

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

## **FOCUS GROUP COMPONENT**

### **Using a Community-Expert Approach to Assess the Health and Well-being of California Commercial and CPFV Fishing Communities in Relation to the MPA Network: Hosting Virtual Focus Groups with Commercial and CPFV Fishermen in California**

Funded By: California Ocean Protection Council and California Department of Fish and Wildlife's MPA Monitoring Program and administered through California Sea Grant

A group of researchers and consultants from Humboldt State University, Ecotrust, and Strategic Earth Consulting (hereafter: the project team) are part of a large project to develop and conduct a long-term socioeconomic monitoring program of California's commercial and commercial passenger fishing vessel (CPFV) fisheries in relation to California's marine protected area (MPA) network. As a part of this larger project, our team hopes to hear directly from commercial and CPFV fishermen throughout the state about the health and well-being of their fishing communities and the outcomes they have observed or experienced from the implementation of California's MPA network.

To collect information, experiences, and views from fishermen, the project team has decided to host virtual focus groups with commercial and CPFV fishermen throughout the state. The discussions were originally intended to be in-person. However, the circumstances of the COVID-19 pandemic made that level of travel and group interaction infeasible, so we have pivoted to a virtual approach. This document describes the project team's planned approach to the focus groups. An earlier draft of this document was sent to a group of 31 Key Communicators (KCs)<sup>1</sup>, including fishermen, managers, and academics connected to California fisheries issues, for review. On January 31, 2020, we hosted a webinar where 17 KCs attended to discuss our approach and receive feedback. We received some great input and suggestions from the group and have revised our approach and Community-Expert well-being assessment tool (hereafter: the assessment tool) to reflect this input. The approach described in this document is reflective of this input and revision. Appendix D contains a list of the key points of feedback received through the webinar along with a description of how this revised approach responded to or incorporated that feedback.

This document has four components:

- (1) A description of our proposed approach and why we chose that approach
- (2) A version of the assessment tool with the questions we propose to ask in the commercial and CPFV focus groups
- (3) A brief description of plans for analysis of data once collected

---

<sup>1</sup>For the purposes of this project, Key Communicators (KCs) are defined as recognized leaders who have a thorough understanding of the perspectives and priorities of their respective communities/affiliations and are interested and willing to act as a conduit of information about policy and management processes through their networks and communications channels.

- (4) Appendices with more detailed information about port groupings for focus groups, participant recruitment and selection process, and an outline of our responses to KC webinar comments

## **1. Proposed Approach**

We have developed a Community-Expert approach to socioeconomic monitoring that centers fishermen in the assessment of the health and well-being of their fishing communities in relation to MPA formation. The goal of this approach will be to gather both quantitative and qualitative data about fishermen's perceptions of MPAs and their fishing communities. The project team has developed an assessment tool with a set of questions related to overall fishing community well-being and impacts and outcomes related to California's MPA network. The assessment tool contains quantitative and qualitative components and is designed to allow for the comparison of fishing community well-being metrics and MPA outcomes assessment across ports and across time, should the study continue to be implemented over time. Since it is not feasible, financially or logistically, to continue to do one-on-one surveys with fishing community members to gain this information, we decided to develop a focus group approach which will allow for the collection of data about perceptions of fishing community well-being and MPA outcomes through a structured deliberative process with Community-Experts. Given the context of COVID-19 and concerns about convening large groups, the project team will employ a virtual format for the focus groups using the Zoom platform.

This study focuses on capturing the perspectives of commercial and CPFV fishermen operating out of California's ports. Given the scope and budget of our study, these two consumptive uses are the primary focus of our research. We will ask participants in these port- or region-based discussions to reflect on the overall health of their ports and fishing communities. It is important to note that fishing communities consist of more than just commercial and CPFV fishermen. The Magnuson-Stevens Act defines a fishing community as "a community that is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew, and fish processors that are based in such communities. A fishing community is a social or economic group whose members reside in a specific location and share a common dependency on commercial, recreational, or subsistence fishing or on directly related fisheries-dependent services and industries (for example, boatyards, ice suppliers, tackle shops)" (MSA NS 8). Our focus group discussions will not include many important perspectives from fishing communities such as recreational and subsistence fishing or processors and support industries. In our discussion of this work, we will clearly communicate that this data primarily captures the views and perspectives of commercial and CPFV fishermen and not all representatives of fishing communities.

We will have somewhat different approaches to capturing information from commercial and CPFV fishermen. The project will hold commercial fishing focus groups in each of the 24 major ports or port groupings on the California coast (see Appendix A). The commercial fishing focus groups will have 4-10 participants and be 3-4 hours in length with a break in the middle. CPFV focus groups will be convened at a more regional level where CPFV operators from multiple ports in a given region will participate in a common group. We anticipate holding seven regional CPFV focus groups (see Appendix B). CPFV focus groups will have 4-10 participants per region and be 2-3 hours in length.

We will invite a group of Community-Experts to attend commercial and CPFV focus groups in each port. By Community-Experts, we mean individuals who have a strong awareness of the state of the commercial and/or CPFV fishing community overall and can speak beyond their individual perspective. We want to make sure that a broad range of perspectives in the port are represented and also invite those who would contribute to the deliberative process in a productive manner. We will consider a variety of factors such as age range, fisheries of participation, ex-vessel value, gender, and level of experience in the fishery. Focus group participants will be selected based on a combination of (1) reaching out to port leadership for nominations or suggestions, (2) drawing from existing contacts among members of the research team, and (3) reviewing CDFW landings data. Given that focus groups will be held in a virtual format, we will also consider access and familiarity with remote meeting technology in our selection of participants. More detail on the participant selection and recruitment process can be found in Appendix C. Our budget includes compensation for commercial and CPFV participants. We will hold the focus group conversations between July and October 2020. We will hold a pilot focus group in July and get responses from the participants and facilitators and revise the process accordingly so it can be consistent and effective in the rest of the ports.

The focus groups will be structured in a way to lead participants through a deliberative process to rate and discuss about 20 questions related to their perceptions of both MPA outcomes and overall well-being of their fishing community (see assessment tool below). First, the facilitators will pose a question and ask participants to rate their community using polling software in Zoom (if individuals have phoned in, they can recount their scores orally or via text). After the participants rate each indicator, the facilitators will encourage respondents to engage in a qualitative discussion about why they chose their ratings. This conversation will allow for the capture of qualitative information in addition to the quantitative data collected in the ratings. To start the conversation, the facilitator will show the spread of the individual data and ask individuals to discuss the areas where and why their individual ratings differed. At the end of the discussion, the facilitators will ask the participants to rate the indicator again to see if the conversation changed any individual ratings and to move the group towards a more consensus-based or collaborative rating. We envision that the statistics related to the individual ratings from the end of the discussion would be taken as the final rating for that port's fishing community, but it would also be possible to analyze and compare how ratings shifted over the course of the discussion. Focus group conversations will be recorded (with consent) and transcribed. This will allow for the collection and analysis of qualitative data. Qualitative data will provide important information about the context of fishing communities and why participants chose to rate indices the way that they did.

The idea of using Community-Experts or key informants to assess socioeconomic outcomes from the implementation of fisheries management strategies is quite common (Anderson et al., 2015; Ocean Health Index, 2019; Smith et al., 2019). Additionally, the use of structured deliberative processes, like the one described above, is a commonly accepted methodology for economic evaluation and sustainability assessment (Frame & O'Connor, 2011; O'Connor et al., 2007; Proctor & Drechsler, 2006; Wilson & Howarth, 2002). Managers and scholars are increasingly using a human well-being approach to understand the social and economic outcomes from MPA formation and to understand the socioeconomic components of marine systems (Ban et al., 2019; Breslow et al., 2016; Brueckner-Irwin et al., 2019).

