIA).[3] This page can be sorted by any of the column headings. An X in the Initial column indicates that the account has never been accessed in the system.

Vessel accounts belong to shareholder accounts based on the reef fish permit for that vessel. Vessel accounts only hold allocation for landings. There may be multiple vessel accounts associated with one shareholder account. Sufficient allocation, at least equal to the pounds to be landed, must be in the vessel account or its associated shareholder account at the time of submission of the landing notification. At the time of landing, allocation at least equal to the pounds to be landed must be present in the vessel account. Upon completion of a landing transaction, the system deducts the allocation from the vessel account.

Dealer accounts are associated with federal dealer permit holders. Prior to August 7, 2014, the federal dealer permit was the Gulf reef fish dealer permit; afterwards the federal permit became the Gulf and South Atlantic Dealer (GSAD) permit. Dealers are limited to completing landing transactions, collecting the cost recovery fee from the fishermen, and paying that fee to the National Marine Fisheries Service (NMFS). All RS-IFQ dealers are required to have a Gulf IFQ dealer endorsement, which can be printed through their IFQ account. A printed copy of the IFQ dealer endorsement must accompany vehicles used to transport IFQ species on land. Endorsements are valid when a dealer's permit and account are active and they do not have any outstanding cost recovery fees. The RS-IFQ program and

[3] https://secatchshares.fisheries.noaa.gov/foiaInformation

the Grouper-Tilefish Individual Fishing Quota (GT-IFQ) program are contained within the same system and are jointly referred to as the Gulf Reef Fish IFQ programs. Therefore, there is one dealer endorsement for both programs.

The RS-IFQ program records allocation, landings and quota in pounds (lb) of gutted weight (gw); therefore, throughout this report, allocation, landings, and quotas are in lb gw. At the beginning of each year, NMFS distributes allocation to shareholder accounts based on the annual quota and the share percentage associated with that account. Allocation can be used to account for red snapper landings or can be transferred to another shareholder. Adjustments (increases or decreases) in the red snapper commercial quota occur due to new information (e.g., stock assessment, calibration, reallocation between fishing sectors). In-season quota increases are distributed proportionately among shareholder accounts based on the percentage of shares held in each account at the time of the adjustment. If a quota decreases in-season, the change is not implemented until the start of the next year, as allocation has already been distributed and transferred within the system.

The RS-IFQ program has a built-in flexibility measure to allow a once-per-year landing overage for any RS-IFQ shareholder account that holds shares. For shareholder accounts with shares, a vessel can land once during the year 10% more than their remaining allocation on the vessel. The overage is automatically applied by the system in that year and labeled as an overage. The system automatically deducts this overage from the shareholder's allocation in the following fishing year. Because overages need to be deducted in the following year, RS-IFQ accounts with shares are prohibited from selling shares that would reduce the account's shares to less than the amount needed to repay the overage in the following year. RS-IFQ accounts without shares cannot land an excess of their remaining allocation.

Program Objectives

The primary objectives of the program, as defined in Amendment 26 to Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP), are to reduce overcapacity and mitigate derby-fishing conditions. Anticipated benefits of the program include: increased market stability; elimination of fishing season closures; increased flexibility for fishing operations; cost-effective and enforceable management of the red snapper commercial sector; improved safety at sea; and balancing social, economic, and biological benefits from the red snapper commercial sector. Additionally, the program is intended to provide direct and indirect biological benefits to red snapper and other marine resources by eliminating quota overages and reducing bycatch and discard mortality. The social, economic, and biological benefits collectively are intended to assist NMFS and the Gulf of Mexico Fishery Management Council (Gulf Council) in preventing overfishing and rebuilding the Gulf red snapper population through the stewardship aspects of the RS-IFQ program.

Program Regulations

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires fishery managers to ensure that no individual, business, or other entity acquires an excessive share of the privilege. The RS-IFQ program is monitored to prevent any entity from obtaining shares in excess of

the established share cap of 6.0203%. The share cap was based on the maximum RS-IFQ share issued to a person, business, or other entity at the time of initial apportionment. There is no allocation or usage cap for red snapper. As of January 1, 2012, any RS-IFQ account may transfer (increase or decrease holdings) red snapper shares and allocation, regardless of reef fish permit status. There are no program fees associated with share or allocation transfers.

All vessels with a reef fish permit are required to submit a declaration (hail-out) prior to leaving port for a fishing trip. While at-sea, vessels are monitored using the satellite-based real-time vessel monitoring systems (VMS). Each vessel is required to have an operational NMFS type-approved VMS transmitter. The transmitter automatically determines the vessel's position and transmits that position to NMFS through a NMFS-approved communication service provider. When returning to port, vessels landing red snapper must provide a pre-landing notification (hail-in) 3 to 24 hours in advance, indicating the time, date, landing location, the intended dealer, and the estimated pounds landed. As of January 1, 2019, all reef fish permitted vessels are also required to provide a pre-landing notification for all commercial fishing trips. For vessels without IFQ species on board, the pre-landing notification includes the time, date, landing location, and an indication that there are no IFQ species onboard. The vessel must land at an approved landing location. Landing may occur at any time, but red snapper may only be offloaded between 6 a.m. and 6 p.m. A landing transaction report is completed by the IFQ dealer and validated by the allocation holder through entry of the vessel signature PIN. The landing transaction includes the date, time, and location of transaction; weight (lb gw) and actual ex-vessel price of fish landed and sold; and the identities of the shareholder account, vessel, and dealer. Landing transactions must be completed on the day of offload, except when being trailered for transport to dealer, where it must be completed before transport. All landing transactions must occur within 96 hours from the time of landing reported in the notification. All landings data are processed in real-time. Current IFQ landings can be accessed at the Southeast Regional Office (SERO) Catch Share Website: https://secatchshares.fisheries.noaa.gov/home, through the Additional Information view and listed under the document Commercial Quotas/Catch Allowances (all years).

NMFS monitors the economic performance of the program by collecting share, allocation, and ex-vessel prices. Both the transferor and transferee submit total share value, while just the transferor submits the allocation price per pound. Ex-vessel prices are the prices paid by a dealer per pound of fish before any deductions are made for transferred (leased) allocation and goods and/or services (bait, ice, fuel, repairs, machinery replacement, etc.). The Magnuson-Stevens Act, in section 304(d)(2)(A)(i), requires a fee to recover the actual costs required to directly administer, manage, and enforce the RS-IFQ program. This fee may not exceed 3% of the actual ex-vessel value. The current cost recovery fee is set at 3%. The Regional Administrator may review and adjust this fee annually. The IFQ allocation holder specified in the landing transaction is responsible for the payment of the cost recovery fees, while the dealer who receives the fish is responsible for collecting the cost recovery fee and submitting the fee to NMFS on a quarterly basis.

Complete regulations governing the RS-IFQ program can be found at 50 CFR § 622.21 (www.ecfr.gov) and the program can be accessed through SERO website: https://secatchshares.fisheries.noaa.gov/home.

Important information regarding the RS-IFQ program is available for download on the website under Additional Information.

Program Performance

Program Participants

Shareholders

For this report, shareholder refers to an account that holds shares, and does not refer to individuals within the accounts. Shareholder account is a type of role within the system. Shareholder accounts may or may not hold shares. Shareholder accounts without shares may still participate in the program by obtaining allocation from another IFQ shareholder account. Allocation holders are any shareholder account that holds allocation, and these shareholder accounts may or may not also hold shares. The number of shareholders changes each year as accounts acquire or divest shares through transfers. For this report, we calculate the number of shareholders at the end of each year. A shareholder may divest their account of shares (i.e., transfer all shares) for a variety of reasons: to exit the IFQ program; to transfer to a new IFQ account after a reef fish permit change;[4] or to manage related IFQ accounts from one account.[5] Accounts that are not associated with a reef fish permit are termed public participant accounts. Public participant accounts may be related to other shareholder accounts that may hold reef fish permits. Related accounts may be created as a means of separating the assets (e.g., shares from vessel) or for ease of managing the shares and allocation across multiple related accounts (e.g., when each vessel in a fleet is owned by a corporation). Discussions with industry representatives indicate this separation of assets may be a growing business practice. Therefore, caution should be used when interpreting trends related to public participant accounts.

In the first eight years of the program (2007 – 2014) the number of shareholders decreased each year (Table 1). In 2015, there was a slight increase in shareholders (+8). This increase may be due to the opening of the GT-IFQ program to public participation (i.e., allows any U.S. citizen or permanent resident alien to open an account and obtain shares or allocation) and discussions in 2015 of modifications to the IFQ program. In general, the number of shareholder accounts have decreased since 2015, with small increases occuring in 2017 and 2020. The large decrease in total shareholder accounts from 2017 to 2018 (37 accounts) was likely a result of Amendment 36A to the Reef Fish FMP (Amendment 36A). In the 2018 final rule for Amendment 36A, shares from accounts that had not been activated were reverted to NMFS. Gulf Council discussion about potential changes to the IFQ programs continues in Amendment 36B to the Reef Fish FMP.

Shareholders are categorized by share volume: small shareholders hold < 0.05% shares, medium shareholders hold between 0.05-1.4999% shares, and large shareholders hold ≥ 1.5% shares. Since the program began, the medium and large shareholders held the majority of shares, while the small and medium shareholders accounted for the greatest number of accounts (Table 1). Decreases in the number

[4] IFQ accounts are established based on the name(s) of the Gulf commercial reef fish permit holder. If the name(s) of the permit holder change (e.g., adding/removing a spouse), a new IFQ account must be established to link to the permit.

[5] Some IFQ participants are associated with more than one IFQ account (e.g., John Smith vs. John and Jane Smith, incorporating each vessel under a different company name), and therefore may shift all their shareholding to one account for ease of management.

of shareholders primarily occurred among small shareholders. For example, at the start of the program small shareholders comprised of 75% of all shareholders, while in 2021 they comprised 55%. Concurrently, the proportion of medium shareholders increased from 23% at the start of the program to 39% in recent years.

Table 1: Shareholders by share volume

Year	Small (<0.05%)		Medium (0.05-1.4999%)		Large (≥ 1.5%)		Total
	Accounts	Share %	Accounts	Share %	Accounts	Share %	Accts
Initial	415	4.55	125	58.52	14	36.94	554
2007	368	4.09	112	49.74	17	46.18	497
2008	346	3.80	111	48.72	17	47.49	474
2009	313	3.34	108	48.02	18	48.66	439
2010	297	3.10	109	47.04	19	49.87	425
2011	284	2.97	116	48.58	18	48.46	418
2012	273	2.91	117	49.94	17	47.16	407
2013	261	2.69	120	48.01	18	49.30	399
2014	236	2.55	125	49.71	17	47.74	378
2015	238	2.67	131	50.30	17	47.04	386
2016	230	2.64	125	47.39	19	49.98	374
2017	233	2.62	126	47.62	19	49.76	378
2018	199	2.47	125	51.50	17	45.96	341
2019	193	2.45	129	50.14	18	47.33	340
2020	194	2.55	130	47.60	19	48.18	343
2021	186	2.37	132	48.21	18	47.75	336

Note: All values were based on the last day of the year, except Initial, which was the program's start date (1/1/2007). The share % is the total shares held by accounts under that classification.

Accounts that are not associated with a reef fish permit are termed public participant accounts, and may include accounts that are related to other shareholder accounts or dealer accounts, accounts that previously held shares, and/or accounts held by any U.S. citizen or permanent resident alien. In the first five years, public participant shareholders could occur if the reef fish permit associated with the account was transferred or terminated. Even in the first year of the program, a small percentage (15%) of shareholders no longer held a reef fish permit (Appendix 3.1). The number of shareholders without reef fish permits increased considerably by 2008 (+44), but thereafter remained similar through 2012. Slight increases occurred during 2013 through 2017, and were most likely related to public participation in both Gulf IFQ programs. In 2018, the number of shareholders without a permit decreased considerably due to Amendment 36A, which reverted shares from inactivated accounts (28) back to NMFS. The shares reverted to NMFS was nominal (0.0788%). The amount of shares held by shareholders without a reef fish permit began increasing since 2008. In 2015, the volume of shares held by non-permitted accounts reached 30% and has remained stable ever since. This information should be interpreted with a degree of caution as many related accounts hold the shares in a separate account from the account linked to the permit and vessel. Due to the migration of the Permits system to a new platform, updated information on permits and shareholders is not available at this time. This information will be updated in later reports.

Allocation Holders

In the RS-IFQ program, accounts may obtain allocation through shares (distributed at the beginning of the year or from any in-season quota increase) or from the transfer of allocation from another account holder. The number of accounts holding allocation does not necessarily equal the number of accounts that land allocation, as not all accounts that hold allocation also hold a reef fish permit, and some accounts may only transfer allocation. Accounts that hold allocation are termed allocation holders. The number of allocation holders is typically greater than the number of shareholders.

While the number of allocation accounts originally decreased from 2007 through 2009, there was a large increase in 2010 (Table 2). This apparent increase is due to the change in system structure (see Appendix 1) and the start of the GT-IFQ program, where many participants also obtained RS-IFQ allocation. Therefore, this report will concentrate on data from 2010 onward. The number of allocation holders increased considerably in 2015 and continued to increase through 2018. In 2018, there were 650 allocation holder accounts, which is the largest number since the program began. Decreases in 2019, were partly due to the accounts with reverted shares that no longer received allocation.

Table 2: Allocation holders by share status

Year	Total	With Shares	Without Shares
2007	596	554 (93%)	42 (7%)
2008	547	497 (91%)	50 (9%)
2009	530	474 (89%)	56 (11%)
2010	598	461 (77%)	137 (23%)
2011	589	439 (75%)	150 (25%)
2012	599	438 (73%)	161 (27%)
2013	598	421 (70%)	177 (30%)
2014	606	399 (66%)	207 (34%)
2015	635	397 (63%)	238 (37%)
2016	639	385 (60%)	254 (40%)
2017	639	388 (61%)	251 (39%)
2018	650	377 (58%)	273 (42%)
2019	624	347 (56%)	277 (44%)
2020	644	339 (53%)	305 (47%)
2021	625	342 (55%)	283 (45%)

Allocation holders can be categorized as those holding or not holding shares (Table 2). Allocation holders that do not hold shares obtained allocation through an allocation transfer from another account and are called allocation only accounts. Allocation holders with shares may also increase or decrease the amount of allocation within the account through an allocation transfer from or to another account. At the start of the program, 93% of allocation holders also held shares. This percentage has been gradually declining over time, and the proportion has been nearing a 50% split in recent years between accounts with and without shares. The decreases in allocation holders with shares may have resulted from a variety of factors. Factors that may influence the percentage of allocation holders with and without shares include: quota changes, shareholders that manage shares in related accounts,[2] the ability for shareholders to obtain shares (e.g., availability or price), changes in harvesting behavior, and/or influences from the GT-IFQ program. Quota increases may allow allocation to be indirectly distributed among more participants through transfers, thereby increasing the percentage of allocation only holders. As the quota increases, those with shares receive a larger amount of allocation than under a smaller quota (e.g., 5% of 100 lb = 5 lb, while 5% of 200 lb is 10 lb). If the allocation received by the fisherman is more than needed to land red snapper, they might transfer out the allocation to another account that does not have shares, rather than land the allocation themselves. The number of

related accounts may create more allocation only account holders, as participants aggregate shares into one account. Reduced availability or increased prices of shares may increase the percentage of allocation only holders, as shares become harder to obtain.

Discussions with industry representatives indicate that not all fishermen who harvest red snapper target red snapper for that fishing trip. Some fishermen indicated that red snapper catch is a supplemental catch used to increase the profitability of a low yield trip. Other fishermen catch red snapper incidentally when targeting species that are located in similar habitat, and therefore obtain red snapper allocation to reduce discards. The number of allocation holders may increase as fishermen seek to obtain allocation for supplemental or incidental catch. Since these fishermen do not target red snapper, they may not wish to obtain red snapper shares, and therefore may obtain allocation only as needed. The RS-IFQ and GT-IFQ programs have a large amount of overlap, and in 2021, 89% of the vessels that landed at least one pound of red snapper also landed at least one pound of GT-IFQ species (Appendix 3.2).

Dealers

The number of dealers processing red snapper has increased over time (Table 3). Dealers can be categorized by the percentage of annual red snapper processed by the dealer: small (receive <1% of RS-IFQ landings), medium (received 1-3% of RS-IFQ landings), and large (>3% of RS-IFQ landings). Some small-sized dealers are likely fishermen who have obtained a GSAD dealer permit to eliminate the need for a seafood wholesaler, and therefore reduce costs and increase profits. Currently it is not possible to link ownership of a shareholder account to ownership of a dealer account, as accounts may be held under different names (e.g., business vs. individual name(s) vs. different business name). Personal communication with industry representatives indicated that there were fishermen who also owned dealer permits, but these were not limited to just small-sized dealers. Small dealers represent the majority of dealers, even though they purchase only a small proportion of the overall catch. The number of medium-sized and large-sized dealers has remained consistent, while the number of small dealers has increased since the beginning of the program. The increase in small-sized dealers likely resulted from fishermen who have obtained a GSAD dealer permit to eliminate the middleman and therefore reduce costs and increase profits. In 2021, there was a decrease in small dealers, which most likely resulted from the pandemic and resulting market conditions.

