APPENDIX III

Social and Wellbeing Outcomes in Catch Share Programs: A Case Study of the LAGC IFQ Program, Draft Survey Results

LAGC IFQ Program Review, 2016-2023

Social and Wellbeing Outcomes in Catch Share Programs: A Case Study of the LAGC IFQ Scallop Program

Draft Survey Results

Prepared for

Walton Family Foundation

July 2025

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Please cite as: Northern Economics, Inc. *Social and Wellbeing Outcomes in Catch Share Programs: A Case Study of the LAGC IFQ Scallop Program*. Prepared for Walton Family Foundation. July 2025.

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Introduction & Survey Description

Project Background

Under a grant from the Walton Family Foundation, Northern Economics and Gulf of Maine Research Institute are investigating how different tools and structural changes in U.S. catch share programs may work to achieve equity goals while minimizing adverse impacts to participants, communities, and other stakeholders. Our research questions are as follows:

1. What strategies have been employed in catch share programs to promote equity? What have the consequences been of these measures on equity and wellbeing outcomes? What other measures could be implemented?
2. What strategies would be most likely to increase equitable outcomes, increase wellbeing, and minimize negative impacts to extant users, fishery dependent businesses, and communities?
3. How would modifications designed to affect equity influence outcomes in an extant catch share program in the U.S.?

To answer these research questions, our work is being conducted in three key phases: 1) Develop an analytical framework of equity strategies and outcomes, 2) Examine this framework with a case study approach using interviews and empirical analysis, and 3) Synthesize findings and develop recommendations. This report presents results from a survey of LAGC IFQ scallop fishery stakeholders as part of the case study. Results of the first phase are presented in a separate white paper (Northern Economics and Gulf of Maine Research Institute 2024) and a full report on results of the case study and overarching conclusions will be prepared and made publicly available in the fall of 2025.

Stakeholder Survey

Survey description

A survey was used to understand wellbeing dimensions of IFQ scallop fishery participants. The survey was composed of two main sections, primarily using a series of statement-based questions (*Appendix: Survey Instrument).* Section one collected information regarding people's background and involvement in the fishery, and wider information including permits and quota ownership, leasing arrangements and dependence on the fishery. Section two was composed of statement-based questions regarding different wellbeing dimensions. An optional open-ended question 'Can you provide an explanation of your responses' was associated with each set of statements.

The survey was designed to obtain information about wellbeing dimensions at a generalized level of the fishery, rather than individual specific answers. This was to complement the broader Bayesian model design that captures and reflects generalizable trends and patterns in the fishery system as a whole, as opposed to specific individual level insights. Additionally, making the survey more generalized provided the potential opportunity for different types of fishery stakeholders associated with the fishery to take part in the survey – i.e. active participants, quota owners who no longer fish, shoreside business owners associated with the fishery, etc.

Prior to implementing the survey, we sought input from three individuals at fishing organizations and in the management system to aid in further refinement of survey questions and statements. This helped to ensure that the questions were understandable by the target audience, consider ordering of questions, and that nuances regarding roles/backgrounds/associations with the fishery were adequately captured by the questions. We then tested the survey with two individuals with detailed knowledge of the scallop fishery to check timing and understanding.

The final survey was administered through the online SurveyMonkey platform, and took between 15-20 minutes to complete.

Recruitment

We used a multi-pronged approach to recruit survey participants due to the wide-geographic range of the fishery and participants being a hard-to-reach sample community and having varying backgrounds associated with the fishery. Initially, emails were sent to key identified 'connectors' within the fishery who could send the online link and associated information to their networks. These connectors included those in fishing associations and organizations, key businesses and individuals in fisheries management positions. Additionally, a paid advertisement of the survey was placed on Facebook and Instagram for 8 days. Paper flyers were provided at an industry focused event, the Maine Fishermen's Forum, at a GMRI booth and during a scallop specific visioning session. These approaches were selected to target both active fishers, but also those with other connections to the fishery. After two weeks of using these approaches with limited participation, we chose to obtain and utilize a scallop permit list which contained phone numbers of individuals with scallop IFQ permits. Two project members rang all individuals on the permit list, providing an option to complete the survey over the phone or online. If individuals were interested in participating online, the survey link was sent via text or email (preferred methods). If individuals wanted to do it over the phone, a time was identified for a follow-up conversation, or the survey was conducted during the immediate conversation. Completion of the survey over the phone typically lasted 1 hour. In all cases, either online participation or over the phone, informed consent information was provided and individuals verbally or electronically provided consent before answering questions.

Final number obtained

The survey was open for 1 month between March and April 2025. During this time frame we collected 32 responses. 25 of these were done online and 7 of these were done over the phone.

Survey Results

Demographics & Representation

A total of 32 respondents participated in the survey. An overview of respondent demographics and associations with the fishery is found in Table 1. The average respondent age was 51 years. Most respondents (87.5%) indicated that their primary role in the fishery was an active fisherman (participated in the last five years); 93.8% of respondents indicated that they were IFQ vessel or permit owners; and 50% were IFQ quota holders. The majority of respondents indicated that they live in Massachusetts for their primary residence (71.9%, Table 2), but respondents also lived in New Jersey, Virginia, North Carolina, Maine, and Rhode Island. Of active fishermen, 50% had been involved in the IFQ program every year since its establishment, but only 31% were initial recipients of quota, meaning that they were granted initial quota shares based on historical fishing effort.

Table 1. Summary of respondents by region/location, age, stakeholder type/role and other characteristics

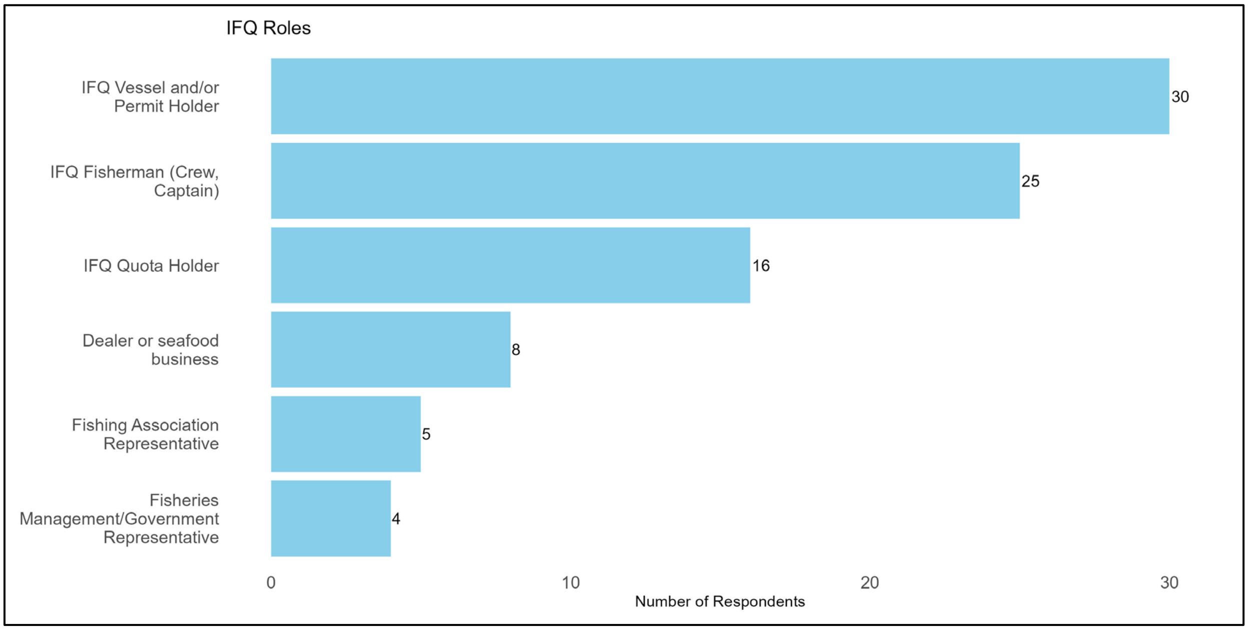
Question	Data Summary
Mean Age	51 years
Active IFQ Fishermen	87.5%
Vessel Owner	93.8%
Quota Holder	50%
Use a quota bank	61%
Average trip length is less than 24 hours	61%
Involved in IFQ every year since 2010	50%
Initial quota recipient	31%
Receives over 40% of fishery income from IFQ fishery	61.53%
Has no other non-fishery income sources	62%

Table 2. Respondents by primary residence state and region (N=32)

State	Region	Percent of Respondents
Massachusetts	Northeast	71.9%
New Jersey	Mid-Atlantic	12.5%
Virginia	Mid-Atlantic	6.3%
North Carolina	Mid-Atlantic	3.1%
Maine	Northeast	3.1%
Rhode Island	Northeast	3.1%

While most people who participated in the survey indicated their primary role to be an active fisherman, serving as a captain, crew, and/or vessel owner, many held additional roles (Figure 1). Most commonly this included being an IFQ vessel and/or permit holder, quota holder, or a dealer/seafood business.

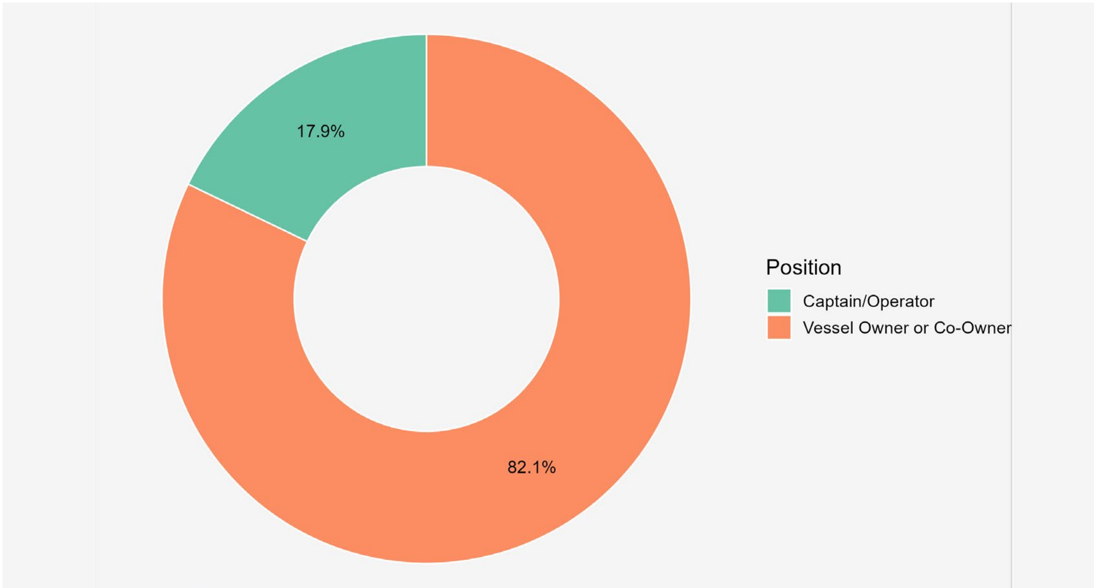
Figure 1. Roles of survey participants within the IFQ scallop fishery (n=32)



Note: Respondents were asked to check all that apply in this question.

