

## Long-term Marine Protected Area Socioeconomic Monitoring Program for Commercial and Commercial Passenger Fishing Vessel Fisheries in the State of California

### **Perspectives on the Health and Well-being of California's Commercial Fishing Communities in Relation to the MPA Network** *Members of San Diego Area's Commercial Fishing Community*

The Marine Protected Area (MPA) Human Uses Project Team<sup>1</sup> anticipates hosting over 25 virtual focus group conversations with fishermen throughout California from July 2020 through Spring 2021.<sup>2</sup> The information shared during these discussions is a core component of a study to gather and communicate information about the health and well-being of commercial and Commercial Passenger Fishing Vessel (CPFV) fishing communities in California, including impacts from MPAs. A key goal of this study is to convey fishermen's perspectives about the unique challenges and opportunities that fishing communities are facing to managers and decision-makers through a series of summaries and other products. The results of this study will be made available to inform discussions about MPA and fisheries management, including California's 10-year MPA network performance review.

For each focus group, a small number of fishermen representing a range of fishing interests were brought together to:

- provide their perspectives on their fishing community's health and well-being, including environmental conditions, markets, infrastructure, and social and political relationships, including impacts from MPAs; and
- share feedback about their focus group experience to help improve the process for future focus groups.

The focus groups included quantitative questions where fishermen were asked to score their port on various topics, and an open-ended qualitative discussion followed each question. This document summarizes both quantitative and qualitative findings from the focus group. More details about the methods used for each focus group discussion, including questions asked to participants and the approach to recruiting focus group participants, is available on the Project Team's website, <https://mpahumanuses.com/>. The website also hosts focus group conversation summaries and an interactive data explorer, which will be components of the final products developed upon completion of this project in 2021. For questions about this project, including focus group engagement and the content of this document, please contact us at [hello@mpahumanuses.com](mailto:hello@mpahumanuses.com).

**Port Group: San Diego Area Ports**

**Date: Tuesday, March 2, 2021**

**Participants: Shad Catarius, Cameron Cribben, John Glawson, Brian Kiyohara, Tanner Saraspe**

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<sup>1</sup> Consisting of Humboldt State University researchers, Ecotrust, and Strategic Earth Consulting

<sup>2</sup> Previous versions of the summaries from other ports suggest there would be 30 focus groups through February 2021. The project has since evolved based on the needs of the fishing community and is reflected in all summaries moving forward.

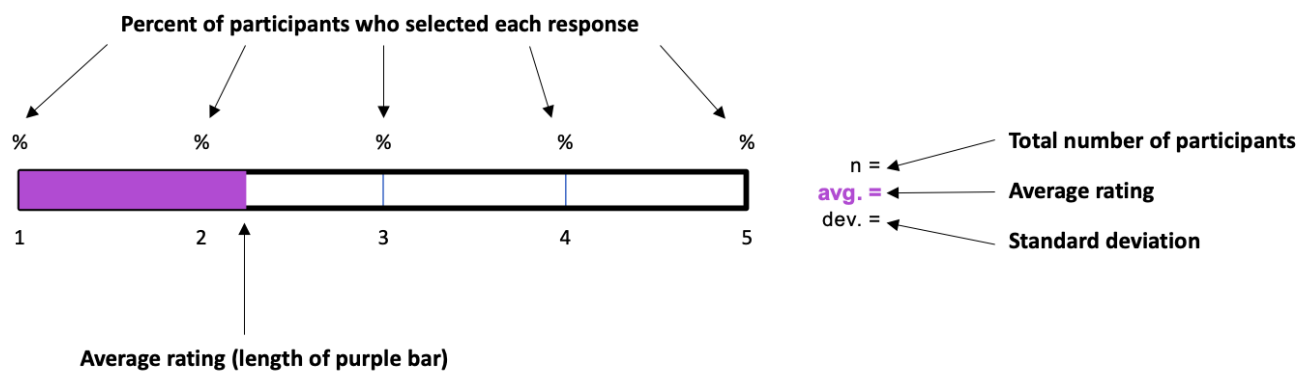
## Overview

On March 2, 2021, five commercial fishermen operating out of the San Diego area participated in the seventeenth focus group conversation. A detailed summary of the conversation is captured below, including:

- the numerical final scores (gathered via Zoom polls) for questions asked within each theme;
- a summary of participants' perceptions, insights, and perspectives related to each question; and
- direct quotes from participants that help to illustrate sentiments in their own words.

## Guidance for Interpreting Figures

There are 17 figures displaying participant responses for questions that had a numerical/quantitative component. In those figures, the percentages located directly above the bar (between 1 (low) and 5 (high)) represent the percent of participants in the focus group who selected that response. The total number of focus group participants is labeled 'n' to the right of each figure. The length of the purple bar indicates the average rating for each question, also labeled 'avg.' to the right, and 'dev.' refers to standard deviation, or the extent to which scores deviated from one another. See below for an example figure. There are also two figures on pages 17 and 24 that display the average responses for each question in the well-being and MPA sections, respectively, from highest to lowest.



In addition to providing feedback to help refine our process and approach for future focus groups, participants requested several resources be shared with them, including:

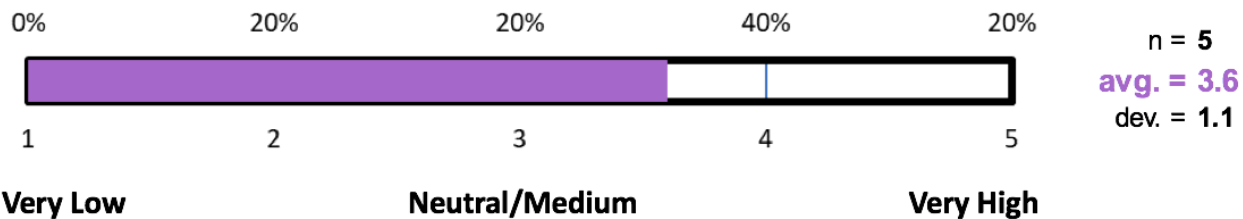
- [California Fisheries Data Explorer](#): This interactive site allows users to visualize commercial landings data (i.e., number of fishermen, pounds of fish landed, and revenue from fish landed) and CPFV logbook data (i.e., number of anglers, vessels, trips, and fish caught from specific fisheries and ports).
- [MPA Baseline Monitoring Program: South Coast](#)
  - [Summary of Findings from Baseline Monitoring of Marine Protected Areas, 2011–2015, South Coast](#)
- [Marine Protected Area Monitoring Program, 2019–2021](#)

Our Project Team would like to express our appreciation to the five San Diego area fishermen—Shad Catarius, Cameron Cribben, John Glawson, Brian Kiyohara, and Tanner Saraspe—for their time and contributions to the focus group conversation.

## Perceptions of Fishing Community Well-being

### Well-Being, Environmental

**1. Marine Resource Health - Present** Overall, how would you rate the current health and sustainability of the marine resources on which fishermen from this port rely?



**Discussion Summary** Participants' views on the health and sustainability of marine resources in the San Diego area ranged from low to very high. Several participants clarified that while some species are healthy, MPAs have created larger size classes of fish that are negatively affecting smaller fish due to predation. For a more detailed discussion related to MPA impacts on resource health, please see the **Discussion Summary** starting on page 17.

- One participant suggested marine resource health, especially species abundance, in the San Diego area has remained in the neutral/medium category for the past ten to 20 years.
- Several participants indicated marine resource health varies across species. One participant perceived spot prawn health to be steady, while bluefin tuna and rockfish abundances have increased in recent years. Another participant considered California spiny lobster abundance to be high.
- One participant believed fish size has declined compared to years past. They added that because fishing opportunities are so limited, catch fluctuates depending on water quality and ocean currents whereas historically, abundance was high and fishermen could catch enough fish in any condition.
- One participant highlighted the increased size of certain species (e.g., sea urchin and kelp bass) and reported increased predation of bottom-dwelling species by kelp bass; they attributed this to the change in size limit for the kelp bass fishery.
- One participant identified a loss of kelp habitat in the waters near Imperial Beach as a result of poor water conditions along the US/Mexico border.

### Participant Quotes

"I think the availability of marine resources is the same as it has been the last ten to 20 years that I've seen out of San Diego. [ . . . ] Pretty consistent. The fish are out there to catch, it's the question of going out and catching them."

"I definitely think it varies based on fishery [ . . . ] It's pretty steady with us for spot prawn. We're seeing this wave of bluefin tuna in US waters, which is interesting, in the last five, six years."

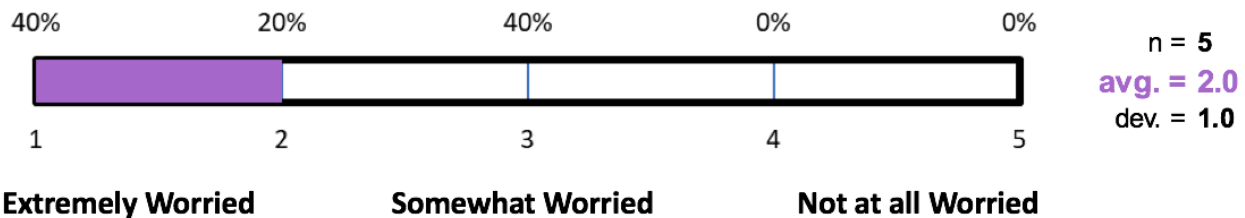
"The fish are smaller than they used to be. [ . . . ] But then there's also a lot more dead periods, I think, than there used to be. [ . . . ] You need conditions to catch fish, as where before you could just fish the big rock pile and scratch something... at least a little something. Now, it seems like

you need cleaner water or a good current to really make a catch that's financially viable. In the old days, you could just pound the kelp bed all day and you'd end up with a catch. Now, if you have bad conditions, it's the price of the fuel and the bait. It's not even worth it to do it."