Finally, we want to note that these focus groups are just one part of a multi-layer project which will include a temporal analysis of landings data across California's ports, an analysis of gathered spatial data, as well as these place-based focus groups. See the project website for more detail: [www.mpahumanuses.com](http://www.mpahumanuses.com).

## **Rationale**

### *Potential Benefits for Monitoring and Management*

The methodology outlined in this document and the questions proposed in the assessment tool below will be useful for addressing several of the key goals from [Appendix B of the MPA Monitoring Action Plan](#):

- (1) MLPA GOAL 2: HELP SUSTAIN, CONSERVE, AND PROTECT MARINE LIFE POPULATIONS, INCLUDING THOSE OF ECONOMIC VALUE, AND REBUILD THOSE THAT ARE DEPLETED
  - (a) The focus group methodology will assist the state in identifying the economic and social connections that commercial and CPFV fishermen have with marine life populations affected by MPAs. The assessment tool will gather data about how fishermen are perceiving MPAs to affect the health of the marine resource populations on which they rely and to assess how MPAs have affected their ability to earn a living harvesting those marine resources.
  - (b) The assessment tool also provides a window into the overall economic and social well-being of fishing communities, providing a better sense of the community connections to these marine resource populations and an understanding of the resource's community and economic value.
- (2) MLPA GOAL 5: ENSURE CALIFORNIA'S MPAS HAVE CLEARLY DEFINED OBJECTIVES, EFFECTIVE MANAGEMENT MEASURES, AND ADEQUATE ENFORCEMENT, AND ARE BASED ON SOUND SCIENTIFIC GUIDELINES
  - (a) The assessment tool contains several questions related to the effectiveness of MPA management, particularly from the perspective of commercial and CPFV fishermen. There are questions related to satisfaction with management, monitoring, and enforcement. Quantitative and qualitative responses from these questions can provide important data into assessing the effectiveness of MPA management overtime.

In addition, to clearly addressing monitoring needs laid out in Appendix B of the MPA Monitoring Plan, the proposed focus group methodology has the potential to gather information related to the health and well-being of California's fishing communities that could be useful to a variety of managers, NGOs, and interest groups including but not limited to: California Department of Fish and Wildlife (CDFW), California Fish & Game Commission, the Ocean Protection Council (OPC), Pacific Fishery Management Council, National Marine Fisheries Service (NMFS), the Nature Conservancy, and California fishermen's organizations and associations (e.g., the California Sea Urchin Commission). Results from the assessment tool could inform conversations about climate-resilience in fishing communities and connect to Fish & Game Commission and Marine Life Management Act goals related to fishing communities.

## *Potential Benefits for Fishermen and Fishing Communities*

A key goal of this study is to make sure that fishermen's voices are captured and included in discussions around MPA management and fisheries management more broadly. We designed the project to provide a vehicle for fishermen to communicate their thoughts on MPAs as well as a whole range of fishing community concerns to managers and decision-makers. State and federal fisheries policy directs managers to consider "fishing communities" in their decision-making processes. Information on fishermen's assessments of their community well-being can help managers to understand the various challenges and strengths communities face and possibly be used to develop strategies to better support fishing communities. Fishermen and fishing associations could use the information to advocate for their needs and begin their own conversations around sustainability planning. In past research and planning efforts, scholars have found that it can be beneficial for fishermen from a port to engage with each other in a conversation about what is and is not working well in their fishery system (Richmond et al., 2019).

Summaries and findings from the focus groups will be made available to participants and California fishing communities upon completion of the study and posted online in formats that protect individual confidentiality. In addition, communities will be given access to port data analyzed for the study (including trends in landings, value, participation, etc.). We intend for this data to be useful for port communities as they participate in their own strategic planning and community development activities into the future. For example, the ports of Eureka, Shelter Cove, Monterey, and Morro Bay recently underwent strategic planning processes related to the long-term health and sustainability of their fishing communities (LWC, 2013, 14; LWC & HSU, 2019a, b). These processes have led to the development of clear recommendations to improve the report as well as the implementation of actions in all of the ports that have improved aspects of fishing community well-being.

Data from a discussion about fishing community well-being could be used by these ports to start conversations about actions the port and managers/policy-makers could take to improve their overall well-being. Results from this research will provide information about fishermen's perceptions of community well-being and MPAs. This work could dovetail well with other fishing community research that is taking place, including an ongoing project titled: Assessing interdependencies between commercial fisheries and California ports. Led by Carrie Pomeroy, this study involves assessing the state of California's ports in terms of infrastructure, amenities, governance, and more. This on-the-ground accounting related to California's ports will provide a nice backdrop for understanding the perceptions uncovered in our research.

## **2. Assessment Tool**

Below are the questions for the assessment tool we plan to implement in each port. The assessment tool is divided into two portions: first, a long list of questions that will be asked in the larger commercial fishing focus groups. The second is a shorter list of questions that will be

asked in shorter conversations with CPFV operators in each port. As a reminder, we plan to ask focus group participants to select a rating for each of the questions using the polling software in Zoom. We will then engage the participants in a qualitative discussion to learn more about the context of the port and why participants rated things the way they did. The questions are listed in the order that we propose to ask them in the focus group. Well-being questions were developed loosely utilizing the community capitals framework (CCF), which views community well-being as deriving from a set of seven interdisciplinary and linked capitals: social, political, cultural, human, financial, built, and environmental (Emery & Flora, 2006; Fey et al., 2006; Flora, 2018). Questions below are labelled based on different groupings and the groupings will be useful in the analysis phase.

Questions that are marked as the same number with an **a and b (or c)**, we envision that during the focus groups we ask the group to rate both those questions one after another before embarking in the discussion. At the end of the discussion, the questions will be rated again. This is to avoid repetition and save time, and because we feel the content of the questions is linked.

### COMMERCIAL FISHING FOCUS GROUPS

#### Questions

Topic	Question	Responses
<b>Well-being Indicators</b>		
<b>1a. Natural Capital: Present State</b>	<p>Acknowledging that there are natural fluctuations, overall, how would you rate the current health and sustainability of the marine resources on which fishermen from this port rely?</p> <p>Criteria to Consider (at present):</p> <ul style="list-style-type: none"> <li>- Abundance of populations of importance</li> <li>- Diversity of species</li> <li>- Average size/weight</li> <li>- Habitat quality</li> <li>- Water quality (incl. temperature, pH, and pollution)</li> <li>- Other</li> </ul>	<p>(1) Very Low (2) Low (3) Neutral/Medium (4) High (5) Very High</p>
<b>1b. Natural Capital: Future Concerns</b>	<p>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?</p>	<p>(1) Extremely Worried (2) Moderately Worried (3) Somewhat</p>

	<p>Criteria to Consider (into the future):</p> <ul style="list-style-type: none"> <li>- Long-term effectiveness of management regimes</li> <li>- Potential future ocean change: global warming/acidification</li> <li>- Future health of marine resources based on: <ul style="list-style-type: none"> <li>- Abundance of populations of importance</li> <li>- Range/spatial distribution of populations</li> <li>- Diversity of species</li> <li>- Average size/weight</li> <li>- Habitat quality</li> <li>- Water quality (incl. temp, pH, and pollution)</li> <li>- Other</li> </ul> </li> </ul>	<p>Worried (4) Slightly Worried (5) Not at all Worried</p>
<b>2a. Economic: Access</b>	<p>Overall, how would you rate your port in terms of the level of access to marine resources to support the local fishing fleet/industry?</p> <p>Criteria to Consider:</p> <ul style="list-style-type: none"> <li>- Amount of resource (pounds, traps, etc.) that local fishermen have access to</li> <li>- Diversity of marine resources that local fishermen have access to</li> <li>- Equity of access throughout the port (across scales/sizes of operations, years of fishing experience, etc.)</li> <li>- Presence of management, weather, or other restrictions that inhibit ability to access/catch resources</li> </ul>	<p>(1) Very Insufficient (2) Insufficient (3) Neutral (4) Sufficient (5) Very Sufficient</p>
<b>2b. Economic: Income</b>	<p>Overall, how would you rate the income that fishermen from your port earn from fishing in terms of supporting livelihoods?</p> <p>Criteria to Consider:</p>	<p>(1) Very Insufficient (2) Insufficient (3) Neutral (4) Sufficient (5) Very Sufficient</p>

