# PACIFIC GROUNDFISH QUOTA PROGRAM WORKSHOP

FEBRUARY 16 – 18, 2016
PORTLAND, OREGON

## SUMMARY OF WORKSHOP THEMES

**REPORT PREPARED BY:**
Fisheries Leadership & Sustainability Forum
Workshop Steering Committee

**WORKSHOP SPONSORS:**
Environmental Defense Fund
Fisherman's Marketing Association
Midwater Trawlers Association
National Marine Fisheries Service
Oregon Trawl Commission
United Catcher Boats
West Coast Seafood Processors Association

# Foreword

The Pacific Groundfish Quota Program Workshop was convened as a collaboration among industry, government, and non-governmental sponsors. This meeting was designed to provide industry members and stakeholders in the groundfish trawl fishery with an opportunity to provide feedback on the performance of the trawl rationalization program. Pacific Fishery Management Council (Council) and National Marine Fisheries Service (NMFS) staff members were also active participants in the workshop.

*Purpose of the report*
The purpose of this report is to capture, summarize and organize ideas and major themes from the group's discussions to support further dialogue among the full suite of groundfish trawl fishery stakeholders. This report is written from the perspective of industry participants and stakeholders and intends to capture the wide range of experiences, concerns and ideas expressed at the workshop. Perspectives shared by Council and NMFS staff are not the focus of this report. This report does not constitute agreement or consensus and does not present formal or consensus recommendations. The organization and ordering of the report does not indicate any priority order to the information and ideas presented.

*Scope and treatment of information*
This report is a summary of workshop discussions and is not intended to be comprehensive of every concern, idea or perspective expressed. The information presented is a compilation of observations and ideas and should not be interpreted as consensus opinion or fact. The workshop convened a diverse group of stakeholders who contributed their perspectives as individuals. These perspectives are treated individually and at face value. Report authors did not reconcile differences of opinion, divergent or contradictory perspectives on a topic, verify information, or elicit perspectives or information outside the workshop dialogue. The report does not include, nor is it intended to serve as, analysis of any of the ideas discussed.

*Relationship to five-year review*
The Pacific groundfish trawl rationalization program is approaching the five-year review mandated by the Magnuson-Stevens Act. The workshop provided an important opportunity for the industry to have an initial conversation and begin considering ideas and concerns that they feel could be included in the review process. The ideas included in this workshop report do not represent consensus opinions or priorities, nor does this report constitute consensus recommendations or serve a formal step in this process. The range of ideas, perspectives, and opinions shared at the workshop may be helpful to explore and analyze during the five-year review process.

## Table of Contents

# 1. Executive Summary

The Pacific Groundfish Quota Program Workshop (Santa Rosa III), held February 16-18, 2016 in Portland, Oregon, convened a diverse group of stakeholders and managers in the Pacific groundfish trawl fishery to discuss challenges to the trawl rationalization program's performance and explore opportunities for improvement. Over 150 participants attended the workshop, including fishermen, crew, vessel owners and operators, quota holders, processors, service providers, retailors, non-governmental organizations (NGOs), Pacific Fishery Management Council (Council) members and staff, and National Marine Fisheries Service (NMFS) staff. Workshop participants came together with a common goal of building on the hard work to date and exploring ways to improve the fishery. The discussion-oriented agenda facilitated the sharing of information and experiences across sectors, regions and roles, and supported a thoughtful examination of the program. The workshop was a valuable opportunity to engage in forward-looking dialogue outside of the traditional regulatory process.

This report presents a summary of the ideas, perspectives, and themes of discussion shared at the meeting. The information contained does not represent consensus opinion or recommendations. The workshop convened a diverse group of stakeholders who contributed a correspondingly diverse array of perspectives and ideas. No attempt is made to characterize or reconcile differences of opinion, verify statements or conduct analysis.

The Pacific groundfish trawl rationalization program, implemented in 2011, is approaching the five-year review mandated by the Magnuson-Steven Act. The Quota Program Workshop and this workshop report do not constitute recommendations or a formal step in the review process. However, workshop participants did identify specific ideas and concerns that could be explored during the review process.

## Successes and Challenges

The Pacific groundfish trawl rationalization program has achieved several notable successes since implementation. The fishery has made significant progress toward meeting conservation goals, achieving accountability, providing robust catch data streams, and improving trust and collaboration between industry, other stakeholders, and managers. These achievements provide a strong foundation for success in the fishery.

However, workshop participants emphasized that significant challenges remain. Many believe that the Amendment 20 objectives for improving utilization and economic performance have not been realized. Progress toward these objectives varies across sectors. Participants noted that while all sectors are facing challenges, the non-whiting fishery in particular is struggling. The group identified a wide range of challenges that they feel are underlying the complex problem of economic performance and the impacts it has on individuals, fleets and communities. These challenges can be organized into five categories, in no priority order.

Costs are high. Participants experience a suite of costs in the trawl fishery that they feel compound to reduce profitability and discourage participation and investment in the fishery.

Utilization is low. Participants believe the trawl fishery, particularly for non-whiting stocks, is significantly underutilized relative to the full utilization goal under Amendment 20 and the National Standard 1 guideline of achieving optimum yield on a continuing basis. Low utilization can be perpetuated by market factors (demand and price), as well as regulatory and quota market constraints that can limit access to quota and introduce risks in aligning catch with quota.

Efficiency and flexibility are constrained. Participants feel that the layers of effort controls and accountability measures create inefficiency and constrain the flexibility and room for innovation the industry needs to succeed.

Markets are weak. Participants believe the combination of inconsistent supply, low consumer demand for some species, competition with imports, and lack of fully developed markets and retail marketing strategies for groundfish products make it difficult to translate value throughout the supply chain.

Community foundations are changing. Participants feel that coastal communities and fishing infrastructure are contracting; the loss of this foundation further degrades the economic performance of the fishery and adds additional barriers to economic recovery.

Each of these five potential challenges consists of a number of specific obstacles and issues. Participants believe that together, these challenges can compound to place some fishery participants in difficult positions. For example, fishermen and processors explained that high costs can create additional barriers to higher utilization of groundfish quotas; increasing the market value of groundfish alone is not sufficient to offset costs without also improving utilization; and utilization is further constrained by regulatory inefficiency, and vanishing infrastructure in smaller ports.

Industry members believe that the combination of these challenges creates additional uncertainty and hinders economic stability in the fishery. Fishermen feel constrained from harvesting their quota or acquiring the optimal mix of quota, and that catch and revenue are difficult to predict, costs are high, and catch values are stagnant. Some expressed that these conditions make the value proposition of participating and making long-term investments in the fishery low.

In addition to uncertainty and lack of stability, participants believe there is significant risk involved in aligning quota pounds with catch in a multispecies fishery. This is primarily a problem of constraining stocks. The available quota for many overfished species is low, and quota for other constraining stocks can be expensive or difficult to acquire; as a result, participants perceive a significant risk of encountering species for which they do

not hold or cannot acquire quota. Workshop participants explained they often have to make a series of decisions and risk calculations to inform their participation in the fishery. These decisions often consider the potential consequences for quota overages and lightning strikes, and are informed by each individual's perception of and tolerance for risk. This risk calculation may result in conservative decision-making that can contribute to underutilization of the fishery.

## Ideas and Opportunities

Workshop participants described a shared vision for a thriving groundfish trawl fishery that builds upon the trawl rationalization program's conservation success to date. Important elements of this vision include optimal resource utilization, stability, profitability (reduced costs and increased value) and an industry that is invested in the future of the fishery and equipped with the flexibility and the tools to succeed.

While a broad suite of ideas was identified through workshop discussions to support this vision (see below), workshop discussions continually converged on three areas where participants felt that particularly meaningful progress can be made.

- **Reduce costs.** Reducing costs associated with the buyback loan, cost recovery, observer coverage, and quota acquisition could provide much needed relief. Lower costs could increase incentives for participation, resulting in increased utilization, more consistency in supply and more stable demand for shoreside infrastructure and services (see Program Costs, Section 4.1).

- **Get more fish out of the water.** Removing harvest barriers, increasing annual catch limits (ACLs), and improving the speed of ACL adjustments could improve utilization. Improving the flow of information and the exchange of quota could allow active fishermen to more effectively access quota, align their quota portfolios and utilize the available resource. Improved utilization could in turn support long-term planning, improved consistency and coordination throughout the supply chain, and ultimately enhance market demand and value of the fishery (see Utilization, Section 4.2).

- **Remove outdated regulations.** The trawl rationalization program is layered upon a number of outdated effort control regulations. Eliminating unnecessary effort controls, particularly gear restrictions and time/area closures, could provide the industry with greater access to healthy stocks, flexibility, efficiency, and room for innovation (see Efficiency and Flexibility, Section 4.3).

Over the course of the workshop, participants identified a number of specific ideas and opportunities to improve the performance of the trawl fishery. This report summarizes important themes and suggestions that participants shared over the course of the workshop. The purpose of the report is to be able to quickly reference these ideas for future consideration, and support further dialogue among industry members and managers. The ideas are not presented in any priority order, and do not include any analysis or evaluation of the feasibility or outcomes from these potential opportunities.

Workshop participants shared a number of different perspectives on these ideas; report authors do not attempt to reconcile differences of opinion or address potentially contradictory ideas, but instead aim to summarize what was heard at the workshop.

The following list provides a summary of the opportunities shared by workshop participants, organized around the five categories of challenges outlined earlier in the summary. These ideas are discussed further in section 4 of the report, where additional context and information is provided. Where workshop discussions highlighted who may have the ability and/or responsibility for exploring each idea, that insight is included.

## Program Costs

**Buyback** (4.1.1, page 23-24)

- **Enlist new supporters/collaborators.** Industry leaders could engage additional partners and explore new avenues to gain traction on refinancing the buyback loan.
- **Consider legal options.** Fishery participants could build momentum by joining forces and exploring legal avenues to address the buyback interest rate.
- **Request loan forgiveness.** Industry members and management partners could explore pathways for requesting forgiveness of the buyback loan.
- **Pursue a private refinance.** Industry members and NGOs could work with philanthropic foundations and investors to explore private financing options.
- **Explore NMFS Options.** The agency could further explore discretionary authorities and tools to reduce the burden of buyback repayment on industry.

**Cost Recovery** (4.1.2, page 24-25)

- **Increase transparency and opportunities for input.** Managers could further explore opportunities for examining the use of cost recovery funds and increasing transparency.
- **Explore whether cost recovery is appropriate.** Managers could consider adjusting cost recovery to account for industry contributions, in-kind or monetary, that are not currently accounted for in the cost recovery fee.

**Observer Coverage and Catch Monitoring** (4.1.3, page 25-29)

*Duplicative accountability systems*

- **Choose between at-sea or dockside coverage.** Evaluate whether both 100% dockside catch monitoring and 100% at-sea monitoring are necessary.
- **Reconsider 100% at-sea monitoring requirement.** Consider reducing the level of at-sea monitoring required. Applying discard rates to unobserved trips, or reducing ACLs to account for uncertainty could support accountability under reduced observer rates.
- **Better utilize existing observer coverage.** Explore the potential for authorizing scientific observers to also serve as catch share observers.

*Regulatory requirements and availability*

- **Reduce observer and catch monitor qualifications.** Consider reducing the educational requirements for observers and catch monitors.
- **Provide more opportunities for observer and catch monitor certification.** The agency could explore additional opportunities for observer training and reevaluation of certification maintenance requirements. The agency could also explore internet based training modules to make training more accessible and less expensive.
- **Expand the market for service providers.** Consider if provider certification requirements could be adjusted to expand the field of potential providers.
- **Encourage local observers and catch monitors.** Communities could explore opportunities for building local capacity for these services. Partnering with community colleges and local funding avenues could support this capacity.
- **Collaborate on observer coverage.** Industry members could collaborate to offset costs and avoid delays, particularly for small ports. Observer pools and regional planning could support these savings.

*Cost sharing, service models and alignment*

- **Reinstate government subsidy.** The agency could consider whether a government subsidy or cost sharing arrangement could be negotiated.
- **Explore a proportional cost system.** Consider a proportional cost system that allocates the costs of observers according to the volume or value of catch.
- **Adjust billing thresholds.** Service providers and industry members could consider adjusting the billing schedule to a twenty-four hour clock, or accommodating partial day billing.
- **Improve communication.** Vessels and service providers could improve communication to provide more consistent activity and manage costs.
- **Encourage collaboration among providers.** Service providers could explore opportunities to work together and coordinate their service to the industry.
- **Implement and refine electronic monitoring.** Continue collaborating on the development and implementation of electronic monitoring (EM) to make this option available to the entire fleet.

**Electronic Monitoring** (4.1.4, page 29-31)

- **Continue collaboration and find efficiencies.** Industry and managers could continue to collaborate on developing and implementing EM.
- **Prioritize EM implementation for the non-whiting trawl fleet.** Managers could continue prioritizing EM for bottom trawlers and non-whiting midwater trawlers so that it becomes an option for everyone in the industry.
- **Explore electronic options for shoreside catch monitoring.** Explore the potential for shoreside electronic catch monitoring to provide additional benefits and cost savings, especially for small ports.
- **Explore ways to assess halibut viability using EM.** Consider approaches for assessing halibut viability to support EM in the bottom trawl sector.
- **Explore video auditing.** Explore whether EM video needs to be fully reviewed, or if an audit approach can be taken to review a proportion of the footage.

**Operational and Administrative costs** (4.1.5, page 31-32)

- **Improve access to quota information.** Industry members and managers could improve access to information about quota ownership in order to reduce trading costs.
- **Increase access to insurance pools.** Industry members could establish and provide access to insurance pools to help reduce premium costs.
- **Support gear innovations.** Managers could remove barriers to gear innovation and encourage the development of more efficient gears.