"[The California Department of Fish and Wildlife (CDFW)] changed the size limit of the kelp bass, [. . .] now it's just hard to get anything off the bottom that isn't being destroyed by that population. That size increase was destructive to the balance, and it hurt a lot of people, [and] really did change things and increase predation on a lot of our trap fisheries."

"When I started thinking about Imperial Beach, and the Tijuana River Reserve, it used to be a lush, lush, lush kelp bed [. . .] There hasn't been a shred of kelp in Imperial Beach for five or six years due to the sewage, or whatever ocean conditions."

**2. Marine Resource Health - Future Concerns** Overall, how worried are fishermen from your port about the future long-term health and sustainability of the marine resource populations on which you rely?



**Discussion Summary** Participants cited effectiveness of management as a greater source of worry about the sustainability of marine resources and the commercial fishing industry rather than future ocean changes.

- Several participants explained the political nature of fisheries management is more of a threat to the fishing community than the long-term health and sustainability of marine resources. They believed fishermen are better able to adapt to changing ecological conditions than to frequently changing management decisions that affect the resources and their access to those resources.
- A couple participants identified several concerning issues, including management, the growth of the recreational fishing industry, and ocean pollution. However, they clarified these issues are less of a concern to those commercial fishermen who will be retiring soon and more of a concern for younger fishermen who are more affected by these circumstances.

**Participant Quotes**

"Management is definitely crippling, way more [than changes in ocean conditions]."

"The political environment is by far more scary than any fishing in the natural resource environment. We will adapt as we always have to fishing conditions. You can't always adapt to political conditions."

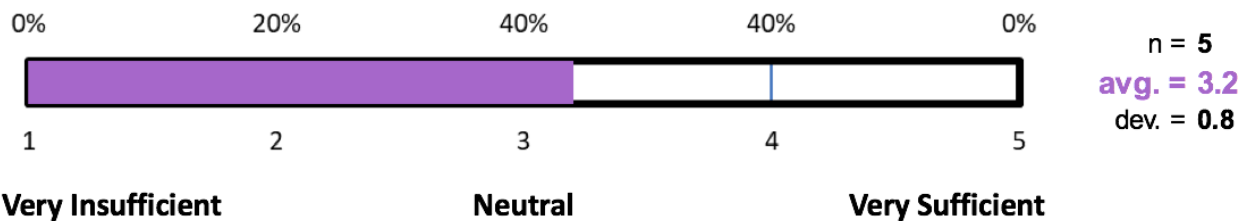
"When you've been commercial fishing for almost 30 years, it just seems like there's always something to deal with. [. . .] Management is probably the biggest thing that I'm personally worried about [. . .] Enforcement has sure changed; that's gone way south in the time that I fished. [. . .] I haven't got X amount of years left in me, but if I were a young man like [name redacted], I would definitely be extremely worried about the direction that this is going. It

seems like we're getting less backing from [CDFW] every year, and there's more hurdles to jump through, all the MPAs and all the different closures and size limits and all of that thrown our way.”

“I'm on the end of my career. [. . .] There's not enough enforcement, [. . .] the recreational fleet is quadrupled at least in the last five years - and who knows how many they're taking and selling on craigslist. And then there's pollution: I don't know how many plastic bags and trash I pick up out of the ocean every day. But I'm somewhat worried. But I could be done in ten years like [name redacted], and we'll be worrying about [name redacted] because he's a young pup, and he's got a long way to go.”

## Well-Being, Economic

### 3. Access to Harvestable Resources Overall, how would you rate your port in terms of the level of access that fishermen have to marine resources to support the local fishing fleet?



**Discussion Summary** Participants identified several barriers to access affecting San Diego area fishermen, including trap and quota limits, permit requirements, and interactions with the sport and international fishing fleets. However, they emphasized MPAs are among the most significant restrictions that inhibit access for numerous fisheries; for a more detailed discussion related to MPA impacts on fishermen’s access to marine resources, please see the **Discussion Summary** on page 19.

- One participant stated that although they own a lobster permit, trap limits and area closures (e.g., MPAs) hinder access to the species. They questioned whether future generations will have sufficient access to the resource to survive in the fishery.
- One participant identified the sportfishing fleet as a hindrance to commercial fishermen’s access to lobster, explaining that the ease of obtaining a sportfishing license, the early sportfishing season opener, and high bag limits for sportfishermen limit commercial fishermen’s opportunity in the fishery.
  - Another participant shared how commercial fishermen raised their concerns regarding the sportfishing fleet during the Fishery Management Plan process in 2012–2013 but were unheard.
- One participant reported the quota for several groundfish species, including vermilion rockfish and blackgill rockfish, is insufficient to offset the costs of participating in the fishery.
- One participant explained depth restrictions for rockfish have been loosened recently, and stated this is an indication that fishermen’s access to the species might improve with additional loosening of depth restrictions potentially continuing in the future.
- One participant mentioned that because offshore fishing can be difficult, daily black cod catch is limited.

- One participant stated the Cowcod Conservation Areas (CCAs) affect access for fishermen out of San Diego who fish offshore; another participant further explained San Diego area fishermen tend to not fish near CCAs or Catalina Island.
- Several participants commented on the financial barrier to obtain fishing permits. They stated that unless fishermen can afford several fishing permits or acquire them through other means like from a family member, they are only able to fish commercially part-time. They emphasized the need for fishermen to obtain a diversity of fishing permits to survive in the commercial fishing industry.

### Participant Quotes

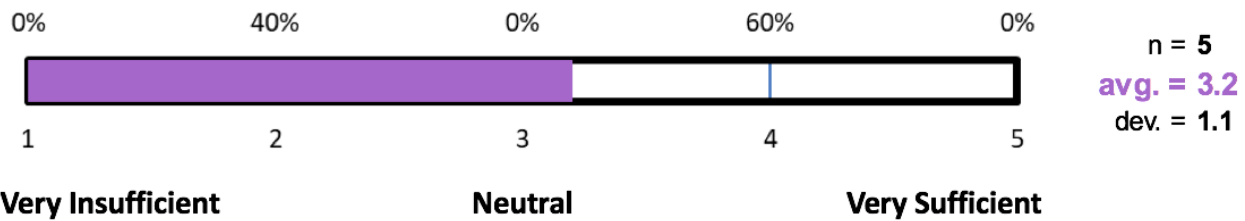
“There's so many more sport fishermen going out for lobster right now, and it's like anyone can walk into a Big 5 and buy a sport fishing license to catch lobster and go hoop netting. There were some guys that were literally going out every single night [ . . . ] I mean, think about it: if the limit's seven per night, if they fish every single night, you're talking 140 lobsters a month... no one can eat that much lobster. I think it's absolutely wrong that that's the limit for sport fishermen. Commercial fishermen have to spend a lot of money for that permit, and they should have the right to fish it well before any of the sport fishermen should. Not to mention they can fish inside the jetty. That's one thing, that divide between the sport fishermen and commercial fishermen. I think they should give commercial fishermen a little bit more leeway and opportunity, especially when it's their livelihood.”

“During the Lobster Advisory [Committee] meetings, [ . . . ] all of those issues [regarding the sportfishing industry] were discussed by the commercial sector. We fought very hard to make some changes, and there was no effort to touch the sports, to change the sports sector. [ . . . ] Politics ends up cutting us off at the ankles more often than the resource [health].”

“It's really not worth it to fish groundfish. [ . . . ] That's something I do on the side while I'm fishing sheepshead or something. If I was to specifically go out and target them, I'd have to stay local, I'd have to stay where I burned the least amount of fuel, the least amount of bait. If I catch 200 pounds, that's great. But I can't plan a trip offshore to go make \$2,000 bucks and spend \$1,200 to go catch those fish; that doesn't make sense. So, like the blackgill fishery, they put the quota so low now that guys aren't even fishing them anymore - used to go out to the 60 mile bank, take six, seven hours to get out there and six, seven hours to get back. And by the time you come in with a small quota, minus fuel, crew, insurance, bait, all this, blah, blah, blah, it's not worth the time fishing it. So, yeah, we need more access to more ocean.”

“I think if the next generation, if there was just the guy that bought a commercial permit, it'd be pretty much next to impossible to make a living at it unless he bought a lobster license or a crab license. And those... what's a lobster license, 100 grand minimum? A shrimp license, [ . . . ] like a million dollars [ . . . ] So the access to commercial fishing, I don't think it's that great. [ . . . ] The full-time guys, I think you can count 'em on two hands how many people do it year-round.”

**4. Income from Fishing** Overall, how would you rate the income that fishermen from your port earn from fishing in terms of supporting livelihoods?



**Discussion Summary** Participants' responses were on both ends of the scoring spectrum, with some indicating that income from fishing is insufficient while others believed it to be sufficient. Several participants stated there is a need for fishermen to have a second source of income to cover their overhead in addition to personal expenses.