Table 3: Dealer accounts by landings volume

Year	Total Accounts	Small <1% of quota		Medium 1-3% of quota		Large >3% of quota	
		Accounts	% landings processed	Accounts	% landings processed	Accounts	% landings processed
2007	75	56	9.86	8	14.85	11	75.29
2008	67	48	9.44	9	17.96	10	72.60
2009	66	44	9.91	11	17.53	11	72.56
2010	77	57	12.99	13	25.70	7	61.31
2011	82	64	15.05	10	17.50	8	67.45
2012	82	67	13.48	7	15.75	8	70.77
2013	81	66	14.16	7	15.87	8	69.97
2014	96	77	10.29	11	19.74	8	69.97
2015	105	88	11.68	8	16.85	9	71.47
2016	96	79	11.13	7	12.88	10	75.99
2017	109	91	14.07	7	12.31	11	73.62
2018	111	93	16.00	8	16.82	10	67.18
2019	114	92	14.10	13	25.65	9	60.25
2020	116	98	15.80	11	23.33	7	60.87
2021	101	80	11.39	11	17.95	10	70.66

Note: Dealer size is determined by percentage of annual red snapper landings landed with each dealer and may include multiple facilities.

Vessels

The number of vessels landing red snapper has decreased compared to pre-IFQ through 2009 (Table 4; Appendix 3.2). The large increase in 2010 (+90 vessels) was attributed to the start of the GT-IFQ program and the ability for vessels to participate in both IFQ programs using the same account and system. Vessels that primarily target GT-IFQ species may obtain red snapper allocation to account for any incidental catch of red snapper. Since the start of the GT-IFQ program, there has been a high degree of overlap between the two programs, with 81% to 94% of the RS-IFQ vessels also harvesting GT-IFQ species. The number of vessels harvesting red snapper continued to decrease through 2013. In 2014, the number of vessels began steadily increasing through 2018. Slight decreases in vessels landing red snapper have occurred since. The number of vessels continues to remain below the average number of vessels harvesting red snapper prior to the IFQ program.

Since the start of the program, vessels primarily landed their catch at Florida facilities (Appendix 3.2). Over time, there has been an increase in the number of vessels landing in the Alabama/Mississippi region, with a subsequent decrease in vessels landing in Louisiana and Texas. Changes in the number of vessels landing in each state may be influenced by factors outside of the RS-IFQ program, and these changes may include, but are not limited to, changes in markets or fishing behavior, availability of facilities, and/or catastrophic events (i.e., hurricanes, red tide events, oil spills). The expansion of the red snapper stock into the eastern Gulf has most likely also contributed to the increase in vessels over time harvesting red snapper. These vessels obtain allocation to harvest rather than discard the incidental catch of red snapper. Due to the migration of the Permits system to a new platform, updated information on landings by states is not available at this time. This information will be updated in later reports.

Table 4: Number of vessels harvesting red snapper

Year	Total RS-IFQ Vessels	% vessel overlap with GT-IFQ program[2]
2002 -06[1]	485	NA
2007	309	NA
2008	300	NA
2009	294	NA
2010	384	**91%**
2011	362	**91%**
2012	371	**94%**
2013	368	**91%**
2014	401	**90%**
2015	415	**91%**
2016	430	**89%**
2017	449	**87%**
2018	450	**91%**
2019	428	**90%**
2020	431	**90%**
2021	397	**89%**

[1] Values for 2002-2006 (pre-IFQ) are average values across this time period from the Coastal logbook records.
[2] Percentage of vessels that landed red snapper that also landed GT-IFQ species.

Account Activity

Account activity (active or inactive) can be determined through analyzing allocation and landing transactions during a year. An account is defined as active if that account has landed allocation or transferred allocation (in or out of the account) during the fishing year, while inactive accounts neither landed nor transferred allocation during the year. Accounts may be inactive due to several reasons: non-activated accounts (never accessed), shares resulting in negligible pounds for harvest or transfer (e.g., 1-5 lb), inability to harvest (e.g., vessel in dry dock), or personal events (e.g., death, medical issues). Account status is determined each year. Active accounts can be further categorized by activity type: only transferring allocation (no landing) or landing and/or transferring allocation. Some reasons why an account holder may only transfer allocation may be due to the limitation in harvest ability (e.g., no permit, vessel inoperative), related accounts (e.g., transfer allocation to related account), and/or insufficient allocation to harvest (e.g., shares resulted in only a few pounds of allocation).

The percentage of inactive accounts has decreased each year, and since 2019 has been at an all-time low of 5% (Table 5). Gulf Council discussion about inactive accounts as well as the publically listed IFQ account statuses may have contributed to the continued decrease of inactive accounts.

Table 5: Allocation accounts by activity

Year	Total	Inactive	Landing	Only Transferring
2007	596	173 (29%)	279 (47%)	144 (24%)
2008	547	168 (31%)	269 (49%)	110 (20%)
2009	530	137 (26%)	262 (49%)	131 (25%)
2010	598	122 (20%)	337 (56%)	139 (23%)
2011	589	102 (17%)	328 (56%)	159 (27%)
2012	599	94 (16%)	333 (56%)	172 (29%)
2013	598	96 (16%)	337 (56%)	165 (28%)
2014	606	74 (12%)	369 (61%)	163 (27%)
2015	635	77 (12%)	378 (60%)	180 (28%)
2016	639	67 (10%)	388 (61%)	184 (29%)
2017	639	58 (9%)	399 (62%)	182 (28%)
2018	650	64 (10%)	410 (63%)	176 (27%)
2019	623	33 (5%)	392 (63%)	198 (32%)
2020	644	34 (5%)	399 (62%)	211 (33%)
2021	625	31 (5%)	376 (60%)	218 (35%)

Throughout the entire program, the majority of accounts with allocation also land fish (47% - 63%). In 2007, only 47% of the accounts with allocation were landing red snapper; whereas, for the last eight years ~60% of the allocation accounts were landing red snapper. The percentage of accounts that are only transferring allocation has remained relatively consistent at about 30%, with a slight increase seen in recent years. However, the percentage of accounts that are only transferring allocation may be confounded by related accounts within the IFQ system. As mentioned before, participants might hold shares and the resultant allocation in one account, and transfer that to another account with a permit.

Accounts landing red snapper can be categorized as those with and without shares (Table 6). At the start of the program, 91% of the accounts with landings also held shares. The percentage of landings from accounts with shares has decreased over time. In 2021, 56% of the landings came from accounts that held shares. While this appears to show a growing disconnect between accounts with shares and those that land those shares, these data must be interpreted with caution. As mentioned previously, many accounts are related to other accounts and conversations with industry representatives have indicated that some fishermen purposely separate their shares from the account landing the allocation.

Table 6: Landings by share status

Year	With Shares		Without Shares	
2007	2,598,649	91%	265,738	9%
2008	1,958,999	88%	276,420	12%
2009	1,735,818	78%	498,196	22%
2010	2,220,185	73%	835,859	27%
2011	2,060,719	64%	1,177,616	36%
2012	2,522,817	69%	1,113,578	31%
2013	2,972,769	61%	1,935,829	39%
2014	3,035,667	61%	1,980,389	39%
2015	3,567,377	55%	2,904,884	45%
2016	3,302,781	55%	2,754,717	45%
2017	3,314,326	53%	2,972,757	47%
2018	3,355,481	53%	2,930,223	47%
2019	3,637,152	53%	3,262,073	47%
2020	3,640,837	53%	3,229,131	47%
2021	3,857,456	56%	3,036,548	44%

Accounts that only transfer allocation may or may not have shares or reef fish permits (Appendix 3.3). At the start of the program through 2015, the majority of accounts only transferring allocation held both shares and permits. The pattern changed in 2016, and has since continued, when the majority of accounts only transferring allocation shifted to those with shares but without a permit. The majority of allocation transferred typically occurred in accounts with shares and with permits for the first nine years of the program, with the only exception of 2008. Starting in 2016, there was also more allocation being transferred from accounts that held shares, but no reef fish permit, and totaled greater than 3 million pounds (mp) being transferred since 2019. Public participant accounts without shares may function as brokers by simply obtaining and transferring out allocation. The number of accounts and allocation transferred from public participant accounts without shares has been variable over time, but remain considerably lower than accounts with shares. Due to the migration of the Permits system to a new platform, updated information on permits by share status is not available at this time. This information will be updated in later reports.

Program Evaluation

Transactions and Landings

Share Transfers

A share is the percentage of the commercial quota assigned to a shareholder account that results in allocation (pounds) equivalent to the share percentage of the quota. Shares were distributed at the start of the program to participants based on landings history. Share holdings within an account can only be increased or decreased through share transfers. During the first five years of the program, a recipient account was required to have a reef fish permit to receive shares. Thereafter, the only restrictions on a share transfer was if it exceeded the share cap. Share transfers are a two-step process with the transferor initiating the transfer, and completion of the transfer occurring after the transferee accepts the transfer. There may be a delay between initiation of the transfer and final acceptance of the transfer.

Table 7: Number and volume of share transfers

Year	N	Total Shares
2007	108	10.7428
2008	42	4.8150
2009	75	6.0233
2010	79	8.4748
2011	78	5.0979
2012	81	7.5608
2013	76	4.7401
2014	91	5.5619
2015	120	15.3071
2016	93	5.8512
2017	116	8.6779
2018	98	6.4183
2019	111	4.6183
2020	151	9.6279
2021	65	9.0060

Note: N indicates the number of share transfers, total shares is the sum of all shares transferred, and the average shares indicates weighted average amount of shares transferred per transaction.

The number and volume of share transfers that occur annually are variable and show no strong pattern over time (Table 7). Since the start of the program, around 5% or more of the shares have been transferred each year. Share transfers were highest in 2015 with 120 transfers equaling 15% of the shares being transferred. Typically, in other years, the amount of shares transfers did not exceed 10%. Share transfers may be between any participant including exiting participants, new participants, or related accounts.

Allocation Transfers

Annual RS-IFQ allocation is the actual poundage of red snapper each IFQ account can use or transfer to possess or land red snapper during a given calendar year. Individual units of allocation cannot be tracked in the system (e.g., the same pounds may be transferred multiple times). Only allocation transfers between shareholder accounts were analyzed in this report, and not transfers within accounts (e.g., shareholder account to own vessel account or vice versa). A new system was created in 2010 to accommodate the GT-IFQ program. The previous system allowed for an under-representation of allocation transfers, as there were no vessel accounts and a single vessel could land under multiple shareholder accounts, thereby bypassing an allocation transfer. The current system precludes this from occurring. The increase in allocation transfers and volume in 2010 was most likely due to the change in system structure and the ability of GT-IFQ participants to receive red snapper allocation.

The number of allocation transfers has been increasing since the program began in 2007 (Table 8). Since 2011, the total amount of allocation transferred has exceeded the quota released, and has ranged between 100% and 162%. The high volume of allocation transfers results from a variety of factors including business practices, quota increases, and decreases in accounts with shares. Conversations with shareholders have indicated that allocation is sometimes transferred to another shareholder preemptively to handle possible red snapper bycatch. If that allocation is not landed, it is often transferred back to the originating shareholder, per business agreement between the shareholders. Allocation may also be transferred multiple times before being applied toward landings, which would increase the number and total allocation transferred for the program. Throughout the program's history, the median amount of allocation per transfer has been between 400 and 700 lb, while average pounds transferred are considerably higher (1,800 lb – 2,500 lb). Previous input from industry representatives has indicated that around 500 lb of allocation were often transferred to vessels that do not target red snapper to allow for any incidental or supplemental catch of red snapper on a trip.

Table 8: Number and volume of allocation transfers

Year	N	lb	Avg. lb	Median lb	% Quota
2007	808	1,686,218	2,087	671	56.5%
2008	683	1,371,100	2,007	600	59.7%
2009	843	1,539,479	1,826	500	67.0%
2010	1,719	3,065,736	1,783	500	96.1%
2011	2,155	3,639,394	1,689	500	110.3%
2012	2,551	3,741,966	1,467	400	100.8%
2013	2,752	5,762,456	2,094	500	114.0%
2014	2,860	5,549,553	1,940	500	110.0%
2015	3,387	9,254,534	2,732	700	140.9%
2016	3,682	8,537,474	2,319	500	140.0%
2017	3,701	8,297,809	2,242	500	138.2%
2018	3,702	7,966,526	2,152	500	126.2%
2019	4,542	9,666,992	2,128	600	139.3%
2020	4,372	11,268,350	2,577	600	162.4%
2021	4,393	10,950,615	2,493	700	157.8%

Quota and Landings

Adjustments in the red snapper quota can occur due to stock status change (e.g., new assessment) or management measures (e.g., reallocation between sectors). Quota increases may be applied at any time during the fishing year. Amendment 36A to the Reef Fish FMP (2018) provided NMFS the flexibility to address an anticipated decrease in commercial quota after the start of the fishing year. When such an anticipated decrease is expected, NMFS will withhold from distribution quota equal to the expected decrease. If the quota decrease is not completed before June 1, the withheld quota will be distributed to the IFQ shareholders based on shares at the time of distribution.

The start of the RS-IFQ program began with a 1.9 mp quota reduction (Table 9). This reduction was due to a stock assessment and the resultant rebuilding plan, and not due to the implementation of the IFQ program. The quota remained near this value for the next 3 years, and increased in late 2010 to just over 3.1 mp gw. The quota exceeded the pre-IFQ quota in late 2013, at 5.054 mp gw. The quota continued to increase over time (for detailed information on quota changes see Appendix 2). The quota reached over 6 mp gw in 2015. In 2019, the quota increased to nearly 7 mp gw and has remained there.

Despite considerable increases in the quota, fishermen land over 96% of the quota annually, and since 2016 land 99% of the quota (Table 9). Recent landings are close to 6.9 mp. Monthly landings average between 4% to 17% of the quota, indicating that red snapper are landed year round (Table 10). Increased proportion of landings typically occur near Lenten season (February through early April) and in the December when fishermen seek to use their remaining allocation before it expires.

Red snapper landings by state are determined based on the facility that first processed the fish. Early in the program, the majority of landings occurred at Florida facilities (Appendix 3.4). Since 2014, equally

high landings occur in both Florida and Texas. The smallest amount of landings have typically occurred in Alabama/Mississippi. Due to the migration of the Permits system to a new platform, updated information on landings by state is not available at this time. This information will be updated in later reports.