## Utilization

**Quota/Biomass Mismatch** (4.2.1, page 33-35)

- **Reconsider risk and uncertainty buffers.** With 100% monitoring, managers could reevaluate their approach to uncertainty and precaution in light of the program's data availability and individual accountability.
- **Add a "green light" approach to two-year specifications**. Managers could reconsider the policy for adjusting catch limits in response to new scientific information. The current "red light" approach allows for swift management action to reduce harvest in response to new stock assessments, but does not include a mechanism to implement timely increases once stocks are rebuilt.
- **Adjust ACLs in-season.** Managers could establish a process for mid-biennial cycle quota adjustments to incorporate new stock assessments.
- **Improve stock assessments.** Managers could consider ways to improve the frequency of and projections from stock assessments, incorporate conservation credit, and increase opportunities for industry and public engagement in the assessment process.
- **Revisit discard/release mortality estimates.** Consider revising discard mortality estimates to more appropriately provide credit for discard handling and survival, especially for sablefish and halibut.

**Regulatory Constraints to Access** (4.2.2, page 35-36)

- **Increase quota pound and quota share caps.** Consider if raising the limits on quota pounds and quota shares could help mitigate quota access and movement challenges.
- **Increase allowable rollover of quota.** Consider if increasing the amount of quota that can be carried over to the next season (for target and constraining stocks) could facilitate improved utilizations while remaining under ACLs.
- **Provide quota flexibility in the whiting fishery.** Consider mechanisms to allow the at-sea whiting fishery to access or acquire additional quota. Potential opportunities include allowing shoreside individual fishing quota (IFQ) allocations to be used in the at-sea sector and/or allowing in-season IFQ quota pound trading between the at-sea and shoreside sectors.
- **Utilize latent quota.** Industry and managers could explore opportunities to encourage or facilitate the harvest of unused quota.

**Quota Markets** (4.2.3, page 36-40)

- **Improve communication to facilitate trading.** Industry and managers could develop and improve communication tools to facilitate more effective trading.
- **Engage in industry collaborations.** Industry collaborations could be leveraged to encourage the flow of quota. Specific ideas include forming, supporting and utilizing more cooperatives and risk pools, as well as trusts, funds and quota banks.
- **Facilitate administration of quota entities.** Managers could streamline and update regulations to allow for more efficient administration of quota entities, such as updating the rules for establishing vessel accounts.
- **Establish limits on sablefish quota movement.** Consider if limitations on the movement of sablefish quota could help make quota more accessible to fishermen who use trawl gear.
- **Align seasons for shoreside quota.** Consider aligning shoreside whiting and non-whiting seasons to help encourage the flow of quota on the market.
- **Consider alternative ways to structure quota prices.** Consider whether mechanisms could be used to control price inflation, such as approaches for grounding quota prices in the ex-vessel value of the catch.

**Risk Calculation and Overages** (4.2.4, page 40-42)

- **Improve speed of observer reporting.** Consider ways to improve fishermen's access to preliminary observer reports. This can reduce the lag time for fishermen in knowing how much quota they have remaining or need to acquire.
- **Create a rebalancing mechanism.** Consider mechanisms to rebalance overages and avoid excessive penalization for deficits.
- **Explore market solutions for quota overages.** Consider opportunities for creative market solutions to address overages.
- **Reconsider choke species management**. Consider if alternate tools may be beneficial for managing certain choke species. Potential options to explore include spatial management, soft caps, in-season management, bycatch avoidance tools, and rebuilding investments.

## Efficiency and Flexibility

**Outdated and Constraining Regulations** (4.3.1, page 42-45)

*Gear Restrictions*

- **Allow for multiple gears.** Managers could authorize harvesters to carry multiple fishing gears on a single trip.
- **Remove selective flatfish requirement.** Managers could remove the selective flatfish requirement to allow greater flexibility in gear usage.
- **Eliminate footrope and mesh requirements.** Managers could remove footrope and mesh size requirements.

- **Improve information exchange.** Industry, stakeholders and partners could develop mechanisms to share new ideas and find efficiencies through collaboration and teamwork.
- **Facilitate and fund innovation.** Explore opportunities to improve collaboration and foster innovation, such as improving knowledge of funding opportunities, connecting fishermen and researchers, and streamlining the exempted fishing permit (EFP) process.

*Spatial Measures*

- **Eliminate or modify RCAs.** Managers could explore modifications to, or removal of, the rockfish conservation areas (RCAs).
- **Allow southern access to whiting.** Managers could remove the prohibition on at-sea processing south of 42°N.

*Seasonal Regulations*

- **Remove midwater trawl seasonal closure.** Managers could authorize year-round midwater trawl fishing for non-whiting species; bycatch risk mitigation measures could also be considered to support this change.
- **Extend the whiting season.** Managers could extend the whiting season by providing an earlier opening date.

*Administrative*

- **Allow at-sea gear change declaration.** Managers could authorize fishermen to declare gear changes at-sea.
- **Authorize joint registration.** Managers could allow fixed gear and trawl permits to be jointly registered to the same vessel at the same time.
- **Allow whiting catcher vessel declaration at-sea.** Managers could remove the administrative requirement for whiting catcher vessels to declare sector participation before leaving the docks. This would allow catcher vessels to deliver whiting to at-sea motherships and shoreside processors on the same trip.
- **Expand at-sea non-whiting processing exemption.** Managers could relax restrictions on authorized processing at-sea to allow more vessels to process and/or freeze groundfish catch in the shoreside IFQ fishery.

## Markets

**Consistency** (4.4.1, page 48-50)

- **Collaborate for consistency.** Harvesters, processors and supply chain partners could collaborate to build more consistency in supply, increase demand and improve value.
- **Plan based on markets.** Harvesters and processors could align fishing effort and product availability with market demand and marketing efforts to improve volume and price.
- **Consider fresh and frozen markets.** Industry members could utilize markets for fresh, frozen and previously frozen product to improve consistency and ensure quality.

**Marketing Challenges** (4.4.2, page 50-51)

- **Work with local partners on marketing and education.** Explore collaborations with supply chain and local partners to build marketing and education capacity.
- **Tell the story.** Leverage certifications and the improved narrative around the fishery to market groundfish products.
- **Create a new marketing entity.** Industry members and stakeholders could establish a new entity to lead and execute West Coast or national groundfish marketing initiatives.

**Global Seafood Market Implications** (4.4.3, page 51-52)

- **Promote domestic consumption.** Industry and managers could promote domestic fisheries and distinguish products from imports.
- **Differentiate groundfish in the market.** Marketing and branding of Pacific groundfish could help differentiate products and increase value.
- **Consider value-added strategies.** Industry and stakeholders could consider value-added strategies and how to leverage the accountability and transparency of the management system to brand groundfish products and support price premiums.
- **Create opportunities to develop new markets.** Industry and stakeholders could explore new local, niche and regional markets to increase demand and value.

## Communities

**Community Stability** (4.5.1, page 52-53)

- **Keep quota local.** Communities and industry members could establish and utilize community quota organizations to help anchor quota in communities and facilitate access to quota for local harvesters and processors.
- **Fund infrastructure.** Communities could leverage community organizations to rebuild and maintain local fishing related infrastructure.

Participants emphasized that all five challenges (costs, utilization, efficiency and flexibility, markets and community foundation) must be addressed concurrently to create a more robust and profitable fishery. Improving the economic performance of the trawl rationalization program will require a strategic suite of solutions as well as targeted responses to specific problems.

Three concepts – stability, flexibility and risk – were central to the group's dialogue. Participants feel that working toward stability is an important starting point. Constraints to flexibility and the perception of high risk can undermine stability and shorten the timeframe for long-term planning and investment in the fishery. Fishermen feel that they need more space and freedom to operate within the boundaries of the program. Increasing flexibility and mitigating risk could help the industry stabilize their participation in the fishery and position themselves to realize the economic benefits of the program, innovate, respond to new opportunities and address future challenges.

## Looking Ahead

The program's conservation achievements, and workshop participants' vision for a thriving and profitable fishery, emphasize that the trawl rationalization program provides a strong foundation for success in ports large and small. While the potential for success and profitability is significant, there is concern that this opportunity, and the progress to date, will be undermined if barriers are not addressed swiftly. Workshop participants are hopeful that the challenges in the fishery can be overcome, and that the program will deliver fully on its goal and objectives.

The upcoming five-year review of the groundfish trawl rationalization program is an important opportunity for the Council, NMFS, industry participants, and other stakeholders to take a comprehensive look at how the program is performing and implement the needed adjustments. However, workshop participants are concerned about the timeline for the review, and its relationship to the suite of trailing actions identified by the Council. The industry believes that the challenges in the fishery are urgent. Without significant near-term improvements, some participants worry they may be forced to leave the fishery before the outcomes from the five-year review can be acted upon. Workshop participants suggested that managers and stakeholders should consider the challenges and opportunities discussed at the workshop, and reflect on relative impact, feasibility and interdependencies. These reflections could then inform a strategic process for prioritizing changes, coordinating efforts, and leveraging opportunities for collaboration.

# 2. Workshop Overview

## 2.1 Background

The Pacific Groundfish Quota Program Workshop ("Santa Rosa III") was held February 16-18, 2016 in Portland, Oregon. The workshop convened a diverse group of stakeholders in the Pacific groundfish trawl fishery, including fishermen, vessel owners, quota holders, processors, service providers, NGO staff, and fishery managers, to discuss the current state of the trawl fishery, reflect on the trawl rationalization program's performance, and explore opportunities for improvement.

This workshop occurred as the third in a series of meetings supporting dialogue around the Pacific groundfish trawl rationalization program, implemented in 2011 through Amendments 20 and 21 to the Pacific Coast Groundfish Fishery Management Plan (FMP). The trawl rationalization program includes a single individual fishing quota (IFQ) program covering both the shoreside whiting and non-whiting fisheries, and harvest cooperatives in the whiting mothership and catcher-processor sectors. The program will undergo a mandatory five-year review beginning later this year.

The first workshop was held in September 2010, prior to the implementation of the trawl rationalization program. This meeting was designed to provide participants in the new program information on the new rules governing fishing and processing that would come into effect in 2011. In addition, the workshop was an opportunity to hear from participants in other fisheries that had transitioned to catch share programs, with the ultimate goal to give Pacific groundfish trawl fishermen the tools to succeed under the new system. The second workshop was held in February 2012, one year after the implementation of the program. The objective of this workshop was to take stock of the first year of the program, identify immediate challenges, and examine opportunities to adjust and improve the program.

## 2.2 Objectives

The primary objective for the Pacific Groundfish Quota Program Workshop was to provide stakeholders with an opportunity to reflect on the five years following the program's implementation, and evaluate how well they believe the program is performing relative to the stated goals. The workshop agenda was designed to identify key fishing, business and management strategies, as well as regulatory changes to help achieve the following:

- Improve the economic performance of the trawl fishery,
- Increase associated benefits to coastal communities, and
- Continue to meet the conservation objectives of the catch share program.

The workshop also provided the opportunity for industry participants to initiate dialogue and contribute their insight leading into the forthcoming five-year review process.

The design and execution of the workshop was a collaborative effort. Workshop sponsors included Fishermen's Marketing Association, Midwater Trawlers Cooperative, West Coast Seafood Processors Association, NMFS, Oregon Trawl Commission, United Catcher Boats, and Environmental Defense Fund. A workshop steering committee comprised of diverse industry members and managers led the development of the agenda. The Fisheries Leadership & Sustainability Forum provided convening and facilitation support. See Appendix 3 for a full list of collaborators and contributors.

## 2.3 Agenda Overview

The workshop agenda was developed to facilitate the sharing of experience and information, and encourage collaborative discussion. The workshop began with opening remarks and an overview of the status of the trawl rationalization program provided by Council and NMFS staff.

The workshop agenda and sessions were designed to support a robust exploration of perspectives on the trawl rationalization program's economic performance. This exploration began with a panel of industry members, who framed the discussion by sharing their reflections on the current status of the fishery and the challenges they are encountering. The group then participated in three targeted sessions to explore specific program challenges and identify pathways forward. Each session included panel remarks and a breakout group discussion focusing on the following:

- Reducing costs and improving operational planning;
- Harvesting more fish; and
- Growing demand and increasing value for the fish.

The workshop then explored concerns related to fishing communities, retiring fishermen and new entrants through a fourth panel session and breakout group. Workshop attendees reflected on their vision for the future of the fishery and the coastal communities it supports, and identified barriers to and opportunities for achieving this vision.

The workshop concluded with panel remarks and large group discussion to reflect on themes of discussion and begin thinking ahead to next steps.

Please see Appendix 1 for the complete workshop agenda. Brief descriptions of presentations and panel sessions are included in Appendix 2.

## 2.4 Participants

Over 150 stakeholders attended the Groundfish Quota Program Workshop (see Appendix 4 for a complete list of participants). Attendees represented the diverse set of stakeholders invested in the trawl rationalization program, including:

- 76 harvesters (fishermen and crew, vessel owners and operators, and quota holders) including participants from the bottom trawl (32), whiting (20) and fixed gear (8) sectors, multiple groundfish trawl sectors (15), and other fisheries (1);
- 13 processors;
- 2 retailors;

- 15 NGO staff;
- 24 agency staff (NMFS and Pacific States Marine Fisheries Commission staff);
- 11 Council members;
- 5 Council staff and Management Team members;
- 8 service providers; and
- 10 others (congressional staff, port managers, press, facilitators, etc.).

## 2.5 Report Organization

This report provides a detailed summary of the ideas and perspectives shared at the workshop (see Foreword). Given the interconnected nature of the topics discussed, the summary is organized around the major themes of discussion rather than chronologically according to the agenda.

**Section 1 – Executive Summary** provides a concise overview of the major themes of discussion.

**Section 2 – Workshop Overview** provides background information on the workshop, the agenda and the participants who attended.

**Section 3 – Assessing Program Performance** highlights reflections on the major successes and challenges in the program and provides an introduction and framework for the information in section 4.

**Section 4 – Industry Perspectives on Improving Economic Performance** is the main body of the report, and includes a close examination of perspectives on the challenges and opportunities associated with:

- Program costs;
- Utilization;
- Efficiency and flexibility;
- Markets; and
- Communities.

**Section 5 – Moving Forward** provides highlights from the group's discussion about essential elements of success in the fishery and captures concerns and ideas about how to move forward.

Additional information is included as appendices at the end of the report.