- Several participants explained that both current and new entrants into the fishery tend to have supplemental income to support their fishing business (e.g., another job, investments, loans, inheritance, spouse's income).
- A couple participants highlighted seasonal closures make it difficult for fishermen to fish year-round, leading them to search for other ways to earn an income during the off-season.
- One participant indicated participation in several limited entry fisheries in addition to an open access fishery is essential to earning sufficient income to support a livelihood from fishing.
- One participant explained income from fishing is sufficient during years when the market prices for catch are high.
- One participant reported health insurance for themselves and their family is the most costly expense that requires them to search for other sources of income beyond commercial fishing. Another participant proposed a nonprofit organization be created to help fishermen cover the cost of health insurance.
- One participant indicated smaller boats tend to earn more than larger operations due to lower operating expenses.

**Participant Quotes**

"There's not a fisherman out there that doesn't have [another source of] income, whether it's family money, investments, another job... in order to be a commercial fisherman in the San Diego area, you have to have money. If you're just scraping by and [say] 'I want to be a fisherman and start from the bottom,' you aren't going to make it. These new kids coming out, all the new kids that fish, it's because their daddy bought them the permit: 'here's \$250, a boat, traps, everything; now my son has an occupation.' And so when it comes down to income, [. . .] everyone's got money from somewhere else, whether they've inherited it, earned it, invested."

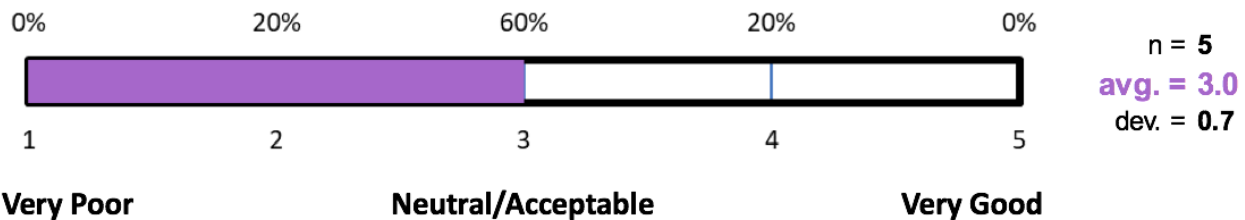
"I also feel like it goes hand-in-hand with the seasonal fishery aspect, like if you have a lobster permit, you can only fish so many months out of the year. So what are you going to do? If it was a year-round fishery, people probably could keep it going, but it's not, so that's also something to do with it."

"I make the majority of my living commercially with three restricted permits: sheepshead, crab, and lobster, and in the open access. I have yet to see an individual make it on an open access fishery [alone]."

“The price was so good this year: you put in the effort and you caught some lobsters, you had to have made some money.”

“Insurance has been the most difficult thing as a commercial fisherman to maintain, and that causes you to find other jobs to maintain insurance for your family. You have to diversify, you have to participate in different things, and the insurance in my household is what eats us up.”

**5. Markets** Overall, how would you rate the quality of the markets to which fishermen from your port are able to sell their catch?



**Discussion Summary** Participants indicated San Diego area markets are variable. They stated direct marketing options for San Diego area fishermen are more reliable, diverse, and offer better prices than wholesale markets; however, the largest wholesale buyers often dictate the price in the area.

- Participants explained the three main wholesale buyers available to San Diego area fishermen offer extremely low prices due to reliance on non-local seafood.
  - One participant stated they have relied on a buyer from outside the San Diego area for several years because the price that the local wholesale buyers offer is not enough to support a living from fishing. They highlighted the importance of the international market for seafood as a result.
  - One participant explained that in response to poor wholesale market options, some fishermen rely on local, direct-to-consumer dockside markets, which can be challenging to build and cultivate given the time commitment required. However, several participants indicated that not all dockside market options are inclusive of all San Diego area fishermen.
- One participant reported the price and overall market for lobster varies from year to year depending on tariffs, availability of buyers, and system shocks (i.e., COVID-19). They stated the development of direct marketing structures has provided San Diego area fishermen with the opportunity to sell their catch at higher prices per pound locally.
- A couple participants related the quality of an individual’s markets to the amount of effort they are willing to put into building alternative markets beyond the traditional wholesale market (i.e., direct-to-consumer sales).
- One participant highlighted San Diego area fishermen’s competition with the Mexican fishing fleet and the belief that fishermen operating out of Mexico have lower operational costs and can sell their product for a lower price, which hinders the market for rockfish in San Diego.

**Participant Quotes**

“I would say the markets suck around here. We've had three choices, basically. We had [wholesale market names redacted] that paid cents for seafood. I got a guy that drives all the way down from Los Angeles to buy my seafood. And I've been with him for ten, 12 years now



because around here, the price is horrible, and they only want to buy the premium on premium. And they got a truck coming up from Mexico [. . .] and you bring in the same red rock cod, they want to pay you a dollar because you're from San Diego, and you can't make a living on that. So we have three choices. It's a monopoly; [they] all get together before lobster season and fix the price, which is illegal. And they say they don't do it, but they do. It's horrible. Without the overseas market, I wouldn't work commercial fishing."

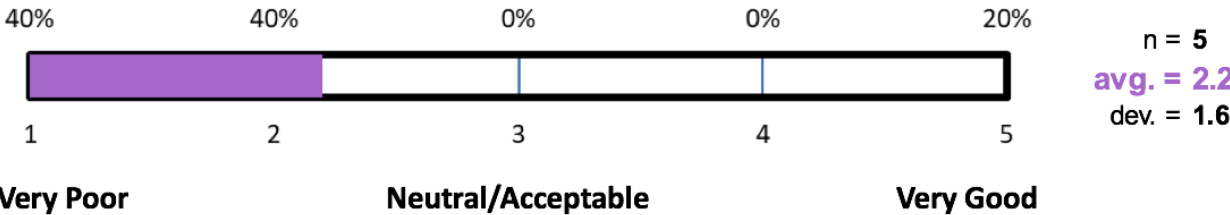
"[Name redacted's] not going to set up a booth... maybe he would, but he's exhausted at the end of the week [. . .] it's not an easy avenue for fishermen [. . .] You're waking up at four AM, you're setting up a tent. I mean, it's the whole thing that goes along with that on top of having to fish. It's like, there should be other outlets for fishermen. It shouldn't be this challenging."

"It's hard because there's like the big [wholesale markets], they just want to trash us for a price [. . .] [wholesale market name redacted], you try to sell a rockfish to them, and they get fish from Mexico that's cheaper, from Alaska that is filetted out. And then there's [dockside market name redacted]: if you're not associated with that group, there's no open invitation. Like, I can't show up and sell my fish there."

"With lobster, it's so different. I mean, last year we faced tariffs and different buyers and more politics than us fishermen want to deal with. And then this year, financially, the price is higher than we've ever seen it. And I think a lot of it is people like [name redacted] starting local markets has made a big difference. Before, everyone thought we could only sell a lobster for ten dollars [a pound.] Well now, [local markets have] created a strong price locally that for a lot of us [is] \$16, \$17 a pound. It works."

"Us in specific, dealing with that we're right next to the border, it definitely limits us. [. . .] You're competing with the Mexican rockfish that sometimes doesn't have the same quality, but it's the same species, and they can catch loads of it and they can sell it for two bucks a pound and their labor costs less, their fuel costs less, they don't have to pay for permits like we do. It's just a completely different thing, so I think us in specific talking about the San Diego area fishermen, it's a lot tougher."

**6. Infrastructure** Overall, how would you rate the state of infrastructure and services that support commercial fishing in your port?



**Discussion Summary** Participants shared a variety of perspectives with regard to the state of fishing infrastructure in the San Diego Bay area, from very poor to very good. They indicated the availability and quality of key infrastructure differs depending on which port within San Diego they are speaking to (i.e., Mission Bay, Point Loma, San Diego Bay).

- One participant reported the boat ramps in San Diego are free of charge, unlike in other ports, but that fishing infrastructure in general is lacking.
- A couple participants commented on the poor availability of infrastructure and services in Mission Bay, including the lack of docks, ice, fuel, supply shops, off-loading facilities, and gear storage. One participant believed the lack of support for fishing infrastructure in Mission Bay is indicative of the port’s reluctance to accommodate commercial fishermen and a preference for yachts. They stated that while there is a commercial fishing dock in San Diego Bay, it is not feasible for commercial fishermen out of Mission Bay to use due to travel time required.
- One participant believed the infrastructure in San Diego Bay is acceptable, with several places for fishermen to tie their boat to and a fairly new launch ramp.
- One participant shared their positive experience with infrastructure in the Point Loma area, including easy access to fuel, bait, and other commercial fishing supply needs.

**Participant Quotes**

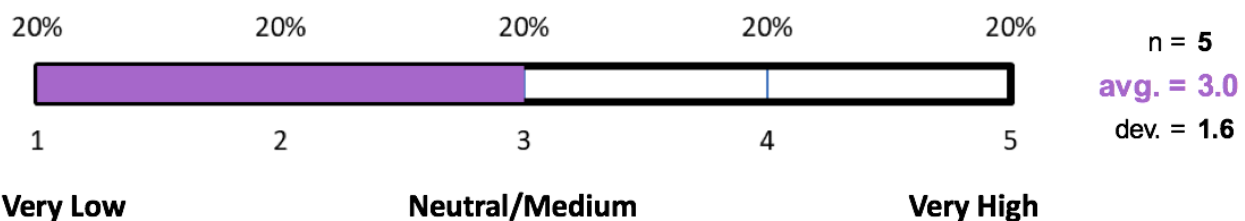
“From a trailer boat perspective, we’re the only harbor [where] the boat ramps are free to access. For me, any other place other than San Diego, I would pay every day to launch my boat. As far as every other aspect, we are in dire need of a lot of support.”