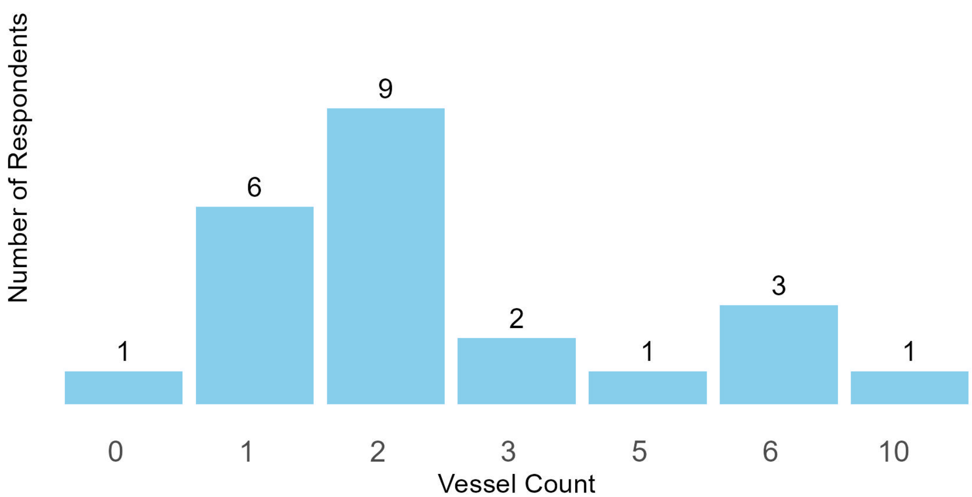
After respondents answered the question about their roles in the fishery, the survey presented different questions depending on the answer. Former IFQ fishermen skipped the current role questions (Q6–Q16) and IFQ permit owner not participating in last 5 years or never participating in IFQ skipped the remainder of the background section (Q6–Q22). Among those indicating that they are active IFQ fishermen, another question (Q6) asked for more information about their role, and asked for the best description of their role as either vessel owner or co-owners, captain/operator, or crew. Those answering crew or vessel operator skipped to Q15. Because of these differences, the numbers of respondents presented in the following section vary from the overall number of respondents and where relevant, the number of respondents is noted in figure captions and in text. Notably, among active IFQ fishermen (28 respondents, or [n=28]), the vast majority of respondents reported being vessel owners (23), a minority reported being vessel captains or operators (5), and none reported being primarily crew members (Figure 2).

Figure 2. Active Fishermen Current Positions in the LAGC IFQ Scallop Fishery (n=28)



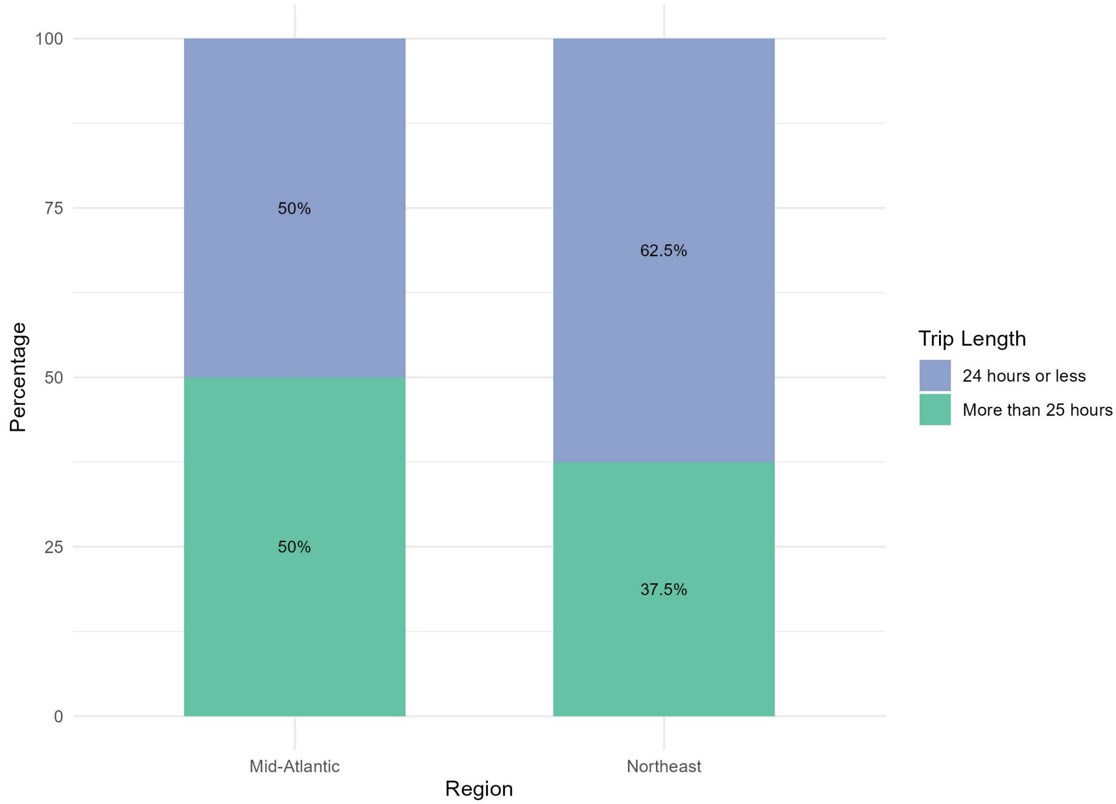
Respondents that indicated an ownership stake in active vessels (n=23) varied in the number they had a stake in, with an average of 2.7 and median of 2 vessels (Figure 3).

Figure 3. Number of active vessels in which respondents held an ownership stake (n=23)



Across all respondents, most (61%) indicated that their typical trip length was less than 24 hours (Figure 4). There was a slight difference when accounting for regional variation, with those from the Mid-Atlantic (n=4) conducting more trips over 24 hours in length compared to those in the Northeast (n=24).

Figure 4. Trip length by region (n=28)

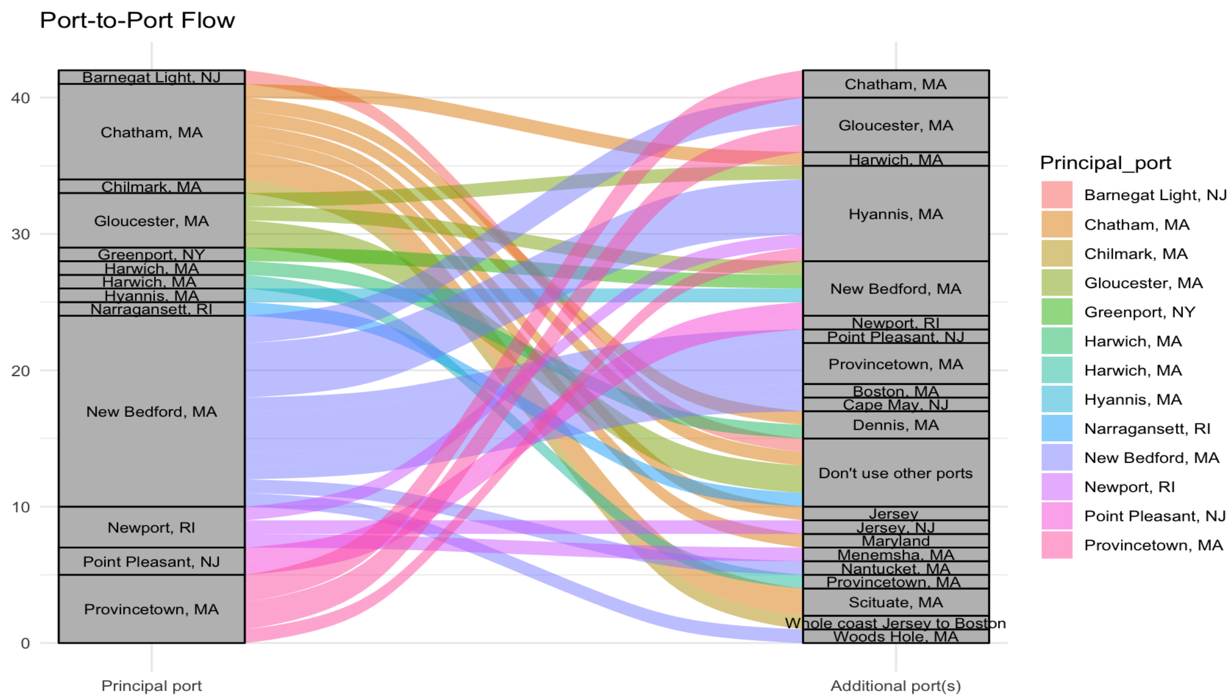


Most respondents indicated their principal port was in Massachusetts (Table 3). However, 77% of respondents answered that they fished out of other ports in addition to their principal port, while 23% fished only out of their principal port. Table 3 summarizes percentages of respondents' usage of different ports, while Figure 5 shows the links for an individual respondent's principal port and the additional ports that they reported using. Notably, while respondents reporting New Bedford as their principal port represent the largest share of respondents, none of these respondents reported only fishing out of New Bedford, with the most common secondary ports being Hyannis and Gloucester, but other ports listed spanned Massachusetts to New Jersey. One respondent indicated that they utilize all ports from New Jersey to Boston.

Table 3. Principal Port State and State of Other Ports Utilized (n=26)

Principal Port State	Percent	Additional Port State	Percent (n=26)
Massachusetts	77%	Massachusetts	78%
New Jersey	11%	Rhode Island	12%
New York	4%	New Jersey	7%
Rhode Island	8%	Maryland	3%

Figure 5. Links between respondents principal port and additional ports that they use

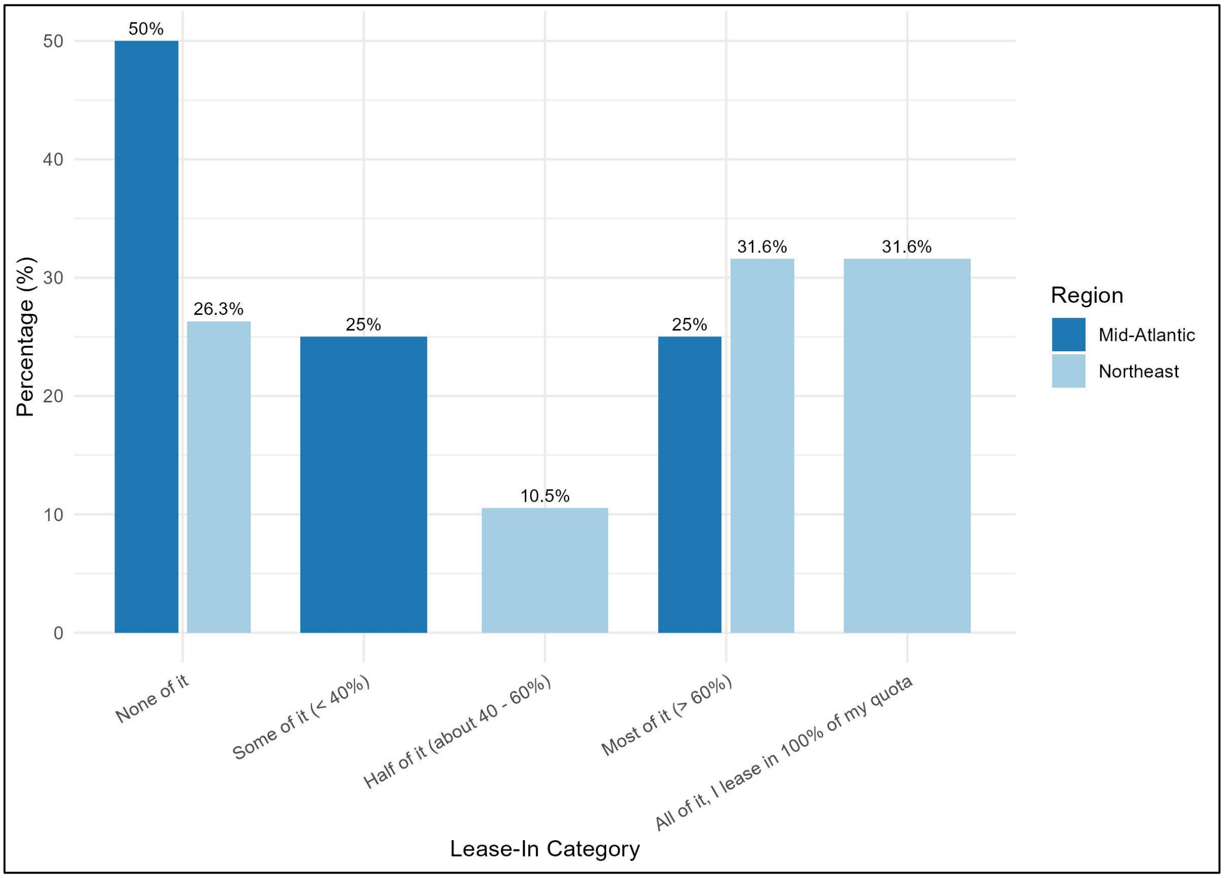


Quota Ownership and Leasing

To better characterize baseline conditions among active fishermen, respondents who indicated that they were vessel owners were asked about their leasing arrangements in terms of the typical proportions of scallop IFQ quota they lease in or out, as well as their usage of quota banks.

