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Proposed policy changes to the Gulf of Mexico red snapper IFQ program: Evaluating differential impacts by participant type

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ABSTRACT

The U.S. commercial red snapper IFQ program was the first catch share management system implemented in the Gulf of Mexico. The program has been successful in meeting its major goals of ending derby-style fishing and reducing overcapacity in the harvest sector, but several concerns regarding the socioeconomic impacts of the program have been raised. To address these concerns, the management agency initiated a fishery management plan amendment to develop potential modifications to the program. This analysis describes the proposed policy changes, identifies the key outcomes, and assesses the impacts on distinct participant types using historic harvest data, quota trading patterns, and existing estimates of industry concentration. There are three implied regulatory objectives, as all proposed modifications would either increase ownership of shares by harvesters, limit consolidation in the harvest sector, or increase harvest flexibility. The corresponding effects on stakeholders could vary quite substantially as each objective and the associated alternative policies would affect the size and composition of multiple markets that collectively affect socioeconomic outcomes. The approach to evaluating existing catch share programs and the associated findings in this paper are important for management agencies charged with adhering to federal policies and guidance concerning distributional outcomes.

1. Introduction

The Gulf of Mexico Fishery Management Council (GMFMC) Reef Fish Amendment 26 established individual fishing quota (IFQ) management of the commercial red snapper fishery in the Gulf of Mexico (GMFMC, 2006). The program, implemented by NOAA Fisheries in 2007, was the first catch share management program in the Gulf of Mexico. IFQ management was adopted to reduce overcapacity in the commercial red snapper fishery and eliminate problems associated with derby style fishing (GMFMC, 2006). As required by the Magnuson-Stevens Fishery Conservation and Management Act (MSA), a review of the program was conducted during 2012 (five years post implementation) and found IFQ management was successful on both fronts as it led to fewer vessels (i.e., more efficient use of capital resources) and year-round fishing that has increased and stabilized dockside price (GMFMC, 2013; Solís et al. 2014a, 2015).

Although IFQ management ended the race to fish and decreased overcapacity in the fishery, issues have been raised over the effectiveness of the program in meeting other management objectives including impacts on fishery participants. One issue is continued high discard rates in the eastern Gulf of Mexico (NMFS, 2015); quota was initially allocated to fishers based on catch histories so less quota was allocated to fishermen in areas where red snapper were less abundant historically (i.e., Florida peninsula). Since IFQ implementation, however, red snapper stocks along the west Florida shelf have rebounded and many fishermen that target other reef fish species have needed to discard red snapper if they have not acquired additional quota. Although discard ratios for red snapper (discarded:landed) have fallen in the region since implementation of the IFQ program, they remain five to 15 times higher than ratios found in the rest of the Gulf of Mexico (NMFS, 2015).

Another issue is the increase in quota owners that no longer fish. By 2014, 29% of the quota was held in IFQ shareholder accounts ineligible to fish because they did not hold a valid commercial reef fish permit but were eligible to lease or sell quota; conversely, 39% of red snapper landings were by vessels associated with shareholder accounts that did not own quota and leased in their harvest/landing privileges (NMFS, 2015). As such, a related issue is an increasing rate of lease-dependent fishermen on the associated sustainability and resiliency of coastal fishing communities. This is an issue that is essentially about who fishes and who benefits – that is, a distributional issue and one that is not

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unique to this fishery (McCay et al., 1995; Brandt, 2005; Dawson, 2005; Knapp, 2011; Olson, 2011; Criddle and Strong, 2013; Pascoe et al., 2014; Apgar-Kurtz, 2015; Bodwitch, 2017). To address distributional issues, other IFQ programs in U.S. fisheries have included: area specific quota (Pacific Coast groundfish trawl and North Pacific halibut and sablefish), quota specific to vessel classes and/or harvesting strategies (Bering Sea pollock, BSAI king and tanner crab, North Pacific halibut and sablefish, Pacific Coast groundfish trawl), owner-on-board requirements for harvesting (North Pacific halibut and sablefish, Pacific Coast fixed-gear sablefish), and requiring that quota share transactions include all other associated fisheries (Northeast multispecies groundfish, and general category Atlantic scallops) (Holland et al., 2015). For comparison, the only current distributional restriction for the Gulf of Mexico red snapper IFQ program is a cap on share ownership.

To address IFQ issues with respect to distributional impacts, the GMFMC initiated a fishery management plan amendment with the goal of proposing modifications to the program. Following a five-year review of the red snapper IFQ program, mandated by the MSA, the GMFMC appointed an ad hoc red snapper IFQ advisory panel, made up of commercial fishers and fish house owners, to recommend potential changes to improve the program. The GMFMC then evaluated and modified the panel's list of potential changes at a series of meetings in 2014. The resulting scoping document identified several potential modifications (GMFMC, 2015), and many are now formalized into proposed Reef Fish Amendments 36A and 36B.[1] In this study, we evaluate the primary proposed changes using a mix of data from, and research on, the commercial red snapper fishery, trading under the IFQ program and other IFQ fisheries in the Gulf of Mexico. The evaluation also looks at the proposed changes with regards to current federal fisheries regulations (i.e., the MSA), stated goals of the IFQ program, and the NOAA Catch Share Policy (NOAA Fisheries, 2010). The next section provides background on the fishery and the IFQ program and is followed by a description of the proposed changes and the results of analyses of their potential impacts on the fishery and its participants. The article closes with concluding remarks.