Table 9: Red snapper quota (lb gw)

Year	Jan 1 Quota	Quota Increase	Increase Date	Dec 31 Quota	Landings	Landings % of Quota
2006	4,189,189	N/A	N/A	4,189,189	4,188,290	99.9%
2007	2,297,297	689,189	June 1	2,986,486	2,867,326	96.0%
2008	2,297,297	N/A	N/A	2,297,297	2,237,480	97.4%
2009	2,297,297	N/A	N/A	2,297,297	2,237,446	97.4%
2010	2,297,297	893,694	June 2	3,190,991	3,056,044	95.8%
2011	3,190,991	109,910	May 31	3,300,901	3,238,335	98.1%
2012	3,300,901	411,712	June 29	3,712,613	3,636,395	97.9%
2013	3,712,613	174,774 1,166,667	May 29 Sept 30	5,054,054	4,908,598	97.1%
2014	5,054,054	N/A	N/A	5,054,054	5,016,056	99.2%
2015	5,054,054	1,516,216	June 1	6,570,270	6,472,261	98.5%
2016	6,097,297	N/A	N/A	6,097,297	6,057,498	99.4%
2017	6,003,604	309,009	June 7	6,312,613	6,287,083	99.6%
2018	6,312,613	N/A	N/A	6,312,613	6,285,704	99.6%
2019	6,312,613	625,225	April 4	6,937,838	6,899,225	99.4%
2020	6,937,838	N/A	N/A	6,937,838	6,869,921	99.0%
2021	6,937,838	N/A	N/A	6,937,838	6,894,004	99.3%

Table 10: Landings by month and year

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2007	103,309	330,625	278,021	281,551	181,798	233,376	225,536	198,141	219,284	187,371	296,230	332,084
2008	241,905	317,871	290,336	204,701	185,313	134,448	152,134	135,030	91,287	135,361	120,797	228,297
2009	226,559	189,520	268,819	220,336	212,850	181,401	165,968	183,851	138,731	143,212	144,406	161,793
2010	276,099	258,807	361,969	267,700	269,711	208,869	137,283	162,232	162,257	196,725	246,878	507,514
2011	239,103	322,078	380,667	265,942	296,991	229,569	205,363	263,077	251,718	229,625	195,741	358,461
2012	305,284	290,652	447,846	311,624	321,705	185,931	293,151	256,486	260,268	298,116	296,205	368,897
2013	356,544	279,295	424,268	299,044	312,069	271,257	380,482	369,519	388,064	565,583	452,067	810,406
2014	375,560	500,551	615,490	577,759	461,025	371,266	382,815	347,230	328,171	404,256	265,232	386,701
2015	429,044	419,257	639,870	426,335	516,018	545,247	509,457	616,951	502,257	526,516	560,901	780,408
2016	488,073	682,187	600,304	608,045	535,883	575,857	508,057	498,894	505,384	386,738	329,567	338,509
2017	434,970	581,363	715,346	572,068	517,730	542,505	502,241	452,744	433,030	384,331	570,959	579,796
2018	437,267	564,231	713,281	657,794	528,504	517,226	536,069	538,681	480,431	396,124	444,644	471,452
2019	526,400	531,875	657,711	673,761	615,515	495,282	521,285	581,352	519,892	492,749	561,262	722,141
2020	479,004	660,024	481,242	398,857	592,487	668,560	515,338	642,243	586,190	625,893	476,145	743,985
2021	552,971	601,836	889,334	677,274	754,291	559,756	554,177	405,175	394,558	412,064	453,497	638,916

Remaining Allocation and Overage Measure

At the end of each year, on December 31, any remaining allocation in an account expires. The percentage of accounts with remaining allocation has generally decreased over time (Table 11). Since 2010, the majority of remaining allocation occurred in active accounts. Inactive accounts with remaining allocation decreased due to several Gulf Council discussions and Amendment 36A that reclaimed shares from inactivated accounts. In 2021, the number and percentage of accounts with remaining allocation decreased to the lowest seen since the start of the program.

Table 11: Number of accounts with remaining allocation and volume by activity status

Year	Accounts	lb	Active Acct	Active lb	Inactive Acct	Inactive lb
2007	327 (55%)	122,311	154	43,768	173	78,543
2008	292 (53%)	59,515	124	9,177	168	50,338
2009	242 (46%)	61,318	105	19,638	137	41,680
2010	306 (51%)	133,104	184	79,953	122	53,151
2011	236 (40%)	65,406	134	14,663	102	50,743
2012	216 (36%)	75,626	122	20,352	94	55,274
2013	257 (43%)	148,767	161	68,957	96	79,810
2014	178 (29%)	37,223	104	9,242	74	27,981
2015	267 (42%)	97,625	190	59,831	77	37,794
2016	194 (30%)	39,447	127	24,733	67	14,717
2017	220 (34%)	27,733	162	15,930	58	11,803
2018	193 (30%)	25,681	129	13,824	64	11,857
2019	165 (26%)	34,803	131	26,326	34	8,477
2020	175 (27%)	63,540	141	55,113	34	8,427
2021	126 (20%)	74,712	95	48,168	31	26,544

An overage flexibility measure allows accounts that hold shares to land in excess of their remaining allocation once per year. This overage measure allows one of the shareholder's vessels to land 10% more allocation than was on the vessel at that point in time. Such overages are anticipated to occur because it is difficult to accurately estimate the weight of fish at sea. Overages typically occur late in the year, as there must be no allocation in the shareholder account for the overage measure to take effect, but may occur at any point in time. All overages are deducted from the shareholder's allocation in the following year. The shareholder is prevented from transferring shares equal to the allocation overage.

The total amount of landings from overages is less than 0.15% of the quota each year (Table 12). Less than 10% of the accounts with shares utilize the overage provision each year. Average amounts of overage are low, near or less than 150 lb, while median values are typically below 50 lb. The low number of accounts with overages and the low overage amounts indicate that this provision is functioning as expected. The lowest number of accounts using the overage provision occurred in 2021, with just 950 lb from overages.

Table 12: Number of accounts with overages and associated volume

Year	Acct.	Total (lb)	Average (lb)	Median (lb)
2007	35 (6%)	2,939 (0.10%)	84	11
2008	41 (7%)	2,061 (0.09%)	50	14
2009	40 (8%)	3,432 (0.15%)	86	19
2010	14 (2%)	655 (0.02%)	47	26
2011	29 (5%)	3,262 (0.10%)	112	14
2012	29 (5%)	1,715 (0.05%)	59	18
2013	36 (6%)	4,741 (0.09%)	132	26
2014	23 (4%)	2,828 (0.06%)	123	33
2015	18 (3%)	2,279 (0.03%)	127	33
2016	29 (5%)	1,532 (0.03%)	53	18
2017	25 (4%)	3,222 (0.05%)	129	33
2018	24 (4%)	1,146 (0.02%)	48	25
2019	16 (3%)	1,708 (0.02%)	107	47
2020	16 (2%)	2,467 (0.04%)	154	76
2021	9 (1%)	950 (0.02%)	106	9

Effort and Discards

Effort

Effort for all trips landing red snapper was determined using the Southeast Fisheries Science Center's (SEFSC) coastal logbook records for 2002-2021.[6] The number of trips, average trip length, the average red snapper landings per trip, and average total landings per trip are analyzed by gear (Table 13). Vertical line (VL) gear includes all types of vertical gear (e.g., hand lines, bandit reels, hook and line, etc.), as well as miscellaneous gear (e.g., spearfishing). The longline gear category (LL) does not include any other gear. Differences in effort may be influenced by gear and region.

Red snapper is part of the reef fish complex that contains both GT-IFQ species and other non-IFQ species. Vessels typically harvest both red snapper and other species on the same trip. The RS-IFQ program eliminated the mini-seasons and derby fishing conditions, as well as the trip limits for red snapper. The number of trips and average pounds of red snapper harvested per trip are consistently greater on trips using VL gear than LL gear (Table 13). The number of VL trips increased in 2010 when the GT-IFQ program began, and increased again in 2014 through 2017, although average days per trip remained similar. Generally, for trips using VL gear, red snapper comprises nearly half of the total landings. The average pounds per trip of red snapper increased gradually over time. These increases coincide with overall increases in red snapper quota available for harvest. In 2020 and 2021, the average noticeably increased to 1,737 and 1,782 lb red snapper/trip, respectively, for trips using VL gear. Trips using VL gear are typically around 4 days in length, and has remained constant over time.

[6] SEFSC Coastal Logbook accessed 9/13/2022

Trips taken using LL gear average longer trip lengths of 10-12 days and corresponding have less trips per year. The average amount of red snapper landed per LL gear trips is typically less than 25% of the average total landings, but has increased slightly over time.

Differences between pre-IFQ and post-IFQ may be influenced by a variety of factors both directly and indirectly related to the IFQ programs, such as elimination of trip limits and short fishing seasons, increases in quota, extension of the red snapper into the eastern Gulf, changes in fishermen targeting behavior, and regulations on other reef fish species.

Table 13: Effort harvesting red snapper

Fleet	Year	Trips[2]	Avg. days/trip	Avg. RS lb/trip	Avg. Total Landing lb/trip
Vertical Line[1]	2002-2006 average	4,595	2.0	844	1,273
	2007	2,454	4.1	1,055	2,261
	2008	2,148	3.9	971	2,397
	2009	2,251	3.8	936	2,368
	2010	2,774	4.0	1,021	2,070
	2011	3,170	3.9	942	2,149
	2012	3,283	4.1	1,041	2,320
	2013	3,187	4.1	1,359	2,367
	2014	3,511	4.0	1,302	2,333
	2015	3,810	3.7	1,548	2,381
	2016	4,103	3.6	1,349	2,155
	2017	4,228	3.6	1,376	2,099
	2018	3,945	3.4	1,446	2,093
	2019	4,075	3.1	1,509	2,112
	2020	3,530	3.3	1,737	2,325
	2021	3,264	3.3	1,782	2,480
Longline	2002-2006 average	276	6.3	902	3,658
	2007	121	9.4	1,448	4,710
	2008	126	9.3	616	5,434
	2009	78	10.1	734	6,211
	2010	191	10.6	510	5,193
	2011	216	10.5	399	7,141
	2012	174	9.7	323	6,979
	2013	272	10.7	506	7,538
	2014	281	11.4	542	8,385
	2015	428	11.7	600	6,748
	2016	430	11.6	517	6,945
	2017	404	12.4	530	5,655
	2018	420	12.0	777	5,077
	2019	547	11.6	938	4,775
	2020	558	10.2	829	4,593
	2021	530	10.5	1,117	5,678

[1] Vertical line includes spearfishing, buoy, and other gear types.
[2] The total number of trips may be less than the sum across gear because some vessels may use multiple gear types.
Data from the SEFSC Coastal Logbook records were available 9/13/2022 and therefore may not contain complete 2021 data.

The ratio of the red snapper to other reef fish for VL gear trips changed after implementation of the RS-IFQ program (Table 14). Prior to the RS-IFQ program, red snapper was the principal species caught (76-100% of total catch) for VL gear trips, and this was driven by the mini red snapper seasons and trip limit regulations. After the RS-IFQ program began, only 26-42% of the VL trips had red snapper as 76% or more of the catch, as fishermen spread out the landings of red snapper throughout the year. Since the initiation of the RS-IFQ program, there are more trips (18-45% of trips annually) that harvest a small ratio of red snapper to other reef fish (25% red snapper or less), indicating that for these trips red snapper is not a targeted species, or are targeted for only a small portion of the trip. The change in the ratios over time indicates a change in catch composition and/or fishermen behavior due to the RS-IFQ program. This pattern also implies that there are different classes of fishermen harvesting red snapper: those that target red snapper (≥ 76% of landings), those that supplement landings with red snapper (26-75% of landings), and those that incidentally land red snapper (≤ 25% of landings).

For trips with LL gear, 50% of the pre-IFQ trips had red snapper landings make up 25% or less of total landings, and only 37% of the trips had red snapper make up 76-100% of the landed catch. After the RS-IFQ program, nearly all trips (67-98%) had red snapper make up 25% or less of the entire trip's landed catch.

Table 14: Percentage of trips by ratio of red snapper landed to total reef fish landed.

Fleet	Year	0-25%	26-50%	51-75%	76-100%
Vertical Line[1]	2002-2006 average	15.6	9.8	14.5	60.1
	2007	33.8	21.2	13.3	31.7
	2008	41.0	20.5	10.9	27.6
	2009	40.1	18.7	11.4	29.8
	2010	37.7	20.7	12.4	29.2
	2011	42.8	20.2	10.6	26.4
	2012	44.9	19.0	9.5	26.6
	2013	34.7	21.0	11.1	33.2
	2014	38.1	17.9	11.2	32.7
	2015	27.2	18.0	12.8	42.0
	2016	33.0	19.7	10.9	36.4
	2017	27.3	20.0	13.7	39.0
	2018	21.1	23.6	16.9	38.4
	2019	20.3	20.4	17.9	41.4
	2020	19.0	20.3	19.2	41.5
	2021	21.8	20.4	18.0	39.9
Longline	2002-2006 average	54.2	4.6	5.6	35.6
	2007	67.8	13.2	6.6	12.4
	2008	89.7	8.7	1.6	0.0
	2009	89.7	7.7	1.3	1.3
	2010	93.7	3.7	2.1	0.5
	2011	98.1	1.4	0.5	0.0
	2012	97.1	1.1	0.6	1.1
	2013	96.0	3.3	0.7	0.0
	2014	97.2	2.5	0.0	0.4
	2015	93.5	5.4	1.2	0.0
	2016	97.2	2.1	0.5	0.2
	2017	91.8	6.7	1.5	0.0
	2018	78.1	17.6	3.8	0.5
	2019	67.8	27.1	4.2	0.9
	2020	74.2	22.0	3.0	0.7
	2021	73.4	20.6	5.3	0.8

[1] Vertical line includes spearfishing, buoy, and other gear types.
Data from the SEFSC Coastal Logbook records were available 9/13/2022 and therefore may not contain complete 2021 data.

Using the data from the SEFSC Coastal Logbook, the average pounds/trip of red snapper was calculated for each vessel. Vessels were sorted into three categories based on each vessel's average landings per trip: ≤ 500 lb/trip, between 500-2,000[7] lb/trip, and > 2,000 lb/trip (Table 15). Prior to the start of the IFQ program, 74% of the vessels landed 500 lb/trip or less, while the remainder landed between 500 to 2,000 lb/trip. Vessels with a Class 1 license could not land more than 2,000 lb/trip and vessels with a Class 2 license could not land more than 200 lb/trip due to trip limit restrictions that began in 1992 (Appendix 2). This trip limit restriction was removed with the implementation of the RS-IFQ program. With the flexibility of an IFQ program, a small percentage of vessels (11-15%) began landing ≥ 2,000

[7] This range was chosen to match the Class 1 licenses prior to the RS-IFQ program that had a trip limit of 2,000 lb. The 500 lb lower limit was chosen due to conversations with fishermen indicating that this is a minimum amount transferred for non-targeted red snapper trips.

lb/trip. The majority of vessels (49-72%) still landed ≤ 500 lb/trip. Vessels harvesting ≤ 500 lb of red snapper per trip may be operated by either small shareholders or those that do not target red snapper. Instead, these vessels may catch red snapper as supplement harvest when targeting other reef fishes or as the retention of incidentally caught red snapper. The vessels that land >2,000 lb/trip are most likely targeting red snapper.

Table 15: Vessel percentage by average pounds/trip of red snapper

Year	<= 500 lb/trip	501-2000 lb/trip	2001+ lb/trip
2002 -06 average	74%	26%	0.2%
2007	65%	22%	13%
2008	69%	21%	11%
2009	68%	21%	11%
2010	67%	21%	13%
2011	67%	20%	12%
2012	72%	16%	13%
2013	59%	26%	14%
2014	64%	22%	13%
2015	59%	27%	14%
2016	65%	22%	12%
2017	62%	27%	12%
2018	59%	28%	13%
2019	50%	36%	14%
2020	51%	35%	14%
2021	49%	37%	14%

Data from the SEFSC Coastal Logbook records were available 9/13/2022 and therefore may not contain complete 2021 data.

Discard Information

Table 16: Reef fish observer trips and trips catching red snapper[1]

Year	Combined		LL		VL[2]	
	Total	RS	Total	RS	Total	RS
2007	111	88%	11	73%	101	89%
2008	62	78%	5	80%	58	78%
2009	83	80%	33	79%	50	80%
2010	136	81%	54	80%	82	82%
2011	194	85%	81	93%	113	79%
2012	280	84%	19	89%	262	84%
2013	220	73%	84	85%	137	66%
2014	147	76%	27	85%	119	74%
2015	241	76%	26	88%	215	75%
2016	212	80%	55	91%	156	76%
2017	85	81%	14	86%	71	80%
2018	45	89%	4	100%	42	88%
2019	36	94%	5	80%	32	97%
2020	26	92%	NA	NA	NA	NA
2021	52	90%	10	70%	42	95%

[1] Data from the Reef Fish Observer Program accessed as of 5/27/2022.
[2] Vertical line includes buoy and spearfishing trips.
Note: Insufficient data were available to include 2020 due to the pandemic.

Data from the SEFSC reef fish observer program (RFOP) were used to evaluate changes in red snapper discards. Data were used from only those trips selected as part of the normal observer selection process; therefore, no special project trips were included. Data from the RFOP were categorized by gear: longline (LL) and vertical line (VL; primarily hand lines and bandit reels, but also includes buoy and spearfishing effort). The number of RFOP trips sampled has been variable over time and generally has been decreasing in number in the more recent years of the program compared to the initial years (Table 16). A larger percentage of RFOP coverage shifted towards vessels using LL gear beginning in 2009 and coverage levels have fluctuated between gear every year since. Insufficient data were available to include 2020 data in this report due to the pandemic, but surveys fortunately resumed in 2021.

RFOP observers record disposition status as: landed/kept, discarded alive, discarded dead, and unknown. These disposition statuses were used to calculate discard ratios by gear and region. The discard ratio is the number of discarded fish for each fish landed. Values greater than one indicated that more fish are being discarded than kept. Discard ratios may be influenced by the amount of allocation available to the observed vessels. Discussions at several stock assessments indicated that fishermen behavior, particularly with regard to discards, varies with the amount of allocation available both during a trip, throughout the year, and the targeted species. From 1995 through May 1, 2007, the minimum size limit for red snapper was 15 inches total length (TL; Appendix 2). The current minimum size limit of 13 inches TL was established on May 2, 2007.