Over half of all respondents (56%, n=23) indicated that they leased in the majority to all of the quota used on their vessel, with 30% indicating that they leased in the majority of the quota used ('Most of it >60%') and about a quarter (26%) stating that they were completely lease dependent, leasing in all the quota used. Another 30% of respondents indicated that they did not need to lease in any quota, indicating that all quota used on the vessel was owned outright. The remaining answered 'Half of it' (8%) or 'Some of it' (4%). When looking at lease-in trends across regions, Mid-Atlantic respondents broadly leased in less quota compared to those in the Northeast, but differences were not significant (T-test, p=0.13) (Figure 6).

Figure 6. Leasing-in percentages by region (n=23)



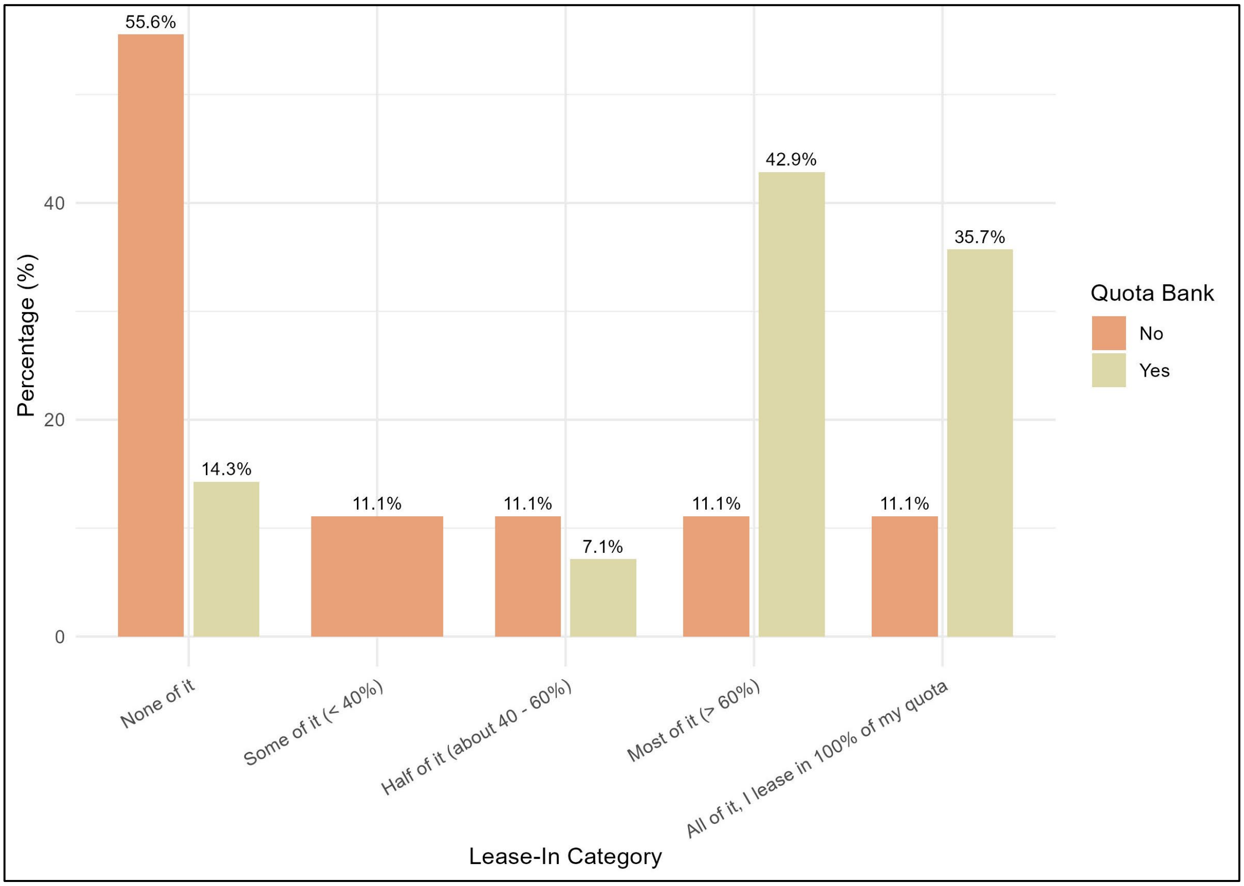
Note: T-test by region was not significant (p=0.13)

When asked about typical amounts of quota that respondents lease out to others, a large proportion of respondents reported they did not lease out any quota and instead fished it themselves (65%, N=23). A smaller proportion (13%) said they leased out 'Some of it <40%', while the remaining 21.7% reported that they are not allocated any quota. Notably, none of the respondents reported that they lease out the entirety of their allocation.

The survey also asked about quota bank usage. Over the last five years, 60.8% of respondents stated that they had received scallop IFQ quota from a quota bank (N=23). Some respondents provided further contextual information regarding their use of quota banks (N=15). Four stated that they used a quota bank because it provided cheaper quota prices compared to the open market, and one stated that they used it to ensure continued access to the fishery. One stated it was more expensive to lease from a quota bank. Two respondents stated that they used the quota bank to ensure continued membership and have voting rights, to ensure they could advocate against policies of the quota bank that they felt were detrimental to small scale operators in the fishery. Three other respondents also described issues with the quota bank they used, citing personal issues, being 'against it', and issues with the running and organization of the quota bank.

As might be expected, those who reported leasing in higher proportions of their quota were more likely to report receiving quota from a quota bank in the last five years. When considering leasing-in arrangements by quota bank status, use of a quota bank was associated with more respondents who leased in quota compared to those who did not (Figure 7).

Figure 7. Quota bank membership and leasing-in arrangements across respondents (n=23)



Note: T-test was significant (p=0.01).

Wellbeing dimensions

The majority of the survey questions were focused on understanding baseline conditions with respect to wellbeing outcomes under the program. Here, results are summarized by theme:

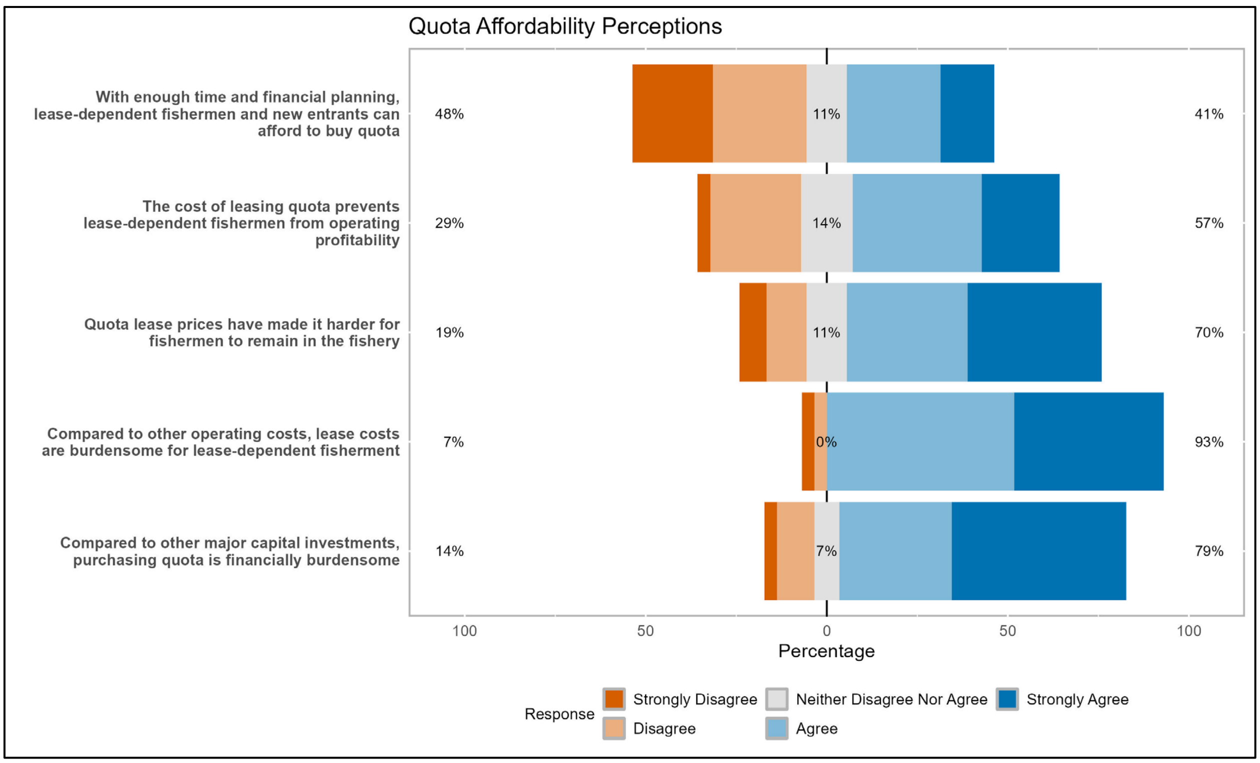
- Quota affordability and availability
- Fishing reliance, diversification, job satisfaction and mental wellbeing
- Upward mobility, continuity of fishing as a livelihood and crew shares
- Social relationships
- Management perspectives

All respondents, regardless of their status as an active fisherman or not, were provided all questions in the wellbeing section of the survey. Where relevant, questions from the previous sections of the survey are summarized to contextualize results.

Quota affordability and availability

Respondents were presented with a series of wellbeing statements across a number of dimensions, including several statements regarding quota availability and affordability. Across all statements, respondents agreed or strongly agreed that quota was unaffordable, in terms of both leasing and purchasing quota (Figure 8). This was seen as challenging not just for the profitability and ability to remain in the fishery of current fishermen, but also for those seeking to enter the fishery.

Figure 8. Responses to quota affordability statements (n=29)



Written comments from respondents further emphasized perceptions of unaffordability:

> *Buying quota is too expensive* –Vessel owner or co-owner, Massachusetts

> *Purchasing quota is very expensive and really has to be planned for, but it's doable... Leasing in quota gets expensive as well, and has to be planned for the year previous, to know what you'll be able to catch and how much quota is around to lease.* –Active IFQ fisherman, Massachusetts.