1. Workshop Agenda
2. Panel and Presentation Summaries
3. Workshop Steering Committee and Sponsors
4. Participant List
5. Groundfish Trawl Cost Profile
6. Program Goal and Objectives
7. Trailing Actions
8. Helpful Links

# 3. Assessing Program Performance

## 3.1 Goals, Objectives and Vision

The goal of the Pacific Coast groundfish trawl rationalization program, as stated in Amendment 20, is to:

***"Create and implement a capacity rationalization plan that increases net economic benefits, creates individual economic stability, provides for full utilization of the trawl sector allocation, considers environmental impacts, and achieves individual accountability of catch and bycatch."***

This goal is supported by a set of objectives (see text box), as guided by a number of constraints and principles (see Appendix 6). Workshop participants reinforced that the stated goal and objectives are appropriate and aspirational.

Through workshop discussions, the group elaborated on the program's formal objectives by describing their hopes and expectations for the future of the fishery. These ideas converged around a common, simple vision: a profitable and thriving fishery that supports healthy communities.

**Groundfish Trawl Rationalization Program Objectives**

1. Provide a mechanism for total catch accounting.
2. Provide for a viable, profitable, and efficient groundfish trawl fishery.
3. Promote practices that reduce bycatch and discard mortality and minimize ecological impacts.
4. Increase operational flexibility.
5. Minimize adverse effects from an IFQ program on fishing communities and other fisheries to the extent practical.
6. Promote measurable economic and employment benefits through the seafood catching, processing, distribution elements, and support sectors of the industry.
7. Provide quality product for the consumer.
8. Increase safety in the fishery.

The following elements of this vision came up frequently in discussion:

- More optimal resource utilization that supports the livelihoods of fishery participants, ensures stable infrastructure and delivers quality and value throughout the supply chain;
- A fleet of active, vested participants;
- A balance of regulations and autonomy that allow fishermen the flexibility to operate successful businesses and acknowledges their ability to successfully self-manage;
- An innovative, forward-thinking industry that continually evolves and collaborates to address future challenges; and
- Thriving coastal communities that value and are invested in the success of the fishery.

## 3.2 Program Successes

The trawl rationalization program has facilitated several critical accomplishments in the last five years. At the time development began on the catch share management program, fishermen and managers were faced with stocks that were overfished, the economic collapse of the fishery, and the annual catch limit and accountability framework required by the reauthorized Magnuson-Stevens Act. Many feel that the implementation of the trawl rationalization program, and the significant effort, commitment, and sacrifice by all stakeholders in the groundfish trawl fishery, has resulted in several important achievements that provide a solid foundation for a sustainable and successful fishery.

*Conservation benefits*: Under the groundfish trawl rationalization program, bycatch rates and discard mortality have been dramatically reduced, and conservation and habitat protection benefits have been realized from the new gear switching provision as well as a wide array of gear and behavior innovations from participating fishermen. Additionally, overfished stocks continue to rebuild and the fishery remains below its annual catch limits (ACLs). The rebuilding of stocks also translates into increased allocations and resumed target fisheries for program participants. The conservation benefits of the program and the rebuilding of overfished stocks have helped to change the narrative around the fishery; improvements in sustainability ratings and new sustainability certifications have positively shifted public perception and contribute to a new image for groundfish.

*Accountability and data*: The individual accountability built into the program through full catch monitoring (discards and landings) has resulted in robust catch data streams. While several managed stocks remain "data poor" in terms of biological data, the fishery is rich with catch information. The detail and comprehensiveness of this information is a powerful tool for unlocking future benefits in the fishery. Additionally, some industry groups have added further layers of data collection and analysis to become more efficient in their businesses and further reduce bycatch.

*Collaboration and communication*: The nature of the trawl rationalization program has facilitated a new operating standard of collaboration. Fishery participants have actively engaged in cooperative efforts, building relationships, sharing information and working together to improve their collective chance of success. Cooperatives, risk pools, informal industry networks and other collaborative efforts have facilitated a number of innovations in gear technology, bycatch avoidance tools, and quota management systems. In some cases, communication and cooperation has also increased between harvesters and processors to better align products and prices.

*Flexibility*: The program has provided increased flexibility that supports participants in planning and organizing their fishing operations. The framework for allowing harvesters and processors to align fishing activities and business planning provides a platform on which greater stability can be built.

*Trust and respect*: Prior to the development of the groundfish trawl rationalization program, there was a history of distrust between managers and the industry. Throughout the development and early years of the program, a better foundation of trust and respect has been built. Cooperation between the industry, agency, Council, and other stakeholders and partners has increased, creating a sense of hopeful optimism for collaboratively addressing the current challenges.

*Program adjustments*: The trailing actions that have been completed to date and, once implemented, the actions currently in the pipeline, can help to address some of the challenges in the fishery. In particular, the development of electronic monitoring, while a significant effort for the industry and managers, could reduce observer related costs and improve flexibility in the fishery.

## 3.3 Program Challenges

As described above, the trawl rationalization program has supported important achievements that provide a strong biological and informational foundation that can support the long-term success of the fishery. However, workshop participants believe that significant changes are required to fully realize the program's stated goal and objectives and support the industry's vision for a successful fishery.

***"The fishery is rationalized in quota but not rationalized in everything else."***

Many believed that the Amendment 20 objectives for improving utilization and economic performance have not been realized. Progress toward these objectives varies across sectors. Participants noted that while all sectors are facing challenges, the non-whiting fishery in particular is struggling. The group identified a wide range of challenges that they believe are underlying the complex problem of economic performance and the impacts it has on individuals, fleets and communities. These challenges can be organized into five categories, in no priority order.

Costs are high. Participants experience a suite of costs in the trawl fishery that they feel compound to reduce profitability and discourage participation and investment in the fishery.

Utilization is low. Participants believe the trawl fishery, particularly for non-whiting stocks, is significantly underutilized relative to the full utilization goal under Amendment 20 and the National Standard 1 guideline of achieving Optimum Yield on a continuing basis. Low utilization can be perpetuated by market factors (demand and price) and regulatory and quota market constraints that can limit access to quota and introduce risks in aligning catch with quota.

Efficiency and flexibility are constrained. Participants feel that the layers of effort controls and accountability measures create inefficiency and constrain the flexibility and room for innovation the industry needs to succeed.

Markets are weak. Participants believe the combination of inconsistent supply, low consumer demand for some species, competition with imports, and lack of fully developed markets and retail marketing strategies for groundfish products make it difficult to translate value throughout the supply chain.

Community foundations are changing. Participants feel that coastal communities and fishing infrastructure are contracting; the loss of this foundation further degrades the economic performance of the fishery and adds additional barriers to economic recovery.

Participants described that these five challenges apply broadly across fisheries and regions, though the extent, impact, and circumstances vary significantly. Thus, the resulting effect is highly specific to each stakeholder in the fishery. Combined, these challenges compound to apply pressure to individual industry participants and to the fishery as a whole.

Workshop participants investigated these five categories of challenges, and considered how they constrain progress toward realizing the goal and objectives of the trawl rationalization program. The group identified specific opportunities to remove barriers and facilitate successful participation in the fishery.

# 4. Industry Perspectives on Improving Economic Performance

The following section of this report provides a detailed summary of each challenge and the associated improvement opportunities. As described in the forward, the workshop convened a diverse group of stakeholders, who shared a correspondingly diverse set of experiences and perspectives, and offered a wide range of ideas. Insights are presented in the voice of workshop participants and do not constitute proven fact, concurrence of opinion or consensus recommendation. Further analysis of challenges and investigation of the feasibility, effectiveness, and level of support for these ideas could be accomplished through follow up analysis or as part of the five-year review process.

## 4.1 Program Costs

Many feel that participating in the groundfish trawl fishery is too expensive. Fishery participants contend with a complicated network of management requirements and costs that can constrain the economic performance of the fishery and influence individual profitability and tradeoff decisions (see Appendix 5).

*Operational costs*: The day-to-day operational expenses of running a fishing business can include an array of variable and fixed costs. *Fixed costs* include costs that do not vary with output or effort level, such as mooring and harbor fees, vessel and equipment maintenance, licensing, permitting, and insurance. *Variable costs* vary with the level of effort and include supplies such as fuel, bait and ice, labor and crew shares, quota leasing and gear purchase/repair.

*Management costs*: A number of management and regulatory costs are associated with participating in the groundfish fishery and trawl rationalization program including repayment of the buyback loan, cost recovery fees, observer and monitoring costs, and state landings taxes.

*Administrative costs:* In addition to the traditional costs of running a business, there are administrative costs (both time and expenses) associated with managing participation in the trawl rationalization program. These costs include managing and trading quota, keeping abreast of changing regulations, participating in the Council process, submitting logbooks, participating in cooperatives or risk pools and fees associated with membership in industry organizations.

**Indirect costs**

In addition to these categories of costs, constraints within the management system can result in indirect costs as a result of forgone harvest. For example, the inability to fish due to lack of observer availability or the inability to access constraining stock quota may result in lost revenue for fishermen, quota holders and processors.

These categories of costs and the expenses within each category impact individuals, vessels, businesses, fleets and sectors differently. Participants stressed that these costs can compound to apply increasing pressure on an already contracting fishery. Workshop discussions highlighted buyback loan payments, cost recovery fees, and monitoring costs (at-sea and shoreside) as particularly burdensome. Participants shared that these three costs combined can add up to more than ten percent of some vessels' total ex-vessel revenues, which in some instances is greater than the profit margin of the vessel. Some industry members noted that these costs could be particularly crippling for smaller and lower-volume vessels. Industry participants are frustrated that they have the least control over these management costs.

In addition to impacting profitability of fishing operations, these costs can have a profound effect on individual decision-making and the future trajectory of the fishery. Participants feel that high participation costs can impact their ability to plan over short-term and long-term horizons, and change the value proposition of working in the fishing industry. Combined with low utilization and constrained efficiency, participants expressed that costs create additional economic stress on the fishery. Participants believe these costs undermine several of the trawl rationalization program's stated objectives, including creating a viable and profitable fishery, reducing impacts to communities, and promoting employment opportunities.

Workshop discussions explored opportunities for cost reduction and efficiencies, focusing on the following elements:

1. Buyback
2. Cost Recovery
3. Observer and Catch Monitoring Costs
4. Electronic monitoring
5. Operational and Administrative Costs

### 4.1.1 Buyback

In 2003, prior to the implementation of Amendments 20 and 21, NMFS facilitated an industry-funded buyback to reduce capacity in the shoreside and mothership sectors. Repayment of the government buyback loan is covered by a five percent levy on ex-vessel catch value. With an interest rate of almost seven percent, fishery participants still owe more than $25 million on the buyback loan even though payments to date are approaching the original principal of $28.3 million.

Participants expressed that the cost they are most concerned about is the Pacific Coast groundfish buyback (which is not related to the trawl rationalization program). For industry members, there appears to be no end in sight for paying off the principle and moving the needle toward profitability. Several industry leaders and core groups of quota holders have invested significant effort to reduce the burden of the buyback loan through refinancing the balance and reducing the percentage of ex-vessel value to be paid. The President in fact signed a bill into law refinancing the loan at a lower interest rate, which would have lowered the required ex-vessel fee to be paid by fishermen to less than three percent. While initial progress was made, these efforts have stalled with the Office of

Management and Budget (OMB), which is requesting an appropriation of ten million dollars to recover lost revenue on the loan before the refinance can occur. NMFS has also tried to elevate the issue through internal channels but has been unable to get traction.

Fishery participants are frustrated with the lack of control over the buyback loan and the lack of progress in alleviating this burden. Given the time invested and the series of disappointments, there is a strong sense of injustice and unfairness.

***"We keep trying and the rug keeps getting pulled out from under us."***

The industry emphasized that reducing the burden of the buyback loan needs to remain a top priority. Participants expressed hope that through additional support and by engaging a larger, more diverse group of stakeholders this effort can finally be successful. Opportunities for addressing costs of the buyback loan include:

- **Enlist new supporters/collaborators.** Industry leaders could engage additional partners to yield new ideas and broaden a lobbying base to support refinancing efforts. Considering different angles for building additional support in Congress could also help elevate this issue.

- **Consider legal options.** Fishery participants could build momentum by banding together to hire legal counsel and exploring legal avenues for rectifying the loan imbalance.

- **Request loan forgiveness.** Industry members and management partners could explore the pathway for requesting full forgiveness of the buyback loan, either in lieu of or in concert with refinancing efforts.

- **Pursue a private refinance.** Industry members and NGO colleagues could work with major philanthropic foundations and impact investors to develop a plan to pay off the federal loan and replace it with a lower interest private loan.

- **Explore NMFS Options.** The agency could further explore the discretionary authorities and tools it has available to reduce repayment or interest rates on the buyback loan, including paying the amount requested by OMB for loan refinancing.

### 4.1.2 Cost Recovery

The Magnuson-Stevens Act mandates cost recovery for limited access privilege programs (LAPPs), whereby participants are required to pay up to three percent of ex-vessel values toward expenses that include management, data collection and analysis, and enforcement of the program.

While workshop participants acknowledged their limited control over the cost recovery requirement, they voiced concern about the transparency, use and fairness of these fees.

Transparency: Fishery participants feel that NMFS is not sufficiently transparent with the administration of the cost recovery program and the allocation of cost recovery fees.

Use of funds: Fishery participants feel they are not consulted or informed about the use of funds collected under the cost recovery program. They expressed concern that fees paid by participants in the groundfish trawl fishery are not being used to directly support the groundfish program, and may be used to cover activities that provide benefits to other sectors not under catch shares.

Fairness: Fishery participants question whether cost recovery is appropriate given the level of responsibility (e.g., costs, accountability, reporting, voluntary bycatch avoidance) that fishermen have taken on under the trawl rationalization program. Additionally, participants feel the inconsistent application of cost recovery in federal catch share programs is unfair and creates an uneven playing field across different management regions.

Opportunities for addressing the costs and opaqueness of cost recovery include:

- **Increase transparency and opportunities for input.** Industry members would like to be informed about how their cost recovery funds are used, and provide input to ensure that cost recovery funds support investment in the program's success. Managers could further explore opportunities for examining the use of costs recovery funds, improving communication and increasing transparency around cost recovery. Some participants suggested that an external audit of the cost recovery program could help uncover how the funds are spent. Establishing a cost recovery committee was also suggested as way of facilitating input and information sharing.