“It’s horrible. All they want to do is put yachts. We’re out of Mission Bay. There was one little seafood restaurant that had a commercial dock, and they would only choose certain people to tie up there. Luckily enough, [name redacted] has a little commercial spot over at San Diego Bay, and he let four of us tie up at his yacht marina over there. I know all of us have gear here at our houses. My wife cannot go in the backyard without stumbling on a lobster trap. There’s no ice machines. There’s no fuel. There’s only a couple of outfitters for marine supplies. It’s ridiculous. It’s a joke. No off-loading facilities, no off-loading piers. [. . .] The commercial dock in San Diego is nice, but it’s an hour inside the Bay. It takes you an hour to drive out of the Bay, an hour to come into the Bay and fish La Jolla. It would take you two and a half hours to get up there on my boat... I mean, five hours a day of driving just to fish off the kelp bed? They do not want us in Mission Bay for one thing, I’ll tell you that.”

“We just got told that we have to get our dock boxes off the dock. We can’t keep our traps down there. Yeah, essentially it’s an absolute nightmare, Mission Bay.”

“The financial support and stuff like that isn’t there [for San Diego ports more broadly]. But for lobster [in] Point Loma, my boat’s tied up down the street. The fuel dock’s a two-minute skiff drive. I get bait down the street, and the buyer comes to me. The San Diego Marine Exchange is a two-minute walk from my fuel dock. It works well [for me].”

**7. COVID-19 Impacts** *How disruptive do you think COVID-19 has been to your port’s fishing operations?*



**Discussion Summary** Participants shared how fishermen in the San Diego area adapted to COVID-19 impacts, especially with regard to markets. They indicated that while COVID-19 was challenging for the fishermen, it was also a catalyst for the development of local, direct sales.

- Participants identified several ways in which San Diego area fishermen responded to restaurant closures and lack of buyers during the COVID-19 pandemic which have helped them diversify their market options.
  - One participant explained how the initial loss of retail and wholesale markets was detrimental, but that it encouraged them to develop e-commerce and direct-to-consumer sales which have worked well.
  - Another participant reported marketing their catch on social media in response to COVID-19.
  - Several participants believed the increase in direct sales amid COVID-19 has benefited both the fishermen and the public. They shared how consumers have been receptive to purchasing seafood directly from the fishermen. They suggested fishermen are likely to continue these marketing strategies long-term.
- One participant recalled difficulty accessing the boat ramps in Mission Bay and San Diego Bay during the early months of the pandemic, which prevented them from fishing during that time.

### Participant Quotes

“The reason we pivoted to e-commerce and more direct-to-consumer sales [was] because restaurants shut down due to COVID. But I mean, yeah, sure, I dreamt of doing like an online sale thing prior to that, but I feel like I got kicked in the butt a little bit and didn't have much of a choice because we had no other outlet for our catch. Like the wholesalers weren't coming down from LA. [Wholesale market name redacted] wasn't buying. The dockside market was still operating. But I mean, that was definitely a response to COVID in specific. And since then, I mean, it's been up and down. There's the farm-to-table thing going on right now. And I feel like with seafood, we're also the sea-to-table movement right here. We're right on the cusp of that revolution or movement. So I hope things get better for fishermen and there's more outlets and the markets strengthen a bit here. I think the consumers definitely want it. It's just logistics of getting it to them.”

“I have an Instagram page, and I don't like people or social media. Now I'm trying to sell direct-to-consumer. So we adapted. We're fishermen; you have to, or you go out of business.”

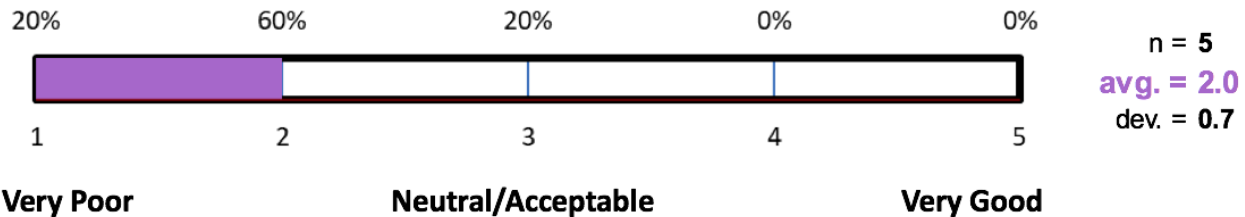
“Absolutely, [I think some of the changes in response to COVID-19 will be long-lasting]. And they're busy; there's guys that came in with 30 tons of tuna at COVID and [wholesale market name redacted] wouldn't buy 'em because there's no restaurants. Now, these same boats are coming in and they're selling all 30 tons right off the boat, never even involving a middleman. [. . .] It's the new way.”

“As a trailer boat commercial fisherman, during COVID, in the beginning, I had to threaten these lawsuits to get access to the boat ramps in Mission Bay. The city was willing to listen and then they gave us access, they gave commercial fishermen access. San Diego Bay didn't until they were faced with having to go before the news to discuss it, and then they finally opened their

boat ramps. There was two months where I wasn't able to fish because the boat ramps were closed."

## Well-Being, Social/Political

**8. Labor/New Participants** Overall, how would you rate your port in terms of being able to recruit new entrants to the industry and being able to retain current participants?



**Discussion Summary** Participants reported recruitment and retention in the commercial fishing industry ranges between very poor and neutral/acceptable. They discussed the dynamics between new and existing commercial fishermen, the need for prospective fishermen to be able to front a large amount of money to enter the industry, and the challenge of retaining crew members.

- A couple participants indicated San Diego area fishermen are wary of new entrants, including captains and crew, to the commercial fishing industry. They believed increased participation in the commercial fishing industry would increase competition and decrease fishermen’s overall access to marine resources, which is already limited by factors like MPAs.
- One participant explained how fishermen are reluctant to hire inexperienced crew members who they do not know, but expressed support for bringing new entrants into the industry in the long-term. They stated that oftentimes, experienced fishermen will look to family members to hire as crew, making it difficult for those who are not connected to the commercial fishing industry to gain the experience needed to begin their own business.
- Several participants shared the perspective that entrance into the fishing industry is relatively easy if an individual can afford the high costs of entry to purchase a commercial fishing license, permits, a boat, and gear, which is often achieved by support from a family member. They stated an individual’s longevity in the fishery is a reflection of their drive and determination rather than their ability to cover upfront costs to entry.
- One participant mentioned it is difficult to retain crew members because fishermen cannot offer them steady work during the off-season.

### Participant Quotes

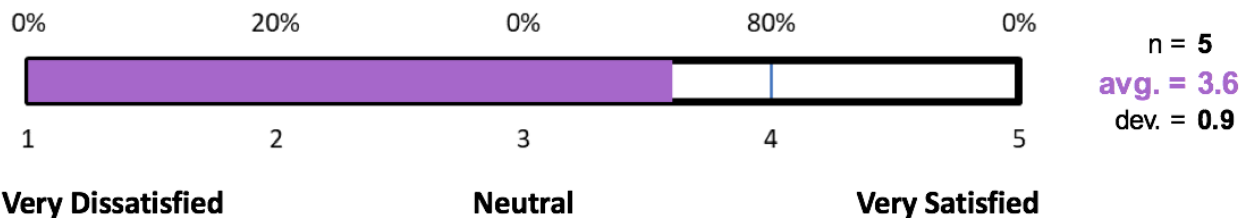
"I'd say it's a privilege for you to be [a commercial fisherman]. There's all those programs to bring in new fishermen, which I think are great. But it's like, in the grand scheme of things, sure, I'm in support of the next generation fishermen jumping on board, but it's like, is [name redacted] going to have that person on his boat as a crew member? Absolutely not. [. . .] And I think that's why it's really challenging [to enter the fishing industry]. I asked [name redacted] this question; I said 'what would your response to this question be?' And he said 'I don't want to see anyone new in the industry. There shouldn't be; it is a privilege. They should stop bringing in commercial fishermen, especially in relation to the MPAs. Like, if you're going to shrink the area where we can fish, why would you bring in more fishermen? And the thing is

now, it's so easy to go get a commercial fishing license and register your boat commercial now and all of a sudden, you're a commercial fisherman.”

“Nobody likes to see anybody new come to fish where we fish, but the only reason why I [put ‘Poor’ and] didn't put ‘Very Poor’ is because of the longevity of it. You look at that old dude, [name redacted], look at [name redacted], you look at me. We've been doing this a long time. [. . .] We've been here for a while, and a lot of the fishermen have been doing this... I don't know how long I've been pulling lobster traps, close to 30 years, and there's a lot of the guys that are still doing it. [. . .] Yeah, [it's easy for new guys to come into the fishery, if their] dad's rich, drops 250 grand... you're a lobster fisherman.”