> *My son loves fishing, but I wouldn't let him get into it. Everything is too expensive and I don't see a future.* –Vessel owner or co-owner, Massachusetts

Another described how quota being owned by non-active fishermen affected the affordability and price:

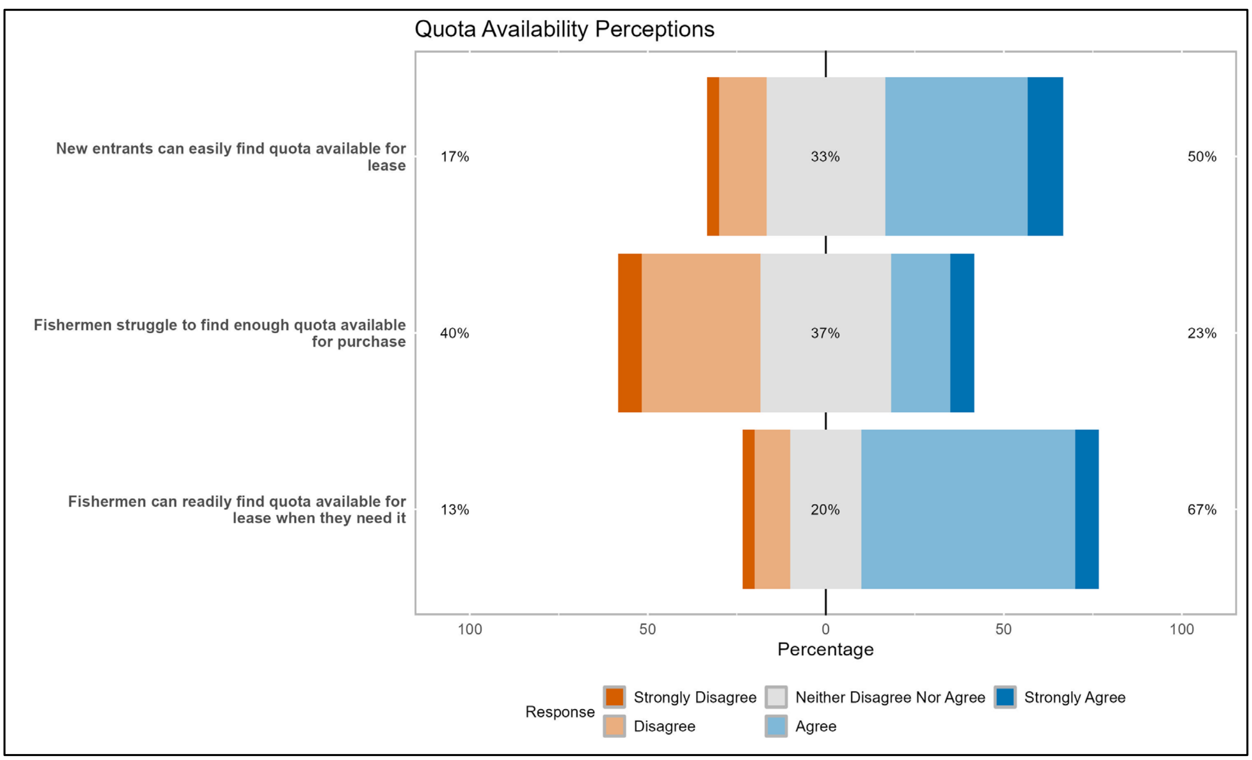
> *Varies a lot from year-to-year. [The] reality is [that] there are enough larger quota owners with a lack of transparency that prices can be manipulated, not prohibitively expensive, but if quota was owned solely by fishermen would solve market manipulation problems.* –Vessel owner or co-owner, Massachusetts

Another described the additional costs of leasing quota, in addition to the price itself (e.g., agent or permit bank fees etc.):

> *The added costs of leasing IFQ or paying off notes for purchased IFQ makes the lean years very difficult and the good years far less rewarding.* –Vessel owner or co-owner, Massachusetts

For quota availability, responses were more mixed. Respondents generally agreed or strongly agreed that finding quota to lease or purchase was easy for new entrants and current fishermen (Figure 9).

Figure 9. Responses to quota availability statements (n=30)



However, these statements also resulted in several respondents selecting 'Neither disagree nor agree,' indicating that there could be more nuanced factors involved in influencing answers to these statements that this survey does not capture.

For example, variability in both quota affordability and availability was described by a respondent who highlighted the ripple effects this has on fishing behavior and decision-making, as well as wider impacts on crew and fishing families:

> *Quota lease costs are variable to the time of year. During the last 5 years there has been a trend of highest quota lease at the beginning of the year when scallop prices begin to drop (an effort of non-fishermen entities to maximize their return on investment into quota). The effect of this is that the best fishing and most effort from the IFQ fishery (most access to grounds, best yield, best weather) is performed when quota costs are highest and vessel prices are lowest. The resulting choice to the fisherman is to suffer tight margins or to fish areas and seasons that take more effort (longer trips, worse weather, reduced yields) and lease residual IFQ pounds at reduced market costs once the bulk of the quota has been caught. This unofficial seasonality is stressful to families and crews. Either work your ass off for less money and binge work your summer (missing critical family time for heads of households) or grind it out during the shoulder or winter months and spend more time under tougher conditions.* –Vessel owner or co-owner, Massachusetts

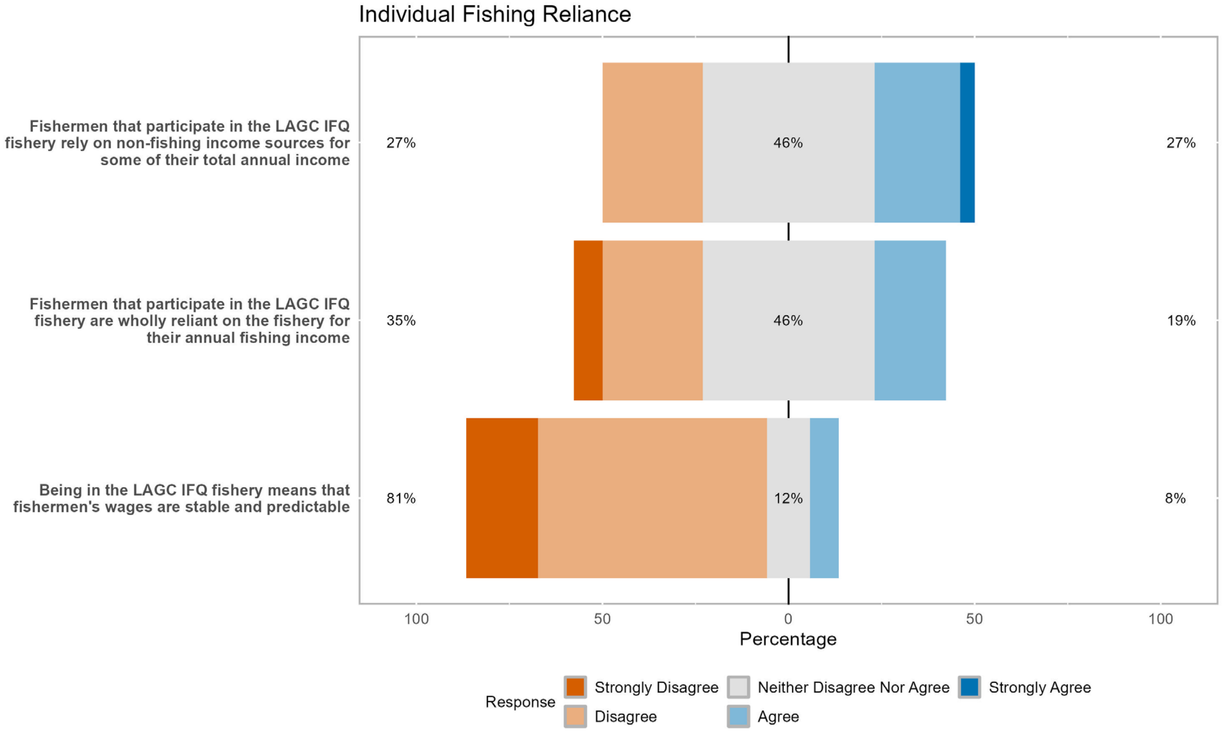
Fishing reliance and diversification, job satisfaction and mental wellbeing

In this section, responses to questions regarding perspectives of general fishing reliance and diversification, job satisfaction and mental wellbeing among IFQ participants are presented.

Fishing Reliance and Diversification

Respondents were asked about fishing reliance in the scallop IFQ program at a general population level (Figure 10). A similar number of respondents (27%) both agreed/strongly agreed and disagreed/strongly disagreed that fishermen in the scallop IFQ fishery are dependent on non-fishing income, while 46% neither agreed or disagreed. This likely reflects the individual nature of income dependence in that it can be variable and subject to individual and household circumstances, and that some respondents may have struggled to answer across a general population level because sharing income dependency information may not be common among those in the fishery. Slightly more respondents disagreed that fishermen in the fishery were wholly reliant on it for their annual fishing income, which could indicate that they are operating in other fisheries that provide financial benefits. Similarly, however, 46% neither agreed nor disagreed, again highlighting the individual nature of this question.

Figure 10. Responses to individual fishing reliance statements (n=26)



Qualitative information provided some additional insights into people's perceptions regarding these statements. One respondent stated the need to be involved in other fisheries, while another described the need to scallop for a large portion of their year to justify their participation costs:

> *Again, this year has been all over the place in the scallop world. I'm involved in more than just that to compensate.* –Captain/Operator, Massachusetts

> *We must participate at least 75 percent of the year to justify the costs associated with scalloping.* –Captain/Operator, Massachusetts

Another described how quota amounts and availability intersect with fishing reliance:

> *Not everybody has the same amount of quota, so some must rely on other sources. Differences in quota mean some have to go elsewhere because they can't buy quota* –Vessel owner/co-owner, Virginia

Others noted the personal nature of these questions, highlighting why survey responses may have received a higher percentage neutral responses:

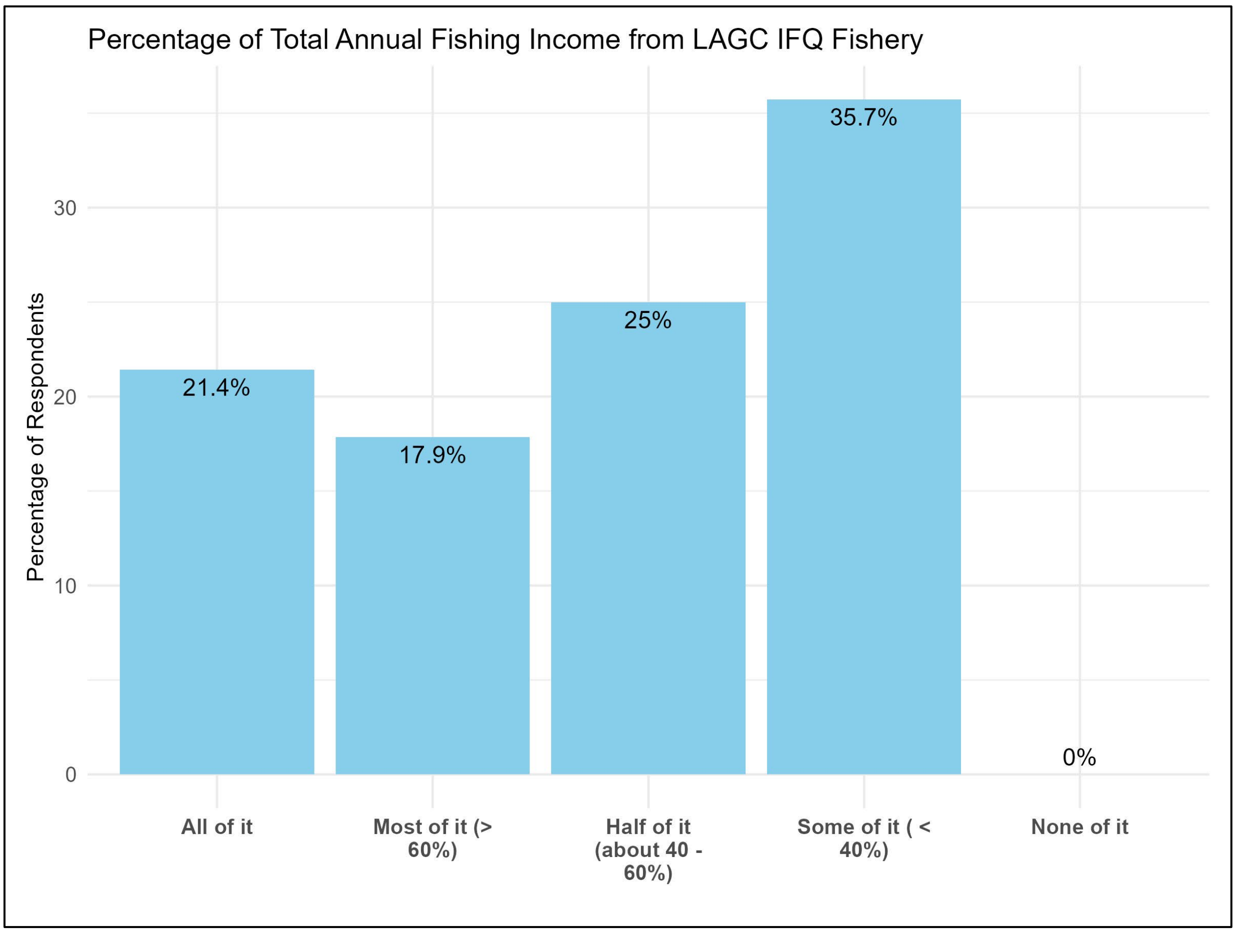
> *Some do, depends on where you're at, fishing used to be real good and now there's no money in it.* –Vessel owner/co-owner, Massachusetts

> *I don't think one could make any of those 3 generalizations. I certainly think that there are less vessels that can singularly target IFQ harvested scallops and those owners that do likely have outside incomes.* –Vessel owner/co-owner, Massachusetts

Finally, a majority of respondents disagreed or strongly disagreed that being in the scallop IFQ program meant their wages were more stable and predictable, which contradicts wider purported economic benefits of IFQ programs. As one respondent stated, "no fishing wages are predictable".