- **Explore whether cost recovery is appropriate.** Managers could consider whether fees collected under the cost recovery program could be reduced or eliminated. Beyond cost recovery, fishery participants noted that they are also supporting management of the trawl rationalization program through in-kind services (e.g., data collection, reporting, in-season monitoring).

### 4.1.3 Observer Coverage and Catch Monitoring

Regulations for the trawl rationalization program require full individual accountability through 100% observer coverage and 100% shoreside catch monitoring. Individual accountability is viewed as an important aspect of the program; however, participants believe that as currently structured, it imposes substantial costs to the industry.

*Observers* monitor and record discards while at sea. The cost for at sea observers is highly variable and depends upon a vessel's location, activity level and length of the fishing trip. Participants feel the sea day rates for observers are high. A number of factors can influence and increase these costs, including: paying full-

day rates for partial coverage, monthly observer service contracts, and paying travel costs in addition to observer rates for vessels that are based in smaller ports.

*Catch monitors* monitor the offloading process and record landings. Observers are often able to serve both roles and perform catch-monitoring duties at the conclusion of a trip. However, when employed separately (for example, on trips with EM, which do not require a human observer), catch monitors can be particularly expensive. In remote ports, there can be additional travel and accommodation costs, and challenges with the availability of monitors.

Fishery participants contract observers and catch monitors through third party, NMFS-approved service providers. Each vessel and/or processor individually negotiates costs and develops a contract with one of the available service providers.

**Service provider perspective on costs**

Service providers must maintain the capacity and flexibility to cover every client when and where they want to fish or offload. Prices increase when fishing activity decreases, because service providers have to maintain more capacity than is fully or consistently utilized. The groundfish trawl fishery's variable demand for observers and catch monitors also contributes to costs because more seasonal employment often results in higher turnover.

#### *4.1.3.1 Duplicative Accountability Systems*

The regulatory framework for the trawl rationalization program includes several layers of accountability in addition to full observer coverage and catch monitoring. These layers include individual or sector level accountability supported by quota management, fish tickets, dealer reporting, scientific observers, and vessel monitoring system (VMS). Workshop participants feel that these layers are duplicative in a fishery that has demonstrated its commitment to accountability.

***"We have a new system of accountability and trust has been built, but we're still operating under a cultural distrust of fishermen."***

Workshop participants suggested taking a comprehensive look at the suite of catch accountability measures. Opportunities for addressing the costs and duplication with observer and catch monitoring coverage include:

- **Choose between at-sea or dockside coverage.** Consider whether dockside catch monitors are necessary given 100% at sea monitoring. The dual requirements for at-sea observers and dockside monitors were put in place to ensure reliable accountability at the start of the program. Fishermen and processors feel that their performance in the fishery warrants adjustments to these coverage requirements, and would also like to see electronic dockside monitoring explored (see 4.1.4).

- **Reconsider 100% at-sea monitoring requirement.** Reducing the level of at-sea monitoring required could provide significant cost savings. Participants identified

two additional avenues that could be explored to support reduced observer coverage while still ensuring accountability.

  - **Apply discard rates.** Discard rates, derived from observer data, could be applied to unobserved trips to support reductions from full coverage.
  - **Apply ACL reduction tradeoff.** ACLs could be reduced to account for uncertainty created by less than 100% at-sea observer coverage.

- **Better utilize existing observer coverage.** There are different categories of observers for different purposes. Consider opportunities to authorize scientific observers (biological samplers) who are under contract with the West Coast Groundfish Observer Program (WCGOP) to monitor other West Coast fisheries to also serve as catch share observers (compliance monitors). This flexibility could reduce the financial burden and availability challenges with observers, particularly in small ports.

#### *4.1.3.2 Regulatory Requirements and Availability*

Participants feel that under current regulations, educational requirements for observers and catch monitors may be excessive and contribute to low availability and high costs. Additionally, the requirements for becoming a government authorized service provider may also limit the field of potential providers. Participants expressed concern that existing providers have a monopoly on a required service and lack accountability for the rates they charge.

For small ports, particularly those in California, the challenges with observers and catch monitors can be compounded by their remote location relative to service providers. In addition to paying travel costs, participant explained that vessels and processors in these ports often have a difficult time securing observers and catch monitors. These challenges can strand vessels at the dock and lead to costly delays and missed opportunities.

Opportunities for addressing regulatory requirements and availability challenges to observer coverage include:

- **Reduce observer and catch monitor qualifications.** Reducing the educational requirements for observers and catch monitors might allow for a broader pool of potential observers/monitors, particularly for remote ports. While some believed this was an idea worth exploring, others noted that lower educational requirements might not translate into lower rates, or provide overall cost savings due to increased turnover.

- **Provide more opportunities for observer and catch monitor certification.** The agency could explore ways to offer additional training and certification opportunities throughout the year and reevaluate certification maintenance requirements; this could support mid-year changes in demand and seasonality.

- **Expand the market for service providers.** Reconsidering the observer provider certification requirements could allow more companies to provide these services.

An expanded field of providers could lower prices as the result of a more competitive market and could facilitate other cost saving approaches.

- **Encourage local observers and catch monitors.** Capacity for these services could to be built and sourced locally to improve availability, provide continuity of service and reduce travel costs. Leveraging a local base of observers and catch monitors could also allow for employing these services on a part time basis to better align with demand of the vessels in the community.
    - **Community colleges.** Communities could explore opportunities to tap into local community colleges as a workforce of potential observers. Partnering with local colleges to develop a curriculum and offer degree or certificate programs could promote fisheries monitoring as a vocational career.
    - **Community funding.** Communities could consider collaborative approaches for supporting a local pool of observers. This arrangement could provide local vessels with greater operational flexibility and make these positions more attractive to observers and catch monitors.

- **Collaborate on observer coverage.** Industry collaborations could have the potential to help offset the costs and delays associated with observer and catch monitor coverage, particularly for small ports.
    - **Observer pools.** Industry participants could establish cooperatives to share costs, coordinate planning, and achieve efficiencies (e.g., by reducing travel costs and paid gaps in observer schedules). Participants noted that a cooperative approach could also help coordinate shifts between electronic monitoring (EM) and observer coverage (see 4.1.4).
    - **Regional planning.** Even without any formal cost sharing mechanism, coordination and planning among vessels in the same areas could yield cost savings on observer coverage.

#### *4.1.3.3 Cost Sharing, Service Models, and Alignment*

Given all of the perceived challenges with the observer program, participants suggested that exploring new cost sharing and service models may be warranted. The current system is set up as a "one size fits all" approach to catch accountability that is applied uniformly across a highly variable fishery. Participants feel this approach does not take into account the needs and limitations of each sector and vessel to ensure fair and equitable cost burdens. Industry members also perceive a lack of alignment between the needs of vessels and the needs of service providers, which can contribute to inefficient operations and drive up costs for both sides.

Opportunities for addressing cost distribution and service model challenges, and promoting better alignment include:

- **Reinstate government subsidy.** The expiration of the federal subsidy toward observer and catch monitor coverage has shifted the full burden of costs to the industry. The agency could consider a cost sharing agreement with the

government, similar to that which has been extended in the New England groundfish fishery to help offset these costs.

- **Explore a proportional cost system.** Consider a proportional cost system that allocates the costs of observers across the fleet according to the volume or value of their catch. Some participants observed that this could create a different but equally problematic distribution of the cost burden.

- **Adjust billing thresholds.** Service providers and industry members could consider if adjusting the billing schedule to a twenty-four hour clock (rather than a daily clock), or accommodating partial day billing could reduce costs. Others suggested that this might not reduce overall costs as partial day rates might increase.

- **Improve communication.** Better communication between vessels and service providers could improve availability and prices. To the extent that vessels are able to plan their observer needs, advance notice and improved consistency in activity could allow service providers to better manage their costs.

- **Encourage collaboration among providers.** Service providers could reduce costs, improve coverage, and provide more consistent service by collaborating and coordinating to serve the fishery as a whole.

- **Implement and refine electronic monitoring.** Electronic monitoring provides a promising new service model for supplementing or replacing observer coverage (see 4.1.4). Workshop participants encouraged industry members, NMFS, and the Council to continue the development and implementation of EM to make this option available to the entire fleet.

### 4.1.4 Electronic Monitoring

Central to the group's discussion of observer coverage was the ongoing development and implementation of electronic monitoring (EM). Participants feel that electronic monitoring—the use of cameras and other technology to replace or supplement human observers to monitor discards—is a promising approach for reducing costs and addressing availability delays and bottlenecks with at sea observers. The technological and regulatory development of EM has been achieved through exempted fishing permits (EFPs); industry members, fishing organizations, non-governmental organizations, NMFS and the Council have all invested in these collaborative EFPs.

Industry experience in the at-sea whiting sector, and more recently in the shoreside fixed gear sector, demonstrates that EM may provide cost savings and allow some vessels greater flexibility and control over their operations. In the at-sea whiting sector, vessels are finding that EM is a fraction of the cost of human observers. EM may also provide cost savings in some shoreside trawl fisheries, if it can be demonstrated to be an adequate substitute for a human monitor. The cost saving potential of EM may be particularly beneficial in remote ports where observer coverage is most expensive. Participants also

noted that EM may help reduce indirect costs of feeding and housing observers, eliminate the challenge of accommodating an additional person aboard small vessels, and reduce delays in scheduling and waiting for observers.

Despite these benefits, participants highlighted challenges to optimizing the use of EM and making it more broadly available to the industry.

> Uncertain cost: While EM can provide cost savings it can also introduce new categories of costs including technology, equipment and installation, data storage and video review. While the upfront investment in technology can be expensive, data storage could be one of the most significant costs depending on how long NMFS needs to store the data. These costs could be a challenge to making EM a sustainable long-term solution.
>
> Speed of delivery: For some, the development of EM from concept to regulation has been a slow process. Implementation of regulations for EM are anticipated by 2017 for the whiting and fixed gear sectors. However, EM is still in development for the non-whiting bottom trawl fleet. For these vessels, the additional technological challenge of EM, and thus the slower pace for development, may extend the impact of observer costs and contribute to their overall challenges.
>
> Availability of services: The shift to EM may affect the availability of human observers and catch monitors. Vessels who do not use EM may have more difficulty securing these services or face increased costs (see text box), as fewer individuals will be employed in these capacities. Additionally, vessels that use EM may have challenges scheduling catch monitors when they return to port.

Opportunities to address challenges and realize the full potential of benefits from EM include:

- **Continue collaboration and find efficiencies.** Industry and managers could continue collaborating to support the development and implementation of EM. Determining legal and procedural data storage requirements and finding efficiencies in technology and review processes could continue to make EM more viable and more effective.

- **Prioritize EM implementation for the non-whiting trawl fleet.** EM implementation is more complicated for the bottom trawl and non-whiting midwater trawl fisheries as compared to whiting and fixed gear sectors. The Council and NMFS could continue prioritizing EM, particularly for bottom trawlers, so that it becomes an available option for everyone in the industry.

- **Explore electronic options for shoreside catch monitoring.** Development of electronic systems for shoreside catch monitoring—using cameras and technology to supplement or replace the use of human catch monitors to record landings—could provide additional benefits to the industry and address emerging challenges.

For shoreside vessels using EM, the requirement for 100% catch monitoring can be a costly and inefficient bottleneck, particularly for small ports with limited access to monitors.

- **Explore ways to assess halibut viability using EM.** One of the major obstacles to EM application in the bottom trawl sector is halibut viability. Without an observer to assess viability, quota pound deductions for halibut would be assessed at 90% mortality, the worst score; this could be a major impediment to fishermen with constraining halibut allocations. Utilizing a proxy approach based on tow time, deck time, and air temperature, or actually using the EM system to assess viability could provide opportunities for a lower halibut mortality to be assessed and could make EM much more viable for the bottom trawl sector.

- **Explore video auditing.** Explore whether EM video needs to be fully reviewed, or if an audit approach could be taken to review a proportion of the footage. An audit approach could significantly reduce the costs of validating EM data.

**Shifting Costs with Electronic Monitoring**

Workshop participants shared concerns that while there are many positive benefits to EM, broader implementation may result in cost displacement. EM reduces costs for some participants in the fishery, but, those who continue to fish with human observers may see increased prices as the result of decreased demand in the fishery overall. Cost increases incurred by processors to meet catch monitor requirements may also offset the cost efficiency that EM provides to harvesters.

### 4.1.5 Operational and Administrative Costs

The groundfish trawl rationalization program is a complicated management system that participants feel comes with high operational and administrative costs.

Under the program, participants find that managing and leasing quota is a significant administrative expense. For individuals who need to acquire quota, there can be transaction costs in addition to the cost of the actual quota, as well as the time burden of finding quota available for barter or purchase. There can be a similar administrative investment in brokering and tracking quota for quota share owners. These administrative responsibilities may be met by individuals or family members, or by employing quota managers to oversee quota portfolios. While the costs with leasing quota are variable over time and depend on how each business fills out their portfolio, there is often an inherent and time consuming risk calculation that informs leasing decisions. Many fishermen participate in fishing organizations and cooperatives to support the success and efficiency of their business, which comes with additional administrative costs.

Fishery participants also have to consider innovation and engagement costs, including experimenting with new gear, developing new bycatch avoidance strategies, engaging in the Council process, and lobbying to encourage support at state and national levels.

Participants explained that these long-term investments in improving operations and supporting a successful fishery come with short-term costs.

While operational planning can provide cost savings and efficiencies for operational and administrative costs, participants feel uncertain about long-term planning in a complex management regime that has changed significantly in the past decade, and continues to evolve under the program. Opportunities for reducing program related costs and supporting better operational planning include:

- **Improve access to quota information.** Greater access to information about quota ownership could reduce the cost and time burden related to locating and acquiring quota pounds (see 4.2.3).

- **Increase access to insurance pools.** Working through the private sector, industry members could establish and provide access to insurance pools to help reduce the costs of vessel insurance premiums.