Red snapper are caught on the majority (73% to 94%) of trips sampled each year by the RFOP. Most observed trips fished with VL gear rather than LL gear. In recent years, red snapper were typically caught on more than 70% of the LL and VL observed trips. Despite the high number of trips that catch red snapper, typically 50% or less of sets on LL observed trips and less than 70% of sets on VL observed trips target red snapper (Appendix 4).

Table 17: Red snapper discard ratios (discarded:landed) [1]

Year	Gear	
	LL	VL
2007	22.67	0.43
2008	0.41	0.36
2009	2.02	0.85
2010	1.45	0.54
2011	2.16	0.33
2012	3.62	0.28
2013	1.89	0.13
2014	1.21	0.10
2015	0.62	0.10
2016	0.70	0.12
2017	1.01	0.21
2018	0.45	0.14
2019	0.01	0.09
2020	NA	NA
2021	0.33	0.17

[1] Data from the Reef Fish Observer Program accessed as of 5/27/2022.
Note: Insufficient data were available to include 2020 due to the pandemic.

The ratio of discarded to landed red snapper showed distinct differences between gear types (Table 17). Discard rates for VL trips have remained low since 2013, indicating allocation is moving to needed vessels. The red snapper discard ratio is typically larger in the LL fleet (0.01 - 22.67) relative to the VL fleet (0.09 – 0.85). This greater discard ratio in the LL fleet may have resulted from insufficient allocation available to land red snapper as a bycatch species. Discard rates in LL fleets have generally decreased since 2007, and may be due to the increased amount of quota available over time.

Discarded red snapper were analyzed by length, and revealed differences by harvest gear (Figure 1). Length information obtained by the RFOP was converted to maximum TL using conversion factors found in the SEDAR 31 update. Length frequencies were calculated by year and gear and aggregated every two years into one inch bins (e.g., if $1 \leq \text{length} < 2$ then length = 1) for each disposition of discarded or landed. For VL gear, few red snapper were discarded above the minimum size limit except for 2009 through 2012. Discards in these years were most likely due to low or no allocation available to the vessel, and fall across a variety of sizes, not just those close to the minimum size limit. Few VL discards were observed in recent years, most likely due to the increased red snapper quota. VL vessels target red snapper in the 14 to 18 inch TL size bins. Longline gear trips had a large number of red snapper above the minimum size limit being discarded, as this gear does not often catch red snapper below the minimum size limit. All discards are assumed to be due to a lack of allocation or price

differentials based on size (e.g., retaining more valuable market sized categories). LL trips capture larger red snapper between the 20 to 30 inch TL size bins. In more recent years, this size bin has begun to expand to 32 inch TL.

Table 18: Discard mortality percent by gear

Year	Gear	
	LL	VL
2007	33%	28%
2008	74%	44%
2009	26%	16%
2010	23%	26%
2011	15%	28%
2012	15%	21%
2013	23%	24%
2014	22%	27%
2015	35%	31%
2016	33%	25%
2017	52%	21%
2018	43%	33%
2019	100%	22%
2020	NA	NA
2021	9%	28%

Data from the Reef Fish Observer Program accessed as of 5/27/2022.
Note: Insufficient data were available to include 2020 due to the pandemic.

The RFOP determines immediate discard mortality through surface observations of individual fish after discard. Some fish were recorded with an unknown discarded disposition due to the difficulty in observing discards attributed to poor lighting, high seas, or other factors. Short-term survival was assumed if the fish rapidly or slowly was able to descend and immediate mortality was classified when the fish floated on the surface or floated on the surface then slowly descended (not swimming). Individual fish recorded as dead upon arrival were included in the analyses since the goal was to examine total discard mortality. The immediate mortality percentage was determined using the number discarded dead out of those released as either alive or dead. Confidence intervals were calculated using the score interval with continuity correction. Interpretation of the immediate discard mortality should be taken with caution, as it is based on a small sample size and may not be indicative of the fishery as a whole. Longline gear had higher mortality rates compared to vertical line in 2008, but in the majority of more recent years, the confidence intervals overlapped (Table 18; Figure 2).

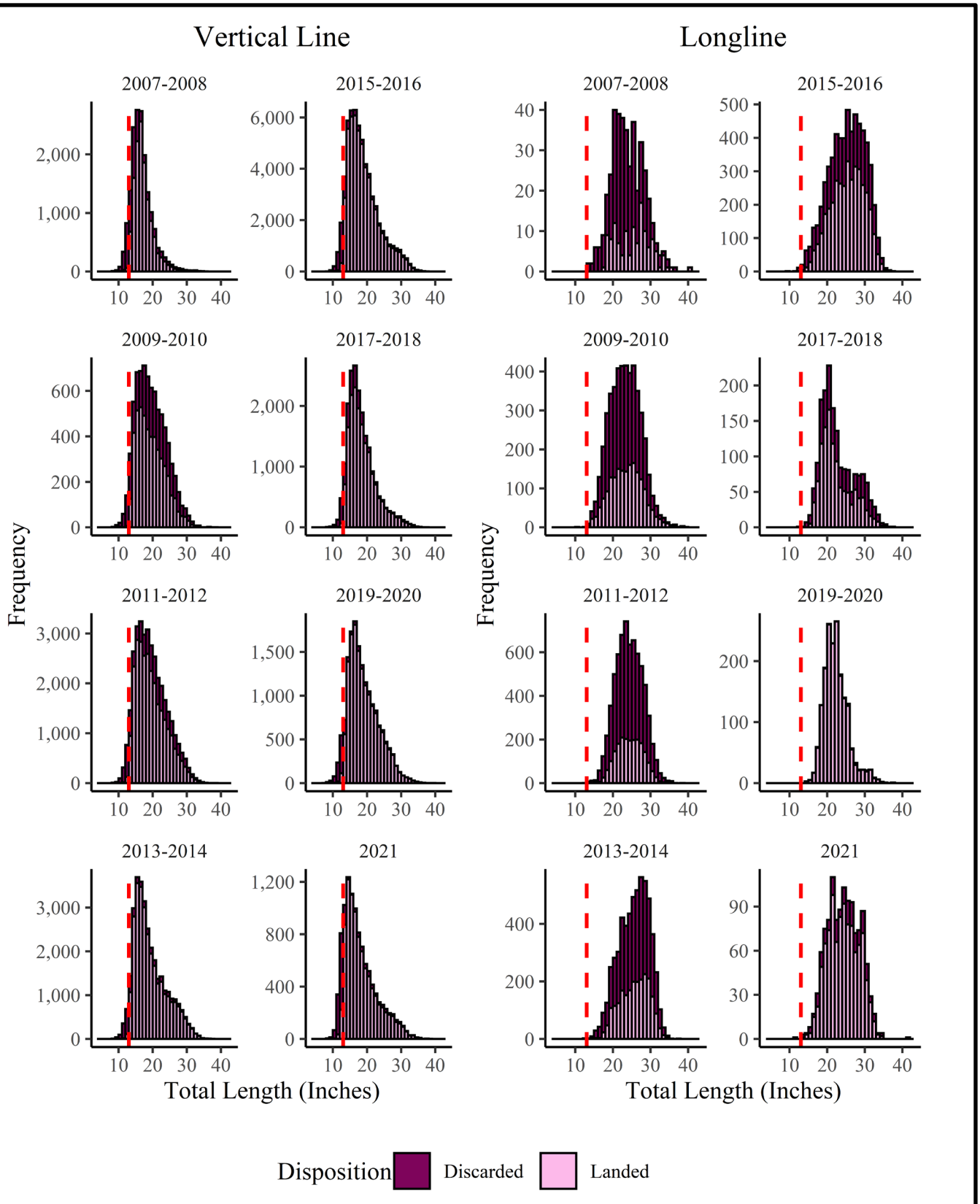

Figure 1. Red Snapper size frequency distribution by gear
Data from the Reef Fish Observer Program accessed as of 5/27/2022.

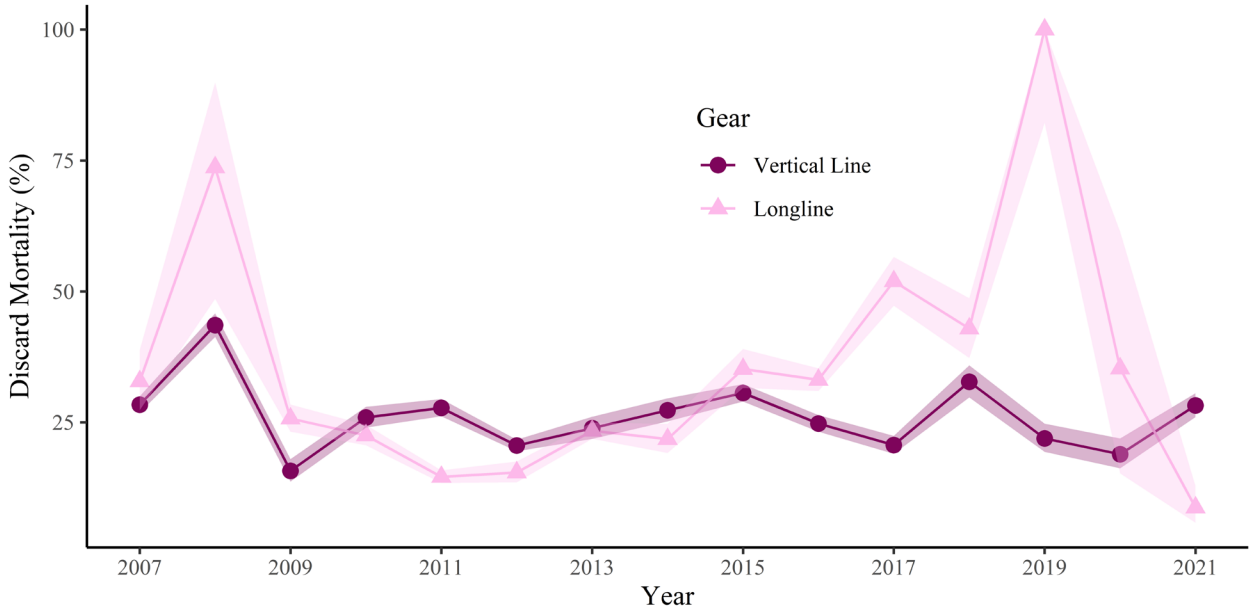

Figure 2. Immediate discard mortality by gear
Data from the Reef Fish Observer Program accessed as of 5/27/2022.

Price Information

Share, allocation, and ex-vessel price information is important for evaluating the performance of catch share programs. Economic theory suggests that when fishermen no longer have to engage in a "race for fish," their profits will likely increase as they adjust their operations to take advantage of weather and market conditions. The elimination of "derby" fishing is expected to increase market stability. As more efficient and profitable operators are willing to pay higher prices to purchase shares and allocation, share and allocation prices increase, which may result in increased profits. Theoretically, allocation prices should reflect the expected annual profit from harvesting one unit of quota; whereas, share prices should reflect the net present value of the expected profit from harvesting one unit of quota in the long-run. Dockside or ex-vessel prices are anticipated to increase as well because fishermen no longer have to race to fish, which in turn should reduce market gluts and generate higher quality products. All inflation-adjusted values in the analysis below were calculated based on the Gross Domestic Product (GDP) deflator.[8] The GDP deflator was chosen as the measure of inflation because it includes prices for all domestically produced goods and services and so is broader than other indexes.

Share Transfer Prices

Reporting of share transfer value was not required until mid-2010, when a minimum transfer value of $0.01 was required for all share transfers. Each year, there are share transactions that have either under-reported or missing share transfer value information. Submitted share transfer values were converted to

[8] http://www.bea.gov/national/index.htm#gdp

a share price per equivalent pound[9] based on the quota at the time of transfer. Transactions that reported low or no value could be due to, but not limited to, any of the following: entering a price per pound equivalent instead of transaction value, reluctance to enter transfer value, gifts, transferring to a related account, part of a package deal (e.g., sale of shares with a permit, vessel, and/or other equipment), and/or unrecorded bartering of shares within the GT-IFQ or RS-IFQ programs. This misreporting of value led to a 2012-2013 mail survey to participants about share value and prices. The survey was mailed to both the transferor and transferee for all past transfers where information was incomplete or identified as an outlier value. Participants were asked to verify or correct the value and price information and select one of seven share transfer reasons: "Barter trade for allocation," "Barter trade for shares," "Gift," "Transfer to a related account," "Sale to another shareholder," "Package deal," and "No comment." Beginning in 2013, a submission of one of these share transfer reasons was required to complete every share transfer to better monitor the performance of the program (Appendix 5).

The majority of share transfers typically have either "Sale to another shareholder" or "No comment" selected as the transfer reason (Appendix 5). The greatest volume of shares are generally associated with the transfer reason "Sale to another shareholder," followed closely by "No comment" and "Transfer to a related account." Discussion at the Gulf Council's Advisory Panels indicate that transfers to related accounts may be interpreted differently by participants. The intent was to identify transfers between accounts with a similar entity, but industry also interpreted related accounts to include business relationships.

For share price analysis, the data were limited to share transfers with representative price per pound equivalents (Appendix 6). Confusion between the price and value can still be found in the data, with participants entering the price per pound instead of the total value in the system. For example, a share transfer equivalent to 33 lb with a total value of $30 was entered resulting in a price per pound less than a dollar. The value of $30 is most likely the price per pound and not the total value. Adjustments were made to the analyzed dataset to account for these types of errors. This error type was more often found in the early years of the program. From 2013 onward, the system started collecting price data from the transferee of the share transfer in addition to the transferor, and sometimes these prices did not match. When the prices differed between the transferor and transferee, a final price was determined based on the more representative transfer value entered. For example, if the transferor enters $30 for a share transfer equivalent to 33 lb and the transferee enters $1000 for the same transfer, the $1000 is the value used in analysis, as it is assumed that the $30 was a price per pound instead of total value. For the share price analysis, the data were limited to share transfers with price per pound equivalents that were greater than $9 (all years) and less than $36 (2007-2011), less than $50 (2012 – 2013), and less than $60 (2014 onward). All values were weighted by the pounds transferred instead of on a transactional basis.

Submission of representative share prices continues to remain a problem (Table 19). The percent of representative share prices in recent years is between 50% and 77%; however, the percentage of representative prices has improved since 2013. Prior to 2013 representative prices were generally under

[9] A price per pound equivalent is the share percentage that would equal one pound for that particular period. The exact share percentage that is equivalent to one pound depends on the total commercial quota and will change as the quota changes from year to year or within a year for any quota increases.

50% of all submitted prices. The number of prices that are not representative is typically similar to the number of transactions where no comment was selected as the transfer reason. This may indicate a reluctance within the industry to report accurate share prices. The average inflation-adjusted price per equivalent pound for shares increased over time from $14/lb in 2007 and 2008, to prices near $35 - $45/lb since 2012.

Table 19: Number of representative share transfers with prices

Year	N[1]	% of all transfers	Avg. price/lb[1]	Median price/lb[1]	Inflation-adj. avg. price/lb[2]
2007	21	19%	$11.04	$12.51	$14.11
2008	22	52%	$11.56	$10.50	$14.49
2009	38	51%	$20.64	$20.00	$25.71
2010	36	46%	$19.84	$21.50	$24.42
2011	28	36%	$28.77	$26.03	$34.69
2012	36	44%	$34.75	$35.00	$41.13
2013	47	62%	$36.77	$42.00	$42.78
2014	47	52%	$34.37	$34.00	$39.25
2015	62	52%	$33.62	$35.43	$38.01
2016	58	62%	$30.66	$35.00	$34.32
2017	84	72%	$34.80	$35.75	$38.23
2018	53	54%	$36.26	$36.50	$38.91
2019	80	72%	$38.30	$40.00	$40.37
2020	116	77%	$39.61	$39.98	$41.26
2021	42	65%	$45.37	$45.00	$45.37

[1] Only used share transactions between $9 and $36/lb equivalent from 2007 - 2011, $9 - $50/lb equivalent from 2012 - 2013, and $12 -$60/lb for 2014 and onward.

[2] Inflation adjustments from: http://www.bea.gov/ with 2021 as the base year using the GDP deflator.

Allocation Transfer Prices

Allocation transfer prices are collected on a per pound basis, but were not required to complete a transfer until late 2020. Each year, allocation transfers were either missing price information or had under-reported price information (e.g., $0.01/lb). Transfers that had low or no price information may be due to, but not limited to, any of the following: reluctance to enter price information, gift, transferring to a related account, part of package deal, or bartering for shares and/or allocation in the GT-IFQ program. To better evaluate the program's performance, the selection of one of seven allocation transfer reasons was required for every allocation transfer beginning in 2013. Allocation transfer reasons that could be selected were "Barter trade for allocation," "Barter trade for shares," "Gift," "Transfer to a related account," "Sale to another shareholder," "Package Deal," and "No comment" (Appendix 7).