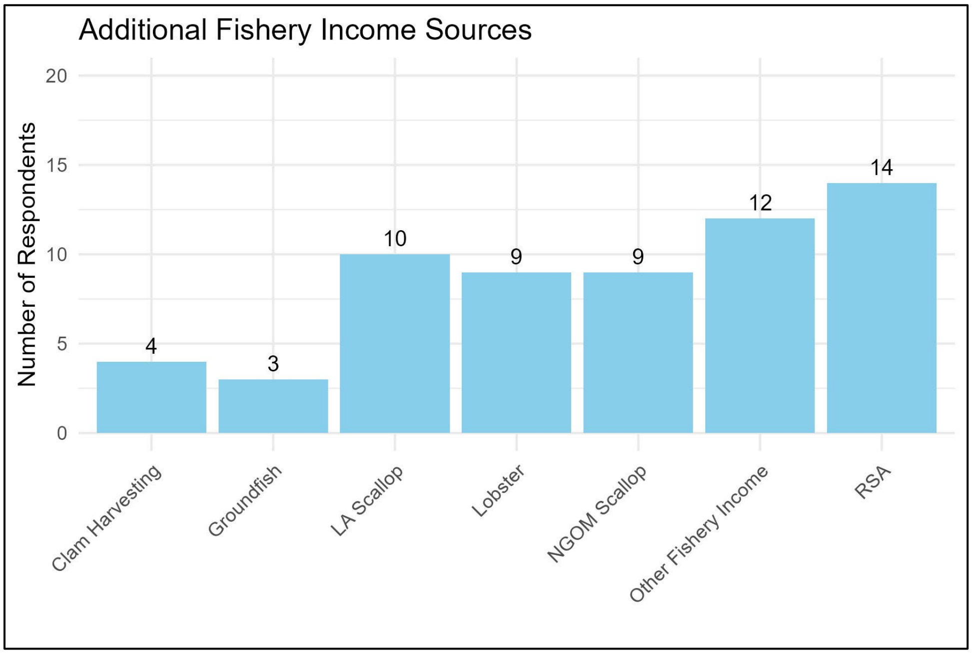
In addition to responding to these statements about fishing reliance, respondents were also asked to indicate their own individual reliance on the IFQ fishery for their total annual fisheries income. Results were somewhat mixed; 35% answered 'some of it <40%', 25% answered 'half of it 40-60%', 17% answered 'most of it >60%' and 21% answered 'all of it' (Figure 11).

Figure 11. Fishing Income Dependency on the IFQ Fishery (n=28)



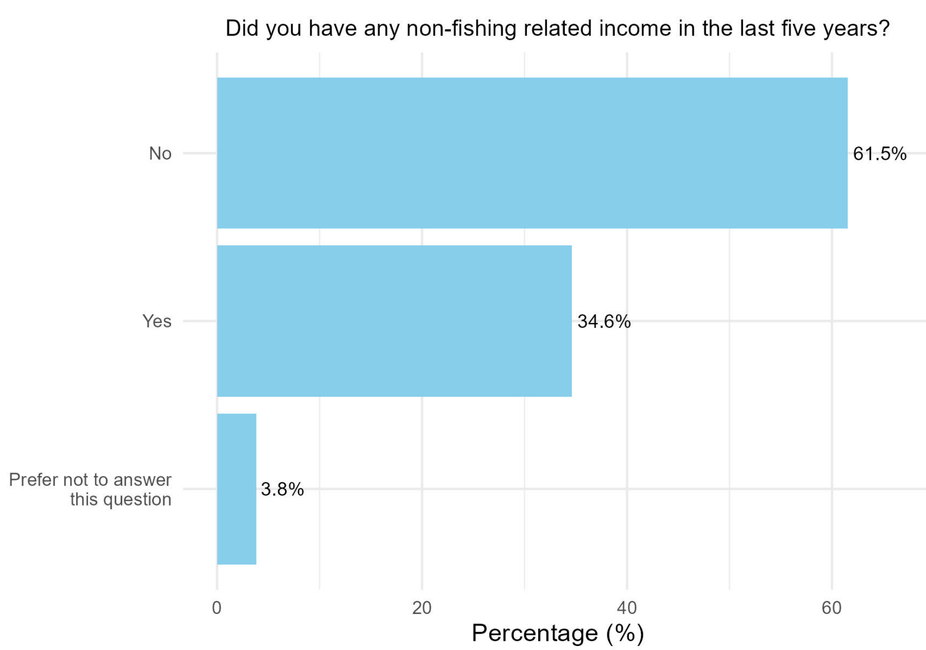
This indicates a majority of respondents (77%) receive at least 40% of their annual fishing income from the IFQ fishery, but 79% receive at least some fishing-related income from other fisheries. The most commonly identified other fisheries that respondents participate in included other scallop fisheries (LA, NGOM, and RSA), as well as lobster and groundfish (Figure 12).

Figure 12. Other Sources of Fishery Income (n=26)



In another question (Q22), individuals identifying as active or inactive IFQ participants were asked about sources of non-fishery employment (Figure 13). Respondents generally indicated that they are reliant on fisheries for their full income (61.5%, N=16). Only a few respondents indicated the type of other income sources, but those listed included boat building, farming, social security, research trips, oyster business, and hurricane assistance.

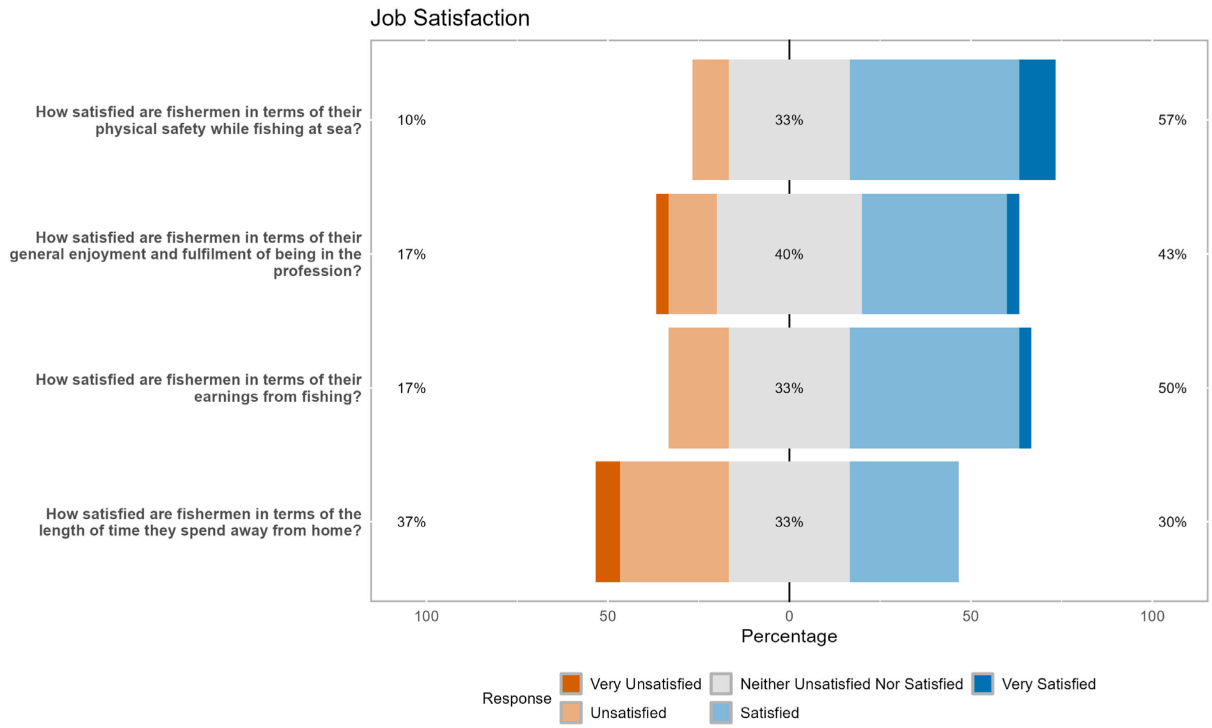
Figure 13. Proportion of Respondents with Non-Fishery Income (n=26)



Job satisfaction

Respondents' answers to job satisfaction are shown in Figure 14. These statements capture different elements of job satisfaction, including physical safety, general enjoyment and fulfilment, satisfaction with earnings, and satisfaction with length of time away from home.

Figure 14. Responses to job satisfaction statements (n=30)



Responses generally indicated that fishermen are satisfied across the first three dimensions, although roughly a third for each statement answered neutrally. There were slightly more who disagreed with the statement regarding satisfaction with time spent away from home. Qualitative answers provided greater insights into some of the nuances and variability regarding satisfaction within the fishery:

> *Big distinction between owner operator and crew satisfaction—crew not satisfied, owner operators more satisfied. As we progress, [it's] harder to find crew who want to do the job and deal with [the] toughness of the job.* –Captain/Operator, Massachusetts

> *Profession is very rewarding, but policy failure makes it hard to find enjoyment even when predicting fishing conditions correctly.* –Vessel owner/co-owner, Massachusetts