	<ul style="list-style-type: none"> <li>- Income earned from fishing compared to wages from other similar types of employment in the region.</li> <li>- Need (or lack of need) for local fishermen to take on other jobs to support living</li> <li>- Costs of fishing compared to revenue from fishing (and how that has fluctuated over time)</li> </ul>	
<b>3a. Markets</b>	<p>Overall, how would you rate the quality of the markets to which fishermen from your port are able to sell their catch?</p> <p>Criteria to Consider:</p> <ul style="list-style-type: none"> <li>- Price</li> <li>- Ease of Use</li> <li>- Stability/consistency/reliability</li> <li>- Diversity/choice</li> </ul>	<p>(1) Very Poor (2) Poor (3) Neutral/ Acceptable (4) Good (5) Very Good</p>
<b>3b. Built Capital (Infrastructure)</b>	<p>Overall, how would you rate the state of infrastructure and services that support commercial fishing in your port?</p> <p>Criteria to Consider:</p> <ul style="list-style-type: none"> <li>- Availability of key or necessary infrastructure/services within the port <ul style="list-style-type: none"> <li>- E.g., docks, fuel, ice, dredging, loading and unloading equipment, processors, haul out facilities, gear storage, etc.</li> </ul> </li> <li>- Quality and reliability/functionality of current infrastructure</li> <li>- Maintenance of infrastructure over time</li> <li>- Financial support of/investment in infrastructure in your port</li> </ul>	<p>(1) Very Poor (2) Poor (3) Neutral/ Acceptable (4) Good (5) Very Good</p>
<b>4a. Human Capital: Labor</b>	<p>Overall, how would you rate your port in terms of being able to recruit new entrants to the commercial fishing industry (as captains and crew) and in terms of being able to retain current participants?</p>	<p>(1) Very Poor (2) Poor (3) Neutral/ Acceptable (4) Good</p>



	<p>Criteria to Consider:</p> <ul style="list-style-type: none"> <li>- Ratio of new entrants compared to those leaving/retiring</li> <li>- Quantity and quality of fishing labor pool to draw from</li> <li>- Presence of barriers to entry</li> <li>- Career longevity: i.e. how long new entrants stay in the industry</li> </ul>	(5) Very Good
<b>4b. Social/Cultural: Job Satisfaction</b>	<p>Overall, how satisfied do you think fishermen from the port are with their jobs in the fishing industry?</p> <p>Criteria to Consider:</p> <ul style="list-style-type: none"> <li>- Sense of fulfillment and purpose from work</li> <li>- Sense of job security</li> <li>- Level of stress</li> <li>- Extent to which fishermen feel the benefits/positives of fishing careers outweigh the challenges/negatives</li> </ul>	(1) Very Dissatisfied (2) Dissatisfied (3) Neutral (4) Satisfied (5) Very Satisfied
<b>5a. Social Capital: Within</b>	<p>Overall, how would you rate the strength of social relationships (or social capital) within your port?</p> <p>Criteria to Consider:</p> <ul style="list-style-type: none"> <li>- Leadership</li> <li>- Trust</li> <li>- Civic engagement (extent to which community members volunteer time/resources for community goals or activities)</li> <li>- Sense of shared identity/mission</li> <li>- Ability to work together</li> <li>- Opportunities to gather, communicate, connect outside of work</li> </ul>	(1) Very Weak (2) Weak (3) Neutral (4) Strong (5) Very Strong
<b>5b. Social/Political: External Relationships</b>	<p>Overall, how would you rate the strength of the port's relationship with external groups who could help support community needs?</p>	(1) Very Weak (2) Weak (3) Neutral (4) Strong

	<p>Criteria to Consider:</p> <ul style="list-style-type: none"> <li>- Community understanding of and engagement in policy processes at multiple scales</li> <li>- Presence on government/NGO advisory committees and decision-making bodies</li> <li>- Relationship with local government entities (city, county, port authorities)</li> <li>- Relationship with federal and state management entities/authorities</li> <li>- Relationship and partnerships with NGOs or other parallel industries</li> <li>- Extent to which the local fishing industry feels supported or acknowledged by the wider community/government</li> </ul>	(5) Very Strong
<b>6. Overall/ Open-ended</b>	<p>Is there anything not captured above that you would like managers and other readers to know about your fishing community/industry?</p> <p>What do you think federal and state managers could do to better support California's fishing communities?</p> <p>AND</p> <p>What do you think members of your fishing industry could do to support the well-being or sustainability of your fishing community?</p>	Open-ended -- to be coded
<b>MPA Specific Indicators</b>		
<b>7. Ecological Outcomes</b>	<p>Overall, how would you rate the effect that the California MPA network has had on marine resource health in your area?</p> <p>(Remind the group to focus on trying to tease out effects from MPAs against other non-MPA related ocean changes that have been occurring since MPAs implemented and</p>	<p>(1) Strongly Negative</p> <p>(2) Negative</p> <p>(3) No Effect or Neutral</p> <p>(4) Positive</p> <p>(5) Strongly Positive</p>

	<p>overall marine environment quality was already discussed in previous questions)</p> <p>Consider Effect MPAs Have Had On:</p> <ul style="list-style-type: none"> <li>- Abundance of populations</li> <li>- Diversity of species</li> <li>- Average size/weight</li> <li>- Habitat quality</li> <li>- Market quality</li> <li>- Other</li> </ul>	
<b>8. Livelihood Outcomes</b>	<p>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?</p> <p>Consider Effect MPAs Have Had On:</p> <ul style="list-style-type: none"> <li>- Landings</li> <li>- Cost (e.g., fuel)</li> <li>- Number of participants in your port</li> <li>- Percentage of income from fishing</li> </ul>	<p>(1) Strongly Negative  (2) Negative  (3) No Effect or Neutral  (4) Positive  (5) Strongly Positive</p>
<b>9a. Effects - Overall</b>	<p>What other types of effects or impacts have fishermen from your port experienced from MPA implementation?</p> <p>Possible Effects to Consider:</p> <ul style="list-style-type: none"> <li>- Change in ability to fish in or go to traditional grounds/areas</li> <li>- Change in travel distance to fishing grounds</li> <li>- Change in safety or risk associated with fishing</li> <li>- Change in crowding/competition in certain areas</li> <li>- Change in ability to serve/fulfill their markets</li> <li>- Change in fisheries of participation or dominance in port</li> <li>- Change in participation in local industry (fishermen leaving industry or moving ports)</li> <li>- Effects on political engagement, organization, and activity</li> <li>- Effects on relationships within and external to fishing community</li> </ul>	<p>Open-ended -- to be coded</p>