“I think it's hard [for] crew members. The seasonality of the job is brutal. [During] lobster [season], you're rich. The next three months now, keeping a crew member, he's going to make nothing. So you work 12 to 15 hours a day for two months and then [it's] ‘I need you to take three months off and not make any money and then come back and start lifting heavy stuff.’ It's hard to retain crew. As far as the owner/operator, it weeds out the guys that don't want to work. There's been, I don't know, countless numbers of people that their dad bought them a boat and permits and traps and three years later, their boats and traps and permits [are] for sale. [Of] the guys that make it, 90 percent of them don't.”

**9. Job Satisfaction** Overall, how satisfied do you think fishermen from the port are with their jobs in the fishing industry?



**Discussion Summary** Participants’ views with regard to job satisfaction spanned from dissatisfied to satisfied. A couple participants elaborated on the sense of fulfillment fishing brings them.

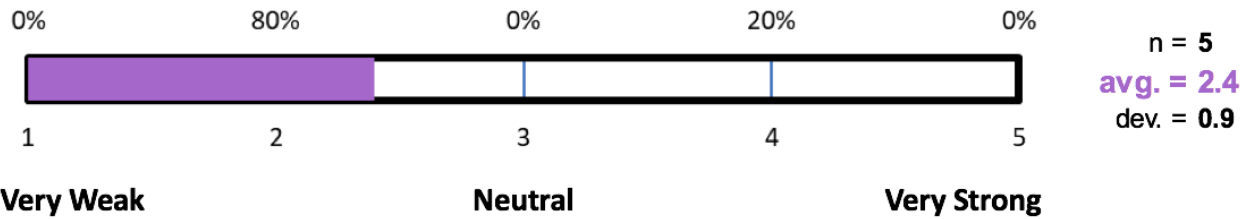
- One participant indicated their job as a commercial fisherman is both a source of pleasure and income.
- Another participant stated commercial fishing is a great job for those who enjoy fishing, but it can be challenging to make a stable living unlike more traditional professions that require more formal education.

**Participant Quotes**

“I get to do what I love to do and make money doing it.”

“If you want to get rich and have a nice, easy, simple life, there's college and law schools and master degrees to make that happen. If you're happy with fishing... it's good and it's bad, but if you love to fish, then it's excellent. If you think you're going to buy a permit and get rich and have life easy, it's not.”

**10. Social Relationships - Internal** Overall, how would you rate the strength of social relationships (or social capital) within your port?



**Discussion Summary** Participants reported internal social relationships within the San Diego area commercial fishing community are strong in some aspects but weak in others.

- A couple participants stated that although they have good, long-standing friendships with many fishermen in the San Diego area, there are others they are distrustful of because they have experienced theft and had other kinds of poor interactions with certain individuals. As a result, they perceived social relationships among fishermen as weak.
- One participant indicated there is better communication and unity among fishermen across California ports than there is within San Diego area ports.
- One participant shared the belief that while the San Diego Fishermen’s Working Group (SDFWG) is the most prominent organization that represents San Diego area commercial fishermen, it is also not inclusive of all fishermen.
- One participant described the poor communication and collaboration among members of the local lobster fleet, particularly between new entrants and existing participants.

**Participant Quotes**

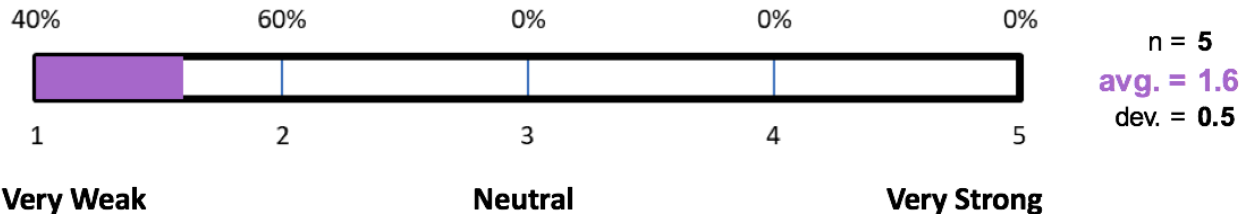
“[Name redacted] married me and my wife. I've known [name redacted] for a long time. [Name redacted’s] dad's been super cool to me as a younger guy in the fishery. There's a lot of older guys that are very cool. My neighbor two houses down fishes lobster in La Jolla, and we're good friends. But like [name redacted] says, in Point Loma, there's a thief. You drive up to someone 'hey, how's it going?' 'Oh, It's good. Yeah. Hey, be careful back there. Six of my traps were opened up.' It's like, oh, OK. Sure enough, you start pulling in, and there's your traps opened up. And it's bad. There's guys who drive past and there's no eye contact, there's no nothing. And there's guys who come running over and give you a trap that's cut off. [. . .] There is a lot of good, and throughout the coast - I have friends that fish in Santa Barbara - there's communication about price and buyers and working together, and in our own backyard, we have our own issues. [. . .] As far as the outreach, when I get in from fishing every day, I have friends that fish in Dana Point. I have friends that fish offshore. I have friends that fish out of Ventura. And there's group texts: 'hey, this is what this buyer is paying.' And the whole coast is working as one.”

“Out of San Diego, the biggest voice of fishermen is the San Diego [Fishermen’s] Working Group [. . .] I've never been asked if I wanted to join the San Diego [Fishermen’s] Working Group, but if the port or anyone outreaches about commercial fishing, it goes straight to this group, which only represents a few.”

“Lobster, it's not very welcoming to newcomers. I worked for [name redacted] for a few years before getting a permit and my first opening day, it wasn't like 'oh, we're glad to have you here.’

You see your buoy floating down the line and it's not welcoming... it's not 'hey, let me show you [this]' or 'hey, watch out for this break.' It's 'you watch your \$100 buoy go floating down the kelp bed.'"

**11. Social Relationships - External** Overall, how would you rate the strength of the port's relationship with external groups who could help support community needs?



**Discussion Summary** Participants discussed the weak relationship between fishermen and external groups and low fishermen participation and engagement in policy processes.

- Several participants indicated fishermen are cautious of engaging in projects like this one and with external groups like nongovernmental organizations (NGOs) because they believe those organizations tend to not work in the commercial fishing industry's best interest and that participation often backfires on participants such that information shared in discussions is used against them.
- One participant explained external groups (e.g., NGOs, decision-makers, academics) often communicate with SDFWG as a proxy for San Diego area fishermen, which has been an issue because the organization is not inclusive of all San Diego area fishermen.
- One participant perceived there is a reluctance for NGOs to work with San Diego area fishermen even when those same fishermen are serving on boards for local NGOs. They explained that in some cases, money has been diverted away from organizations that engage with San Diego area fishermen.
- One participant attributed poor engagement in policy processes by San Diego area commercial fishermen to the lack of communication and leadership among local fishermen.

**Participant Quotes**

"Before this [focus group] started, I was talking to a couple of lobster fishermen on speakerphone, and I asked them a few questions, and it's like 'no comment. Anyone we talk to, we just get shut down,' which I don't think is the right way, but that's the feel of a lot of these guys: anyone they talk to, it's just used against them."

"I feel like we're all trying to protect ourselves, too, because we don't want to see them shut more things down. We're always afraid to communicate with NGOs, and there's a huge gap that needs to be bridged by someone. Yeah, there will always be that gap between the NGOs, policymakers, academics, and the fishermen themselves. [. . .] The San Diego Fisherman's Working Group, that's an entity of its own, and they [external groups] only communicate with fishermen through the [San Diego] Fisherman's Working Group. It's like, there's other ways of communicating with fishermen, but that seems to be the only avenue people know of or go out of their way to ask."

“As soon as [the San Diego Oceans Foundation] started putting proposals together, putting things out, money was going away from the organization because a commercial fisherman was the president of it, and we weren't supporting some of that money's ideologies that they were trying to enforce. So the more fishermen get involved in something, and when it comes to questions, a lot of times there's a lot of pull back.”

“It's weak, it sucks, and we have no one to blame but ourselves because we don't communicate with each other as fishermen. [ . . . ] It's tough to be a leader when there's no group. [During] the Lobster [Advisory Committee meetings], out of 230 something permits back then, 15 people used to show up at the meeting. So it's tough to get anything done. There's no leaders, and it's our own fault.”

## Well-Being, Overall/Additional Comments

**12. Overall/Open-ended** *Is there anything not captured above that you would like managers and other readers to know about your fishing community/industry?*

- *What do you think federal and state managers could do to better support California's fishing communities?*
- *What do you think members of your fishing industry could do to support the well-being or sustainability of your fishing community?*

**Discussion Summary** One participant recounted a whale entanglement situation that they believe was mishandled. They would like to see gear that is removed from an entangled whale be returned to its owner. They were also concerned that the initial, incorrect reporting on the source of the entanglement was never publicly corrected once the true cause of the entanglement was determined.