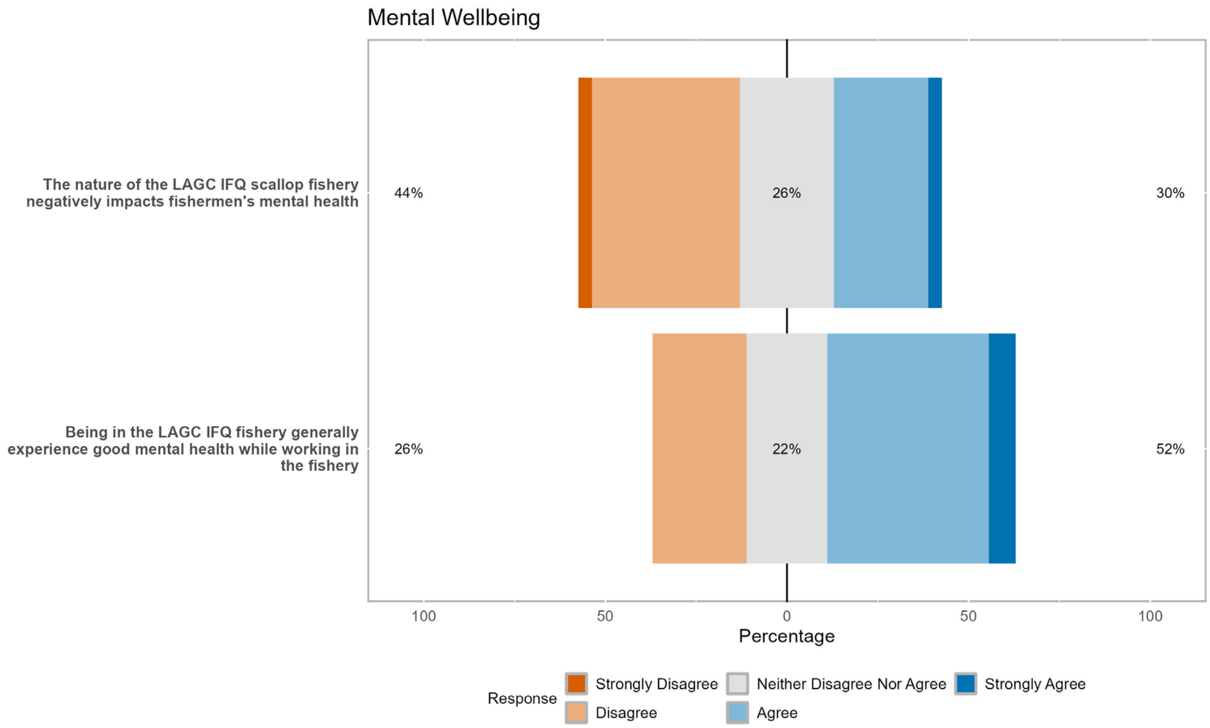
> *No one is real happy with the way the fishery is going, and god forbid the bid boats find out where you're fishing. Younger folks are not happy with the length of time they have*

to spend to get catch, and no one is happy now compared to previous years. –Vessel owner/co-owner, Massachusetts

Safety has improved, making trainings more mandatory [is] important. –Vessel owner/co-owner, Massachusetts

Respondents were then asked to assess two statements regarding mental health within the fishery. Generally, results suggest that respondents agreed that fishermen in the fishery were experiencing good mental health (Figure 15).

Figure 15. Perceptions of mental wellbeing in the fishery (n=27)



However, between a quarter and a third of respondents did indicate this was not necessarily the case. Comments within the survey provided insight into some of the challenges being felt within the fishery, such as stress, anxiety and sleep deprivation:

Might be negative on mental health when staying awake for 50 hours, better when able to run more crew. Switching to 3-handed in recent years has given ability to add in nap rotations, recently switched in last couple of years. –Vessel owner/co-owner, Massachusetts

Not very happy with way fishery is going, causes anxiety depending on how much you have tied up in fishery. Still stressful even if not leveraged because everything feels like it sucks. –Vessel owner/co-owner, Massachusetts

> *Up until last fall [we] were very satisfied. But since catch has been so poor, [it's] difficult to get them to go to sea. Drugs and alcohol use goes in line with the boom and bust with the fishery*. –Vessel owner/co-owner, Massachusetts

Some respondents who disagreed that the IFQ fishery negatively impacted mental health and agreed that participants in the IFQ fishery experienced good mental health provided comments that being in the Limited Access Fleet was more stressful compared to the IFQ fishery:

> *High stress occupation with derby style regulations.* –Captain/Operator, Massachusetts

> *Derby fishing in closed areas and lack of open bottom scallops was very stressful.* –Permit/Quota owner, New Jersey

Upward mobility, continuity of fishing as a livelihood, and crew shares

The survey asked a number of questions about crew and/or new entrants to the fishery, upward mobility within the occupation, and perceptions regarding continuity of fishing as a livelihood into the future.

Regarding crew shares specifically, 91% (n=23) answered that they used a crew share system. Only 2 responded 'Other', citing 'After Fuel' and 'Straight-cut percentage'. The average reported crew share was 45.8% (Table 5), but varied.

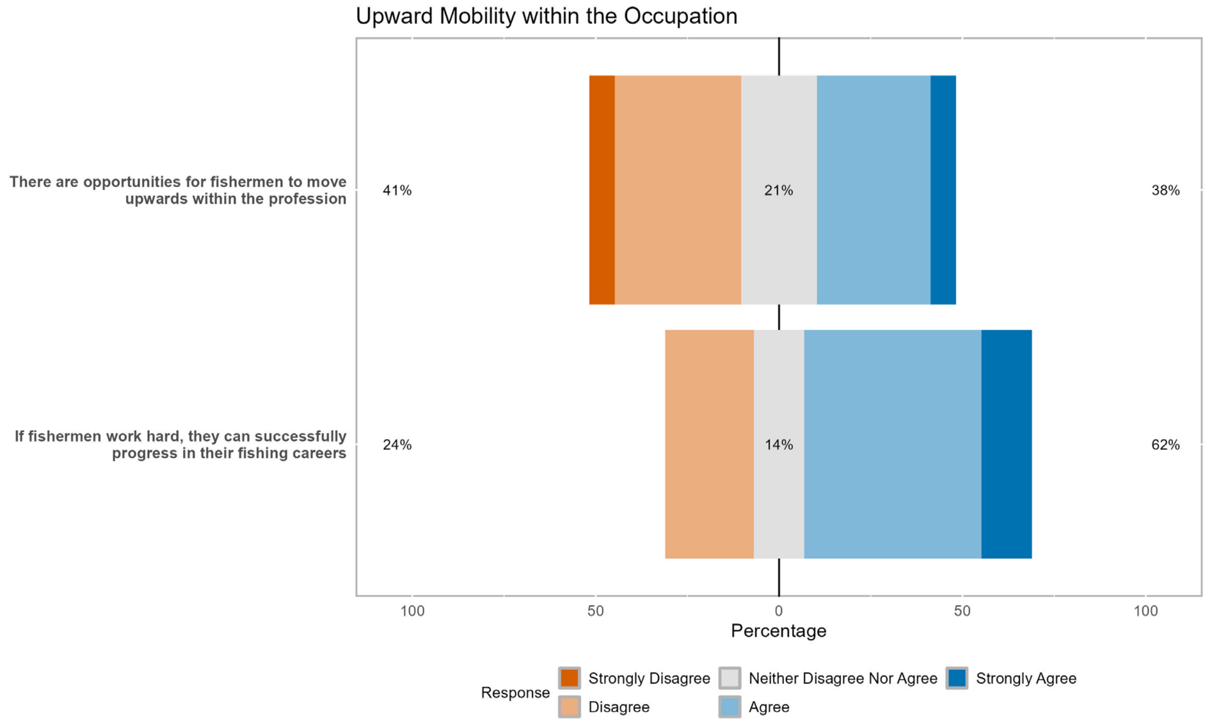
When asked if quota lease costs are deducted from the vessel's gross revenue before the crew share is applied 80% answered 'yes' (15) while 25% answered 'no' (4).

Table 4. Average Reported Crew Pay Share and Variance (n=23)

Average Crew Pay Share (%)	Standard Deviation
45.8 %	13.71

Regarding upward mobility within the occupation (e.g., from crew to permit holder, vessel owner or quota shareholder), there were mixed responses to the statement that there are opportunities for fishermen to move upwards with slightly more disagreeing with the statement (41%) than agreeing (38%) (Figure 16). Most respondents (62%) agreed that if fishermen work hard they can successfully progress in their careers. However, as evidenced in earlier results regarding perceptions of quota affordability, there may be other barriers that affect crew or new entrants' ability to move upwards within the profession.

Figure 16. Responses to Upward Mobility Statements (n=29)



Qualitative comments provided support for and disagreement with the statements:

> *I'm living proof that you can work your way up in any business.* –Vessel owner/co-owner, Massachusetts

> *LAGC IFQ fishery gives individuals an opportunity and platform to get started in career and fishery*. –Vessel owner/co-owner, North Carolina

> *Really hard to get all the way to the top, and not sure who would want to, given how the fishing is*. –Vessel owner/co-owner, Massachusetts

> *Comparatively to other NE fisheries, the IFQ scallop fisher bears a high cost of entrance and high cost of maintaining efforts: The cost of a vessel that has appropriate horsepower and gear reduction, the cost of rigging to handle heavy gear, the permit cost and then quota purchase and/or lease. (Almost always inclusive of leasing but many never buy). Quota lease costs are variable to the time of year.* –Vessel owner or co-owner, Massachusetts

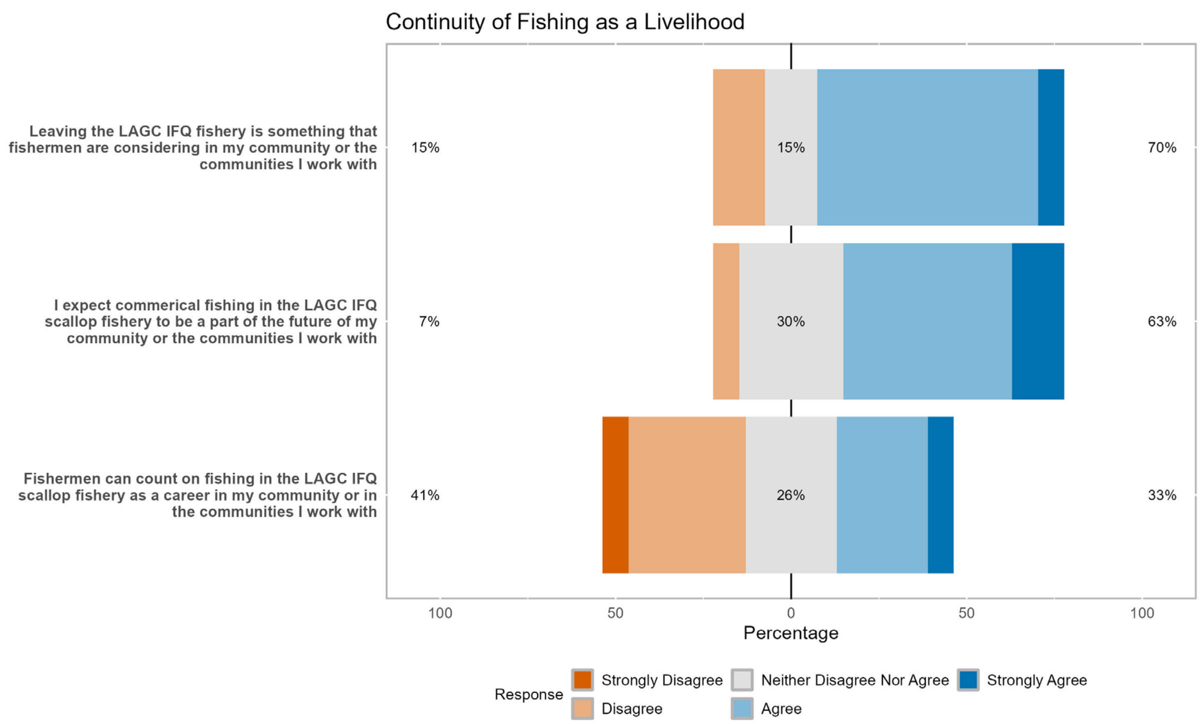
Others highlighted the need for financial planning in order to be successful in the fishery and consider future career progression:

> *The role of being a fisherman has changed you MUST be prepared to reinvest monthly and yearly*. –Vessel owner/co-owner, Massachusetts

> *Purchasing quota is very expensive and really has to be planned for, but it's doable. Upward mobility is as well in the cards. I started out as crew on a LA Part time and now own my own boat, have crew etc. Leasing in quota gets expensive as well, and has to be planned for the year previous, to know what you'll be able to catch and how much quota is around to lease.* –Captain/operator, Massachusetts

When asked about perceptions of the continuity of the scallop IFQ fishery as a livelihood into the future, within their own community or ones they worked in, 70% of respondents agreed that fishermen were considering leaving the fishery, and 41% disagreed that the fishery was something fishermen could count on as a career (**Error! Reference source not found.**).