- **Support gear innovations.** Eliminate barriers to gear innovation and encourage the development of more efficient gears to reduce fuel costs (see 4.3.1.1).

## 4.2 Utilization

Participants believe that stocks in the groundfish trawl fishery are largely and significantly underutilized; large amounts of quota available under ACLs remain unharvested, and the program is not achieving its goal of full utilization or achieving optimum yield (National Standard 1). Even for stocks such as whiting and sablefish, where utilization rates are higher, participants see opportunities for improvement. Participants identified several potentially compounding barriers to accessing yield and disincentives to achieving higher utilization of the groundfish resource, including access to quota, availability of certain quota, market factors and regulatory constraints.

**What are appropriate utilization goals?**

Workshop participants generally agreed that trawl caught groundfish stocks are underutilized. However, there were varying opinions about what utilization targets are appropriate for a multispecies fishery. Some felt that 100% utilization across all stocks in the fishery is not realistic; others thought full utilization should be the goal. Utilization is influenced by the level at which ACLs and quotas are set, and also by market demand and business models. Many believe that program regulations should be set up to accommodate full utilization, and provide flexibility for the fishery to optimize harvest within the full range of possibilities.

For the majority of the fleet, the challenges with utilization relate to constraining stocks, also termed “choke species.” Many constraining stocks, like Yelloweye rockfish, are overfished and managed under rebuilding plans with low allowable catch levels. Other stocks, such as sablefish and halibut are not overfished, but may constrain some harvesters in the groundfish trawl fishery given the high demand for sablefish quota and

the regulatory discard limits for halibut. In the multispecies groundfish trawl fishery, quota of constraining stocks often facilitates ("greases the wheels for") directed fisheries; without that quota, target species remain unharvested.

**Common Constraining Stocks**

- Canary Rockfish
- Yelloweye Rockfish
- Darkblotched Rockfish
- Petrale Sole
- Widow Rockfish
- Pacific Ocean Perch (POP)
- Sablefish (Black Cod)
- Halibut

For overfished constraining stocks, ACLs under rebuilding plans are low. Thus, quota allocations are correspondingly low, and the market demand for quota can be high. Participants explained that this results in an imbalance between the quota of constraining stocks that is available (or affordable to purchase), and the quota portfolio needed for directed fisheries to operate. Additionally, some quota allocated under the trawl IFQ program can be stranded in latent permits and inaccessible to active harvesters. Participants described that as a result of the imbalance around quota, fishermen are conservative in their decision-making, reluctant to release unused quota, and incur additional costs to avoid fishing in areas where they are likely to encounter choke species. Participants believe the combination of risk avoidance, regulatory constraints and market incentives leads to underutilization of quota for constraining as well as target stocks. Increasing ACLs for constraining stocks and improving utilization of the available quota could create more flexibility to improve fishery utilization overall.

### 4.2.1 Quota/Biomass Mismatch

Under rebuilding plans, ACLs of rebuilding stocks must be set at low levels while biomass rebuilds. As a result, participants feel there is often a mismatch between actual catch composition (what the fishery encounters) and quota composition (what the fishery is allowed to harvest). This problem can be exacerbated and become more frustrating to harvesters as stocks continue to rebuild and become more abundant. Fishermen want to see successful rebuilding efforts translate to increased access.

Stock assessment timing and uptake: Participants feel that the frequency of stock assessments and the speed at which new assessments enter the management system constrains the alignment of ACLs to biomass conditions. For example, the 2014 stock assessment for canary rockfish shows that the stock is rebuilt; however, due to the two-year harvest specification cycle, ACLs for canary won't increase until 2017. Participants believe this delay in translating stock assessments into ACLs results in lost yield, constrains the proportional alignment of quota with biomass, and creates unnecessary risk for the industry.

Layers of precaution: Participants feel the groundfish trawl rationalization program is conservative, and that too many layers of precaution are built in the system. With full individual accountability provided through reporting and

observer coverage, participants believe applying additional buffers for uncertainty and other precautionary approaches are duplicative and unnecessary.

***"Policy doesn't keep up with science, and science doesn't keep up with reality."***

Workshop participants felt that ACLs and available quota need to be more closely aligned with biomass. The rebuilding of stocks is a conservation and management success, but can also be a compounding challenge that can strand millions of pounds of quota from healthy fisheries. Opportunities for better aligning biomass with quota and supporting increased ACLs include:

- **Reconsider risk and uncertainty buffers.** Participants suggested the Council could reevaluate its approach to uncertainty and precaution. The transparency in catch and landings (100% monitoring), robust catch data streams, individual accountability measures, and low utilization rates could all potentially support a minimal level of management and scientific uncertainty buffering. Thus, a less conservative approach to setting ACLs may not jeopardize conservation or rebuilding.

- **Add a "green light" approach to two-year specifications**. The Council could reconsider its risk policy for adjusting catch limits upwards in response to new scientific information. The current "red light" approach allows for swift management action to reduce harvest in response to new stock assessments, but does not include a mechanism to implement timely increases once stocks are rebuilt.

- **Adjust ACLs in-season.** A process for mid-biennial cycle quota adjustments could be established by the Council to increase the speed with which stock assessments can be translated into corresponding ACLs.

- **Improve stock assessments.**
    - **Frequency and projections.** Managers could consider changing the frequency of stock assessments from every two years to every year for key stocks, and explore how stock assessments could be conducted with more forward-looking projections/forecasts. With information on stock trends, particularly for rebuilding stocks, the Council could make informed decisions about incrementally increasing constraining stock ACLs to reduce quota mismatch while still adhering to rebuilding schedules.
    - **Conservation credit.** Participants suggested that the conservation benefits of spatial closures could be taken into account, and that the biomass in these areas could translate into increased ACLs for constraining stocks. This may be particularly true for sedentary species that associate with rocky reef habitat, much of which has been protected through the essential fish habitat (EFH) process.
    - **Industry engagement.** Managers and scientists could identify potential avenues for more public engagement in the stock assessment process,

particularly through collaborative data collection efforts and utilizing data provided by fishermen.

- **Revisit discard/release mortality estimates.** Applied mortality estimates could be revisited to more accurately provide credit for discard survival. Particularly for sablefish and halibut, there appear to be discrepancies in the rates applied to different fisheries and different gears. With full observer coverage, participants feel the information exists to determine more appropriate rates that reflect conservation efforts.

### 4.2.2 Regulatory Constraints to Access

There are several provisions in place to avoid excessive consolidation of quota and ensure that ACLs are not exceeded.

*Quota pound and quota share caps:* Vessel use (quota pound) caps limit the amount of quota pounds that can be fished by a single vessel in a given year; quota control (quota share) caps limit the amount of quota shares that can be held by one entity. Vessel caps also limit the amount of quota pounds a vessel can use to correct an overage in a given year.

*Rollover allowance:* The carryover provisions in place limit the amount of unharvested quota that can be rolled over into the following year; allowable carryover varies by species, but is capped at ten percent.

*Across sector trading:* For the at-sea whiting fishery, quota of constraining stocks is allocated to the sector as a whole, and trading is not allowed between the shoreside sector and two at-sea sectors.

Some participants are finding the quota pound caps and quota share caps too low to operate effectively within the IFQ program. Participants suggested the limitations on quota carryover and trading of constraining stock quota among sectors can also constrain the flexibility needed to align quota with catch. These regulations, in addition to the market drivers and risks discussed below, can create barriers to the efficient flow of quota shares and pounds within the program.

Opportunities for reducing regulatory constraints to access and supporting higher utilization include:

- **Increase quota pound and quota share caps.** Raising the limits (caps) on quota pounds and quota shares could allow fishery participants to access the quota needed for their businesses. This could involve revising or doing away with the quota pound caps and/or quota share caps, increasing the size of individual caps, or any combination of the three. Participants noted that in considering cap increases, the protection provided against large companies buying up significant amounts of quota should also be considered.

- **Increase allowable rollover of quota.** Increasing the amount of quota that can be carried over to the next season (for target and constraining stocks) could facilitate access to quota while remaining within allowable catch limits. Particularly given low utilization rates, participants felt that providing additional flexibility to "bank" quota for when it's needed would likely not compromise rebuilding or adherence to ACLs. Some participants suggested that allowing unrestricted rollover could facilitate better utilization in the fishery, and that for such long lived species, the concept of annualized catch limits is not particularly meaningful.

- **Provide quota flexibility in the whiting fishery.** Consider mechanisms to allow the at-sea whiting fishery to access or acquire additional quota above their sector allocation. Specific recommendations include:
    - **Quota shifting.** Consider allowing vessels in the shoreside whiting fishery to apply their shoreside IFQ quota against catches made when participating as catcher vessels in the at-sea mothership sector.
    - **Quota trading.** Consider allowing the at-sea sector to purchase or lease constraining stock quota from the shoreside sector IFQ quota market. Some participants noted that a holistic system of trading both ways across sectors could be most equitable.

- **Utilize latent quota.** Consider ways to encourage or facilitate the harvest of unused quota. Mechanisms could include common pool use of remaining quota, encouraging release of extra quota prior to the end of the season, or other innovative ways to translate latent "paper quota" into fish on the dock.

### 4.2.3 Quota Markets

Industry participants emphasized that they must maintain a carefully balanced portfolio of quota to participate successfully in the multispecies groundfish trawl fishery. Some harvesters believe that their allocations of quota under the program do not reflect the quantities or portfolio of species that they were catching prior to the program's implementation, particularly for constraining species. Many fishermen must then lease quota to fill gaps in their quota holdings. Participants noted that the costs of quota leasing vary across vessels but represent a significant cost overall.

Many participants expressed their frustration with the effectiveness of the current quota market system, and identified a number of obstacles that they feel constrain movement of quota and prohibit better utilization from the fishery.

Ineffective trading: Participants believe the current system for trading quota is complicated and inefficient at connecting quota holders. Greater communication and transparency could help the quota market to operate more efficiently.

Quota holding: Participants explained that many harvesters and quota owners are responding to the complicated equation of whether to hold or lease quota (see 4.2.4) by erring on the side of caution. Fishermen often hold onto their quota

pounds until the end of year or purchase quota pounds early in the year as an insurance policy against future bycatch events. This response can reduce the amount of quota available on the market throughout the year. Fishery participants are required to acquire quota pounds to cover overages within 30 days or before the next trip; the inability to acquire quota can strand vessels mid-season and/or drive up market prices for quota. Holding onto quota can result in a year-end glut of unused quota on the market that was unavailable when it was needed.

Sablefish quota movement: Some non-whiting trawlers feel that, as a result of the gear switching provision, difficulty accessing sablefish quota has become a significant constraint to improving utilization for the bottom trawl fleet. Participants noted that a number of factors may contribute to this situation, including higher catch values for fixed gear caught sablefish, scarcity of quota, high prices for sablefish quota, and purchasing and leasing behavior by processors and harvesters. In addition to being a directed fishery for the fixed gear and bottom trawl fleets, sablefish quota is necessary to target bottom trawl species such as Dover sole and thornyheads (see text box, below).

**Perspectives on Sablefish**

The movement of sablefish IFQ program quota from trawl to fixed gear participants is a charged and complex issue. Anyone who leases or purchases a trawl endorsed limited entry permit, establishes a vessel account, and leases or purchases IFQ quota can participate in the groundfish trawl IFQ fishery. The gear switching provision for trawl permits was built into the trawl rationalization program, and several permit holders have converted and invested in the IFQ fixed gear fishery. Several fishermen also participate using both gear types. There continues to be interest in this provision, including from fixed gear sablefish fishermen who own sablefish endorsed limited entry permits or fish open access sablefish, or who participate in other commercial fisheries. While fishing in the trawl IFQ program, fixed gear participants must abide by all of the program regulations, including 100% observer and catch monitoring requirements.

Some trawl fishermen are frustrated by the impacts they perceive as resulting from the fixed gear sablefish component of the IFQ fishery. Several factors contribute to this frustration, including the entrance and/or conversion of vessels to fixed gear IFQ, the targeting of a single species within a multispecies complex, and an increase in demand and price for sablefish quota. Many trawl fishermen target sablefish or need sablefish quota in order to access Dover sole and other trawl target species. While the number of fixed gear vessels, and the amount of sablefish harvested by fixed gear, has declined somewhat since the peak in 2011, some bottom trawl fishermen continue to feel that sablefish catch by fixed gear IFQ vessels constrains utilization in the trawl fishery.

Quota pricing: The price of acquiring constraining stock quota can be expensive, and in some cases prohibitively high. Participants explained that quota prices are

driven by the limited amount of constraining stock quota, the limited mechanisms in place to facilitate market transactions, and the behavioral and regulatory incentives to hold quota. Some participants also expressed concern that quota entities might influence quota prices (see text box, page 39).

Opportunities to address market constraints and improve access to quota include:

- **Improve communication to facilitate trading.** Quota holders could benefit from more efficient communication and equal access to information to facilitate trading. Participants suggested several specific ideas, including a database of contact information provided by NMFS on the trading site, and a voluntary registry and/or anonymous online forum (akin to Craigslist) that could be used by the industry to facilitate trading. Participants feel the current trading interface is too formal and transactional; networking among industry members could help build relationships, encourage the flow of quota and minimize the competition that can drive up costs. During this discussion, some did note the need to be cautious of collusion, confidentiality and privacy considerations when developing these communication mechanisms.

- **Engage in industry collaborations.** The movement of quota could be facilitated by additional industry led collaborations that encourage the flow of quota throughout the year.
    - **Cooperatives and risk pools.** Cooperatives and risk pools could help some industry members to reduce financial risk by distributing risk across a pool of participants. These structures could also facilitate more efficient allocation and movement of constraining stock quota, particularly for severely constraining overfished stocks. In addition to voluntary risk pools, participants suggested that managing quota of certain bycatch stocks, such as Yelloweye and halibut, in sector wide risk pools could be a better approach than individual quotas. The group also discussed incentivizing risk pools by potentially providing relief from certain regulations based upon the practices and added accountability of the cooperative.
    - **Trusts, funds and quota banks.** Community funds, conservation trusts and quota banks can help maintain local ownership and harvesting of quota, facilitate quota access, and mitigate price inflation (see 4.5.1). Increasing the visibility of these organizations and facilitating the administration of these entities (see below) can support broader benefits.