Forty percent or more of the allocation transactions each year had no or under-reported allocation prices (e.g., $0.01/lb). Since the implementation of requiring a transfer price with every allocation transfer in 2020, however, there has been an improvement in the percent of representative prices reported. In 2021, only 26% of allocation transfers had an under-reported price. The majority of allocation transfers most often had "No comment" (50 - 70%) selected as the allocation transfer reason, indicating a reluctance

from the industry to submit accurate prices (Appendix 7). While not all transfers are of equal amounts, a similar pattern was found when looking at the total amount of allocation transferred.

For the allocation price analysis, the data were limited to representative prices, which were between $1.20/lb and $5.00/lb for 2007-2009, $1.80/lb and $5.00/lb for 2010-2014, $1.80/lb and $5.50/lb for 2015-2016, and more recently, $1.80/lb and $9.00/lb (2017 onward; Appendix 6). Unadjusted inflation prices were used when determining outlier price values each year, whereas inflation-adjusted average values are compared across time. As the pounds per allocation transfer are variable, all statistics were computed using a weighted pound model and not on a transactional basis.

In the early years of the program, representative prices were between 19% and 39% of all submitted prices. There was some improvement between 2014 and 2020 thanks to outreach efforts, with roughly 50 - 60% of the allocation prices containing representative prices (Table 20). The implementation of requiring allocation transfer prices with each transfer in late 2020 further improved the percentage of representative prices reported to 74%. There is still a need to improve reported allocation prices. Average allocation inflation-adjusted price per pound has steadily increased, from just under $2.50/lb to just over $3.80/lb. The median value in recent years has been slightly greater than the average value. When median values are greater than average values, this indicates that there are more values on the lower end of the distribution. These lower values may be due to fluctuations in allocation price across regions or during the year.

Average allocation prices also vary by month (Appendix 8). Allocation prices are often tied to the amount of quota and the amount of remaining quota. Therefore, late releases of quota (e.g., in the third or fourth quarter) often result in decreased allocation prices. Allocation prices tend to increase towards the end of the year as the majority of the allocation has been used earlier in the year, but demand for allocation may still exist.

Table 20: Number of representative allocation transfers and prices

Year	N[1]	% of all transfers	Avg. price/lb	Median price/lb	Inflation-adj. avg. price/lb[2]
2007	155	19%	$1.97	$2.00	$2.52
2008	152	22%	$2.31	$2.25	$2.90
2009	283	34%	$2.69	$2.75	$3.35
2010	344	20%	$2.88	$3.00	$3.55
2011	476	22%	$2.96	$3.00	$3.57
2012	781	31%	$3.00	$3.00	$3.55
2013	1,068	39%	$2.98	$3.00	$3.46
2014	1,382	48%	$3.03	$3.00	$3.46
2015	1,562	46%	$3.09	$3.25	$3.49
2016	1,891	51%	$3.21	$3.25	$3.60
2017	1,983	54%	$3.32	$3.35	$3.65
2018	2,052	55%	$3.40	$3.50	$3.65
2019	2,678	59%	$3.69	$3.75	$3.88
2020	2,639	60%	$3.65	$3.75	$3.80
2021	3,261	74%	$3.81	$4.00	$3.81

[1] Number of allocation transactions that had prices between $1.20/lb and $5.00/lb for 2007-2009, $1.80/lb and $5.00/lb for 2010-2014, $1.80 - $5.50 for 2015-2016, and $1.80 - $9.00 for 2017 onward.
[2] Inflation adjustments from: http://www.bea.gov/ with 2021 as the base year using the GDP deflator.

Ex-vessel Prices

Ex-vessel prices, the price paid to the vessel operator by a dealer per pound of fish, are required to complete a landing transaction, with a minimum value of $0.01/lb. Ex-vessel prices may differ by region, season, and year. Ex-vessel prices may be under-reported for a variety of reasons: to minimize cost recovery fees and/or capital gains, contractual arrangements between dealers and shareholders, and deductions for transferred allocation, goods (e.g., bait, ice, fuel), and/or services (e.g., repairs, machinery replacement). In June 2011, regulations modified the definition for ex-vessel price and explicitly prohibited the deduction of allocation, goods, and/or services when reporting the ex-vessel price. For ex-vessel price analysis, the data were limited to representative ex-vessel prices (Appendix 6). All statistics were weighted by pounds rather than on a transactional basis. All ex-vessel prices prior to the start of the program were calculated using the SEFSC Accumulated Landings System (ALS) database.[10] After the start of the RS-IFQ program, ex-vessel prices are reported to both the ALS and RS-IFQ systems, but IFQ prices are used in this analysis.

Ex-vessel price may be influenced by the amount of quota, demand (local, Gulf-wide, or the Southeast region), landings, and local economic differences. Prior to the RS-IFQ program, red snapper ex-vessel prices varied year to year (Figure 3), with ex-vessel prices below $3.00/lb. The majority (70 - 90%) of ex-vessel prices submitted were representative of the industry (Table 21). After adjusting for inflation, the average ex-vessel price increased from 2007 through 2019. The average price decreased be nearly $0.30/lb in 2020 due to the pandemic, but has since begun to increase slightly again. The average ex-vessel price has stayed near or above $5.00/lb since 2012, which has been roughly 1.5 times greater or

[10] SEFSC Accumulated Landings System accessed on 3/29/2022.

more than the pre-RS-IFQ ex-vessel prices (Figure 3). Similar to the allocation prices, the median value was slightly greater than the average value indicating a higher distribution of lower ex-vessel prices. The lower ex-vessel prices are most likely influenced by time and space.

Table 21: Number of representative ex-vessel transactions and prices ($/lb)

Year	N[1]	% of all trans.	Avg.	Median	Inflation-adj. avg.[2]
Pre-IFQ[3]	-	-	$2.81	$2.83	$3.91
2007	2,455	92%	$3.74	$3.75	$4.69
2008	2,023	85%	$4.06	$4.25	$5.06
2009	1,963	79%	$4.13	$4.25	$5.08
2010	2,319	71%	$4.17	$4.25	$5.13
2011	2,985	77%	$4.26	$4.25	$5.14
2012	3,319	84%	$4.44	$4.50	$5.26
2013	3,716	90%	$4.46	$4.75	$5.19
2014	3,660	84%	$4.75	$5.00	$5.42
2015	4,045	84%	$4.83	$5.00	$5.46
2016	4,428	84%	$4.87	$5.00	$5.45
2017	4,518	86%	$4.97	$5.00	$5.46
2018	4,242	84%	$5.10	$5.20	$5.47
2019	4,397	82%	$5.28	$5.40	$5.57
2020	4,042	84%	$5.07	$5.10	$5.28
2021	3,728	81%	$5.35	$5.50	$5.35

[1] Number of reasonable ex-vessel transactions (see Appendix 6).
[2] Inflation adjustments from: http://www.bea.gov/ with 2021 as the base year using the GDP deflator.
[3] Pre-IFQ averages are from 2002-2006.

After the start of the RS-IFQ program, there was less monthly variation in red snapper ex-vessel prices, with the greatest decrease in prices occurring late in November 2013 (Table 22). This decrease was most likely due to the large quota increase of 1.16 mp late in the year. Ex-vessel prices typically decrease when a large amount of quota is released late during the season or at the end of the year when fishermen seek to use their remaining allocation before it expires.

Average monthly ex-vessel prices were between $4.50/lb and $5.25/lb for 2007 through 2013. Prices then increased up in 2014 through 2019 to between $5.28/lb and $5.57/lb (Table 22). The lowest value in recent years occurred in 2020 and was related to the pandemic.

Red snapper ex-vessel prices vary within regions (Appendix 3.5). Typically, the greatest ex-vessel prices occur in Florida. In the early years of the program (2007-2016), the lower ex-vessel prices occurred in Alabama/Mississippi and in later years in Texas. One goal of the RS-IFQ program was to create greater market stability. The consistent prices in recent years shows progress towards this goal. Due to the migration of the Permits system, updated information on ex-vessel prices by state is not available at this time. This information will be updated in later reports.

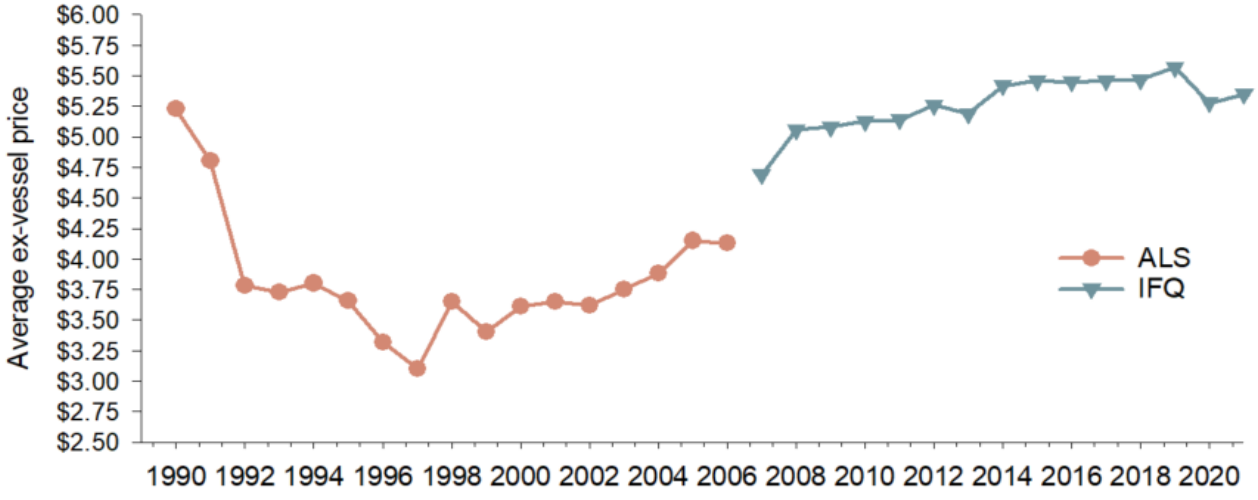

Figure 3. Average annual inflation adjusted ex-vessel price
Data source: SEFSC ALS records as of 3/29/2022.

Table 22: Average monthly ex-vessel prices by year[1]

Month	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Jan	$4.73	$4.94	$5.07	$5.17	$4.82	$5.07	$5.43	$5.20	$5.46	$5.49	$5.46	$5.48	$5.60	$5.64	$5.22
Feb	$4.66	$4.98	$5.03	$5.16	$5.16	$5.03	$5.29	$5.39	$5.56	$5.38	$5.42	$5.46	$5.53	$5.61	$5.14
Mar	$4.70	$5.04	$5.11	$5.23	$5.00	$5.16	$5.34	$5.41	$5.57	$5.41	$5.46	$5.35	$5.48	$5.35	$5.10
Apr	$4.83	$5.19	$5.06	$5.35	$5.03	$5.23	$5.47	$5.36	$5.54	$5.41	$5.44	$5.41	$5.50	$4.80	$5.19
May	$4.84	$5.19	$5.00	$5.24	$5.11	$5.30	$5.53	$5.36	$5.55	$5.43	$5.38	$5.33	$5.48	$5.07	$5.19
Jun	$4.83	$5.23	$5.17	$5.02	$5.00	$5.36	$5.51	$5.48	$5.55	$5.46	$5.48	$5.44	$5.42	$5.10	$5.36
Jul	$4.75	$5.18	$5.12	$5.24	$5.26	$5.41	$5.62	$5.52	$5.57	$5.49	$5.48	$5.56	$5.62	$5.38	$5.50
Aug	$4.88	$5.28	$5.14	$5.31	$5.34	$5.46	$5.63	$5.48	$5.54	$5.47	$5.47	$5.58	$5.67	$5.35	$5.56
Sept	$4.82	$5.23	$5.32	$5.29	$5.20	$5.40	$5.61	$5.50	$5.39	$5.52	$5.51	$5.55	$5.64	$5.39	$5.54
Oct	$4.89	$5.20	$5.24	$5.22	$5.23	$5.37	$5.18	$5.52	$5.48	$5.51	$5.51	$5.55	$5.64	$5.39	$5.54
Nov	$4.89	$5.08	$5.32	$5.23	$5.38	$5.27	$4.46	$5.63	$5.35	$5.51	$5.53	$5.58	$5.67	$5.44	$5.56
Dec	$4.66	$4.93	$5.28	$4.63	$5.16	$5.20	$4.36	$5.41	$5.10	$5.40	$5.44	$5.58	$5.53	$5.43	$5.69

[1]Inflation adjustments from: http://www.bea.gov/ with 2021 as the base year using the GDP deflator.

Price Ratios

Ratios of allocation prices to share prices and allocation prices to ex-vessel prices are commonly used as indicators of economic performance. These ratios provide information about the implicit discount rate of the quota market. Discount rates indicate the value of current dollars to future dollars. A high discount rate implies that current dollars may be worth more than future dollars. In general, decreasing discount rates indicate that fishermen have longer planning and investment horizons because the perceived uncertainty about future returns lessens. Red snapper allocation price to share price ratios have remained very similar since 2011 with allocation prices being 8-10% of the share price (Table 23) compared to 22-24% at the start of the program. This change suggests that fishermen are less uncertain about the RS-IFQ program with respect to share prices and that this certainty has stabilized since 2011. The allocation price to ex-vessel price ratios have been gradually increasing over time. At the start of the program (2007-2008), the red snapper allocation prices was 54-57% of ex-vessel price, but increased over time to between 64% and 72%. The greatest ratios occurred in 2019 through 2021, when allocation price was 70%-72% of ex-vessel price. The long-term change in allocation to ex-vessel ratio suggests that fishermen have been successful at maximizing profits from the commercial red snapper quota and have an increased confidence in the program. These ratios are also influenced by the number of representative allocation prices over time. Ratios in the early years of the program differ from ratios seen in later years of the program and is likely due to a lower percentage of representative prices seen during those earlier years. When the program first began, RS-IFQ participants could bypass the allocation transfers process and associated prices were not captured (see Allocation Transfers section).

Table 23: Price ratios 2007-2021

Year	Average $/lb[1]			Ratios (allocation price: share or ex-vessel price)	
	Allocation	Shares	Ex-vessel	Shares	Ex-vessel
2007	$2.52	$11.04	$4.69	22%	54%
2008	$2.90	$11.56	$5.06	24%	57%
2009	$3.35	$20.64	$5.08	16%	66%
2010	$3.55	$24.42	$5.13	15%	69%
2011	$3.57	$34.69	$5.14	10%	69%
2012	$3.55	$41.13	$5.26	9%	68%
2013	$3.46	$42.78	$5.19	8%	67%
2014	$3.46	$39.25	$5.42	9%	64%
2015	$3.49	$38.01	$5.46	9%	64%
2016	$3.60	$34.32	$5.45	10%	66%
2017	$3.65	$38.23	$5.46	10%	67%
2018	$3.65	$38.91	$5.47	9%	67%
2019	$3.88	$40.37	$5.57	10%	70%
2020	$3.80	$41.26	$5.28	9%	72%
2021	$3.81	$45.37	$5.35	8%	71%

[1]Averages are adjusted for inflation, and shares are based on the equivalent pound.

Cost Recovery and Ex-vessel Value

The Magnuson-Stevens Act requires the Secretary of Commerce to adopt regulations implementing a cost recovery program to recover the actual incremental costs of managing and enforcing the RS-IFQ program. The cost recovery fee established for the RS-IFQ program is currently 3% of the actual ex-vessel value of Gulf red snapper. RS-IFQ fishermen who completed a landing transaction were responsible for payment of the fee. The dealer who purchased red snapper was responsible for collecting and submitting to NMFS the fee on a quarterly basis. Monies collected were used for administration of the program, maintenance and upgrades to the online system, enforcement of the RS-IFQ program, and scientific research

Cost recovery fees were calculated from the reported ex-vessel value, and therefore changes in ex-vessel prices and landings will affect the amount of cost recovery fees collected (Table 24). Total ex-vessel value has increased since 2009 and has been exceeding $30 million in recent years. Ex-vessel value in each quarter has been between $4-9.5 million, compared to $2 million seen at the beginning of the program. The increase in ex-vessel value is a consequence of an increased quota, subsequent increase in landings, and increase in ex-vessel price over time. The cost recovery fees recorded here were based on landings and may not represent the actual dollars recovered, due to non-payment by IFQ participants. Overall, there are very few dealers that did not pay the cost recovery fees and the amount not collected is often less than 0.50% of the expected recovered dollars. Dealer accounts with unpaid cost recovery fees are set to delinquent and cannot accept more IFQ landings until the delinquent fees are paid to the agency.