	- Other	
<b>9b. Effects - MPA Specific</b>	Which MPAs have had the most impact (positive or negative) on fishermen from your port and why?	Show a map of the different MPAs and allow them to select -- responses to be coded based on MPA
<b>10a. Management</b>	<p>Overall, how satisfied do you think fishermen from your port are with the management of the MPA network?</p> <p>Criteria to Consider:</p> <ul style="list-style-type: none"> <li>- Fairness in process for decision-making (in implementation and ongoing management of MPAs)</li> <li>- Effectiveness in communicating MPA management decisions and their rationale/reasoning</li> <li>- Opportunities for fishermen and other stakeholders to be involved in management discussions and decisions over time</li> <li>- Effectiveness of management in achieving goals</li> </ul>	<p>(1) Very Dissatisfied (2) Dissatisfied (3) Neutral (4) Satisfied (5) Very Satisfied</p>
<b>10b. Monitoring</b>	<p>Overall, how satisfied do you think fishermen from your port are with the monitoring of the MPA network?</p> <p>Criteria to Consider:</p> <ul style="list-style-type: none"> <li>- Type, quality, design of research and monitoring conducted related to MPAs</li> <li>- Communication of results</li> <li>- Collaboration and engagement with fishermen</li> <li>- Inclusion of fishermen's knowledge and perspectives</li> </ul>	<p>(1) Very Dissatisfied (2) Dissatisfied (3) Neutral/Neither (4) Satisfied (5) Very Satisfied (6) Not Aware/Not Enough Information</p>
<b>10c. Enforcement</b>	<p>Overall, how satisfied do you think fishermen from your port are with the enforcement of MPAs?</p> <p>Criteria:</p> <ul style="list-style-type: none"> <li>- Clarity of the rules and regulations</li> <li>- Fairness in CDFW's interpretation of</li> </ul>	<p>(1) Very Dissatisfied (2) Dissatisfied (3) Neutral (4) Satisfied (5) Very Satisfied</p>

	the rules/regulations - Effectiveness	
<b>11. Overall</b>	Any comments or concerns about the MPAs and MPA management you would like to communicate?	Open-ended -- to be coded

**CPFV FISHING FOCUS GROUPS**  
**Questions**

Topic	Question	Responses
<b>Well-being Indicators</b>		
<b>1. CPFV Industry Health and Well-being</b>	<p>Overall how would you assess the health of the CPFV industry that operates out of your port or region? What are key strengths, weaknesses, opportunities, and threats you see for the local industry?</p> <p>Criteria/Categories to Consider:</p> <ul style="list-style-type: none"> <li>- Health of resource</li> <li>- Income/ability to earn living</li> <li>- Costs</li> <li>- Access to the resource</li> <li>- Social relationships and political engagement</li> <li>- Job satisfaction</li> <li>- Available infrastructure</li> </ul>	
<b>2. Overall/ Open-ended</b>	<p>Is there anything not captured above that you would like state managers and other readers to know about your fishing community/industry?</p> <p>What do you think federal and state managers could do to better support California's CPFV fisheries?</p> <p style="text-align: center;">AND</p> <p>What do you think members of your fishing industry could do to support the</p>	Open-ended -- to be coded

	well-being or sustainability of your fishing community?	
<b>MPA Specific Indicators</b>		
<b>3. Ecological Outcomes</b>	<p>How would you rate the effect that California MPA network has had on marine resource health in your area?</p> <p>(Remind the group to focus on trying to tease out effects from MPAs against other non-MPA related ocean changes that have been occurring since MPAs implemented)</p> <p>Consider Effect MPAs Have Had On:</p> <ul style="list-style-type: none"> <li>- Abundance of populations</li> <li>- Diversity of species</li> <li>- Average size/weight</li> <li>- Habitat quality</li> <li>- Other</li> </ul>	<p>(1) Strongly Negative  (2) Negative  (3) No Effect or Neutral  (4) Positive  (5) Strongly Positive</p>
<b>4. Livelihood Outcomes</b>	<p>Overall, how would you rate the effect that the MPA network had on the ability for CPFV operators from your port to earn a living/gain income?</p> <p>Consider Effect MPAs Have Had On:</p> <ul style="list-style-type: none"> <li>- Income: Number of clients and price per client</li> <li>- Cost (e.g., fuel)</li> <li>- Percentage of income from CPFV operation</li> </ul>	<p>(1) Strongly Negative  (2) Negative  (3) No Effect or Neutral  (4) Positive  (5) Strongly Positive</p>
<b>5a. Effects - Overall</b>	<p>What types of effects or impacts have CPFV operators from your port experienced from MPA implementation?</p> <p>Possible Effects to Consider:</p> <ul style="list-style-type: none"> <li>- Change in ability to fish in or go to traditional grounds/areas</li> <li>- Change in travel distance to fishing grounds</li> <li>- Change in safety or risk</li> </ul>	<p>Open-ended -- to be coded</p>

	<p>associated with fishing</p> <ul style="list-style-type: none"> <li>- Change in fisheries or activities participate in with clients</li> <li>- Change in crowding/competition in certain areas</li> <li>- Change in participation in local industry (fishermen leaving industry or moving ports)</li> <li>- Change in ability to recruit clients and price charged</li> <li>- Effects on political engagement, organization, and activity</li> <li>- Effects on relationships within and external to fishing community</li> <li>- Effects on public interest in/demand for fishing opportunities</li> <li>- Other</li> </ul>	
<b>5b. Effects - MPA Specific</b>	Which MPAs have had the most impact on CPFV fishermen from your port and why?	Show a map of the different MPAs and allow them to select -- responses to be coded based on MPA
<b>6. Management</b>	<p>Overall, how satisfied do you think fishermen from your port are with the management of the MPA network?</p> <p>Criteria:</p> <ul style="list-style-type: none"> <li>- Fairness in process for decision-making (in implementation and ongoing management of MPAs)</li> <li>- Effectiveness in communicating MPA management decisions and their rationale/reasoning</li> <li>- Opportunities for fishermen and other stakeholders to be involved in management discussions and decisions over time</li> <li>- Effectiveness of management in achieving goals</li> </ul>	<p>(1) Very Dissatisfied  (2) Dissatisfied  (3) Neutral  (4) Satisfied  (5) Very Satisfied</p>

<b>7. Monitoring</b>	<p>Overall, how satisfied do you think fishermen from your port are with the monitoring of the MPA network?</p> <p>Criteria:</p> <ul style="list-style-type: none"> <li>- Type, quality, design of research and monitoring conducted related to MPAs</li> <li>- Communication of results</li> <li>- Collaboration and engagement with fishermen</li> <li>- Inclusion of fishermen's knowledge and perspectives</li> </ul>	<p>(1) Very Dissatisfied  (2) Dissatisfied  (3) Neutral  (4) Satisfied  (5) Very Satisfied  (6) Not Aware/Not Enough Information</p>
<b>8. Enforcement</b>	<p>Overall, how satisfied do you think fishermen from your port are with the enforcement of MPAs?</p> <p>Criteria:</p> <ul style="list-style-type: none"> <li>- Clarity of the rules and regulations</li> <li>- Fairness in CDFW's interpretation of the rules/regulations</li> <li>- Effectiveness</li> </ul>	<p>(1) Very Dissatisfied  (2) Dissatisfied  (3) Neutral  (4) Satisfied  (5) Very Satisfied</p>
<b>9. MPA Overall</b>	Any additional comments or concerns about the MPAs and MPA management you would like to communicate?	Open-ended -- to be coded

### 3. Analysis Approach

#### *Quantitative Data*

This assessment tool will produce both quantitative and qualitative data. The quantitative data will be used to develop various indices or ratings for each port that can communicate information about perceptions of the well-being of the port and outcomes from MPAs. Commercial fishing focus groups will allow for the development of indices related to overall commercial fishing community well-being including social, economic, and environmental components. Both commercial and CPFV focus groups will provide rating information about outcomes from MPAs, potentially allowing for the development of indices related to MPA



outcomes. Quantitative results for each question will provide an interesting view into the state of commercial and CPFV fisheries. Additionally, from the commercial focus groups we will be able to compare the responses pre- and post-deliberation to see if and how the structured conversations changed how fishermen assessed their ports. We plan to work with KCs including statisticians, managers, and fishermen in the development of indices or metrics from the quantitative data. As a result, a more detailed discussion of the analysis process will be presented in a later document for review.