**Risk pools and cooperatives**

Risk pools and cooperatives have proven to be effective mechanisms for supporting utilization and improving efficiency by mitigating risk. In addition to supporting access to constraining stock quota, participants in cooperatives often work together to develop strategic fishing plans, collect and share data, and actively avoid areas of high bycatch by creating spatial maps and voluntarily closing hot spots. Cooperatives and risk pools can be tools for improving utilization but are not standalone solutions. These programs also introduce additional administrative and data costs.

- **Facilitate administration of quota entities.** Managers could consider streamlining and updating regulations to support more efficient administration of quota entities (e.g., cooperatives, quota funds, conservation trusts and quota banks). In particular, relaxing quota accumulation limits and authorizing entities to hold quota without also having to hold vessel accounts and permits could allow for more efficient operations.

**Quota entity concerns**

When discussing quota entities (e.g., risk pools, cooperatives, and quota funds, trusts and banks), some participants expressed concern about the impact these approaches could have on other fishermen. Some participants worry that these entities could reduce the amount of quota available on the market and influence prices. Particularly when supported by investments from third party entities, such as donors and non-governmental organizations, some worry that the playing field becomes less level when sub-groups of fishermen are provided with preferential access to subsidized quota.

- **Establish limits on sablefish quota movement.** Limitations on the movement of sablefish quota could help ensure that quota remains accessible to the non-whiting fishermen who use trawl gear. Some participants from this group suggested that limits could be established to cap the number of new fixed gear vessels that could enter the trawl IFQ fishery (i.e. not granted quota under the trawl IFQ program), and/or the amount of IFQ quota that can be fished by each gear type (fixed gear and trawl gear). Participants noted that it would be important to consider the implications of a cap, and not to penalize those individuals who have already invested in the fixed gear sector of the trawl IFQ fishery through converting gear, acquiring permits and/or purchasing quota. Some fixed gear participants noted additional considerations, including the potential benefits of fixed gear fishermen who target sablefish making their other constraining species quota available to bottom trawlers, and that limitations on leasing or selling of sablefish quota could be economically disruptive to trawl permitted vessels that lease their quota.

- **Align seasons for shoreside quota.** Aligning shoreside whiting and non-whiting seasons could help encourage the flow of quota on the market. Having the same annual timing for choke species could better facilitate the movement of quota between sectors.

- **Consider alternative ways to structure quota prices.** Consider whether contracts or mechanisms could be used to control price inflation, such as grounding prices in the value of catch. For example, participants noted that the price for quota in some Alaska catch share programs is set as a percentage of catch value in order to reduce the harvesters' risk and allow more equitable access to quota.

**Economic valuation of quota shares**

The economic value of quota is difficult to determine. The lack of clarity around a) the monetary value of quota on the market and b) the monetary value of quota shares as an asset, can constrain the ability of quota holders to make informed trading decisions and secure loans using quota shares as collateral. Defining and strengthening the value of quota shares, and enlisting more lending support for the industry could help quota holders secure capital to make investments in their business.

### 4.2.4 Risk Calculation and Overages

Participants feel that in addition to overcoming the constraints imposed by ACLs, one of the fundamental challenges to utilization is managing the risks of aligning quota portfolios with harvest. With the balanced portfolio of quota pounds needed to participate in the groundfish trawl fishery, and the barriers to acquiring that portfolio, participants believe that fishing for groundfish is a risky proposition. Participants face the possibility of exceeding their quota pounds and not being able to cover an overage. As a result, participants are conservative and risk-averse in their decision-making.

Weighing options: Participants feel individual quotas and the quota market in the non-whiting fishery can make long-term and short-term business planning challenging. Fishermen noted that they invest significant time weighing the risk of "if, what and when" to lease. If they lease quota and don't end up needing it, they lose money; if they lease less than they need, they might be over and not be able to cover the overage; and if they don't invest to acquire the quota they might need, they can't fish and therefore can't make money.

Covering overages: Participants emphasized that covering quota overages is an urgent problem. Fishery participants are required to cover quota overages within 30 days and clear any quota deficits before leaving the dock. Participants believe the often distorted supply and demand function of constraining stock quota can make the existing quota market an expensive and largely unreliable avenue for ensuring positive balances for constraining stocks. Participants expressed that lags in confirming observer reported catch sometimes compound this problem, forcing fishermen to scramble to find quota at higher market prices or sit out until they can afford to cover the overage.

Lightning strikes: Participants are concerned about rare unintended bycatch events that can cause a vessel to significantly exceed its quota pounds with one "disaster tow." This can result in grave consequences if the vessel is unable to cover the overage due to quota pound caps or market availability. Participants feel that the potential for lightning strikes is exacerbated when ACLs do not reflect current stock assessment results; high biomass of constraining stocks with unaligned low quotas can make it even more difficult to keep catch under constraining stock quota limits.

In addition to the ideas addressed previously, opportunities to directly mitigate risk were identified:

- **Improve speed of observer reporting.** Consider ways to improve fishermen's access to preliminary observer reports. Consistently having access to preliminary reports after the trip concludes could allow fishermen to have a better sense of the quota pounds they have remaining or need to acquire.

- **Create a rebalancing mechanism.** Creating mechanisms to rebalance overages and avoid excessive penalization could help mitigate participants' concerns about risk and consequences. For example, allowing after season trading to cover overages with remaining quota, or forgiving deficits so long as the total sector allocation has not been caught.

- **Explore market solutions for quota overages.** Creative market solutions, such as allowing the trading of negative as well as positive amounts of quota pounds could allow vessels that encounter overages that exceed their vessel limits to work out their overage on the market. Under these sorts of potential market mechanisms, all vessels could conceivably continue to fish so long as the sector as a whole covered the overage.

- **Reconsider choke species management**. Discussions at the workshop raised a fundamental question: ***is precise management of quota pounds the right tool to manage <u>all</u> choke species?*** Participants suggested taking a step back and considering different strategies; the group raised the following ideas and questions.
    - **Spatial management.** Could spatial management complement or replace quota management for some particularly constraining overfished stocks? These ideas were met with very mixed reactions.
        - Closed area approaches could include replacing quota accountability with closures, or combining closed areas with increased quotas.
        - Open area approaches could include incentivizing fishing in designated "clean areas" by not counting quota caught in those areas, or counting quota at a discounted rate (e.g. 0.5 quota pounds per 1 pound caught).

      For overfished stocks that are sedentary in nature, such as Yelloweye rockfish, a designated Yelloweye Rockfish Conservation Area could support rebuilding while providing relief from the constraining quotas.
    - **Soft Caps.** Could soft caps and in-season management measures provide balance between supporting utilization and ensuring rebuilding?
    - **Information and technology.** How can information streams and technology be used to help avoid bycatch? Identifying seasonal or real-time bycatch hot spots could help reduce bycatch rates. Exploring ways to credit vessels that participate in voluntary programs could help encourage participation and reduce risk.

- **Investing resources.** Are there opportunities to better direct limited resources? Participants pondered if the funds currently spent on the complicated system of quota counting could be better directed to make sure that overfished stocks are recovering.

## 4.3 Efficiency and Flexibility

The groundfish trawl rationalization program was implemented amid a framework of pre-existing regulations and effort and output controls. Given the individual accountability required by the program, fishermen want the discretion to determine how best to harvest their quotas and the flexibility to adapt their businesses to succeed within the trawl rationalization program and ACL framework.

***"The pathway forward is to offset costs by adding value, especially through increased efficiency."***

### 4.3.1 Outdated and Constraining Regulations

Fishermen are frustrated that the previous effort based controls were not reconsidered during the development and implementation of the trawl rationalization program, and discouraged that they continue to exist five years into the new output based management program. Participants feel that these pre-existing regulations hinder performance under the new system by constraining access, efficiency and innovation, and imposing unnecessary costs and duplicative constraints. They noted that the fishery has changed substantially since these controls were put in place; the rationale and necessity for these regulations may no longer hold true. Additionally, participants believe that these sweeping effort controls manage to the "lowest common denominator," assume that all fishermen are bad actors, and do not reflect the accountability and commitment demonstrated by the industry. Participants want to see the trust that has been earned by the industry under the trawl rationalization program reflected in the regulations.

***"We wanted a new progressive modern fishery management tool, so we took a 21st century tool and put it on top of a 20th century tool."***

#### *4.3.1.1 Gear Restrictions*

Fishermen are effective researchers, problem-solvers and innovators. Participants believe the residual gear restrictions constrain the industry's flexibility to adapt to the trawl rationalization program by developing more selective and efficient gear. The fishery is fully accountable and the industry feels they need more autonomy to determine how best to harvest their quota within the parameters of the trawl rationalization program.

Opportunities for reducing gear constraints and clearing a path for greater flexibility include:

- **Allow for multiple gears.** Managers could consider authorizing vessels to carry multiple gears on a single trip. This could allow fishermen to be responsive and harvest a portfolio of species that aligns with market demands (see 4.4.1).

- **Remove selective flatfish requirement.** The use of selective flatfish gear inside 100 fathoms may no longer be needed given the rebuilding of rockfish and accountability measures in place. Managers could consider eliminating this requirement, which could allow more flexibility in gear usage and access to the nascent reemerging rockfish fishery and associated markets.

- **Eliminate footrope and mesh requirements.** Managers could consider removing the footrope and mesh size requirements. This could allow greater flexibility in harvesting target quota and promote innovation and efficiency.

- **Improve information exchange.** Fishermen want to develop better mechanisms to share new ideas, exchange gear innovations lessons between ports, and to find efficiencies through collaboration and teamwork.

- **Facilitate and fund innovation.** While the exempted fishing permit (EFP) program is a valuable pathway for fostering innovation, the process could be improved to streamline the permitting process and uptake of results. Educating fishermen about grant and other funding opportunities and connecting researchers and industry members could improve collaboration and foster innovation.

**Gear Innovations**

Workshop participants emphasized that the development and modification of gear holds significant promise for improving utilization and performance of the trawl fishery, and that this innovation should not be constrained by regulations. Gear innovations have the potential to decrease bycatch interactions, reduce discards, and improve catch value. By leveraging the data generated by observers and electronic monitoring, the industry can explore the efficiencies and benefits of experimental gear at an even faster rate.

#### *4.3.1.2 Spatial Measures*

Participants feel that spatial measures also constrain access and efficiency. The group's discussion focused primarily on the existing network of rockfish conservation areas (RCAs) implemented to support rebuilding under the previous effort control system. Fishermen emphasized that they need the flexibility to fish where they can access target species and minimize encounters with constraining species. Participants believe that the RCAs restrict access and force fishermen to exert more time, energy and expense per pound of catch. With the precaution built into the trawl rationalization program through full accountability and the probabilistic approach (p*) used for setting Acceptable Biological Catch (ABC) levels, the industry asserts that mortality closures are duplicative.

Opportunities to remove unnecessary spatial constraints include:

- **Eliminate or modify RCAs.** Fishermen would like to see the RCAs lifted, or at minimum, the boundaries and restrictions modified. Managers could consider

these changes, which could allow fishermen to follow volume, selectively fishing on larger concentrations of target stocks and reducing bycatch.

- **Allow southern access to whiting.** Managers could consider removing spatial constraints in the whiting fishery, particularly allowing at-sea processing south of 42°N. This could aide efficiency in the mothership whiting sector, support improved access to a dynamic resource, and eliminate unnecessary delays and expense.

**Rockfish Conservation Areas and Habitat**

As the Council considers the habitat implications with revising the RCAs, fishermen noted that shoreside non-whiting bottom trawlers are the only vessels currently excluded; midwater whiting and non-whiting, and shrimp, are all operating in the RCAs. Fishermen noted that the RCAs were intended to function as a mortality reduction measure rather than as habitat protection.

#### *4.3.1.3 Seasonal Regulations*

Participants also view seasonal regulations as another category of residual effort controls that are unnecessary under the trawl rationalization program and an impediment to access and efficiency.

Opportunities to address unnecessary seasonal regulations include:

- **Remove midwater trawl seasonal closure.** Managers could consider allowing year-round midwater trawl fishing for non-whiting species. This adjustment could support more stable operations, better positioning with markets, better alignment with shoreside annual quota markets, and facilitate the development of a stable, profitable market for rockfish.
    - **Consider a substitution mechanism.** Given bycatch considerations, particularly of constraining groundfish species and Endangered Species Act (ESA) listed salmon, corresponding risk mitigation measures may be helpful to facilitate lifting the current midwater trawl season closure. Mandatory participation in a risk pool, for example, could ensure that bycatch incidents can be covered with quota given the relatively high risk of midwater trawling.

- **Extend the whiting season.** Managers could consider extending the whiting season through an earlier opening. This could provide more flexibility for vessels to operate efficiently and optimize their participation in other fisheries.

#### *4.3.1.4 Administrative*

There are several regulations in place that participants feel cause unnecessary administrative burdens. Originally put in place for accountability purposes under the effort control system, the industry believes they are duplicative of the current monitoring and reporting requirements and impose additional cost to the industry.

Opportunities for addressing unnecessary administrative burdens include:

- **Allow at-sea gear change declarations.** Along with allowing multiple gears on a single trip (see 4.3.1.1), managers could consider authorizing fishermen to declare gear changes at-sea rather than having to return to dock to make this declaration.

- **Authorize joint registration.** Managers could consider providing additional flexibility by allowing fixed gear and trawl permits to be jointly registered to the same vessel at the same time.

- **Allow whiting catcher vessel declaration at-sea.** Managers could consider allowing whiting catcher vessels to declare whether they are participating in the shoreside or mothership sectors while at-sea. Many vessels participate in both the shoreside and at-sea sectors. It would aide efficiency to allow them to make deliveries to motherships and shoreside processors on the same trip. Current rules require catcher vessels to return to port to declare which fishery they are participating in.

- **Expand at-sea non-whiting processing exemption.** Managers could consider relaxing restrictions on at-sea processing in the shoreside non-whiting IFQ fishery. This could allow additional vessels to incorporate processing capabilities, and support new value added strategies and frozen markets (see 4.4.1).