Figure 17. Perceptions of continuity of the scallop IFQ fishery as a livelihood into the future (n=27)



Despite this, 63% agreed that the scallop IFQ fishery would be a part of their community's future. Together these results potentially suggest that despite a relatively grim outlook for current and future participants, respondents are less worried that communities will be negatively affected in the long run as a result of these challenges.

Comments suggested that some fishermen are leaving the fishery, but suggest that it may only be temporary:

> *It was a tough year, I think people are looking to other fisheries.* –Captain/Operator, Massachusetts

> *A number of fishers have already left the IFQ fishery. I expect some changes to come in the management of the IFQ component and am unsure if the IFQ component will remain. Likely a hybrid model of quota rights with more controls. Or less IFQ allocation and areas that will be common pool.* –Vessel owner/co-owner, Massachusetts

> *Wouldn't tell anybody new to get into it because currently unstable, seems like fishery is slowly dying.* –Vessel owner/co-owner, Massachusetts

> *Scalloping has always cycled 7 years at a time. We are in the downturn and worse is yet to come. Some experienced the boom now can't hack the grind.* –Vessel owner/co-owner, Massachusetts

> *It will be there, but at what point will it no longer be worth grinding out? [I] really don't know, fishery and market is not in a good way right now, hard to predict. [I] see boats/permits coming up for sale in the mid-Atlantic, guys are trying to get out.* –Vessel owner/co-owner, Massachusetts

However, others pointed to wider and long-term issues regarding workforce availability and reliability, and the connections to the continuity of fishing within communities:

> *Very difficult. Guy like me, solid business with 6 boats. [It's] not about allocation or capital, it's about lack of operators. Because of regulations there is no glamour or value to operating a vessel. No recruitment of operators or crew. Not about quota or vessels or permits*. –Vessel owner/co-owner, Massachusetts

> *Simple economics. The local crews won't be there to come back even if the resource does. Coastal areas are already struggling to keep workforce because of home values.* –Vessel owner/co-owner, Massachusetts

> *People are wanting to leave because [it's] hard to get quality help, catch [is] down and fuel $ up, so economically [it's] hard, have to spend more time at sea.* –Vessel owner/operator, Virginia.

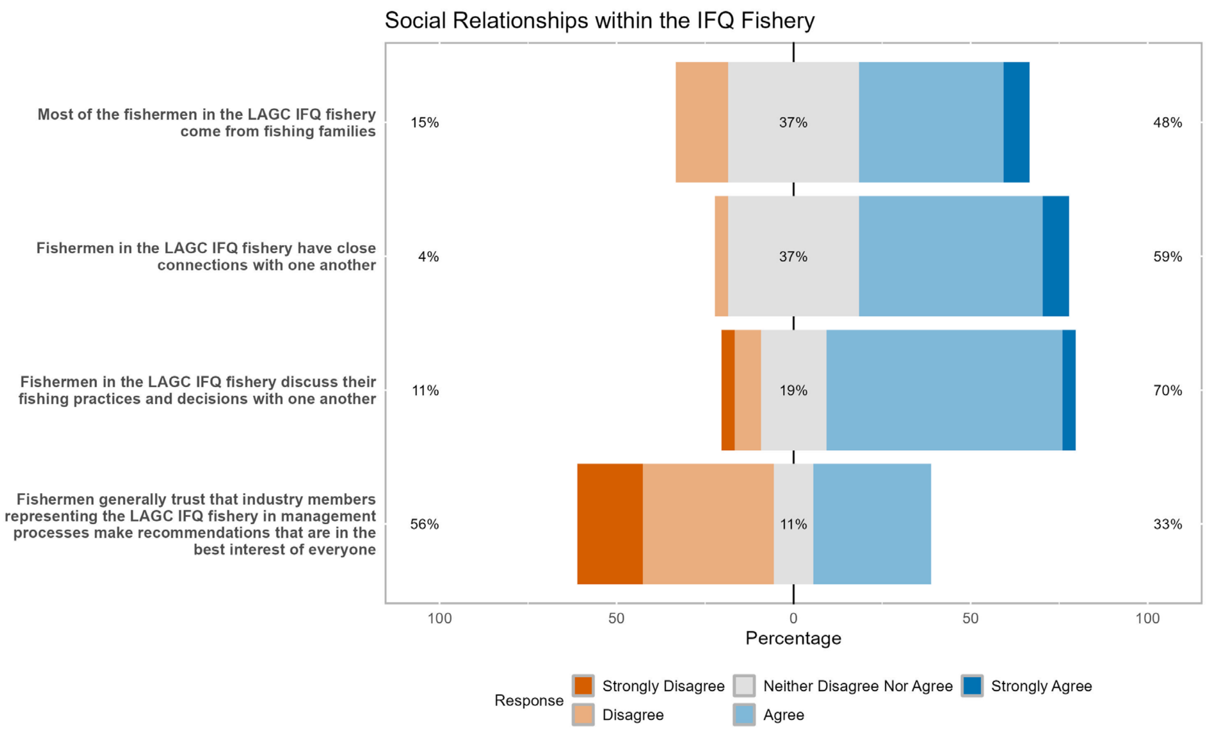
Social Relationships

Respondents were asked about four statements regarding social relationships within the scallop IFQ fishery (Figure 18).

Generally, respondents agreed that fishermen in the fishery have close connections with one another and discuss their fishing practices. Many also agreed that most fishermen came from fishing families, but as one comment stated:

> *Most fishermen come from fishing families but of course there are many exceptions. Having a family member in a fishery gives a serious advantage over those without but that certainly doesn't mean it's prescriptive.* –Vessel owner/co-owner, Massachusetts.

Figure 18. Perceptions of social relationships within the fishery (n=27)



There was more disagreement (56%) with the final statement regarding trust in industry members representing the IFQ scallop fishery in management decisions. A few comments showed agreement and disagreement with the statement:

> *Hard to tell if the people representing us are actually sincere. Not sure if they will wave our flag or champion our interests.* –Vessel owner/co-owner, Massachusetts.

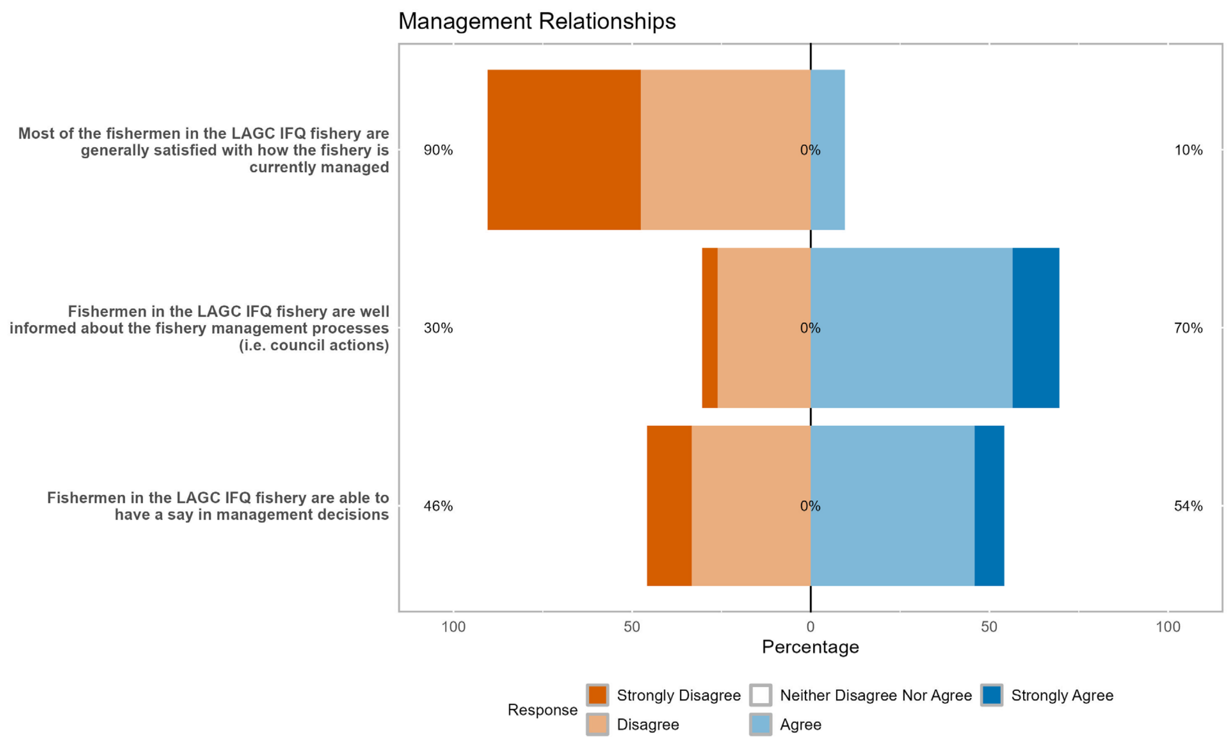
> *The groups most involved in assisting development of the fishery have their own operating costs and profits to be mindful of. This isn't best practice.* –Vessel owner/co-owner, Massachusetts

> *For industry representatives, trusted because voted and can be voted.* –Vessel owner/co-owner, Virginia.

Management Perspectives

Finally, respondents were asked about a series of statements regarding management of the scallop IFQ fishery (Figure 19). Seventy percent agreed that fishermen were well informed about management processes, and 54% stated they were able to have a say in decisions. Despite this, a strong majority (90%) disagreed that fishermen were satisfied with how the fishery is currently managed.

Figure 19. Management Relationships within the Fishery (n=28)



Appendix: Survey Instrument

Introduction

You are invited to participate in a research project being conducted by Northern Economics and the Gulf of Maine Research Institute and funded by the Walton Family Foundation. The project aims to understand the ways catch share programs can affect social and wellbeing outcomes, using the Northeast Limited Access General Category (LAGC) Individual Fishing Quota (IFQ) Scallop program as a case study. Specifically, the project investigates how management changes to the program might impact different stakeholders, such as crew, vessel owners, seafood dealers, and other community members involved in the LAGC IFQ scallop fishery.

The project will use information gathered in survey responses and interviews to develop a model to understand how different management interventions, specifically in catch share programs, may influence different social and wellbeing outcomes for fisheries stakeholders. In addition, the study seeks to understand how changes to these programs could affect the distribution of costs and benefits to better understand potential trade-offs associated with management changes that seek to improve social and wellbeing outcomes.

Who is this survey for?
This survey is for those who have participated in, or have knowledge about, the scallop IFQ program, including:

- **Fishermen (captains and crew) who work on LAGC IFQ scallop vessels**
- **LAGC IFQ scallop permit, vessel, or quota owners**
- **Dealers and seafood businesses who purchase scallops from IFQ vessels**
- **Fishing Associations who represent IFQ scallop fishermen**
- **Quota or permit banks who own IFQ quota or permits**
- **Fisheries Management or government officials who are knowledgeable about the IFQ program**
- **Family members of IFQ scallop fishermen**

If you have any questions about the survey please contact Melissa Errend at Melissa.Errend@norecon.com (503-309-5152) or Kat Maltby at kmaltby@gmri.org (207-400-4476).

The survey is expected to last approximately 15-20 minutes. No compensation for your participation will be provided.

Click ‘next’ to progress, and learn more information about the survey.

Informed Consent

Who will be in this study?

- **You must be at least 18 years of age to participate.**
- **Stakeholders with experience with or participation in the scallop IFQ program are included in this study.**

What are the possible risks and costs of taking part in this study?

Except for your time and inconvenience, there are no direct risks to you from participating in this study. However, while this study is not affiliated with any federal management agency or entity, this study has the potential to inform the future development or modification of fishery management rules and regulations, which may change the distribution of costs and benefits of the scallop IFQ program to participants and other stakeholders. When answering questions there may be some discomfort for participants as they reflect on their experiences within the IFQ fishery. Participants have the right to pause or stop the survey at any time. Participation is free and no costs are incurred other than those for giving up your time.