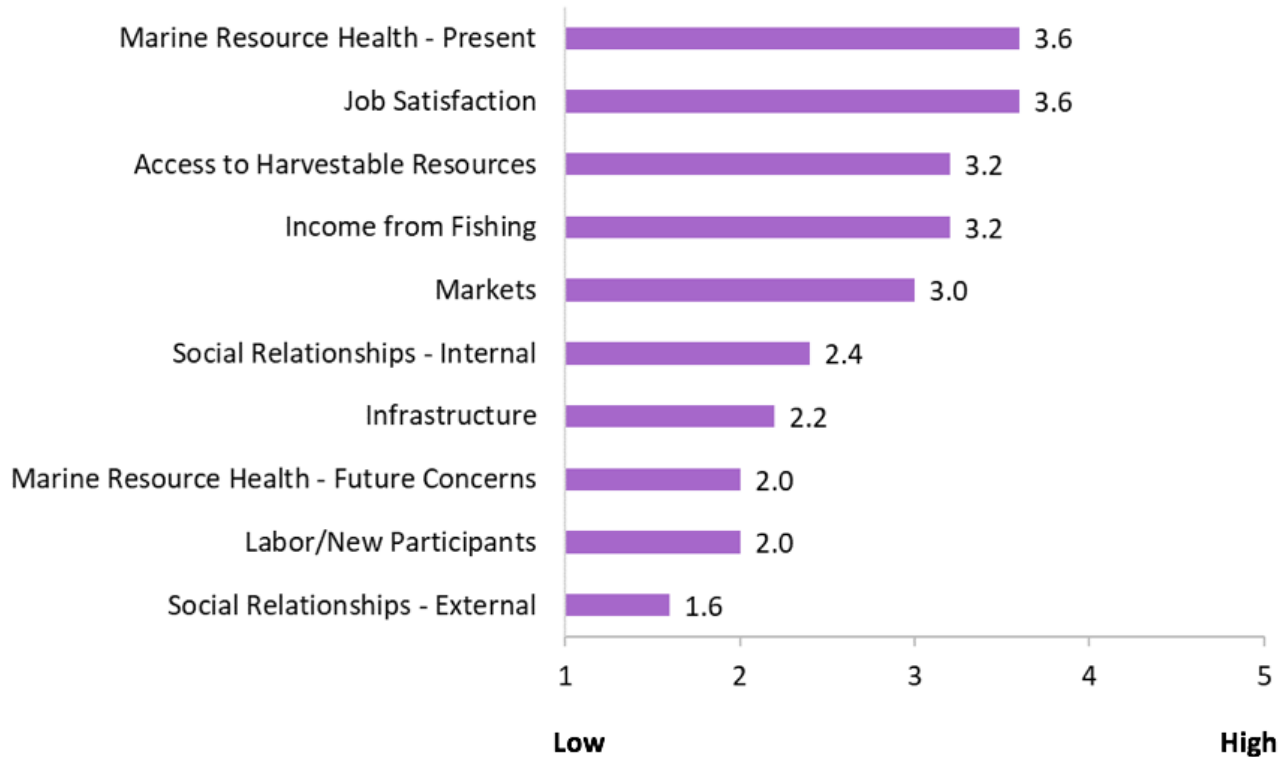
## Participant Quotes

“I actually have something that was really disturbing: last year, we had a whale entanglement issue [ . . . ] I was able to help SeaWorld pull up what they said was a lobster trap... it ended up being a string of Southern rock crab gear, but it wasn't the rock crab gear that was concerning. It was the fact that that whale had entangled the Dungeness crab trap from the sport sector up North, dragged it around, and snagged the Southern rock crab gear. [ . . . ] The fisherman whose gear that belonged to - the Southern rock crab - was never contacted, and that gear was never returned, nor was anything ever discussed about it. And that was disheartening because that fisherman lost his gear, and it was never further researched as a sport issue [instead of] a commercial issue. All we're hearing is whale entanglement, whale entanglement... this entanglement had nothing to do with any of our gear in Southern California, and it had everything to do with a piece of sport gear, that is commercial in style, that was [dragged] into our area. And nothing was ever addressed about that [ . . . ] I don't know how much a five trap string of rock crab gear costs, but it wasn't an old set of gear. So not only [did that fisherman] lose that string of gear that was never returned to him, nor was he contacted, but he also lost what he could have caught with that. So you can let somebody know they dropped the ball.”



## Perceptions of Fishing Community Well-being, Average Responses for Questions 1-6, 8-11

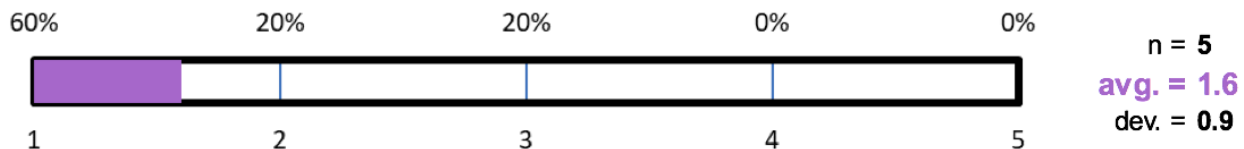
(Note: The following figure does not include the average rating for question 7. *COVID-19 Impacts*.)



## Perceptions of MPAs

### MPAs, Outcomes/Effects

**13. MPA Ecological Outcomes** Overall, how would you rate the effect that the California MPA network has had on marine resource health in your area?



**Strongly Negative**

**No Effect/Neutral**

**Strongly Positive**

**Discussion Summary** Some participants reported negative ecological outcomes as a result of the MPA network, while others highlighted how the MPAs have had no effect on marine resources in the San Diego area.

- One participant believed the MPAs harbor larger fish which has led to increased predation. They stated the closures have also led to loss of kelp habitat as a result of urchin barrens due to restrictions on sea urchin harvesting.

- Positive MPA outcomes were mentioned, including larger fish (e.g., school fish, lobster) and rebound of some rockfish; however, several participants indicated there has been no population spillover outside the MPAs. Additionally, they stated larger species inside the MPAs are foraging on target fisheries such that fishermen are not seeing the increase in catch that was anticipated from the MPAs. One participant shared the perspective that other fisheries management tools, including fishing quotas, are more effective in improving marine resource health than area closures.
- One participant stated MPAs have not had any effect on the broader health of the ocean.

**Participant Quotes**

“With the MPAs though, it kind of started separating size class in a lot of ways [. . .] larger fish school together, smaller fish school together. All large fish in the MPAs. Same thing with lobsters a lot of times. So right now, we're just waiting for time to maybe equalize [the populations] to some degree. I know in the sea urchin populations, it's kinda the opposite. MPAs become dead zones. The feed lines and everything else, they're just dying because you're getting bigger urchins. Without culling the urchins, those areas become stagnant. They don't move around the same way everything else does, in that respect.”

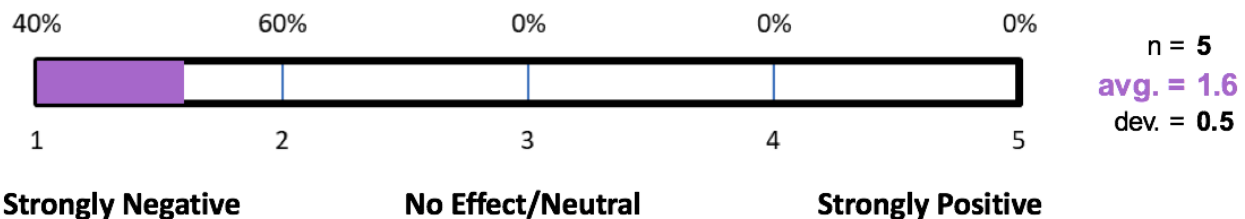
“They did say there's a rebound with the rockfish fishery after all the closures.”

“I don't know how it [the MPA network] necessarily affected all the other fisheries. From lobster, it's destroyed us. It's done exactly the opposite of what they said it would do. The predation on all MPA lines falls in line with all the studies that were done: the predators get larger and therefore they sit on that line.”

“The overflow was not something that was promised, but it seemed like there was some research to back that there would be overflow with these MPAs. And we're not seeing that at all.”

“The MPAs have no effect on the ocean. I don't know what they hoped. I mean, there's some big lobsters in there now, but I don't think it's bringing the ocean back to where it was. Limits and trip quotas and that stuff would do a lot more than closing the ocean.”

**14a. MPA Livelihood Outcomes** Overall, how would you rate the effect that the MPA network has had on the ability for fishermen from your port to earn a living/gain income from fishing?



**Discussion Summary** Please see the **Discussion Summary** following question 14b. *MPA Effects - Overall* on page 19 which summarizes the conversations related to questions 14a and 14b.

**14b. MPA Effects - Overall** *What other types of effects or impacts have fishermen from your port experienced from MPA implementation?*

**Discussion Summary** According to participants, MPAs have generally had negative impacts on San Diego area fishermen's livelihoods.

- A couple participants commented on the 30x30 initiative, and stated any more areas restricted to fishing would be detrimental to the local fishing fleet.
- Due to displacement of fishing effort from historically important fishing grounds, several participants explained there is a high degree of crowding and competition near MPA boundaries.
  - They reported an increase in gear interactions and gear loss due to the concentration of gear in smaller areas since MPA implementation, which has resulted in higher operating costs to fish along MPA boundaries where fishermen are hoping to catch larger lobster.
  - One participant stated the loss of fishing grounds as a result of MPAs is exacerbated by increases in new entrants to San Diego's commercial fishing industry.
  - One participant believed that although the lobster fishery's trap limit helped reduce the amount of gear being fished, fishermen still do not have sufficient area to set their gear and are forced to travel further distances offshore due to the MPAs.
- A couple participants shared how prior to the MPAs, San Diego area fishermen would rotate where they would fish along the coast, but they are no longer able to due to MPAs that restrict access to productive fishing grounds throughout the region.
  - A couple participants mentioned that because of the closures, they have sought new fishing areas to target like in deeper waters.