### 4.3.2 Trailing Actions

There was significant discussion at the workshop about the Council's suite of trailing actions on the groundfish trawl rationalization program. Industry members expressed frustration with the time it has taken for these changes to move through the decision-making and regulatory process. Many participants stressed that clearing the decks of the many trailing actions already in the pipeline could translate to a significant benefit in the fishery.

The Council and NMFS are currently addressing changes to several of the constraining regulations discussed above (see 4.3.1) and in other sections of this report (see Appendix 7 for full list of trailing actions, current as of February 2016)[1].

<u>Awaiting NMFS approval</u>

- Electronic monitoring for whiting and fixed gear
- Joint registration of trawl and fixed gear
- Widow rockfish quota share reallocation
- Removal of blackgill rockfish from the slope rockfish complex

[1] Following the workshop, the Council took action at its March and April 2016 meetings, moving some of these trailing actions forward, such as the gear regulation actions (See Appendix 8).

Currently in the Council process

- At-sea declaration for whiting vessels
- Gear regulations, including mesh size, selective flatfish trawl, and multiple gears on board.
- Elimination or modification of the RCA (as part of the EFH amendment process)
- Transfer of rockfish quota between the shoreside and mothership whiting sectors.
- Fishing in multiple IFQ management areas on the same trip

Workshop participants voiced their concern that the above actions, as well as those awaiting Council prioritization, could get further tabled during the five-year review of the groundfish trawl rationalization program (see 5.2). With so many compounding challenges in the fishery, industry expressed that relief cannot come soon enough; some fishermen are barely hanging on and may not be able to weather any further delays.

***"If we could get trailing amendments cleared, we could get to the innovative things the agency and people here want to do."***

## 4.4 Markets

Participants explained that the economic performance of the trawl rationalization program is a function of the program itself (costs, utilization, and efficiency), as well as the market it supplies.

> *The seafood supply chain* involves many players including fishermen, processors, distributors, buyers, retailers, and consumers.
>
> *The value of groundfish* reflects a number of factors including price, supply, demand, consistency, marketing, and competition with other products.

Price, supply, and demand are all connected. Consistency in supply drives demand; costs and demand determine prices; and demand is needed to support increases in supply. Workshop discussions illuminated how these complex relationships and interconnected factors interact to affect the value of the groundfish trawl fishery, making it difficult to pinpoint challenges and identify solutions and starting points.

Despite the complicated nature of this discussion, workshop participants made significant progress toward articulating challenges and identifying opportunities to yield more value in the fishery. Participants who have been involved at multiple points in the supply chain played an important role in this discussion.

Participants began by exploring different perspectives within the seafood supply chain, focusing on the considerations that drive their decision-making.

**Retailers, buyers, and distributors**

Retailers, buyers, and distributors translate the value of the product to the consumer. They need stable, reliable supplies of product to support long term business planning. Based on these considerations, groundfish is not always an appealing product. Workshop discussions highlighted that the lack of consistency in supply can make it difficult for groundfish to become a significant aspect of their portfolios, and make groundfish a risky and unreliable bet. Distributors and retailers also lack clarity on the factors that influence the supply side of the groundfish market.

The perspectives of retailers, buyers, and distributors were shared primarily through presentations and follow up discussion. Speakers identified the following considerations.

> *Long-term planning:* Retailers and distributors ensure supply by operating on long-term planning horizons of months or even years. Knowing when product is available allows them to advertise products and move more volume.
>
> *Consistency:* Consistency and continuity in supply is essential to support long-term planning and develop markets. For seasonal fisheries, this means a steady, reliable supply of product within season.
>
> *Timing*: The timing of supply influences price and market bandwidth. Treatment of catch and minimizing time from catch to market is important to ensure quality and premium pricing.
>
> *Volume:* Most retailers, distributors, and buyers must meet volume thresholds and fill rates to move product efficiently. Particularly in commodity markets, dealing in small amounts is difficult.
>
> *Prices*: Fresh seafood commands the highest price, but requires the most consistency in supply. Frozen and previously frozen products return a lower price per pound but are more robust to inconsistencies in supply.
>
> *Marketing:* Retailers and distributors make their purchasing decisions in response to consumer preferences. However, their ability to market and connect with consumers can also help inform consumer preferences.

**Fishermen and processors**

Harvesters and processors are closely linked in the supply chain. Based on the market, processors determine the price paid to fishermen for their catch, and fishermen influence the consistency of supply. Both sides emphasized that a lack of transparency and shared understanding of the supply chain pose challenges to aligning with markets and increasing the value of their product.

Fishermen and processors each expressed a distinct set of concerns.

> *Fishermen* often lack firsthand knowledge of how their catch moves through the supply chain and how their business model impacts the price of the product. They are frustrated by their lack of control over price, the lack of transparency about costs and profits throughout the supply chain, and the power relationship that can exist with processors. Processors can exert a strong influence on fishing and targeting behavior, and pay fishermen based on a volume-price dependency that is difficult to optimize given the variable nature of fishing. Fishermen-processor relationships can be influenced by additional factors, such as accepting groundfish catch contingent upon delivering catch from other fisheries. Fishermen expressed frustration that processors sometimes make future market commitments without informing or consulting them about their harvest plans (e.g., planned vessel maintenance). This lack of communication can hamper market development to the detriment of both fishermen and processors. Other factors such as the large volumes of lower cost imported groundfish can also influence the price and market limits for west coast groundfish.
>
> *Processors* are struggling with the inconsistency in groundfish deliveries. Processors noted that decreased utilization of some species and inconsistency of landings in the fishery have resulted in reductions in processing capacity and the evaporation of processing infrastructure in some areas. Prior to the trawl rationalization program, landings were relatively more consistent due to monthly trip limits that influenced the timing of landings (see text box on page 49). Processors often rely on other fisheries, such as shrimp and crab to subsidize the processing of groundfish and keep the markets full. Playing an intermediary role in the supply chain, they are also frustrated by gaps in communication and being steps removed from dealing directly with retailers.

**Increasing value, accessing markets**

The group identified significant barriers to developing and supplying a strong market for groundfish species. Some fishermen and processors feel that profits and the value of groundfish catch have largely stagnated or declined. Particularly for some participants in the non-whiting fishery, there is frustration that an increase in fishery value—communicated as a benefit of adopting the catch share program—has not been realized for all participants.

Workshop discussions highlighted that increasing value in the groundfish trawl fishery is a function of building demand and ensuring consistency of supply.

### 4.4.1 Consistency

To establish successful footing in markets, fishermen and processors need to deliver a predictable and consistent supply of product, either annually or seasonally. Participants noted that catch consistency is affected by internal factors related to the design and functioning of the trawl rationalization program, and external factors affecting the alignment of catch with markets.

**Trawl rationalization program challenges**
Participants believe that consistency in catch is hindered by the trawl rationalization program challenges discussed in previous sections. Specific examples include:

Utilization: The challenges of aligning catch with available quota can affect the timing and volume of catch to create unfavorable outcomes. For example, access to rockfish can be limited until late in the season by the availability of constraining stock quota. This can result in a glut of rockfish on the market rather than a consistent supply (see 4.2).

Planning: The availability of observers and the suite of spatial and temporal measures in place in the groundfish trawl fishery can make it difficult to make and honor specific supply commitments (see 4.1.3 and 4.3.1).

Infrastructure: The loss of processing capacity, skilled workers and fishery infrastructure in some ports, particularly in California, can limit catch volume and consistency (see 4.5.1).

Participants feel that the high costs and complexity of operating in the groundfish trawl fishery deter participation and provide a disincentive to the consistent effort that would translate to a consistent supply. Strong markets and large volumes in the crab and shrimp fisheries can result in operators choosing to fish exclusively for one or both of these year-round, instead of for groundfish. Participants noted that long-term variability in West Coast fisheries forces vessels to diversify their portfolios and participate in fisheries where access and profits are the most assured. Without a fleet of dedicated groundfish fishermen, the sporadic nature of the fishery can translate into sporadic supply. Participants believe that addressing the challenges and management barriers related to costs, utilization, efficiency, and flexibility would better position the groundfish trawl industry to achieve the consistency in supply needed to increase value in the fishery

**Consistency tradeoff under trip limits and IFQs**
Participants noted that there is a tradeoff in flexibility and consistency under the trawl IFQ program compared to the previous system of trip limits. Monthly trip limits forced some degree of consistency in landings, but at the same time inhibited flexibility for harvesters. The trawl IFQ program provides increased flexibility, but can result in less consistent landings and fluctuations in supply.

**Alignment of catch with markets**
The lack of alignment between links in the supply chain makes it challenging to build and maintain markets for groundfish, and therefore, for groundfish to move more volume or command a higher price in the market. While workshop participants felt many of these challenges will need to be addressed at the program design level, there are opportunities and significant momentum for the industry to work together.

***"We need to make the markets work for us, not against us."***

Opportunities for aligning the supply chain with final markets to increase value from groundfish harvest include:

- **Collaborate for consistency.** Participants in the groundfish industry and supply chain could collaborate to build a foundation for consistent supply that is robust to unforeseen barriers. Communication and planning among vessels and processors is an important first step for aligning supply and helping industry participants understand timing and price incentives. Collaborations among fishermen and processors could have additional benefits by working with others in the supply chain to increase demand and improve value.

- **Plan based on markets.** Market demand and marketing efforts affect the potential for product to be moved effectively and profitably after it reaches the dock. By considering the endpoint of the supply chain, groundfish industry participants could plan and align their fishing effort accordingly.

- **Consider fresh and frozen markets.** The groundfish industry could utilize markets for fresh, frozen and previously frozen products to help ensure consistency even in times where it is more difficult to supply fresh markets. Freezing product at sea could help elevate the quality of frozen products. Presently freezing at sea is prohibited so this would require a regulatory change.

### 4.4.2 Marketing Challenges

A major challenge to marketing groundfish effectively is that West Coast groundfish lacks a "brand." Consumers are not familiar with groundfish species and don't recognize this fishery as a substantial source of regional seafood. Within this challenge lies a great opportunity to educate consumers and increase demand through targeted marketing. Consumers care about the story behind seafood products, and want to connect with fishermen and support local fisheries. However, marketing and branding for the fishery is a function for which no clear effort or financial responsibility exists.

Opportunities for addressing branding and marketing challenges include:

- **Work with local partners on marketing and education.** Collaborating with others in the supply chain and leveraging local partners could provide capacity for educating consumers about the groundfish resource and executing coordinated marketing campaigns.

- **Tell the story.** The groundfish trawl fishery and participating fishermen have a great story to tell. The narrative around groundfish trawling has changed, and marketing represents an opportunity to leverage the conservation success of the fishery. Certifications and ratings such as the Marine Stewardship Council and Monterey Bay Aquarium Seafood Watch program can be leveraged to solidify the fishery's reputation.

- **Create a new marketing entity.** Establishing a new, dedicated entity with marketing responsibility could help translate ideas into action. In addition, this entity could devise a robust strategy that considers the appropriate level for marketing (e.g., local, regional, national), the appropriate scale for determining price premiums and providing consistency (e.g., single species, groups of species), and opportunities to increase the visibility and demand for underutilized species.

Finally, groundfish markets vary by and within sectors, with each market requiring a different approach. For high volume fisheries, such as whiting and Dover sole, the commodity market is the best way to move catch; for other species that can be differentiated (such as chilipepper rockfish), more distinct markets (both species specific large volume and niche markets) may produce a higher return.

**Consumer purchasing considerations**

For many consumers, the cost and unfamiliarity of cooking methods for seafood mean that they approach purchasing decisions differently from other proteins. Consistency in availability and high quality can help make seafood a more appealing choice. Price is a major driver for purchasing decisions, but consumers are also interested in sustainability and the story around the product. Some consumers rely on retailer branding and sustainability ratings to help them make their purchasing decisions.

### 4.4.3 Global Seafood Market Implications

The markets for groundfish catch are global. Groundfish products compete with seafood coming from aquaculture and international fisheries, particularly direct competition with Canadian groundfish. Participants noted that the Canadian groundfish industry does not incur the same management costs as industry members in the U.S. trawl rationalization program; lower costs and a favorable exchange rate means that Canadian products are available at a lower price than U.S. products. Additional investments are needed to compete with the pricing and availability of these other supplies.

Opportunities to distinguish groundfish products in a global market include:

- **Promote domestic consumption.** Investments by industry and NMFS to promote domestic consumption of seafood from U.S. fisheries could help consumers distinguish groundfish catch from imports. Some participants suggested that imposing tariffs on imported seafood might further help promote domestic consumption by narrowing the price differential.

- **Differentiate groundfish in the market.** The marketing opportunities described above, and the resulting branding of frozen and fresh Pacific groundfish products could help differentiate these products in the market and yield higher value through taking them out of the seafood commodity stream.

- **Consider value-added strategies.** Introducing value-added strategies, such as new product forms, marketing strategies and seafood labeling initiatives (e.g.,

branding, sourcing, certifications, etc.) could leverage the existing accountability and documentation mechanisms in the fishery to brand groundfish trawl products and support price premiums.

- **Create opportunities to develop new markets.** Taking advantage of the local food movement (e.g., local catch programs, farmers markets), working with niche markets (e.g., sustainability focused and health food stores) and exploring new regional markets (e.g., schools, restaurants, prisons) could help to draw larger orders or produce a premium on groundfish catch. Some participants noted that these local markets may be low hanging fruit for increasing value and getting larger chain stores interested and invested in groundfish, which is essential to move more volume.

## 4.5. Communities

The challenges of costs, utilization, efficiency, flexibility, and markets can all affect the communities that have ties to the groundfish trawl fishery. Healthy fisheries and healthy communities support one another. Participants believe that the poor economic performance of the trawl fishery has had cascading impacts on many communities, eroding the infrastructure, services and employment base upon which vessels and processors rely.