### *Qualitative Data*

While the quantitative data provide an opportunity to compare well-being or MPA scores between ports and over time, they do not provide rich information about the context of fishing communities and the complex processes and outcomes they experience. The qualitative information from these conversations is essential for providing that nuanced context, and we will develop data products that highlight and feature the qualitative data and ensure that the quantitative data is not communicated outside of its broader context.

With permission, we intend to record and transcribe the focus group conversations. We will analyze the data using standard qualitative data analysis methods. We will develop a list of themes and code the data for those themes using a qualitative coding software such as Atlas.ti or Dedoose. All identifying information will be stripped from the quotes before they are presented in reports or other public facing materials. Following the completion of each focus group, the project team will draft a key themes summary that describes the key points and findings made in the conversation. These summaries will not include identifying information for participants. They will be made available to fishing communities following completion and will be submitted to CDFW/OPC as part of the data sharing agreement.

### *Communication Tool*

We plan to develop an effective means to communicate findings from the focus groups so that they can be accessible to fishermen, managers, academics, and the public. Our intention is to develop a web-based visualization tool (hereafter: communication tool) where results from the focus groups can easily be searched and queried. We were thinking of developing a communication tool similar to the one for the [Ocean Health Index](#) where site visitors would be able to view quantitative results from each port - either through indices or responses to each question. We also envision that the communication tool will incorporate some qualitative data in the form of relevant quotes from each port for each key indicator or question. We also intend to vet draft versions of our communication tool with KCs including fishermen, managers, and members of academia.

## **References**

- Anderson, J. L., Anderson, C. M., Chu, J., Meredith, J., Asche, F., Sylvia, G., ... & Valderrama, D. (2015). The Fishery Performance Indicators: A management tool for triple bottom line outcomes. *PLoS ONE*, 10(5), 1-20.
- Ban, N. C., Gurney, G. G., Marshall, N. A., Whitney, C. K., Mills, M., Gelcich, S., ... & Breslow, S. J. (2019). Well-being outcomes of marine protected areas. *Nature Sustainability*, 2, 524-532.
- Breslow, S. J., Sojka, B., Barnea, R., Basurto, X., Carothers, C., Charnley, S., ... & Levin, P. S. (2016). Conceptualizing and operationalizing human wellbeing for ecosystem assessment and management. *Environmental Science & Policy*, 66, 250-259.
- Brueckner-Irwin, I., Armitage, D., & Courtenay, S. (2019). Applying a social-ecological well-being approach to enhance opportunities for marine protected area governance. *Ecology and Society*, 24(3).
- Frame, B., & O'Connor, M. (2011). Integrating valuation and deliberation: The purposes of sustainability assessment. *Environmental Science & Policy*, 14, 1-10.
- Lisa Wise Consulting, Inc. (2013). City of Monterey Fishing Community Sustainability Plan.
- Lisa Wise Consulting, Inc. (2014). City of Morro Bay Fishing Community Sustainability Plan.
- Lisa Wise Consulting, Inc. & Humboldt State University (2019a). Shelter Cove, CA Fishing Community Sustainability Plan.
- Lisa Wise Consulting, Inc. & Humboldt State University (2019b). Eureka, CA Fishing Community Sustainability Plan.
- Ocean Health Index. (2019). Global Scores: Ocean Health Index.  
<http://www.oceanhealthindex.org/region-scores> Accessed: 11/7/19.
- O'Connor, M., Bureau, P., & Reichel, V. (2007). *Deliberative sustainability assessment with the online KerDST deliberation support tool* (Report No. 2007-03). Paris, France: Centre d'Economie et d'Ethique pour l'Environnement et le développement (C3ED).
- Proctor, W., & Drechsler, M. (2006). Deliberative multicriteria evaluation. *Environment and Planning C: Government and Policy*, 24, 169-190.
- Richmond, L., Dumouchel, R., Pontarelli, H., Casali, L., Smith, W., Gillick, K., Godde, P., Dowling, M., & Suarez, A., 2019. Fishing Community Sustainability Planning: A Roadmap and Examples from the California Coast. *Sustainability*, 11, 1904.

- Smith, S. L., Karasik, R., Stavrinaky, A., Uchida, H., & Burden, M. (2019). Fishery Socioeconomic Outcomes Tool: A rapid assessment tool for evaluating socioeconomic performance of fisheries management. *Marine Policy*, 105, 20-29.
- Wilson, M. A., & Howarth, R. B. (2002). Discourse-based valuation of ecosystem services: Establishing fair outcomes through group deliberation. *Ecological Economics*, 41, 431-443.

**APPENDIX A.** List of the major ports or port groupings in California where we intend to hold commercial fishing focus group conversations. See [this document](#) on our project website for more detailed information about which ports are encompassed in which groups.

1. Crescent City
2. Trinidad
3. Eureka
4. Shelter Cove
5. Fort Bragg
6. Albion
7. Point Arena
8. Bodega Bay
9. Bolinas
10. San Francisco Area Ports
11. Princeton - Half Moon Bay
12. Santa Cruz
13. Moss Landing
14. Monterey Bay
15. Morro Bay
16. Avila-Port San Luis
17. Santa Barbara
18. Ventura
19. Port Hueneme - Oxnard
20. Los Angeles - Long Beach Area Ports
21. Orange County Area Ports
22. Dana Point
23. Oceanside
24. San Diego Ports

**APPENDIX B.** List of proposed port groups for CPFV focus group conversations (based on commercial fishing port groupings from [this document](#))

Group A: Crescent City, Trinidad, Eureka, Shelter Cove, Fort Bragg, Albion, Point Arena

Group B: Bodega Bay/Bolinas

Group C: San Francisco Area Ports, Princeton - Half Moon Bay

Group D: Santa Cruz, Moss Landing, Monterey Bay

Group E: Morro Bay, Avila-Port San Luis, Santa Barbara, Ventura, Port Hueneme-Oxnard

Group F: Los Angeles - Long Beach Area Ports

Group G: Orange County Area Ports, Dana Point, Oceanside, San Diego Ports

## **APPENDIX C. Participant recruitment and selection process**

This appendix describes the project team's proposed approach for recruiting participation of commercial fishermen and Commercial Fishing Passenger Vessel (CPFV) owners/operators in a series of small group discussions. The process design has been developed with an aim to develop focus groups that are representative of the unique demographics of each port, port group, or region.

### **Group Composition**

Feedback shared by Key Communicators has illustrated the need for each focus group to be reflective of the diverse demographics that exist within each port/port group. Since this is a state project linked to nearshore MPAs, we will limit participants to those who participate in at least one state water fishery.

Based on CDFW data, demographic criteria the project team is considering includes:

- Occupation (e.g., seeking commercial fishing and CPFV operators)
- Age
- Gender
- Year experience fishing in CA (before/after MPA implementation)
- Type and number of fisheries of participation
- Scale of operation (e.g., ex-vessel revenue, CPFV trips)

Finally, in selecting participants we will consider three additional factors. First their ability to participate effectively and productively in a focus group conversation. Second, their access to sufficient technology to participate in a virtual focus group. And third, their ability to consider the state of their fishing community beyond their own individual experience. The goal of the conversation will be to get fishermen to discuss the state of their port or fishing community as a whole.