**Participant Quotes**

"I lose a lot of gear on our MPA. Whether it's another fisherman runs it over because there's a buoy every two feet, surfers that surf the Point... I lose a lot of gear, but to be competitive, you have to fish it to beat the trap that's six inches away from yours on the bottom. It takes twice the bait, triple the bait. It's very costly to fish the [MPA boundaries]."

"With the MPAs, there's more fishermen buying commercial fishing permits, there's more boats out there fishing, and they just keep closing down the areas that the fishermen can fish."

"Ever since the MPAs came on, we're all pushed into these boxes. I think the trap limit, like in lobster fishing, is a good thing. Before, it was a free-for-all and people would have gear out there and we'd all be pushed into these boxes and people would fish 500, 600, 700 traps and they wouldn't service them. It was hard to even move a trap because there was five traps around you. So, with these MPAs now, we're all fishing in these boxes. So the trap limit's a good thing, but we don't have enough room for the fisheries, really, especially locally. Now, I've had to go offshore, go further, go deeper, go farther. So I don't think we have enough room."

"I'm 'Negative' and not 'Strongly Negative.' I strongly hate the MPA, but I'm 'Negative' because it has forced me to search out new ground and kind of change tactics, try other places and do other things - the only positive that I could say that's come out of this for myself."

## MPAs, Discussion of Specific MPAs

### 15. *MPA Effects - MPA Specific* Which MPAs have had the most impact (positive or negative) on fishermen from your port and why?

**Discussion Summary** Participants identified several MPAs that have negatively affected commercial fishermen's access to marine resources. They clarified these MPAs are the most impactful because they were valuable fishing grounds prior to MPA implementation and local fishermen tend not to fish beyond the San Diego area. They furthered that fishermen across California also experience the greatest adverse livelihood impacts from MPAs near their respective ports. Another participant explained commercial fishermen lost significantly more fishing grounds as a result of the MPAs than sport fishermen.

- *Tijuana River Mouth State Marine Conservation Area (SMCA)*: One participant reported a decrease in their overall lobster landings due to the inability to fish this MPA, and stated they have not seen any spillover beyond the MPA boundary. They expressed confusion about the rationale for designating this MPA, given that it sustained little fishing activity prior to MPA implementation and continues to experience poor water quality and pollution regardless of fishing restrictions.
- *Point Cabrillo State Marine Reserve (SMR)*: One participant mentioned compaction of fishing pressure along this MPA boundary due to fishermen attempting to capitalize on potential lobster spillover.
- *South La Jolla SMCA, South La Jolla SMR, and Swami's SMCA*: One participant reported a loss of fishing grounds as a result of the South La Jolla SMCA and SMR, which has had cascading effects with regard to crowding and competition outside the MPAs.
  - Another participant explained these MPAs force fishermen into smaller, less productive areas outside the closures. They estimated the majority of fishing grounds in La Jolla and northern San Diego County were lost to these MPAs such that it is not viable to fish in northern San Diego County.

### Participant Quotes

"The Tijuana [River Mouth SMCA] pretty much ruined me [and one other fisherman that I know]. I used to catch a lot of seafood, a lot of lobsters. And our closure in Point Loma [Cabrillo SMR], guys have traps lined up on it every five feet, and you can still catch lobsters there, but it's a joke. Down there, in Tijuana, I have tried all sides of the MPA everywhere, and they don't crawl out of there; for some reason, that cobblestone is different. So I pretty much lost 75 percent, half the area that I fish. It sucks, I never even see anything down there, anybody/any traffic. All I see is diapers and sewage and trash coming out of the Tijuana River. I don't know what they are protecting. [. . .] I don't know why it is, but there's just no spillover there, not like the other reserve in Point Loma."

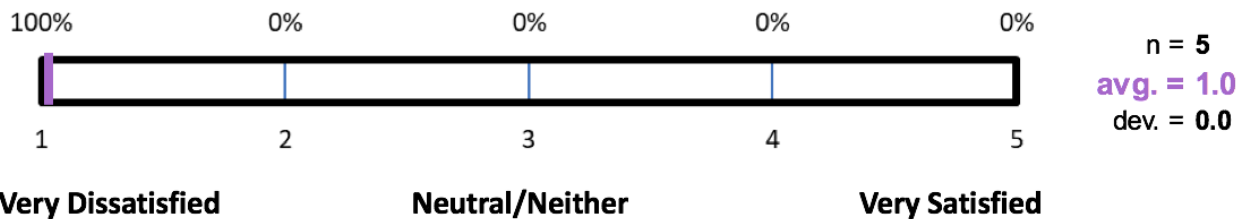
"The [South] La Jolla [SMCA and SMR] is a joke. It just took away fishing area. They said there would be spillover and big fish coming out of there and it's going to be good for everything... all it is is just [a line for] everyone to put their lobster traps on because there's no room to fish. [. . .] The only thing it did was take away fishing area, as far as I'm concerned."

“We have the Swami’s [SMCA] and the [South] La Jolla [SMCA and SMR]. We were spread out before, and now in front of our harbor, it's all mud basically. So they took away half of La Jolla and pretty much all of North County. I mean, there's a little swath of North County, but it only is enough for about 40 traps. So it's not viable to go up north. So [before] we were all spread, and now we're all into this little tiny box. It's a joke. Sheepshead and lobster and crab, three fisheries that [the MPAs] really hurt us.”

“It's interesting when you look at the MPA map: I see a lot of areas sport[fishing] can still continue, but there's nothing that commercial can continue.”

## MPAs, Management

**16. MPA Management** Overall, how satisfied do you think fishermen from your port are with the management of the MPA network?



**Very Dissatisfied**

**Neutral/Neither**

**Very Satisfied**

**Discussion Summary** Participants expressed their extreme dissatisfaction with MPA management, citing poor communication of information and decisions regarding the MPA network as the reasons for the dissatisfaction.

- One participant stated fishermen believe the MPAs are areas that restrict fishing indefinitely and will likely be expanded in the future.
- A couple participants expressed interest in learning more about MPA management, including the timeline for review and evaluation of the MPA network against Marine Life Protection Act goals.
- One participant believed adaptive management, including the prospect of loosening MPA restrictions, is hindered by lack of funding.
- One participant asked managers to consider allowing limited entry commercial fisheries to access the MPAs in an effort to mitigate the negative impacts of MPAs on fishermen’s livelihoods.

### Participant Quotes

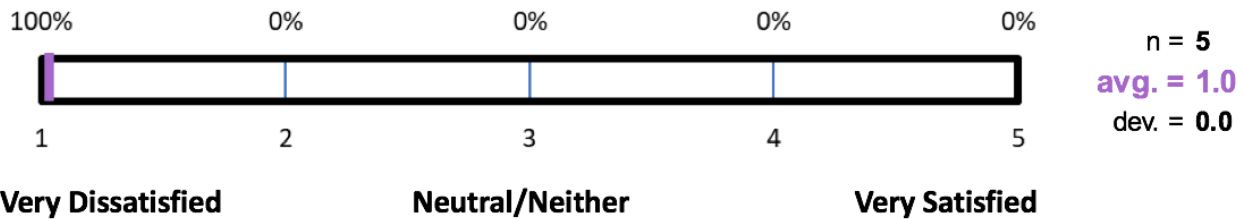
“I think a lot of fishermen see [the MPA network] as ‘it's just closed and it's going to be closed forever, and they're going to make a new one and it's going to be closed forever.’ And I think that a lot of fishermen's views is that they're not showing any like ‘oh, let's reopen this one.’ They're just creating more territory for people to poach... closures.”

“I'm looking forward to hearing what's going to happen with these MPAs.”

“Makes a whole lot of sense, that they aren’t going to change anything because they don’t have any money. [. . .] When I talked to the wardens, that's what it comes down to [is funding].”

“Whoever is implementing these MPAs should consider allowing limited entry permit holders, like lobster permit holders, to fish in the MPAs, but make sure sport fishermen can't fish in the MPAs and anyone who doesn't have a limited entry permit to fish in the MPAs.”

**17. MPA Monitoring** Overall, how satisfied do you think fishermen from your port are with the monitoring of the MPA network?



**Discussion Summary** Participants were very dissatisfied with the monitoring of the MPA network.

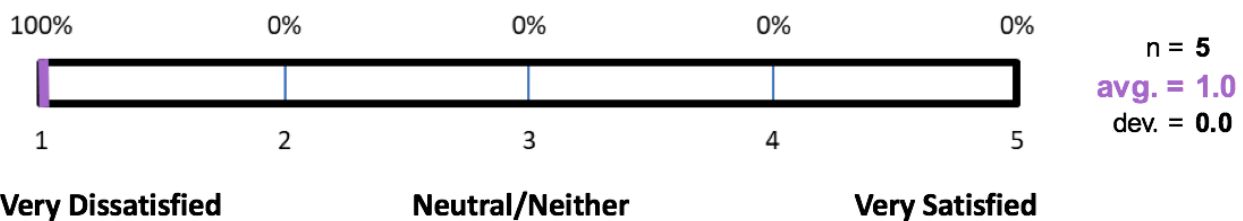
- A couple participants reported not seeing any on-the-water research in the local MPAs, despite frequenting the areas nearby when they are fishing.
- One participant explained MPA monitoring efforts have not been shared and communicated with fishermen.
- One participant shared their belief that landings data are the primary MPA monitoring tool. They are interested in learning about other types of data and studies that are being used to inform MPA monitoring efforts.