2. The fishery

Red snapper is part of the management unit of the Reef Fish Fishery Management Plan (FMP) in the Gulf of Mexico. The fishery is managed by NOAA Fisheries through the GMFMC. The FMP covers numerous snapper and grouper species as well as amberjacks, triggerfish, tilefish, and several other species. For commercial reef fish fishermen, red snapper, vermillion snapper, and red grouper are the most harvested commercial species by weight.

In 1988 the red snapper fishery was found to be overfished and undergoing overfishing (Goodyear, 1992); in response, a total allowable catch (TAC) was set in 1990 as the main means of limiting overfishing. The use of a TAC to manage harvest continued through 2006. The TAC was set annually with 51% of the TAC allocated to commercial fishermen that held a required reef fish permit (commercial quota) and 49% allocated to recreational fishermen (recreational quota). In addition to a TAC, regulators imposed a moratorium on issuance of new reef fish permits and red snapper endorsements that effectively limited directed red snapper harvesting to 136 vessels (GMFMC, 2006).[2] TAC management of the red snapper fishery led to shortened seasons. Between 1996 and 2003 the average commercial red snapper season was only 77 days stretched across 10-day monthly mini-seasons until quotas were attained (NMFS, 2008). The race to fish caused by TAC management led to flooded markets and lower dockside prices due to market gluts (Weninger and Waters, 2003). In 2007, NOAA Fisheries implemented IFQ management in the Gulf of Mexico commercial red snapper fishery to reduce overcapacity and eliminate the problems associated with derby fishing. In 2010, the IFQ program was extended to several other commercial grouper and tilefish species.

Quota in the fishery is managed through two components: shares and allocation. Shares are the percentage of the total commercial quota owned by individual entities and represent a perpetual (but revocable) privilege as long as the program exists. Allocation is the annual harvest privilege (in pounds) associated with shares and is the amount of red snapper a fisher can legally land or trade annually. A shareholder's allocation is determined by multiplying their share by the annual commercial quota. Share ownership is restricted to no more than 6.0203% of the total commercial quota for any unique entity; however, there are currently no restrictions on the amount of annual allocation that can be accumulated by an entity (NMFS, 2014).

Both share and allocation are tradeable with share transactions representing a permanent transfer of quota (the buyer receives all future allocation associated with the share transferred) while allocation transactions are on an annual basis (a lease), only involving current year harvest privileges; any allocation that goes unharvested does not carry over into future years. Share was initially awarded to 554 fishing entities based on catch history. For the first five years of the IFQ program (2007–2011), quota ownership (share and allocation) was limited to those entities holding a valid Gulf of Mexico commercial reef fish permit. In 2012, the requirement was lifted allowing all U.S. citizens and permanent legal residents to purchase and sell both share and allocation; however, the commercial reef fish permit is still required to commercially harvest red snapper (NMFS, 2013).

The MSA requires that all limited access privilege programs, including IFQ programs, be evaluated within five years of their implementation. The review found that the IFQ program led to a reduction in the size of the commercial fleet from 443 vessels in 2006 to 368 vessels in 2011 (GMFMC, 2013). This decrease may, however, be modest given a recent fleet capacity utilization analysis estimated that 75 vertical line vessels could have harvested the entire 2011 commercial quota (Solís et al., 2014b). IFQ management also eliminated the race to fish, such that landings are spread more evenly throughout the year, consequently stabilizing dockside prices for red snapper. During the first year of IFQ management, 2007, the inflation-adjusted dockside price rose 24.6% above the average of the previous five years (2002–2006); inflation-adjusted dockside prices increased another 15.9% between 2007 and 2014 (NMFS, 2015).

The commercial red snapper fishery, while distinct from the recreational sector, is also heterogeneous with respect to target species, fishing gears, fishing-dependent communities, and participant types. This analysis defines six different participant types that consider fishing status, share ownership, and leasing behavior (Table 1) (Ropicki, 2014). By subdividing participants in this manner, the analysis evaluates how different participant types, with different fishery practices and behaviors, will respond to proposed management modifications.

Fig. 1 presents the allocation held (by investors and allocation brokers) and the allocation fished (by allocation-dependent fishers, investor fishers, share fishers, and supplementers) as a percentage of total annual quota at year end. Investor accounts continue to grow in terms of the percentage of the total commercial quota owned as share; at the same time the percentage of total harvest by allocation-dependent account holders has also grown. Some IFQ participants have multiple shareholder accounts and hold their quota in accounts without an associated reef fish permit but transfer the quota to affiliated accounts with a permit to harvest their quota. Because of these affiliated accounts, both the size and growth of the

[1] The original scoping document (GMFMC, 2015) only considered changes to the red snapper IFQ program. Revisions to the original document led to proposed Amendments 36A and 36B and broadened the scope to include both the red snapper and grouper-tilefish IFQ programs. Amendment 36B includes the proposals discussed in this paper and continues to evolve. For conciseness, this analysis focuses on the potential impacts on the red snapper fishery only, but the techniques used are applicable to the grouper-tilefish and other IFQ programs.

[2] The red snapper endorsement system included 136 Class 1 endorsements, limited to 2000 pound trip limits, and 628 Class 2 endorsements limited to 200 pound trip limits. In effect, Class 1 endorsements authorized directed red snapper harvest and Class 2 endorsements authorized landing incidental red snapper harvest.

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