### **Group Size**

- Focus groups, commercial & CPFV (online): 4-10

### **Screening Process**

Once we have a draft list of invitees we will reach out to participants to screen them for possible participation.

- Determine their willingness and availability to participate
- Determine their access to appropriate technology for virtual participation
- Determine if they need a zoom/technology training prior to the focus group
- Determine their ideal mode of communication related to the project: phone, text, or email.

## **Approach to Developing a Participant List in Each Port or Region**

- Port Demographic Profiles
  - We will use the CDFW landings data to develop demographic distributions and profiles of each port based on the criteria listed in group composition above (e.g. ex-vessel value, fisheries of participation, age)
  - These demographic profiles can be compared to focus group invitees list to ensure appropriate representation and completeness
- Project Team (PT) Contacts
  - PT has significant experience working with California's fishing communities and their own contact lists to consider for recruitment to focus groups
  - PT will use existing contact lists to develop a list of potential invitees and identify key communicators or liaisons within each port to work with
- Port Liaisons (PLs)
  - Utilize local liaisons (minimum of 2) within each port who are known to be leaders, ideally across fisheries
    - These individuals can act as point-people within each port to solicit participation based on identified criteria, share list with PT
    - PLs can nominate, and in some cases recruit participants
- Draft Invitee List
  - Develop a draft invitee list based on suggestions from PT, PLs, and CDFW data
  - Compare the demographics of the invitee list with the demographic profile of the port and determine if any key groups or sectors are missing; any missing demographics will be noted in our final reporting
  - If needed, add additional invitees to the list to make up for any missing demographic groups - these individuals could be determined by PL or PT suggestions or by reviewing the CDFW data.
- Final Invitee List
  - Finalize an invitee list that includes wide representation from major demographic groups
  - Reach out to invitees and determine availability
  - Fill in additional invitees with similar demographics for those who are not able or willing to attend
  - Invite at least two participants more than the minimum number, as it is possible that issues will arise and not all will be able to make it on the day

## **Recruiting Process**

- Once an invitee list has been developed, the PT will reach out to invitees individually to communicate more information about the project and determine their interest and availability
  - PLs may assist with initial contact to some invitees, but PT will follow-up shortly after with personalized emails and phone calls/text messages to provide more information

- PT members will use a combination of phone calls and emails to reach out to invitees and communicate information about the project. Information to be shared with all invitees include:
  - Background
    - The purpose of the study
    - Who wants the information, who is sponsoring the study
    - What they will do with the information
    - Who we want to hear from
    - Why the study is important
  - Selection process
    - How focus group participants are being solicited
    - How you got that person's name
    - Why you are inviting them
    - What will be done with results; who will benefit from the study
    - How they might benefit from participating (what is the incentive for participating?)
  - Procedure
    - Dates of groups
    - Process for confirming participation
    - Whether to leave phone messages
  - Focus Group Process and Information
    - Answers to frequently asked questions
    - Focus group question list
    - List of invitees
    - Consent form
  - Follow-up
    - Personalized follow-up email (date/time)
    - Reminder phone calls or texts (date/time)
  - Contact
    - Contact information for questions

## **Compensation**

### *Commercial Fishermen*

- \$175 per fisherman (\$275 for pilot port participants)

### *CPFV Fishermen*

- \$175 per fisherman



## **APPENDIX D. Response to KC webinar comments**

### **[Key Communicators Webinar to Guide the Design of a Draft Port Community Well-being Tool and Focus Group Discussions](#)**

January 31, 2020; 17 participants

### **[Presentation and Discussion Highlights Summary](#)**

**Comment 1. One KC questioned why stakeholders would trust that the state is interested in considering the socioeconomic data gathered through this project since the Marine Life Protection Act (MLPA) did not distinctly consider socioeconomic effects. From their perspective, MPAs were created for their intrinsic ecological value so it is unclear why MPA monitoring, including the collection of socioeconomic information, is needed.**

*Response:* The state of California has been using a set of criteria to base their review and monitoring of the MPA network. There are two goals included in the [MPA Monitoring Action Plan](#) related to socioeconomic information:

MLPA GOAL 2: HELP SUSTAIN, CONSERVE, AND PROTECT MARINE LIFE POPULATIONS, INCLUDING THOSE OF ECONOMIC VALUE, AND REBUILD THOSE THAT ARE DEPLETED

MLPA GOAL 5: ENSURE CALIFORNIA'S MPAS HAVE CLEARLY DEFINED OBJECTIVES, EFFECTIVE MANAGEMENT MEASURES, AND ADEQUATE ENFORCEMENT, AND ARE BASED ON SOUND SCIENTIFIC GUIDELINES

With these goals and in the funding allocated to this and past socioeconomic projects, the state is signaling an interest in understanding the effects of MPAs on commercial and CPFV fishing industries and communities. We cannot guarantee if and how the socioeconomic data collected from this study will be used by the state in the further review and management of the MPA network. However, this study does provide an opportunity for fishermen to share and communicate their experiences. In addition, we have included questions beyond MPAs in the assessment tool so that fishermen can provide information about the greater context within which they operate -- about the challenges and strengths of their fishing communities. This data can be relevant beyond MPA management. It could provide useful information to fisheries managers at the state and federal levels. Finally, findings from this research will be made available to individual fishing communities who could use it in their own advocacy and planning. We added additional information to the rationale section of this document to include possible benefits from participating in this project.

**Comment 2. A question was asked regarding how an MPA 'statewide baseline' is defined, considering some MPAs were implemented over a decade before this project began.**

*Response:* The term “baseline” came from the state’s call for proposals as this is the first time that long-term monitoring will be implemented throughout the state (i.e., MPA baseline monitoring has been conducted at a regional scale to date). Data we collect this year can be compared with data collected in past and future monitoring efforts. Based on this feedback provided, the word “baseline” has been taken out of most of our communications related to this project, including this document, to avoid confusion.

**Comment 3. It was suggested the MPA monitoring reference sites include areas across broader geographic ranges than within a specific MPA region to more accurately observe changes in ecosystem health due to MPA impacts.**

*Response:* This question seems related to ecological monitoring of MPAs; there are several projects working on ecological components, but that is not within the scope of this project.

**Comment 4a. Focus groups have increased potential to gather information that is credible, reliable, and representative of California commercial and CPFV fishing communities if each focus group includes a diverse array of fishermen that are reflective of their respective ports. One KC suggested that it would be important to include fishermen in the conversation who were fishing before MPAs were put in place so they could speak to socioeconomic and port community well-being before and after MPA implementation.**

**Comment 4b. KCs requested clarification about the process for determining the number of fishermen invited to each focus group and the process for recruiting focus group participants. One KC suggested varying the size of focus groups based on port community size and cautioned against holding large group discussions.**

*Response:* Recruitment and selection of participants for the focus groups will be essential to ensure there is a representative group across each port/port grouping. In response to this comment, more detail on the selection and recruitment process for the focus groups has been developed. This includes updates to the text of the process design and a new document (Appendix C), which outlines the criteria and process we will use to select participants. Criteria include, but are not limited to, age range, gender, fishery of participation, size of operation, level of experience in the fishery, awareness of the state of the fishing community, ability to speak beyond individual experience on behalf of the fishing community, and ability to do well in a deliberative process. Since the conversations have moved to Zoom, we will also seek participants who have an ability to use a web-based meeting platform and training will be made available to those fishermen with limited experience with Zoom tools (e.g., polls). With the criteria of age and experience in the fishery, we will seek to ensure that each focus group has participants who can provide a long-range view of the fishing port and can speak to conditions before and after MPA implementation.