Table 24: Reported ex-vessel values by quarter

Year	Jan – Mar	Apr – Jun	Jul- Sept	Oct –Dec	Ex-vessel Annual Value	Cost Recovery
2007	$2,576,222	$2,577,170	$2,208,242	$2,775,369	$10,137,003	$304,043
2008	$3,065,980	$1,996,123	$1,421,440	$1,776,917	$8,260,461	$247,725
2009	$2,412,869	$2,212,748	$1,686,223	$1,693,520	$8,005,360	$240,157
2010	$3,108,724	$2,652,196	$1,557,619	$2,957,294	$10,275,834	$308,277
2011	$3,145,224	$2,827,857	$2,612,696	$2,976,664	$11,562,441	$346,877
2012	$3,934,030	$3,308,138	$3,132,546	$3,805,450	$14,180,164	$425,408
2013	$4,723,278	$4,036,831	$5,323,814	$7,024,875	$21,108,798	$633,276
2014	$6,818,495	$6,437,344	$4,967,398	$4,801,220	$23,024,456	$690,736
2015	$7,063,974	$7,073,027	$7,554,015	$8,076,309	$29,767,325	$893,021
2016	$8,106,205	$7,915,811	$7,130,949	$4,827,722	$27,980,687	$839,423
2017	$8,292,006	$7,516,640	$6,508,225	$7,190,916	$29,507,787	$885,236
2018	$8,333,280	$7,948,435	$7,461,698	$6,186,525	$29,929,938	$897,900
2019	$8,314,879	$8,419,647	$7,876,753	$8,475,389	$33,086,668	$992,603
2020	$7,736,679	$7,240,591	$8,195,334	$8,507,179	$31,679,509	$950,396
2021	$9,314,441	$9,345,340	$6,900,646	$7,479,083	$33,039,510	$991,188

Enforcement and Administrative Actions

Law Enforcement Activities

Effective law enforcement is a crucial component of the IFQ programs. Special agents and officers from the National Oceanic and Atmospheric Administration's (NOAA) NMFS Office of Law Enforcement (OLE) Southeast Division, the U.S. Coast Guard (USCG) and state wildlife officers and game wardens under authority of state law, or operating under the authority of a cooperative joint enforcement agreements (JEA) with OLE, enforce the regulated activities mandated under the Gulf IFQ programs through a variety of mechanisms. These mechanisms include at-sea and dockside inspections, offload monitoring, investigations of potential violations, and the seizure of illegally caught fish.

Enforcement of the IFQ regulations includes all of the enforcement options and activities present in all of NOAA's enforcement work. Law enforcement personnel from OLE, the USCG, and state JEA partners conduct at-sea and dockside patrols and inspections designed to educate the regulated community about the program and detect and deter violations. In addition, OLE conducts follow up investigations in the event of more complicated violations such as the undocumented landing and sale of IFQ species and the trafficking of illegally landed red snapper or grouper-tilefish in interstate or foreign commerce. If the USCG or JEA partners detect a violation related to the IFQ program, they can provide compliance assistance to fix the violation on the spot such as educating fishermen on the use of the technology used to monitor the program (VMS and IFQ notification systems), or, if the violation is of a more serious nature, they can forward the case to OLE for additional action. OLE's enforcement options include a wider range of actions including compliance assistance, written warnings, summary settlements,[11] referral to NOAA's Office of General Counsel, Enforcement Section, for consideration of a civil penalty, or referral to the Department of Justice for prosecution of a criminal offense.

Major violations detected by law enforcement since the implementation of the IFQ programs include false reporting of species landed and under reporting of total weights landed. More typical violations include landing prior to the three-hour minimum landing notice, landing at an unspecified or unapproved location, insufficient allocation, transporting IFQ species without an approval code, completing a landing transaction without a landing notification, and offloading after approved hours. Typical dealer violations include misreporting IFQ species, failure to provide a current dealer permit and/or IFQ dealer endorsement, and failure to report IFQ species landed. The seizure of illegal catch is also an enforcement option, although OLE usually reserves this option for the most egregious violations. As the program has matured, the number of federal IFQ related cases that have resulted in seizures has decreased.

[11] Summary settlements are offers issued by OLE to settle violations listed on the Office of General Counsel, Enforcement Section's Summary Settlement Schedules. The summary settlement program is designed to provide a mechanism to resolve relatively low-level violations quickly, efficiently, and without the more formal procedures involved when the Office of General Counsel assesses a civil penalty. Up until 2019, previous settlement schedules only included penalties for red snapper violations and did not contain IFQ specific violations. In June of 2019, the Southeast Region summary settlement schedule added penalties for IFQ specific violations. OGC/Enforcement. The schedule now includes provisions for violating IFQ regulations relating to transport on land, landing notifications, arrival times, offloads, landing locations, and sufficient allocation. Fees begin at $1,000 for each first offense and increase by $500 for each subsequent second and third offense. See https://www.gc.noaa.gov/gces/2019/SE-SSS-Final-6-27-19.pdf.

In 2021, OLE agents and officers in the Southeast Division conducted approximately 177 patrols. These patrols included monitoring of the offloading of catch and investigations involving IFQ program regulations. The number of incidents resulting in seizures has decreased since the start of the program, and OLE continues to work with partners to proactively enforce IFQ regulations. In 2021, there were 116 IFQ investigations that resulted in the issuance of compliance assistance, written warnings, and violations.

Summary of the 2021 Fishing Year

In the 15th year of the RS-IFQ program, the program has shown continued progress in achieving its main objectives of reducing overcapacity and mitigating the derby fishing conditions and auxiliary objectives such as increased market stability, fishing flexibility, and balancing social, economic, and biological benefits. During the 15 years of the program, there have been changes in participation and activity in the program. Participation can be seen in the status of accounts in relation to holding shares, permits, and allocation, while activity is determined in relation to accounts transferring shares or allocation or landing red snapper. The following tables provide a summary of the 2021 values and change from the previous year for changes in participation and activity (Table 25), transfers and landings (Table 26), economic information (Table 27), and effort and discards (Table 28).

Table 25: RS-IFQ program participation and activity

		2021 Value	Change from 2020
Participation	Shareholders	336	-7
	Allocation Holders	625	-19
	Dealers	101	-15
	Vessels	NA	NA
Activity	Shareholders without permits		
	Number of accounts	NA	NA
	Percentage of accounts	NA	NA
	Shares held	NA	NA
	Allocation holders without shares		
	Number of accounts	283	-22
	Percentage of accounts	45%	-2%
	Accounts landing red snapper	376	-23
	Percentage landings from accounts with shares	56%	+3%
	Accounts inactive	31	-3
	Accounts only transferring allocation	218	+7
	With permit and with shares	NA	NA
	With permit and without shares	NA	NA
	Without permit and with shares	NA	NA
	Without permit and without shares	NA	NA
	Accounts with remaining allocation	126	-49
	Number of Active accounts	95	-46
	Percentage of accounts with remaining allocation	20%	-7%
	Number of accounts with overages	9	-7
	Total overage amounts	950 lb	-1,517 lb

Table 26: RS-IFQ program transfers and landings

		2021 Value	Change from 2020
Transfers and Landings	Number of Share Transfers	65	-86
	Percentage of Shares Transferred	9.0060%	-0.6219%
	Number of Allocation Transfers	4,393	+21
	Amount of allocation transferred	10,950,615 lb	-317,735 lb
	Percentage of quota transferred	157.8%	-4.6%
	Landings Percentage of Quota	99.3%	+0.3%

Table 27: RS-IFQ program economic information

		2021 Value	Change from 2020
Economic Information	Average Share Price per pound	$45.37	+$5.76
	Percent of Representative Share Transfer Prices	65%	-12%
	Average Allocation price per pound	$3.81	+$0.16
	Percent of Representative Allocation Transfer Prices	74%	+14%
	Average Ex-vessel price per pound	$5.35	+$0.28
	Percent of Representative Ex-vessel Prices	81%	-3%
	Ex-vessel Value	$33,039,510	+$1,360,001

Table 28: RS-IFQ program effort and discards

		2021 Value	Change from 2020
Effort and Discards	VL Trips	3,264	-266
	VL Days/Trip	3.3	0
	VL Avg RS/Trip	1,782 lb	+55 lb
	LL Trips	530	-28
	LL Days/Trip	10.5	+0.3
	LL Avg RS/Trip	1,117 lb	+288 lb
	VL Discard Ratio D:L	--	--
	VL Discard Mortality	--	--
	LL Discard Ratio D:L	--	--
	LL Discard Mortality	--	--

Looking Ahead

The final rule for Amendment 36A to the Reef Fish FMP was effective on July 12, 2018 (83 FR 27297), and revoked shares non-activated IFQ accounts and allowed NMFS to withhold a portion of the quota from distribution if a quota reduction is anticipated. The Gulf Council is currently considering additional changes to both the RS-IFQ and GT-IFQ programs through Amendment 36B and 36C to the Reef Fish FMP, which would also establish a use for the revoked shares from Amendment 36A. Amendment 36B aims to improve the performance of the RS-IFQ and GT-IFQ programs based on suggestions from the Red Snapper 5-year review, an advisory panel, and Gulf Council discussions. Amendment 36B, which is under development by the Gulf Council, considers shareholding requirements and divestment of shares resulting from such restrictions, while Amendment 36C deals with the redistribution of reclaimed shares from 36A (and potentially 36B), quota banks, and accuracy of weights estimated in landing notifications.

The Catch Share Online System successfully transitioned to a new system on December 21, 2020. This migration was necessary as the software that supported the system was at end of life. On August 27, 2021, the Permit Information Management System was also migrated to a new platform to modernize that system. Since both migrations, improvements to the systems have been a continued effort to improve function and connectivity between the systems. The NMFS Southeast Regional Office (SERO) Catch Share staff are continuously looking for ways to improve the interaction with the online Website. If you have a suggestion on how the online system can be further improved, please call or e-mail SERO Catch Share customer support as listed on the cover page.

Appendices

Appendix 1. History of the red snapper (RS) individual fishing quota (IFQ) program

An IFQ program for red snapper was first proposed in Amendment 8 to the Fishery Management Plan (FMP) for Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP) and approved by the National Marine Fisheries Service (NMFS) in 1995. The program was not implemented due to Congressional action that placed a moratorium on the development and implementation of new Individual Transferable Quota programs until October 1, 2000. Despite this moratorium, red snapper commercial fishermen and the Gulf of Mexico Fishery Management Council (Gulf Council) remained interested in developing an IFQ program, and in 2004 initiated the development of the current Red Snapper IFQ (RS-IFQ) program. A majority of eligible voters (based on a weighted majority of votes of red snapper Class 1 license holders) supported, through referendum, development of the RS-IFQ program. Persons eligible to vote in the 2004 referendum included red snapper Class 1 license holders and vessel captains harvesting red snapper during 1993-1996. License holders were defined as the entity that actually controlled the transfer of the license, and such person would be listed as the qualifier on the commercial reef fish permit. NMFS issued 157 referendum ballots, 145 of which were filed with the agency. The weighted vote resulted in 72% of respondents (representing 81% of the weighted votes) supporting the Gulf Council's development of an IFQ program. During 2004 and 2005, the Gulf Council, in collaboration with their Ad Hoc Red Snapper Advisory Panel, developed Amendment 26[12] to the Reef Fish FMP. This amendment outlined the key components of the RS-IFQ program. In 2006, a second referendum determined that a majority of eligible voters supported the submission of Amendment 26 to the Secretary of Commerce for approval. On January 17, 2006, NMFS issued 167 referendum ballots, 140 of which were filed with the agency; the weighted vote demonstrated 76% of respondents (representing 87% of the weighted vote) favored implementation of an IFQ program. The amendment was approved by the Gulf Council in March 2006 and implemented by the Secretary of Commerce on January 1, 2007.

Initial shares were issued to Gulf commercial reef fish permit holders with valid Class 1 or Class 2 red snapper licenses on November 22, 2006, based on the amount of red snapper landings reported under each entities qualifying license during the qualifying time period. For Class 1 license holders, RS-IFQ shares were based on the best ten consecutive years from 1990-2004. For Class 1 historical captain license holders, RS-IFQ shares were based on seven years of landings from 1998-2004. For Class 2 license holders, RS-IFQ shares were based on the best five years of landings from 1998-2004. Initial share distribution was based on landings history; therefore, Class 1 license holders received a majority of the RS-IFQ shares (91%) and corresponding allocation. Class 2 license holders and fishermen along the west Florida shelf received smaller amounts of shares and corresponding allocation, as red snapper were less plentiful there during the qualifying years of the RS-IFQ program.

In 2010, there were significant changes made to the RS-IFQ database and online system to align it with the new GT-IFQ program and enhance law enforcement. In 2010, the structure switched from a

[12] https://gulfcouncil.org/wp-content/uploads/Reef-Fish-Amendment-26_508Compliant.pdf

fisherman-assignee based system to a fisherman-vessel based system. In the old system, a unique entity could have multiple accounts (one for each vessel owned), but the new system switched to one account per unique entity and allowed multiple vessels per shareholder account. The old system allowed a vessel owner to land allocation from a different permit holder's account without enforcing an allocation transfer to the landing vessel. The new system enforced allocation transfers before landing, and provides a more accurate picture of allocation holders and allocation transfers. Additional changes to the program included submission of share transfers electronically, estimation of gutted fish weights for landing notifications, requiring pre-approval of landing locations, and the elimination of vessel endorsements. In mid-2010, shortly following the start of the GT-IFQ program, share transfer prices became mandatory for the transferor to report.

On June 1, 2011, actual ex-vessel price was redefined to ensure equivalent reporting among dealers. The definition now states that "actual ex-vessel price" represents the price paid per pound of fish before any deductions are made for transferred (leased) allocation (i.e., pounds of fish) and goods and/or services (e.g., bait, ice, fuel, repairs, machinery replacement).

On January 1, 2012, the RS-IFQ program opened to the general public. Prior to January 1, 2012, accounts could only be established in the RS-IFQ program if the account holder also held a Gulf commercial reef fish permit. After January 1, 2012, any U.S. citizen or permanent resident alien could establish a RS-IFQ account. Accounts without commercial Gulf reef fish permits, can transfer shares and allocation, but cannot harvest red snapper.

In 2012-2013, a five-year review of the RS-IFQ program was conducted to evaluate the progress towards achieving the stated goals of reducing overcapacity and eliminating the problems associated with derby fishing. To analyze the program's progress data were obtained from a variety of sources: RS-IFQ database; Southeast Fisheries Science Center's coastal logbooks accumulated landings system, and reef fish observer program; the National Institute of Occupational Safety and Health; and surveys of the RS-IFQ participants. In general, the review found that the program has been moderately to highly successful in achieving its stated goals, although there is still room for further achievement, particularly with respect to overcapacity, discard mortality, price reporting, and social and community analyses. Additionally, a survey on share price updated share prices and reasons for transfers in 2012-2013. In 2013, transfer reasons were added to both share and allocation transfers in order to capture more information about the types of transfer that occur and the reasons for the transfers, especially as how they related to price. Also in 2013, a share transfer price became mandatory for the transferee. In 2015, transfer reasons for both share and allocation transfers became mandatory, and it wasn't until December 21, 2020 that allocation prices became mandatory.

On October 27, 2014 there were administrative revisions to IFQ programs to improve enforcement, monitoring, and administration, and to clarify existing regulatory requirements. The rule made changes to landing notifications, offloading, landing transactions, as well as administrative changes. Modification to landing notifications included: 1) allows allocation be held in either a vessel or linked shareholder account at the time the landing notification is submitted, 2) extends the landing notification reporting window from 12 to 24 hours, 3) requires that vessels must land within an hour after the arrival

time given in the landing notification, and 4) specifies that any changes to a landing notification would require a new landing notification and would supersede a previous notification. The captain will not be required to wait an additional 3 hours if only one superseding landing notification has been submitted for the trip. If more than one superseding notification has been made for a trip or the landing location is changed, the vessel will be required to provide at least 3 hours' notice before landing. The rule also allows vessels to land prior to the 3-hour notification if an authorized officer is present, is available to meet the vessel, and authorizes the vessel to land early. The final rule included a change to the offloading process, where offloading could continue past 6 p.m. if an authorized officer is present, is available to remain at the offloading site while the offload continues, and authorizes the vessel to continue offloading. The rule modified landing transactions such that: 1) requires the dealer and vessel to complete a landing transaction on the day of offload and within 96 hours of the landing, and 2) prohibits the deduction of ice and water weight when reporting an IFQ landing transaction unless the actual weight of the ice and water is determined using a scale. The intent of these modifications is to improve timeliness and accuracy of landing transactions. The administrative changes included: 1) allowing participants to close an IFQ account by submitting a Close Account form to NMFS, and 2) allows NMFS to close an IFQ account if no landing transactions or IFQ transfers have been completed by the IFQ account holder in at least one year and if either the account does not hold shares or allocation (shareholder account) or the account has paid all cost recovery (dealer account). The rule also clarified the following: 1) fish must be sold to a federally permitted dealer and dealers must report all landings and their actual ex-vessel value via the IFQ system, 2) a dealer may only receive IFQ fish that have a corresponding transaction approval code, 3) removed a phrase stating NMFS will "add other methods of complying with advance notice of landing requirement" because NMFS has already identified numerous methods for submitting landing notifications, 4) removed regulatory language that prevents a dealer from completing a landing transaction if a landing notification is not submitted, and 5) explicitly stated that IFQ species must be landed at an approved landing location.