**Participant Quotes**

“I'm on the ocean a lot, and I have yet to see any kind of studies going on, monitoring. I've never seen any research of any iota in the local Point Loma one [Cabrillo SMR], which is at the entrance to the harbor. I've not seen any kind of research vessel, divers, anything in these MPAs. So I don't know how they're researching or how they're getting their info.”

“[MPA monitoring] is all based on our landings. That's it. [. . .] And how are you going to look at our landings based on an area that we don't land anything in? And the block numbers are so big... it doesn't make any sense to me. I'd love to hear more about how they're doing it.”

**18. MPA Enforcement** Overall, how satisfied do you think fishermen from your port are with the enforcement of MPAs?



**Discussion Summary** Participants characterized MPA enforcement as inadequate, ineffective, and unfair.

- A couple participants shared the perspective that effective MPA enforcement is hindered by insufficient resources (i.e., funding, capacity). They also highlighted the challenges faced by

wardens when citing offenders because of the need for concrete evidence demonstrating MPA violations.

- One participant questioned why there is not sufficient funding for MPA enforcement given the amount of revenue collected by the state through fees (e.g., fishing permits, landings taxes).
- Several participants believed commercial fishermen are disproportionately affected by MPA enforcement and face heavier penalties compared to sportfishermen. They stated an MPA violation could result in a loss of a permit (i.e., a dire impact on livelihood), whereas sportfishermen face a small fine. They explained that when an MPA violation goes into the court system, the judges taking the cases do not understand that the issues and penalties are not in alignment with the realities of the infraction.

### Participant Quotes

“There's no enforcement. [CDFW has] told all of us they don't have the money, the manpower, the time. There's commercial fishermen or lobster fishermen putting gear in the reserve, hoop netters setting in the reserves.”

“The things that I've seen happen in some of these MPAs, [MPA enforcement's] just talk... I talk to wardens about it, and it's always 'I can't prove it,' this and that. It just... it sucks. They implemented these MPAs, and I see no enforcement.”

“You'd think that our landing tax and all that other money we spend on permits and fees would be going towards some of the stuff that would maybe help us out here and there [with MPA enforcement], but we have yet to see that happen. But we're going to keep fighting for it.”

“I think the reality is that there's no enforcement. There's a ton of sport fishermen fishing in those areas. And the thing is, we [commercial fishermen] have more to lose. If they take our permits away, that's our livelihood. Whereas these guys are like 'oh, I might get a ticket. I'm going to go fish in the MPAs and there's no enforcement.' But like, would we ever roll the dice? No, we have more to lose. So that's where the whole enforcement component of it doesn't make any sense.”

“That South La Jolla one [Cabrillo SMR] is just a free rein for recreational to poach or fish in and like [name redacted] said, we don't dare go in there because you could lose your permit. And if I lost one permit, I would be bankrupt in a matter of months. I wish they had 100 wardens out there every day. Enforcement's a joke. I know the guys that are in enforcement are good guys and they're doing the best they can with what they got, but it's a joke.”

“It's like, a guy gets a ticket and it goes to the City of San Diego or County of San Diego judge. And he's dealing with a million cases. And then he sees one guy who has two short lobsters or six lobsters or whatever it be, it's 'oh, community service for a couple of days.' But when really it's affecting our livelihood.”

**19. MPA Overall** Any additional comments or concerns about the MPAs and MPA management you would like to communicate?

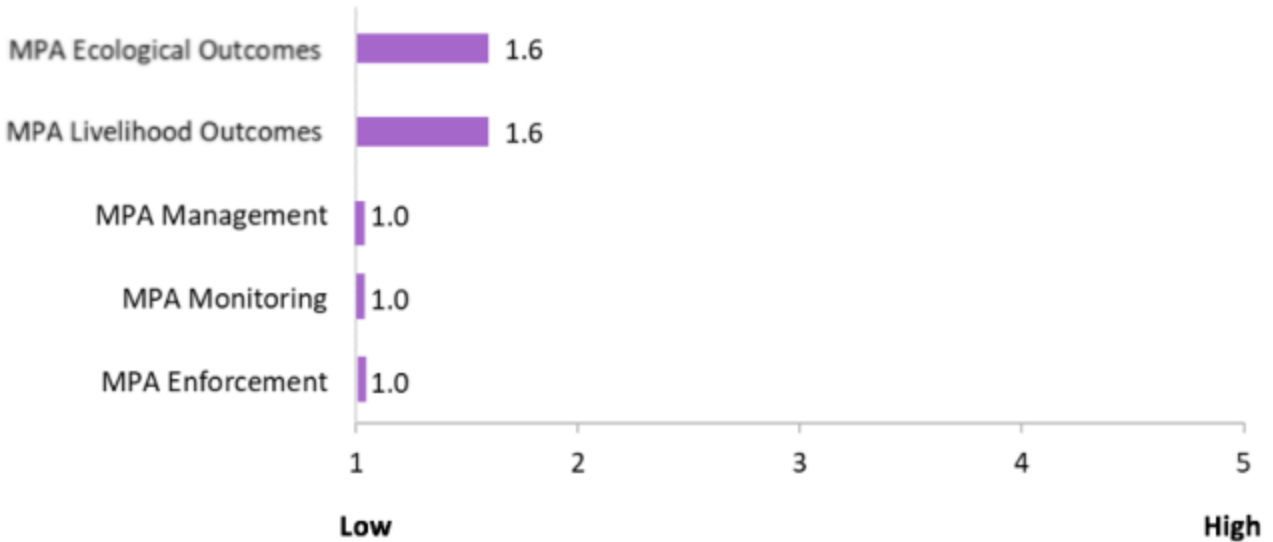
**Discussion Summary** Participants reiterated the need for better, equitable MPA enforcement, and the importance of considering fishermen’s perspectives and experiences in MPA decision-making. They expressed hope that decision-makers will read this and other focus group summaries.

**Participant Quotes**

“If you're going to close big areas of the ocean, enforce it so it's not one-sided for one group [over] another group.”

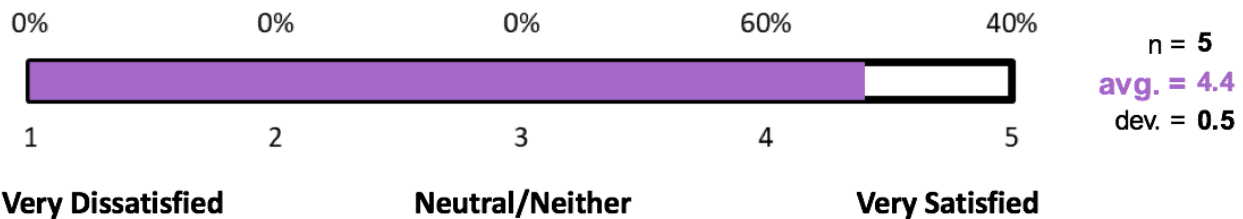
“Hopefully this will get to the right people that need to hear [what we shared].”

**Perceptions of MPAs, Average Responses for Questions 13-14a, 16-18**



**Feedback on Virtual Process**

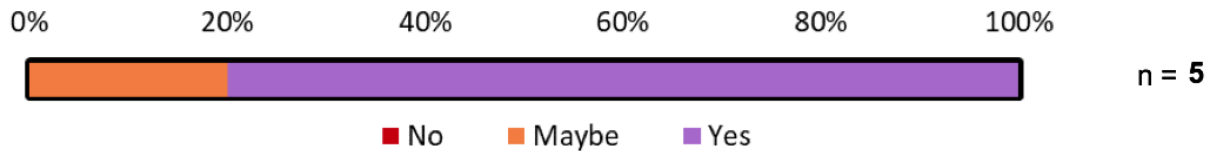
**20a. Satisfaction with the Virtual Process** Overall, how satisfied were you with your experience participating in this virtual focus group?





**20b. Willingness to Participate in Virtual Process in Future** *Would you be open to participating in a virtual focus group or meeting like this in the future?*

(Note: For the following figure, the length of the orange bar indicates the percent of participants who responded 'Maybe' to question 20b. The purple bar indicates the remaining percent of participants who responded 'Yes.' If participants responded 'No,' a red bar would appear.)



**20c. Process Open-ended** *Can you share any additional comments about your experience in this virtual focus group? What do you think are some of the pros and cons of having a conversation like this online rather than in-person?*

**Discussion Summary** Participants discussed their general satisfaction with the focus group experience.

- Several participants were appreciative of the opportunity to contribute commercial fishermen’s perspectives to long-term MPA monitoring via this project.
  - They also expressed their thanks to the project team for their professionalism and efforts to include fishermen’s voices in decisions and processes that affect their livelihoods.
- One participant shared their preference for an in-person discussion, and others indicated a desire for an earlier meeting time (i.e., not ending at eight in the evening).

**Participant Quotes**

“It is extremely refreshing to see that you guys are [. . .] talking to commercial fishermen in comparison to the other things that are going on with those areas [MPAs] that were funded. It's great.”

“You guys are great. We appreciate the effort. A lot of boring stuff that none of us want to do, but we appreciate it.”

“Thank you for getting some fishermen’s perspective. I appreciate it. The only horrible thing was this darn Zoom. I got a crummy computer. Maybe we could all meet in a big room one day.”