We have decided to reduce the size of planned focus groups, particularly in light of the COVID-19 crisis and the need to hold focus groups in a virtual format. We have decided that commercial and CPFV focus groups will have a range of 4-10 participants.

**Comment 5. One KC questioned whether the focus group approach is the best way to collect information about port community well-being, and shared that they saw potentially more value in a project that would do on-the-ground assessment of port amenities and capabilities.**

*Response:* We agree that these focus group or interview methods will only provide one piece of information related to fishing community well-being: commercial and CPFV operators' perceptions of the well-being of their communities. Perceptions data is important for community members and managers to understand as it provides a window into community views of management strategies like MPAs and overall community health. Perceptions data alone will not provide a complete view of the state of fishing communities and their unique contexts and needs. We hope to design our study so that it can compliment richer analyses such as on-the-ground assessments of port infrastructure, amenities, and capabilities. One such study is a research project being led by Carrie Pomeroy titled: *Assessing interdependencies between commercial fisheries and California ports*. Our hope is that our research can provide a snapshot into the views, perceptions, concerns, thoughts, and feelings of commercial fishermen and CPFV operators on a statewide scale. Findings will be available to inform possible further work, like Carrie's, that delves more deeply into the state of fishing communities and ports. We have revised the project approach to more clearly communicate the purpose of the study and to describe how it could integrate and interact with other fishing community research. By hosting a webinar to gain feedback from KCs, we have sought to include researchers working on fishing community research in California to provide their guidance and help to design the study in a way that it can complement and add to existing and future planned research.

**Comment 6. Based on past experiences with the MLPA Initiative and MPA planning / designation process, concerns were raised that fishermen may be skeptical about or uninterested in engaging in this project.**

*Response:* We agree this is a real challenge and have taken a number of steps to try to build trust in the project and increase incentives for participation.

- We have sought feedback from representatives of California fishing communities in the design of the assessment tool and have included fishermen throughout the process design for this study as an attempt to build trust and to design a project that is reflective of their interests and needs.
- In response to feedback from fishermen, we have broadened the scope of the study beyond MPAs to include questions related to the broader context and challenges that fishing communities face.
- We are developing ways to communicate findings from the research in a way that will be relevant and useful for fishing communities themselves -- including developing key

theme summaries from focus groups and web-based communication tools that will be more accessible than lengthy reports.

- We have been very clear about including funding for compensation for fishermen who participate in this project. We respect fishermen's time and believe they should be compensated for sharing their expertise.
- Members of the project team have long-standing relationships with representatives from fishing communities over years of collaboration and projects, and we hope that the trust developed through those projects can assist in recruiting fishermen to participate.
- Participation in this study will be voluntary. If individual fishermen are not interested in participating, that is their choice. We cannot guarantee the extent to which this research will be used by managers in their decision-making, but see value in including fishermen's voices and perspectives as part of the conversation about the ongoing monitoring and management of MPAs. We hope that many will be willing to participate and provide their views -- positive or negative about MPAs and other aspects of their fishing communities. The goal of this research will be to present fishermen's perspective to managers and other readers as transparently, clearly, and honestly as possible.

**Comment 7. There was general agreement that inviting fishermen to participate in focus groups during the height of their respective fishing seasons would be difficult. One KC suggested that focus groups be combined with other fisheries meetings to help maximize participation.**

*Response:* Several members of the project team are in close communication with port leadership to determine when fishermen are available to participate in the virtual focus groups. With this information, we are working to schedule the focus groups around fishing seasons and weather windows when fishermen aren't out on the water. While we appreciate the suggestion to piggy-back the focus groups with other fisheries meetings to help increase turnout, we cannot guarantee that we would be able to recruit a broad, diverse, and reflective group of participants from these meetings. This idea has been made even more challenging in light of COVID-19.

**Comment 8. A number of KCs expressed concerns that the draft questions may be too broad, which could introduce more variability in the answers received (due to increased participation). To support richer conversations, multiple KCs suggested improving the specificity of certain questions and including sub-criteria to improve understanding and consistency in responses received.**

*Response:* A clear set of criteria has been added after each question so that participants in the conversation can be clear about what they are assessing, and to add more consistency across ports and time.

**Comment 9. One KC discussed that given the question design we should use the term "rate" instead of "rank" when asking participants to evaluate the likert scale questions.**

*Response:* We have replaced “rank” with “rate” throughout the document.

**Comment 10. One KC suggested that the project team reach out to more members of the fishing community to request their input about what factors they think are important to consider about community well-being.**

*Response:* Our goal was to seek as much feedback as possible from fishing community representatives (and other experts) in the design of this assessment tool. We took the following steps to incorporate their feedback into the assessment tool:

- (1) Prior to the design of the assessment tool, nine commercial and/or CPFV fishing community representatives were contacted by the project team to gain their input in the design of the assessment tool. Feedback from these conversations directly contributed to the design of the first draft of the assessment tool.
- (2) After a draft assessment tool and process design was developed, we held a webinar to gain feedback from a variety of experts and potential end users of the data, including eight representatives from commercial and/or CPFV fishing communities. We incorporated this feedback into the design of the assessment tool.
- (3) We plan to conduct a pilot test of the assessment tool and process design on one port and to gain feedback from participants about the assessment tool and the process. We will make modifications to the approach related to the feedback.

A multi-year, phased approach where workshops are first held with fishermen about what constitutes well-being followed by the design and implementation of the assessment tool could be a most robust approach. However, neither the budget nor timeline was available to support that kind of effort. Additionally, the limitations on in-person meetings related to the COVID-19 pandemic made it more difficult to incorporate this strategy. We were also worried about respondent fatigue and did not want to burden fishing representatives with many requests of their time.

**Comment 11. One KC expressed it may be difficult for focus group participants to tease out socioeconomic impacts specific to MPAs when considering all large-scale management actions that have affected fishing communities.**

*Response:* During the focus group discussions, the project team will encourage and remind participants to do their best to tease out changes related specifically to MPAs during administration of the MPA portion of the assessment tool. In addition, the overall fishing community well-being questions can provide an opportunity for fishermen to discuss other drivers of change beyond MPAs.

**Comment 12. One KC suggested it might be fruitful to integrate the well-being questions with the MPA questions, for example to start on a topic and then drill down to how MPAs related to that topic. Others were not sure about whether integrating the questions in that way would be effective.**

*Response:* The approach suggested has been considered by the project team, which in theory makes a lot of sense. However, when we considered the practicality of the conversations flow, while also being mindful of time management, we decided to keep the two sets of questions separate. In general, it seemed that when fishermen were talking about MPAs, they tended to want to talk about all aspects of MPAs at once. We thought that switching to MPAs every 2nd or 3rd question would make it challenging for participants to keep their train of thought and might lead to repetition in the conversation. The order and arrangement of the questions is something that we will test during the pilot focus group and is something that we could modify based on responses from fishermen.

**Comment 13. Additional questions and concerns were raised regarding focus group participants' ability to convey the perspectives of their port rather than individual priorities or needs.**

*Response:* We recognize this as an important consideration and plan to address it in several ways.

- We added a set of criteria for each question to help each participant consider the questions in the same way.
- Voting will be conducted before and after each question to help reduce responses that focus on the individual, rather than their broader fishing community. In the first rating, fishermen might be more biased towards their individual experience. However, the goal is the second rating, which follows a group conversation, might be more reflective of their view of the community overall.
- We also hope to address this in the selection of participants in the focus group discussions by selecting KCs or community leaders or experts who have some experience thinking about or advocating for their port or community as a whole.
- We plan to remind the participants throughout the process to reflect on the port or community experience rather than just their own.
- In materials leading up to the focus groups, we will send participants a list of the questions and will ask fishermen to discuss them with other members of their community (as they are able), so they can come to the focus group with a broader perspective.