The IFQ website and database systems were modified in 2014 and 2015 to include the Gulf Headboat Collaborative (HBC) pilot program and the Highly Migratory Species (HMS) Bluefin Tuna Individual Bycatch Quota (BFT) program. With the additions of these programs, the homepage was retitled to "SERO Catch Shares Programs" and additional information was added for each program. Each program contains a separate tab on the Public home page with information specific to that program and the Log In dialogue box was changed to reflect the additional roles for each program. The public "View Landing Locations" page was changed to include both IFQ and HBC landing locations, with a drop down box to select by program. The Additional Information page was changed to allow for selection of documents by program: IFQ, HBC, or BFT.

In 2017, Amendment 36A to the Reef Fish FMP (Commercial IFQ Program Modifications) was approved by the Gulf Council. The final rule published on June 12, 2018 (83 FR 27297). Amendment 36A included three actions: 1) require that the owner or operator of a commercial reef fish permitted vessel landing commercially caught, federally managed reef fish from the Gulf provide a landing notification at least 3 hours, but no more than 24 hours, in advance of landing; 2) return permanently to NMFS any shares contained in IFQ accounts that have never been activated since January 1, 2010; and 3) allow NMFS to withhold the distribution of IFQ allocation equal the amount of an expected

commercial quota reduction on January 1, for any IFQ species or multi-species quota, and redistribute the allocation back to fishermen should the expected quota reduction not be implemented by June 1. The effective date for the return of shares and the provision to withhold quota was effective July 11, 2018, but the effective date for the advance notification of landing was delayed until Jan 1, 2019. Additional information can be found on the Southeast Region webpage:

> https://www.fisheries.noaa.gov/action/reef-fish-amendment-36a-modifications-commercial-individual-fishing-quota-programs.

Several updates were made in 2018 to improve the Gulf Reef Fish IFQ online systems. A new share and allocation calculator was added to the home page that can convert between share percentages and equivalent pounds for each share category. VMS lists for dealers and landing locations have been generated to assign a code to each unique dealer and landing location. These codes will replace the text lists that were formerly used to select form for each landing notification submitted via VMS. This change removes the need to update VMS units when new dealers and landing locations are added to the program. Additionally, a "Show PIN" feature to view what has been typed into the PIN field when logging into a user account was added to allow the user to see what they have entered.

In 2020-2021, a five-year joint review of both the RS-IFQ and GT-IFQ programs was conducted, making it the second instance that each of the programs were reviewed. The first review of each program aimed to compare the fisheries before and after the implementation of the programs, and specifically to evaluate the progress towards achieving the stated goals of reducing overcapacity and eliminating the problems associated with derby fishing. The joint review aimed to compare more recent trends seen in the program to those seen when the programs were first implemented to further analyze the program's progress in achieving those goals. Data were obtained from a variety of sources: the SERO IFQ database; Southeast Fisheries Science Center's coastal logbooks accumulated landings system, and reef fish observer program; the National Institute of Occupational Safety and Health; and surveys of the IFQ participants. In general, the review found that the program remains moderately to highly successful in achieving its stated goals, although there is still room for further achievement. Areas that have room for improvement include overcapacity, discard mortality, price reporting, and social and community analyses.

In late 2020, the IFQ system was redesigned to function in a cloud environment and additional features were added to the system for flexibility and security. The cloud environment should ensure that the system remains running even during natural disasters such as a hurricane. The system was brought up to current security standards to secure the transmission and storage of program information. The website was redesigned to allow access through mobile devices and tablets and the landing transaction form was modified to allow for the entry of different prices for the same species in one landing transaction. The IFQ program migrated to the new platform in late December 2020, after two years of development.

In late 2021, several improvements were developed for the IFQ system. The loan program was officially launched on September 2, 2021 to support NOAA's Fisheries Finance Program to issue loans for IFQ related needs. On September 11, 2021, a new Vessel Signature PIN was developed that will

have fewer security requirements compared to the Vessel Account PIN to ease the difficulty of submitting a landing transaction. A new feature was also incorporated alongside the Vessel Signature PIN to require that the Vessel Signature PIN be provided to confirm that a landing transaction submission will draft a 10% allocation overage from the Vessel account. This additional warning was implemented to provide a warning to users to confirm they wish to take advantage of that flexibility.

Quota Adjustments

Adjustments in the red snapper quota can occur due to stock status change (e.g., new assessment) or management measures (e.g., reallocation between sectors). Quota increases may be applied at any time during the fishing year. Amendment 36A to the Reef Fish FMP (2018) provided NMFS the flexibility to address an anticipated decrease in commercial quota after the start of the fishing year. When such an anticipated decrease is expected, NMFS will withhold quota from distribution equal to the expected decrease. If the quota decrease is not completed before June 1, the withheld quota will be distributed to the IFQ shareholders based on shares at the time of distribution.

The start of the RS-IFQ program began with an overall 1.2 mp gw quota reduction. This reduction was due to a stock assessment that determined that red snapper was overfished and undergoing overfishing, resulting in an interim rule to decrease the red snapper quota. The commercial red snapper fishery opened on January 1, 2007, but received only 2.297 mp gw of the 2.986 mp gw commercial red snapper quota specified by an interim measure for the 2007 fishing year. NMFS issued the balance of the 2007 commercial red snapper quota to the commercial red snapper fishery on June 1, 2007. A revised rebuilding plan set the commercial quota in 2008 to 2.297 mp gw and this remained in place the start of the 2010 fishing season.

In 2010, a red snapper assessment update projected overfishing ended in 2009, and therefore, the commercial quota increased on June 2, 2010, to 3.190 mp gw. Based on updated stock assessment projects, the quota increased again on May 31, 2011 to 3.300 mp gw. In 2012, a population assessment determined that overfishing had ended, resulting in a quota increase on June 29, 2012 to 3.712 mp gw. The red snapper population continued to grow, resulting in a quota increase on May 29, 2013 to 3.887 mp gw. Another update to the red snapper assessment resulted in a second increase within 2013 to 5.054 mp gw on September 30, 2013. The quota remained at that level through the start of 2015. In March of 2015, a Gulf Council webinar established a Reef Fish FMP framework amendment to adjust the red snapper quotas for the next three years (2015-2017) to be consistent with the red snapper rebuilding plan. The total red snapper quota was set equal to the acceptable biological catch (ABC) for each year. As the ABC was projected to decrease over the following three years, so will the commercial quota. The commercial quota was to be set at 6.567 mp gw in 2015, 6.414 mp gw in 2016, and 6.315 mp gw in 2017. On June 1, 2015, the commercial quota was increased to 6.570 mp gw.

Later in August 2015, the Gulf Council evaluated and adjusted the allocation of red snapper between the commercial and recreational sectors to ensure the allowable catch and recovery benefits were fairly and equitably allocated between the commercial and recreational sectors (Amendment 28, Red Snapper Allocation). Amendment 28 resulted in an increase in red snapper allocation to the recreational sector

and a decrease in the commercial sector's allocation. The allocation changed from 51% commercial: 49% recreational to 48.5% commercial: 51.5% recreational allocation. This allocation adjustment further decreased the commercial quotas to 6.097 mp gw in 2016, and 6.004 mp gw in 2017. In September 2015, the Gulf Council finalized a framework amendment to retain a portion of the red snapper commercial quota from distribution at the start of 2016, as Amendment 28 was not be finalized before the annual IFQ distribution of allocation in January of 2016. This framework action withheld 4.9% of the 2016 red snapper commercial quota, resulting in a decreased 2016 quota of 6.097 mp gw and a decrease to 6.003 mp gw for 2017.

In 2017, a court order vacated Amendment 28, which had shifted 2.5 percent of the red snapper quota from the commercial sector to the recreational sector. The court order required the National Marine Fisheries Service to reinstate the sector allocations and resulting quotas that were in effect prior to Amendment 28. The rule became effective on June 6, 2017 and quota increased to 6.312 mp gw. The quota remained at this amount through the start of 2019. In 2019, a stock assessment determined that the total available yield for red snapper had increased resulting in a quota increase on April 4, 2019 to 6.937 mp gw. The quota remained here through 2021.

Appendix 2: Red snapper management history

All weights are in million pounds gutted weight; all lengths are in inches total length; all days are calendar days. Data collected from Gulf of Mexico Fishery Management Plans and Amendments, stock assessments, and IFQ program. Landings through 2006 were from the SEFSC ACL dataset accessed 7/3/2012; landings 2007 onward were from the IFQ system.

Appendix 2.1. Pre-IFQ Red snapper management history

Year	Days open	Quota (mp gw)	Harvest (mp gw)	Size Limit	Commercial Management Action
1990	365	2.79	2.39	13	
1991	236	1.84	1.99	13	
1992	95	1.84	2.80	13	▪ Emergency rule: Apr 3- May 14 1,000 lb trip limit. ▪ Moratorium on new commercial reef fish permits ▪ 200 lb trip limit or 2,000 lb trip limit with endorsement ▪ Closed fishery Dec 1
1993	94	2.76	3.04	13	▪ Opened Feb 10 ▪ One trip limit per day ▪ Extended endorsements
1994	77	2.76	2.90	14	▪ Raised minimum size over next 5 years ▪ Extended commercial reef fish permit moratorium
1995	52	2.76	2.64	15	▪ Opened Feb 28
1996	87	4.19	3.89	15	▪ Split quota into spring and fall seasons ▪ Extended endorsement
1997	73	4.19	4.33	15	▪ Fall season started Sept 2 for 1st 15 days/month till quota met
1998	72	4.19	4.22	15	▪ Established Class 1 and Class 2 licenses ▪ Allocated ⅔ quota to spring, starts Feb 1 ▪ Fall season started Sept 1, 1st 10 days /month
1999	70	4.19	4.39	15	▪ Spring season reduced from 15 to 10 days/month
2000	66	4.19	4.36	15	▪ Extended permit moratorium for 5 more years
2001	79	4.19	4.17	15	
2002	91	4.19	4.31	15	
2003	94	4.19	3.97	15	
2004	105	4.19	4.19	15	
2005	131	4.19	3.69	15	▪ Extended commercial reef fish permit moratorium indefinitely
2006	126	4.19	4.19	15	

Appendix 2.2. Post-IFQ Red snapper management history

Year	Days open	Quota (mp gw)	Harvest (mp gw)	Size Limit	▪ Commercial Management Action
2007	365	2.99	2.87	13	▪ Implemented commercial red snapper IFQ program ▪ Reduced quota from 2006 level ▪ Mid-year quota increase ▪ Reduced size limit on May 2, 2007 to 13" TL
2008	366	2.30	2.24	13	
2009	365	2.30	2.24	13	
2010	365	3.19	3.06	13	▪ Mid-year quota increase in June; Area closures due to Deepwater Horizon oil spill event
2011	365	3.30	3.24	13	▪ Mid-year quota increase in May
2012	366	3.71	3.64	13	▪ Mid-year quota increase in June
2013	365	5.05	4.91	13	▪ Mid-year quota increases in May and September
2014	365	5.05	5.02	13	
2015	365	6.57	6.47	13	▪ Mid-year quota increase in June ▪ Framework action to withhold a portion of the commercial red snapper quota for 2016
2016	366	6.10	6.06	13	
2017	365	6.31	6.29	13	▪ Mid-year quota increase in June to reclaim the allocation that had been given to the recreational sector by Amendment 28.
2018	365	6.31	6.29	13	▪
2019	365	6.94	6.90	13	▪ Mid-year quota increase in April
2020	366	6.94	6.90	13	
2021	365	6.94	6.89	13	

Appendix 3. Gulf of Mexico Commercial Reef Fish Permit Data

On August 27, 2021, the NMFS Permits Information Management System (PIMS) Database was transitioned onto a new platform to modernize the database, improve data collection, and automate many permitting processes for permit holders in the Southeast region. Summarization of the data on the new platform will require new tools and techniques that were not yet available for this report. All tables that require data from the PIMS Database, therefore, are presented here through 2020.

Appendix 3.1. Shareholders by Permit Status

	Permit		No Permit	
Year	Account	Share	Account	Share
2007	421	85.71	76	14.29
2008	354	87.25	120	12.75
2009	319	86.17	120	13.83
2010	304	84.77	121	15.24
2011	298	81.87	120	18.14
2012	288	78.94	119	21.07
2013	273	75.65	126	24.36
2014	258	72.05	120	27.96
2015	252	69.71	134	30.30
2016	247	69.84	127	30.17
2017	246	69.53	132	30.47
2018	240	68.23	101	31.70
2019	237	70.05	103	29.88
2020	226	67.27	117	31.07

Note: Shares in 2018 through 2020 do not equal 100% as the reverted shares are held in an administrative account until the Gulf Council determines distribution.

Appendix 3.2. Number of vessels harvesting red snapper by state

Year	Total[1]	FL	AL/MS	LA	TX	% vessel overlap with the GT-IFQ program[3]
2002-06[2]	485	-	-	-	-	NA
2007	309	224	8	42	60	NA
2008	300	219	16	37	49	NA
2009	294	221	14	27	40	NA
2010	384	309	30	27	34	91%
2011	362	290	27	20	31	91%
2012	371	304	23	23	28	94%
2013	368	295	20	27	35	91%
2014	401	320	23	26	36	90%
2015	415	341	24	28	40	91%
2016	430	346	30	31	40	89%
2017	449	354	36	30	42	87%
2018	450	360	32	30	41	91%
2019	428	334	31	34	44	90%
2020	431	354	28	29	35	90%

[1] The total number of vessels is less than the sum of vessels across states because some vessels land in multiple states. States are determined by the facility listed in the landing transaction.
[2] Values for 2002-2006 (pre-IFQ) are average values across this time period from the Coastal logbook records.
[3] Percentage of vessels that landed red snapper that also landed GT-IFQ species.

Appendix 3.3. Number of accounts and volume transfers for accounts only transferring allocation

Year		With Shares				Without Shares			
		With Permit		Without Permit		With Permit		Without Permit	
	N	Accts	lb	Accts	lb	Accts	lb	Accts	lb
2007	144	117	321,285	21	216,531	6	18,890	N/A	N/A
2008	110	63	192,382	36	267,159	11	15,124	N/A	N/A
2009	131	75	385,237	49	238,140	7	4,430	N/A	N/A
2010	139	75	948,205	48	497,648	16	51,315	N/A	N/A
2011	159	92	1,161,253	47	580,099	20	19,523	N/A	N/A
2012	172	101	1,410,115	52	819,592	19	24,812	0	0
2013	165	89	2,016,673	52	1,170,137	21	36,964	3	109,899
2014	163	76	1,651,320	66	1,445,864	17	107,529	4	92,331
2015	180	80	2,499,546	68	2,162,768	22	57,437	10	193,225
2016	184	65	1,849,357	90	2,166,730	14	65,624	15	870,818
2017	182	66	1,897,585	94	2,760,697	14	68,949	8	234,806
2018	176	68	1,477,044	85	2,898,918	12	82,792	11	310,520
2019	198	78	1,967,740	83	3,099,771	17	48,629	20	758,443
2020	211	77	2,486,106	88	3,279,180	24	89,447	22	971,732

Note: The pounds are the amount of pounds transferred out from these accounts and not the sum of pounds transferred in and out, which would double count the pounds.