What are the possible benefits of taking part in this study?

There are no direct benefits to you for participating in this study. More broadly, your participation will help us learn more about the ways catch share programs, using the scallop IFQ program as a case study, can influence and affect different stakeholders in terms of social and wellbeing outcomes. This area of research is currently understudied and so this research may help to inform future management decisions on these themes. In addition, this study has the potential to inform the development or modification of fishery management rules and regulations, which may change the distribution of costs and benefits of the scallop IFQ program to participants and other stakeholders.

How will my privacy be protected?

No one outside of the project team will know about your participation within this study. No names are being collected through this survey. Data will only be published in summarized form to protect your anonymity.

How will my data be kept confidential?

The research team will maintain the confidentiality of all data and records associated with your participation. Data will be stored in secure online folders on an encrypted Microsoft SharePoint server securely managed by Northern Economics, indefinitely that has limited access to only project members. A numerical code will be used to protect your identity in the data set. Your identifying information will not be reported in any publications.

* 1. To proceed to the survey, please click ‘Yes’ to each of the below conditions:

- [ ] I am over 18 years of age
- [ ] I have experience with or have participated in the scallop IFQ program
- [ ] I consent to taking part in this survey

Part A: Introductory and Background Information

* 2. Where is your primary residence (town/city, state)?

Town/City

State

3. What is your age in years?

18 50 100+

* 4. What roles do you currently have in, or related to, the LAGC IFQ scallop fishery? (Select All That Apply)

- IFQ Fisherman (Crew, Captain)
- IFQ Vessel and/or Permit Holder
- IFQ Quota Holder
- Dealer or seafood business
- Fishing Association Representative
- Quota or Permit Bank Representative
- Fisheries Management/Government Representative
- Other (please specify)

* 5. Which of the following <u>best</u> describes your primary involvement with the LAGC IFQ scallop fishery? Here, participation in the scallop fishery means you or a vessel you own were directly involved in the harvesting of scallops on IFQ trips.

- Active IFQ fisherman or vessel owner (crew, captain, or vessel owner who has participated in the fishery in the last 5 years)
- Former IFQ fisherman or vessel owner (crew, captain, or vessel owner who participated more than 5 years ago and does not currently own quota)
- IFQ permit or quota owner who has not participated in the fishery in the last 5 years
- I have never participated in the IFQ program or owned an IFQ permit or quota

Part A: Introductory and Background Information

* 6. Which of the following roles <u>best</u> describes your current position in the LAGC IFQ scallop fishery?

- ○ Vessel Owner or Co-Owner
- ○ Captain/Operator
- ○ Fishing Crew

Part A: Introductory and Background Information

* 7. Across all fisheries, how many active commercial vessels do you own or have an ownership stake in?

0 5 10+

* 8. On average over the last five years, what proportion of the scallop IFQ quota you are allocated do you lease out? (In other words, if your annual allocation of scallops is equivalent to 1,000 pounds of scallops, what proportion do you typically lease to other fishermen?)

- None of it, I fish it all
- None of it, I don't fish it but I don't lease it out
- Some of it (<40%)
- Half of it (about 40-60%)
- Most of it (>60%)
- All of it, I lease out 100% of my annual allocation
- I am not allocated any quota

* 9. On average over the last five years, what proportion of the scallop IFQ quota used on your vessel/s is leased in?

- None of it
- Some of it (< 40%)
- Half of it (about 40 - 60%)
- Most of it (> 60%)
- All of it, I lease in 100% of my quota

* 10. Over the last five years, have you received IFQ scallop quota from a quota bank?

- Yes
- No

Comment Box: please describe why you have or have not leased/received quota from a quota bank

Part A: Introductory and Background Information

* 11. On your vessel, how are crew typically paid

- ◯ A share system: revenues and expenses were shared between the boat and the crew
- ◯ Other (e.g. per trip, hourly), please specify below

* 12. For share systems, what are the typical percentages distributed to the boat (the vessel owner) and crew?

% Boat Owner Share

% Crew Share

* 13. Are quota lease costs deducted from the vessel's gross revenue before the crew share is applied?

- ◯ Yes
- ◯ No
- ◯ Not Applicable

* 14. The year 2024 has been indicated to be an ‘unusual year’ with low lease prices. Was your leasing decision different in 2024 (compared to 2019-2023)? Please choose one that best describes your situation.

- ◯ Yes – I leased out more than usual
- ◯ Yes – I leased in more than usual
- ◯ No – My leasing didn’t change
- ◯ Unsure
- ◯ Not Applicable

* 15. On average over the last five years, what is the average trip length for the IFQ vessel that you own or work on?

- ◯ 24 hours or less
- ◯ More than 25 hours

* 16. Across all the fisheries you participate in, on average over the last five years what percentage of your total annual fisheries income comes from the LAGC IFQ scallop fishery?

- ◯ None of it
- ◯ Some of it (< 40%)
- ◯ Half of it (about 40 - 60%)
- ◯ Most of it (> 60%)
- ◯ All of it

Part A: Introductory and Background Information

* 17. While participating in the IFQ scallop fishery, what is your principal port (town/city & state) where you primarily fish out of)? (If you are a retired/former IFQ fisherman please provide where your operations were based)

Town/City

State

* 18. While participating in the IFQ scallop fishery, do you land in any other ports other than your principal port? If yes, please describe. (If you are a retired/former IFQ fisherman please specify any ports you would land in when you were active)

- No, I only fish/ed out of my principal port
- Yes (please specify other port location(s))

* 19. Since the LAGC IFQ scallop program was implemented in 2010, how many years have you been, or were you, involved in the fishery?

- Less than 1
- 2-5
- 6-10
- 11-15
- Every Year

* 20. Were you an initial recipient of quota under the original LAGC IFQ Scallop Program in 2010? (i.e., qualified based on your historical participation)

- Yes
- No

* 21. At any time in the last five years, did you have any income from any other types of scallop fishing trips or any other fisheries? (select all that apply)

- [ ] LA Scallop
- [ ] NGOM Scallop (while fishing on NGOM scallop trips not your LAGC quota)
- [ ] Scallop research set-aside (RSA) trips
- [ ] LAGC Incidental
- [ ] Groundfish
- [ ] Lobster
- [ ] None, LAGC IFQ scallop is the only fishery that I received income from
- [ ] None, I did not earn income from any fishery in the last five years
- [ ] Other (please describe)

22. At any time in the last five years, did you have any non-fishing related income?

- ○ No
- ○ Prefer not to answer this question
- ○ Yes (please briefly list those sources)

Part B: Wellbeing

This section will ask a series of statements about the wellbeing of fishermen at a general population level. Please answer in general terms rather than for you as an individual.

* 23. *Availability and Affordability of Quota*
Generally speaking, over the last five years for fishermen participating in the LAGC IFQ scallop fishery:

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Unsure
The cost of leasing quota prevents lease-dependent fishermen from operating profitably.	○	○	○	○	○	○
Quota lease prices have made it harder for fishermen to remain in the fishery.	○	○	○	○	○	○
Compared to other operating costs (e.g., fuel, crew wages, maintenance), lease costs are burdensome for lease-dependent fishermen.	○	○	○	○	○	○
With enough time and financial planning, lease-dependent fishermen and new entrants can afford to buy quota.	○	○	○	○	○	○
Compared to other major capital investments (e.g., vessels, permits, equipment) purchasing quota is financially burdensome.	○	○	○	○	○	○

* 24. *Availability and Affordability of Quota*
Generally speaking, over the last five years for fishermen participating in the LAGC IFQ scallop fishery:

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
Fishermen can readily find quota available for lease when they need it.	○	○	○	○	○
New entrants can easily find quota available for lease.	○	○	○	○	○
Fishermen struggle to find enough quota available for purchase.	○	○	○	○	○

* 25. *Upward Mobility within the Occupation*
Generally speaking for fishermen participating in the LAGC IFQ scallop fishery:

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
There are opportunities for fishermen to move upwards within the profession (e.g. from crew to mate, mate to captain, captain to vessel owner; to increase quota ownership)	○	○	○	○	○
If fishermen work hard, they can successfully progress in their fishing careers	○	○	○	○	○

Can you provide an explanation for your responses?

Part B: Wellbeing

* 26. *Job Satisfaction*

Generally speaking for fishermen participating in the LAGC IFQ scallop fishery:

	Very Unsatisfied	Unsatisfied	Neither Unsatisfied Nor Satisfied	Satisfied	Very Satisfied
How satisfied are they in terms of their general enjoyment and fulfilment of being in the profession?	◯	◯	◯	◯	◯
How satisfied are they in terms of their physical safety while fishing at sea?	◯	◯	◯	◯	◯
How satisfied are they in terms of the length of time they spend away from home?	◯	◯	◯	◯	◯
How satisfied are they in terms of their earnings from fishing?	◯	◯	◯	◯	◯

Can you provide an explanation for your responses?

* 27. *Mental Wellbeing*

Generally speaking, do you agree or disagree with these statements:

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
Fishermen in the LAGC IFQ scallop fishery generally experience good mental health while working in the fishery.	◯	◯	◯	◯	◯
The nature of the LAGC IFQ scallop fishery negatively impacts fishermen's mental health.	◯	◯	◯	◯	◯

Can you provide an explanation for your responses?

* 28. *Continuity of Fishing as a Livelihood in Fishing Communities*

Generally speaking, do you agree or disagree with these statements

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
I expect commercial fishing in the LAGC IFQ scallop fishery to be part of the future of my community or the communities I work with	◯	◯	◯	◯	◯
Fishermen can count on fishing in the LAGC IFQ scallop fishery as a career in my community or in the communities I work with	◯	◯	◯	◯	◯
Leaving the LAGC IFQ fishery is something that fishermen are considering in my community or the communities I work with	◯	◯	◯	◯	◯

Can you provide an explanation for your responses?

* 29. What community were you thinking of when answering the question above?

Part B: Wellbeing

* 30. *Individual Fishing Reliance*

Generally speaking do you disagree/agree that:

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
Being in the LAGC IFQ fishery means that fishermen's wages are stable and predictable	○	○	○	○	○
Fishermen that participate in the LAGC IFQ fishery are wholly reliant on the fishery for their annual fishing income	○	○	○	○	○
Fishermen that participate in the LAGC IFQ fishery rely on non-fishing income sources for some of their total annual income	○	○	○	○	○

Can you provide an explanation for your responses?

* 31. *Management*

Generally speaking do you disagree/agree that:

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Fishermen in the LAGC IFQ fishery are well informed about the fishery management processes (e.g., Council actions)	○	○	○	○	○
Fishermen in the LAGC IFQ fishery are able to have a say in management decisions	○	○	○	○	○
Fishermen in the LAGC IFQ fishery are generally satisfied with how the fishery is currently managed	○	○	○	○	○

Can you provide an explanation for your responses?

* 32. *Social Relationships*

Generally speaking do you disagree/agree that:

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
Fishermen in the LAGC IFQ fishery have close connections with one another	○	○	○	○	○
Fishermen in the LAGC IFQ fishery discuss their fishing practices and decisions with one another	○	○	○	○	○
Most of the fishermen in the LAGC IFQ fishery come from fishing families	○	○	○	○	○
Fishermen generally trust that industry members representing the LAGC IFQ fishery in management processes make recommendations that are in the best interest of everyone	○	○	○	○	○

Can you provide an explanation for your responses?

33. Is there anything else you'd like to add that we didn't ask you about but you'd like us to know?

End of Survey

34. Thank you so much for participating in our survey! The information you have provided is so valuable for supporting this research effort and we appreciate the time you gave to this work.

If you would like to be informed of future project outputs (e.g. a report or publication) please provide your email address or phone number in the box below. Note that we will keep this contact information separately from your answers in order to protect your anonymity, and it will not be shared with anyone outside of the project team.