**Comment 14. Some KCs highlighted the need for clear messaging about what the draft assessment tool is and what type of data it will collect, given that not all components of the fishing community will be present during each focus group. Using the term 'port community' may be misleading, given that the project only focuses on one or two parts of the fishing community as a whole (i.e., processors and buyers will not be part of focus group discussions). There were suggestions to give the tool and project a more focused name.**

*Response:* The language describing the assessment tool has been updated to be more specific about what it is. Specifically, we described the assessment tool as drawing from a

Community-Expert approach that will ask members of the community to assess the status of their ports. We have also clarified the data will reflect fishermen's perceptions of their fishing communities rather than on-the-ground assessments of the tangible reality at ports. Since commercial and CPFV fishermen are the intended participants, we replaced "port community" with "fishing community" to reflect this. We included language about the definition of the fishing community in our approach and made it clearer that not all members of the fishing community will be a part of these conversations -- as they will only focus on commercial and CPFV operators and not processors, support industries, and other key components of fishing communities. In communications about the study, we will be clear that results from our work show the views of two - but not all - components of fishing communities.

**Comment 15. Several KCs expressed concern that the current focus group design only includes commercial fishermen. Due to constraints in the scope of the project, CPFV discussions are slated to take place in a smaller group setting and will not involve the use of clickers. Some KCs highlighted the importance of collecting comparable quantitative and qualitative data across both commercial and CPFV fishing communities. Several KCs asked about how the project was planning to consider fishermen who fish commercially and also operate CPFVs. It was highlighted that the responses of these 'hybrid' fishermen in a focus group setting could be affected depending on which perspective they are asked to answer from. Several KCs highlighted there is a larger CPFV presence in some ports and that these ports might benefit from the inclusion of more CPFV operators than the proposed 2-4 participants.**

*Response:* This project was not funded to support a full assessment of CPFV operators at the same level as the commercial focus groups. Though CPFV group discussions were originally proposed to be more expansive in scope, the state requested the project team reduce our budget, which in turn reduced the scope for the CPFV component of this project. The switch to virtual focus groups did provide the project team with the opportunity to rethink aspects of the approach to CPFV. Instead of small conversations with 2-4 operators in each port, we anticipate having more detailed and lengthy conversations with 4-10 CPFV operators on a regional basis -- across several different ports. We have developed a list of port groupings for CPFV in Appendix B. These are designed to ensure that those ports with a higher CPFV presence have more representation and regions with more CPFV activity will have more focus groups. In line with the reduced scope of the CPFV assessment, the CPFV focus groups will be shorter in length with fewer questions compared to the commercial groups. Given that focus groups will include CPFV operators for multiple ports, we decided that it will be difficult to capture quantitative data on all of the indicators because the experiences could differ across ports, but we still plan to gather quantitative information about MPAs.

**Comment 16. KCs noted several of the port groupings defined by the project team may make it difficult to comprehensively capture an accurate assessment of port community well-being and/or socioeconomic impacts due to MPAs. When only holding one discussion for commercial and CPFV fishermen respectively across ports in an area, the**

**subtle nuances of needs and priorities between ports may be lost by grouping ports together.**

*Response:* The goal of this project and the MPA monitoring project is to gather statewide data related to the socioeconomics of MPAs and fishing communities. Conducting monitoring at a state scale in a state as big as California, with a limited budget, can be difficult. There is likely no cost-effective, replicable method that would capture all the nuance and experience with MPAs throughout such a large and diverse state. With this assessment tool and approach, we have aimed to design a method that can capture some of the nuance and diversity in experience of fishing communities with MPAs and well-being, while keeping that state scale in mind. Ratings can provide a quantitative snapshot, while the qualitative information will provide rich nuanced and context-specific information. The use of Community-Expert approaches with a deliberative process are proven methodologies for socioeconomic assessment, particularly when working at a large scale with limited resources. Additionally, this project will capture views and perspectives from each of the 24 major port or port groupings in California. These include extremely small and rural ports, large urban ports, and everything in between. We hope this approach will provide a window into the range of different experiences throughout the state. We also hope the broader scale findings from this project can serve as an invitation for future researchers to conduct more in depth, nuanced, and long-term studies of specific ports and places. We will always seek to be clear about the limitations of this work and what the findings are, but also are not able to communicate about fishing communities in California.

**Comment 17. One KC suggested that the number of ports / port groups currently outlined (24 in total) be reduced to make additional project resources available to support discussions with CPFV operators.**

*Response:* In order to capture the range of commercial fishing experiences throughout the state, we feel it is important — and more representative — to capture the experience across a range of port types and sizes. The deliberative process makes it difficult to hold commercial focus groups with multiple different ports as fishermen from different ports may rate their port experiences differently. Additionally, when the scope of the grant was determined in partnership with the state, it was confirmed that the available budget would focus on fully funding the commercial fisheries portion of the project and a more streamlined approach to CPFV would be designed. The recent switch to regional CPFV focus groups will, however, allow for longer and more in depth conversations to capture CPFV perspectives.

**Comment 19a. A number of KCs expressed concern that individual ratings would not be presented but rather be merged into one rating for reporting and discussion purposes. This average rating would not demonstrate the full variety of perceptions within each focus group. To help address this, one KC suggested that an instrument could be designed to identify/contextualize the perspectives of individuals.**



**Comment 19b. Some KCs expressed concern that presenting ratings as numerical responses or indices on their own could be misleading without the underlying qualitative data related to context, and suggested that the project team be careful about the presentation of results (i.e., provide explanations/caveats about what the numbers may or may not reflect).**

**Comment 19c. One KC suggested that a summary of responses to individual questions be made available in addition to the overall ratings of each index (e.g., well-being [social, economic, environmental] and MPA).**

*Response:* The project team has continued to consider how we plan to analyze and present the data. We agree that presenting rating data without providing the qualitative context could be misleading. We also agree that only presenting an aggregate score could mask the nuance and heterogeneity in responses. We will consider devising data display mechanisms that show the spread of data along with the average and work to make data with the spread available to those who are interested. We will aim to seek input on data analysis approaches and data visualization products from KCs who participated in the January 2020 webinar after the data have been collected.

**Comment 20. There was a suggestion to report trends in the responses based on participant age and other demographic information.**

*Response:* Given the deliberative approach to this study, we are not sure that this would be appropriate. We are asking Community-Experts to rate the views and perspectives of their community, not just as themselves as an individual. Given that task and focus, analyzing responses based on individual demographics may not be appropriate, however, it is something we could consider in the analysis.

**Comment 21a. Broad support was shared for the project team's suggestion to develop a web-based tool similar to the Fisheries Data Explorer to communicate the project's key findings.**

**Comment 21b. KCs provided several other suggestions for ways to communicate findings from this project directly to key audiences (e.g., fishermen, decision makers, fisheries managers), including presentations, verbal reports, social media, newspaper, port association meetings, and other direct forms of outreach.**

*Response:* The project team will be working on web-based communication tools for data display and will seek feedback from KCs and others during the development process. As a first step, we have merged the data explorer (which allows for the search of landings data by port and fishery for commercial and CPFV fisheries in California) with the project website (<https://mpahumanuses.com/data-viewer.html>). We will take into consideration all of the feedback about communication of findings when the project is complete.

**Comment 22.** There was interest expressed in reconvening the KCs after the pilot port focus group, and one KC expressed interest in being involved with fishing community engagement once focus group planning was underway.

*Response:* The project team appreciates this continued offer of support and looks forward to keeping an open line of communication with our KCs as the project progresses.