Appendix 3.4. Landings by state

Year	FL		AL/MS		LA		TX	
2007	1,122,379	39%	80,288	3%	447,055	16%	1,217,604	42%
2008	921,927	41%	88,058	4%	381,075	17%	846,420	38%
2009	930,630	42%	78,536	4%	415,203	19%	813,077	36%
2010	1,378,733	45%	159,967	5%	571,449	19%	945,895	31%
2011	1,594,317	49%	149,480	5%	606,804	19%	887,734	27%
2012	1,725,555	47%	166,429	5%	711,339	20%	1,033,072	28%
2013	2,001,334	41%	244,697	5%	1,060,017	22%	1,602,550	33%
2014	1,958,498	39%	261,762	5%	674,096	13%	2,121,700	42%
2015	2,610,215	40%	378,117	6%	1,028,943	16%	2,454,986	38%
2016	2,143,740	35%	437,146	7%	1,014,576	17%	2,462,036	41%
2017	2,330,192	37%	575,322	9%	1,140,368	18%	2,241,201	36%
2018	2,351,337	37%	479,842	8%	1,262,806	20%	2,191,719	35%
2019	2,676,566	39%	527,516	8%	1,287,011	19%	2,408,132	35%
2020	2,841,387	41%	413,134	6%	1,131,018	16%	2,484,429	36%

Appendix 3.5. Average annual ex-vessel prices by region

Year	FL	AL/MS	LA	TX
2007	$4.71	$3.96	$4.68	$4.48
2008	$5.07	$4.29	$5.03	$4.65
2009	$5.04	$5.20	$4.90	$4.78
2010	$4.99	$4.69	$4.76	$4.93
2011	$4.99	$4.82	$5.07	$4.81
2012	$5.04	$4.87	$4.89	$5.12
2013	$4.94	$4.76	$4.98	$5.02
2014	$5.26	$4.92	$5.15	$5.20
2015	$5.38	$4.65	$5.11	$5.22
2016	$5.37	$4.79	$5.17	$5.19
2017	$5.34	$5.18	$5.34	$5.11
2018	$5.36	$5.22	$5.33	$5.14
2019	$5.44	$5.31	$5.34	$5.25
2020	$5.31	$5.36	$5.06	$4.81

Note: Inflation adjustments from: http://www.bea.gov/ with 2020 as the base year using the GDP deflator.

Appendix 4. Reef fish observer trips

Reef Fish Observer data comparing fishing sets targeting red snapper versus other reef fish species on trips using longline (LL) gear and vertical line (VL) gear. Very few observed LL sets typically target red snapper. Insufficient data were available to include 2020 due to the pandemic. Data from the Reef Fish Observer Program was accessed as of 5/27/2022.

	Fishing Sets					
	LL			VL		
Year	Total	RS	RS Target	Total	RS	RS Target
2007	216	38%	NA	3,202	32%	NA
2008	128	23%	NA	1,715	33%	NA
2009	780	40%	1%	2,310	21%	4%
2010	1533	45%	1%	3,927	28%	12%
2011	2471	50%	4%	4,486	32%	22%
2012	563	57%	3%	11,490	31%	19%
2013	2246	47%	4%	5,113	27%	25%
2014	949	42%	0%	4,489	25%	18%
2015	774	44%	NA	8,402	27%	29%
2016	1912	50%	1%	5,918	31%	30%
2017	490	32%	6%	2,429	41%	32%
2018	140	64%	NA	1,337	42%	31%
2019	153	63%	47%	1,282	52%	51%
2020	NA	NA	NA	NA	NA	NA
2021	301	51%	27%	1,290	58%	67%

Appendix 5. Share Transfer Reasons

Beginning in 2013, share transfers required the selection of one of seven allocation transfer reasons for every allocation transfer to better monitor the program's performance. The tables below contain the number of share transactions and percentage transferred by transfer reason between 2013 and 2021.

Appendix 5.1. Count of Share Transfer Reasons

Share Transfer Reason	2013	2014	2015	2016	2017	2018	2019	2020	2021
Barter trade for shares or allocation	6	6	4	0	1	2	1	1	0
Gift	0	6	0	3	3	9	4	6	5
No comment	12	17	47	29	35	36	40	67	16
Package Deal	2	5	0	0	1	2	1	1	0
Transfer to a related account	14	9	19	13	15	9	6	14	7
Sale to another shareholder	42	48	50	32	61	40	59	62	37

Appendix 5.2. Percent of Shares Transferred For Each Transfer Reason

Share Transfer Reason	2013	2014	2015	2016	2017	2018	2019	2020	2021
Barter trade for shares or allocation	1.92	0.33	0.07	0	0.02	0.02	0.03	0.01	0
Gift	0.00	1.08	0	0.08	0.35	0.14	0.09	0.15	0.62
No comment	0.38	1.94	6.1	2.22	3.86	0.93	1.72	1.46	1.70
Package Deal	0.01	0.95	0	0	0.01	0.01	0.0001	0.08	0
Transfer to a related account	1.37	0.18	4.24	0.72	1.55	1.65	0.25	4.81	4.80
Sale to another shareholder	1.05	1.09	4.82	0.85	2.89	3.68	2.53	3.12	1.89

Appendix 6: Price Analysis Rationale

Price information is a crucial portion of the economic evaluation of the program, and yet the program continues to have price reporting challenges with respect to share transfers, allocation transfers, and ex-vessel prices. Share prices were not required from 2007-2009, but since mid-year 2010, a minimum transfer price of $0.01 has been required for all share transfers. Despite requiring participants to enter a total price for share transfers, many share transactions had the minimum total value of $0.01. Allocation transfer prices are currently not required by the online system (e.g., a zero value may be entered). Ex-vessel prices have varied considerably since the start of the RS-IFQ program, with values ranging widely. Extremely low prices have been attributed to dealers reporting ex-vessel prices after deducting for transferred or leased allocation, goods (e.g., bait, ice, fuel), and/or services (e.g., repairs, machinery replacement). The definition of actual ex-vessel price was changed through regulations in June 2011 and prohibits the cost of allocation transfers, goods, and /or services from being deducted from ex-vessel prices. Despite the new regulation in 2011, ex-vessel prices in many instances continue to be under-reported in the RS-IFQ online system.

An expected range of reasonable prices was calculated for each price variable but investigating the frequency of each price within a given year(s). Any price value outside the given range was excluded from analysis. Share prices were analyzed over multiple years, as any one given year had small number of prices with transactions. Allocation and ex-vessel prices were analyzed on a yearly basis. Both allocation and ex-vessel prices had bi-modal distributions that clearly displayed a subset of transactions with low price information. The minimum value was set as the valley between the bi-modal distributions. Share price ranges were set between $9-$36/lb for the first five years and greater than $50/lb since 2012. For ex-vessel prices, the online system set a cap of $10/lb for the first seven years, but increased the cap to $20/lb in 2014. All minimum and maximum values can be seen in the table below. The above method for limiting price ranges was demonstrated to and endorsed by the Socioeconomic Scientific and Statistical Committee of the Gulf Council in 2013.

Year	Share		Allocation		Ex-vessel	
	Min	Max	Min	Max	Min	Max
2007	$9	$36	$1.20	$5.00	$2.60	$10
2008	$9	$36	$1.20	$5.00	$2.60	$10
2009	$9	$36	$1.20	$5.00	$2.60	$10
2010	$9	$36	$1.80	$5.00	$2.60	$10
2011	$9	$36	$1.80	$5.00	$2.60	$10
2012	$9	$50	$1.80	$5.00	$2.60	$10
2013	$9	$50	$1.80	$5.00	$2.60	$10
2014	$9	$60	$1.80	$5.00	$2.60	$20
2015	$9	$60	$1.80	$5.50	$2.60	$20
2016	$9	$60	$1.80	$5.50	$2.60	$20
2017	$9	$60	$1.80	$9.00	$2.60	$20
2018	$9	$60	$1.80	$9.00	$2.60	$20
2019	$9	$60	$1.80	$9.00	$2.60	$20
2020	$9	$60	$1.80	$9.00	$2.60	$20
2021	$9	$60	$1.80	$9.00	$2.60	$20

Appendix 7. Allocation Transfer Reasons

Beginning in 2013, allocation transfers required the selection of one of seven allocation transfer reasons for every allocation transfer to better monitor the program's performance. The tables below contain the number of allocation transactions and percentage transferred by transfer reason between 2013 and 2021.

Appendix 7.1. Count of Allocation Transfer Reasons

Allocation Transfer Reason	2013	2014	2015	2016	2017	2018	2019	2020	2021
Barter trade for allocation	41	21	28	33	13	23	5	15	13
Barter trade for shares	3	4	8	6	2	3	3	4	1
Gift	38	28	37	20	31	41	62	37	41
No comment	1,374	1,560	1,854	2,305	2,227	2,112	2,603	2,567	2,206
Package deal	6	22	7	2	5	2	10	3	2
Transfer to a related account	411	323	485	468	551	640	829	825	708
Sale to another shareholder	878	902	968	846	872	881	1,030	919	1,421

Appendix 7.2. Percent of Allocation Transferred For Each Transfer Reason

Allocation Transfer Reason	2013	2014	2015	2016	2017	2018	2019	2020	2021
Barter trade for allocation	93,371	13,031	60,320	83,812	20,083	38,353	3,023	35,922	13,886
Barter trade for shares	6,854	9,950	63,794	16,692	784	4,051	6,539	6,443	1,099
Gift	91,734	16,887	39,124	15,891	22,248	23,483	149,815	40,597	61,418
No comment	2,802,597	3,088,708	5,638,898	5,809,143	5,448,860	4,831,546	5,691,791	7,236,771	5,484,781
Package deal	11,450	51,792	32,703	1,906	13,650	20,001	39,515	47,859	4,000
Transfer to a related account	1,281,863	823,707	1,321,814	856,367	1,021,521	1,409,156	1,247,188	1,495,363	1,367,107
Sale to another shareholder	1,473,599	1,545,478	2,097,881	1,745,663	1,770,663	1,639,936	2,529,121	2,403,828	4,013,324

Appendix 8: Monthly Allocation Prices

The table below contains the average monthly allocation and ex-vessel price per pound for each year of the RS-IFQ program, after adjusting for inflation based on based on the Gross Domestic Product (GDP) deflator (http://www.bea.gov/national/index.htm#gdp).

Monthly Allocation Prices

Month	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
January	$2.25	$2.68	$3.39	$3.58	$3.56	$3.52	$3.58	$3.39	$3.60	$3.54	$3.58	$3.48	$3.68	$3.73	$3.67
February	$2.46	$2.97	$3.39	$4.00	$3.50	$3.65	$3.77	$3.48	$3.57	$3.64	$3.67	$3.65	$3.97	$4.09	$3.78
March	$2.15	$2.91	$3.28	$3.77	$3.64	$3.50	$3.56	$3.55	$3.63	$3.44	$3.77	$3.68	$4.04	$3.90	$3.85
April	$2.30	$2.86	$3.23	$3.69	$3.61	$3.50	$3.65	$3.54	$3.72	$3.71	$3.66	$3.71	$3.95	$3.82	$3.88
May	$2.59	$2.91	$3.36	$3.75	$3.53	$3.63	$3.56	$3.55	$3.63	$3.63	$3.66	$3.84	$3.94	$3.79	$3.82
June	$2.52	$2.85	$3.53	$3.56	$3.59	$3.46	$3.66	$3.45	$3.67	$3.68	$3.72	$3.69	$4.02	$3.85	$3.80
July	$2.41	$3.13	$3.69	$3.36	$3.56	$3.71	$3.69	$3.60	$3.65	$3.71	$3.67	$3.55	$3.90	$3.72	$3.89
August	$2.60	$3.10	$3.30	$3.47	$3.45	$3.44	$3.46	$3.30	$3.64	$3.69	$3.58	$3.84	$4.00	$3.92	$3.83
September	$2.77	$3.02	$3.37	$3.43	$3.59	$3.71	$3.68	$3.64	$3.32	$3.79	$3.81	$3.78	$4.01	$3.93	$3.92
October	$2.56	$3.07	$3.15	$3.43	$3.53	$3.21	$3.51	$3.09	$3.10	$3.54	$3.75	$3.76	$3.93	$3.64	$3.90
November	$2.73	$3.27	$3.45	$3.66	$3.62	$3.61	$2.89	$3.54	$3.20	$3.63	$3.67	$3.78	$4.02	$3.84	$3.92
December	$2.80	$2.93	$2.97	$2.94	$3.59	$3.63	$2.72	$3.63	$2.89	$3.71	$3.75	$3.71	$3.79	$3.58	$3.94

Appendix 9: Glossary

10% Overage – A provision in the IFQ program that allows IFQ accounts that hold shares to land 10% over their remaining allocation on the last fishing trip of the year. Any overage will be deducted from the shareholder's allocation for the next fishing year and the shareholder is restricted from selling shares that would prohibit this take back action.

Active Account –An account in which the allocation holder has landed, bought, and/or sold allocation within that year. Accounts activity status changes yearly based on the actions taken by the account.

Allocation – Allocation is the actual poundage of red snapper by which an account holder is ensured the opportunity to possess, land, or sell, during a given calendar year. IFQ allocation will be distributed to each IFQ shareholder at the beginning of each calendar year, and expire at the end of each calendar year. Annual IFQ allocation is determined by the amount of the shareholder's IFQ share and the amount of the annual commercial red snapper quota. Dealer accounts may not possess allocation.

Allocation Holder – An account that holds allocation and may or may not hold shares.

Allocation Only Holder – An account that only holds allocation and does not hold shares.

Allocation Transfer – A transfer of allocation (pounds) from one shareholder account to another shareholder account. Before January 1, 2012, allocation could be transferred only to an entity that held a valid Gulf commercial reef fish permit.

Entity – An individual, business, or association participating in the IFQ program. Each IFQ account is owned by a unique entity.

Ex-vessel price – The price paid to the vessel by a dealer per pound of fish before any deductions are made for transferred (leased) allocation and goods and/or services (e.g., bait, ice, fuel, repairs, machinery replacement, etc.).

Ex-vessel value - A measure of the dollar value of commercial landings, usually calculated as the price per pound at first purchase of the commercial landings multiplied by the total pounds landed.

Gulf of Mexico Commercial Reef Fish Permit Holder – An entity that possesses a valid Gulf commercial reef fish permit and therefore, is eligible to be exempt from bag limits, to fish under a quota, or to sell Gulf reef fish in or from the Gulf Exclusive Economic Zone.

IFQ Dealer Endorsement – The IFQ dealer endorsement is a document that a dealer must possess in order to receive Gulf of Mexico red snapper. The dealer endorsement can be downloaded free of charge from the IFQ dealer's online account.

Inactive Account – An account in which the allocation holder has neither landed, bought, nor sold allocation within that year, including those who never logged into their account. Accounts activity status changes yearly based on the actions taken by the account.

Initial Account - An account that was never logged into by the account's owner(s).

Landing Notification - A required 3-24 hour advanced landing notification stating the vessel identification, approved landing location, dealer's business name, time of arrival, and estimated pounds to be landed in each IFQ share category. Landing notifications can be submitted using either a vessel's VMS unit, through an IFQ entity's on-line account, or through the IFQ call service. The landing notification is intended to provide law enforcement

officers the opportunity to be present at the point of landing so they can monitor and enforce IFQ requirements dockside. For the purpose of these regulations, the term landing means to arrive at the dock, berth, beach, seawall, or ramp.

Landing Transaction – The dealer completes a landing transaction by entering the date, time, and location of transaction; weight and actual ex-vessel price of red snapper fish landed and sold; and information necessary to identify the fisherman, vessel, and dealer involved in the transaction into the IFQ online system. The fisherman landing IFQ species must validate the dealer transaction report by entering his vessel's unique personal identification number when the transaction report is submitted. After the dealer submits the report and the information has been verified, the website will send a transaction approval code to the dealer and the allocation holder.

Median - The middle value in a statistical distribution, above and below which lie an equal number of values.

Participant - An individual or corporation that is part of an IFQ entity. For example, John Smith the participant may belong to multiple entities such as John Smith, John and Jane Smith, and ABC Company. Share and allocation caps are tracked at the IFQ participant level and not the IFQ entity level.

Pound Equivalent – The share percentage that would equal one pound for that particular time period. The exact share percentage that is equivalent to one pound depends on the total commercial quota and will change as the quota changes from year to year or within a year from any quota increases.

Public Participant – Accounts that do not have an associated Gulf commercial reef fish permit. Public participants may hold and transfer shares and allocation, but cannot harvest red snapper.

Share – A share is the percentage of the commercial quota assigned to a shareholder account that results in allocation (pounds) equivalent to the share percentage of the quota. With limited exceptions, your percent share of the quota does not change unless shares are transferred into or out of an account. Dealer accounts may not possess shares.

Share Cap – The maximum share allowed to be held by a person, business, or other entity. The share cap prevents one or more IFQ shareholders from purchasing an excessive amount of IFQ shares and monopolizing the red snapper commercial sector.

Share Transfer – A transfer of shares from one shareholder account to another account. A shareholder must initiate the share transfer and the receiver must accept the transfer by using the online IFQ system. Before January 1, 2012, shares could be transferred only to an entity that held a valid Gulf commercial reef fish permit.

Shareholder – An account that holds a percentage of the commercial red snapper quota.

Shareholder Account – A type of IFQ account that may hold shares and/or allocation. This includes accounts that only hold allocation.