***"Community stability is tied to individual stability; community health is tied to the health of the fishery."***

**Defining "community"**

While the term "fishing community" has a specific meaning in the context of the Magnuson-Stevens Act, the concept of community can mean something different to everyone. Within the groundfish trawl fishery, community can include places and regions (e.g., a port or group of ports, a specific region, or the full Pacific coast span of the fishery), individuals with similar business interests (e.g., by gear type or sector, related support infrastructure, or the whole supply chain), and connection-based communities (e.g., other fisheries that supplement groundfish, a group of people with shared values, or the broader community with an interest in marine resources).

### 4.5.1 Community Stability

The fishery has changed significantly in the past decade, and some harvesters view their situation as dire. High participation costs, low utilization, and the lack of stability for harvesters (see 5.1) can translate into community instability. Participants feel poor economic returns and the loss of capacity results in a corresponding loss of employment, infrastructure such as processing capacity, markets and support services. Once this infrastructure is lost, many worry that it will not return. Given the consolidation resulting from the buyback and the expected contraction experienced under the trawl rationalization program, participants expressed that quota migration and loss of infrastructure has taken a toll on some communities, particularly in California.

Experiences in several California communities highlight opportunities to provide more stable footing for fishing communities. These include:

- **Keep quota local.** Community quota organizations could help anchor quota in the community and allow for fishermen to continue providing the harvest that supports the economy and the character of the community. These community-based models could provide stability and predictability to counterbalance the volatility of the quota market and the incentives that drive quota from smaller ports.

- **Fund infrastructure.** Community-based quota mechanisms, such as quota funds, can also be used to directly rebuild and maintain fishing related infrastructure. Additionally, grounding quota in certain communities may create incentives for processors and observers to invest in their local businesses.

### 4.5.2 Retiring Fishermen and New Entrants

Some participants expressed concern about the lack of opportunities for new entrants in the fishery. Given the expense and risk involved with acquiring quota, the traditional pathway for advancement from crew to vested ownership may be a difficult proposition. As existing fishermen retire and the fishery contracts, there is concern about losing knowledge and experience in the harvesting and processing sectors as well as in other fishery-dependent businesses.

**Defining new entrants**

Participants agreed that defining "new entrants" would be helpful to informing future discussions. New entrants could mean many things including generational recruits, new quota buyers and vessel owners, and crewmembers that develop succession plans with their captains. Understanding these different pathways for entry into the fishery may be helpful when articulating the challenges and opportunities available.

Given the urgent challenges in the fishery, the group emphasized the need to help those already in the fishery stay afloat before dedicating resources to accommodate new entrants.

***"It's hard to think about adding new fishermen when existing participants aren't stable yet. We need to shore up the existing program with existing participants first."***

The group noted that until the groundfish trawl fishery supports profitability and stability, it is likely not an attractive investment for new participants or the businesses that provide infrastructure and support. Participants suggested that making the necessary changes in the trawl rationalization program would be the most effective way to maintain the current level of participation in the fishery and support new entrants in the future. As the fishery rebounds, offering opportunities for entering the fishery, such as apprenticeships, and making sure those opportunities are communicated, could support new entrants in understanding the pathways for working their way up in the fishery.

**Adaptive Management Quota**

The groundfish trawl rationalization program includes a 10% adaptive management set aside to allow managers to respond to unintended consequences and future challenges. To date, this quota has been distributed pro rata to quota holders (i.e. in proportion to their quota share holdings). The lack of clarity on what will be done with this quota, and when that will be decided, can create uncertainty for harvesters. For many, distribution of the adaptive management quota is essential for staying afloat. Fishermen have worked hard to remain in the fishery; using the adaptive management quota for other purposes, such as facilitating new entrants, seems inappropriate given the struggles of active participants. Participants also expressed their concerns that adaptive management quota or other socially targeted provisions could de-level the playing field. Some suggested that distributing adaptive management quota through existing channels (e.g. processors, captains or crew) could help sustain community stability.

# 5. Moving Forward

Throughout the course of workshop discussions, a collective vision for the groundfish trawl fishery emerged (see 3.1). Workshop participants want to see a profitable and thriving fishery and fishing communities. The program's conservation success to date provides a platform on which future success can be built. Industry members and stakeholders stressed the need for important and timely changes, but also bring a sense of optimism that collaboration will continue and the fishery will realize its full potential. Workshop discussions reinforced the critical role of stability in the fishery, and the need to develop a cohesive strategy on how to enable and support stability, and define the pathway toward success.

## 5.1 Foundation of Stability

The need for stability is a theme underlying most of the workshop discussions. Stability can be an elusive concept in the fishing industry, which experiences varying resource and environmental conditions and must evolve in response to new regulations. Stability in this context means having the ability and the tools to invest, plan, and thrive under changing conditions. Workshop participants felt that stability in the groundfish trawl fishery could be achieved through solutions that support the following outcomes:

Consistent economic performance: The ability to build and consistently access a robust portfolio of quota can support consistency in catch, and reliable economic performance in the fishery. While fishing is inherently variable, participants expressed the need to be able to operate under the reasonable assumption of making enough money to cover their bills and support their families.

Planning and long-term investments: Participants believe a stable fishery requires resilient, vested participants including harvesters, processors, and supporting businesses and infrastructure. Participants emphasized the need to plan ahead and develop long-term business models in order to confidently invest in their business and the infrastructure that support the fishery.

Streamlined and predictable regulations: Participants feel that predictability in regulations is important; it allows the industry to know what to expect and to make decisions with the confidence that the rules are not going to change underneath them. Streamlined regulations and certainty in the durability of decisions (particularly allocation decisions) can support strategic and long-term investment. Additionally, participants believe the regulatory process needs to respond and adapt in a timely matter to remove barriers and address future challenges.

Adaptability and resiliency: Given the number of uncertainties that accompany fishing, participants emphasized the need for stability and flexibility in order to adapt to changing resource conditions and to be resilient enough to weather downturns and unforeseen changes.

There are a number of factors that influence the achievement of stability in the fishery. Participants feel the loss of vessels and infrastructure, constraints on harvest, climate change impacts, and declines in other regional fisheries can all tip the scales to instability. Improvements in markets, innovations, and the flexibility to support business planning could all tip the scales in a more favorable direction.

**Incentives, investment and stability**

Some participants feel that the current state of the groundfish trawl fishery deters investment. High costs, barriers to utilization and efficiency, and the risks associated with avoiding and potentially encountering rebuilding stocks can create an uncertain economic outlook. The opportunities available in other fisheries, such as crab and shrimp, can also influence participation and investment in groundfish. When these other fisheries are profitable, groundfish can be a lower priority endeavor; when they are less profitable, participants rely more heavily on groundfish. Moving forward, participants believe that stability and economic performance will encourage investment, and make the groundfish trawl fishery attractive for new entrants and current participants.

The challenges facing the fishery are complicated and interrelated. Participants believe that all facets of the problem (program costs, utilization, efficiency and flexibility, markets and communities) need to be addressed in concert to give the industry the tools to be successful. Over the course of the two-day workshop, conversations consistently converged on a set of ideas that participants feel could address the most significant barriers to stability and make meaningful improvements in the fishery.

- **Reduce costs.** Reducing costs associated with the buyback loan, cost recovery, observer coverage, program administration, and quota acquisition could provide relief. Lower costs could increase incentives for participation, resulting in increased utilization, more consistency in supply and more stable demand for shoreside infrastructure and services.

- **Get more fish out of the water.** Removing harvest barriers, increasing ACLs, and improving the speed of ACL adjustments could improve utilization. Improving the flow of information and the exchange of quota could allow active fishermen to more effectively access quota, align their quota portfolios and utilize the available resource. Improved utilization could in turn support long-term planning, improved consistency and coordination throughout the supply chain, and ultimately enhance market demand and value of the fishery.

- **Remove outdated regulations.** The trawl rationalization program is layered upon a number of outdated effort control regulations. Eliminating unnecessary effort controls, particularly gear restrictions and time/area closures, could provide the industry with greater access to healthy stocks, flexibility, efficiency, and room for innovation.

Workshop participants were hopeful that through swift action to enact these changes the program would be set up to achieve much better performance.

***"We are barely scratching the surface of the benefits this program can provide."***

## 5.2 Formulating a Game Plan

### 5.2.1 Five-year Program Review

The Groundfish Quota Program Workshop was convened to support informal reflection and dialogue around the performance of the program. The upcoming five-year review to be conducted by the Council and NMFS was also at the forefront of participants' minds.

Fishery participants see the five-year review as an opportunity to critically evaluate the program against its stated goals and make much needed adjustments. Participants shared some concerns and ideas for consideration in the five-year review process:

*Timeline:* Participants are very concerned about the timeline for the review, and its relationship to the suite of trailing actions (see Appendix 7). The group was concerned about the prospect of having to wait until 2018 to initiate the regulatory process for changes in the pipeline as well as those resulting from the five-year review. Industry members feel this delay could prolong the lack of economic performance, and for some who are barely staying afloat these changes may come too late. Participants hope that the Council and NMFS can "change the tire while driving the car," by continuing to move urgent changes and the backlog of trailing actions through the system during the review process.

*Independent review*: Industry participants suggested enlisting the services of a neutral third party consultant to support the five-year review. Bringing in an outside party to assist and play a central role in the review could provide additional verification of analysis, ensure more buy-in from the fleet, and help facilitate industry engagement and input throughout the process.

*Economic data:* Participants in the fishery perceive and experience the economic performance of the fishery very differently. Some industry members noted their experiences do not match the conclusions drawn from the aggregated economic data analyzed and presented by NMFS during their introductory presentation. Moving into the five-year review workshop participants suggested exploring new and existing approaches that could help disaggregate economic data to support economic analysis of the different sectors, gears, geographies and vessels in the fishery. For example, delineating between trawl and fixed gears, vessels fishing from different ports, and the three whiting sectors could support a more detailed picture of costs, values, and overall economic performance. Additionally, finding ways to better estimate the prices paid on quota pound leases and the value of quota shares could also help to support more refined net revenue calculations for the fleets.

### 5.2.2 Considerations and Questions

Workshop participants identified questions and "food for thought" for the industry, Council, and NMFS to consider as they work toward addressing challenges and improving the economic performance of the fishery.

*Triage or comprehensive care:* The Pacific groundfish trawl fishery occurs across a large geographic scale and encompasses multiple sectors. Particularly within the shoreside sectors, there is significant variability in target species, vessel size, gear types and location. Non-whiting fishery participants in California face additional challenges that can make their situation particularly difficult.

While managed under a single fishery management plan, the groundfish trawl fishery is not a single fishery with one-size-fits all solutions. As managers and stakeholders consider pathways forward, it may be helpful to consider whether to prioritize the most pressing needs and solutions, or to first address the challenges that provide benefits to all.

*Logjam versus Legos:* Discussions at the workshop identified a large number of challenges and a corresponding suite of ideas for addressing them. When considering how to prioritize which actions to move forward, it may be helpful to reflect on whether the approach to providing the needed relief is one of eliminating a few key barriers or cumulatively ensuring the appropriate building blocks are in place.

*Cohesive strategy:* Participants emphasized that success will depend upon concurrently addressing all five facets of the problem (costs, utilization, efficiency and flexibility, markets and communities). The ideas generated at the workshop involve all stakeholders; some are under the purview of industry and their partners, some are under the authority of NMFS, and some require Council action. In order to prioritize and enact the necessary changes, it may be helpful to unify all players in a cohesive strategy. Articulating an overarching game plan, identifying the roles and responsibly of those involved, and designating a ringleader to coordinate efforts could help improve the effectiveness and speed of program improvements.

*Simplify a complicated fishery:* While the fishery is diverse and regulations need to address the suite of individuals and operating models, participants suggested the complexity in the management system might actually detract from its effectiveness. When considering future regulatory changes, it could be helpful to consider removing layers of complexity, rather than adding additional layers, to create more flexibility in the fishery and make the regulations easier to navigate.

*Next generation management program:* As managers and industry members review and modify the trawl rationalization program, it may be helpful to think ahead to future opportunities in the fishery. The conservation successes, robust

information and data streams, and cutting edge science in the fishery may provide significant potential for innovation and next generation management.

*Lean on collaboration:* Despite the significant challenges workshop participants identified, the group continually reinforced their desire to work collaboratively to ensure the fishery is a success for all. Fishermen, processors, retailers, managers and other stakeholders all want to contribute to the solution. Leaning on this atmosphere of collaboration can help leverage limited resources and expedite a path to realizing the program's goal and objectives.

# Appendices

## Appendix 1. Workshop Agenda

**Pacific Groundfish Quota Program Workshop**
**February 16-18, 2016, Portland, Oregon**

***Tuesday, February 16th –***

3:00-6:00 pm Arrival and check-in

6:00-8:30 pm Reception Dinner Pacific Northwest Ballroom

- Will Stelle, Regional Director, NOAA Fisheries West Coast Region (WCR)

***Wednesday, February 17th –***

7:00-8:30 am Breakfast and continued check-in

8:30-8:45 Welcome Mt Hood/Mt St Helens Rooms

- Dorothy Lowman, Lowman and Associates
- Kim Gordon and Katie Latanich, Fisheries Leadership & Sustainability Forum

8:45-10:00 Current Status of the Fishery and Quota Program:

Panelists:

- Chuck Tracy, Deputy Director, Pacific Fisheries Management Council
- Frank Lockhart, Senior Policy Advisory, WCR Sustainable Fisheries Division
- Erin Steiner, Economist, Northwest Fisheries Science Center

10:00-10:15 Break

10:15-12:00 Economics of the Fishery: Industry Overview of Current Status and Challenges

Panelists:

- Heather Mann, Executive Director, Midwater Trawlers Cooperative
- James Mize, Premier Pacific Seafoods, Inc.
- Brad Pettinger, Director, Oregon Trawl Commission
- Robert Eder, F/V Timmy Boy
- Andrew Bornstein, Bornstein Seafoods, Inc.
- Michelle Norvell, Advisory Member, California Groundfish Collective

Discussion

- What elements of the program have helped you in your business?
- What constraints negatively impact your ability to operate your business efficiently?
- How do these challenges relate to the goals for the fishery?

12:00-1:00 pm Lunch

1:00-1:45 Economics Session 1: Reducing Costs and Improving Operational Planning

Panelists:

- Heather Mann, Executive Director, Midwater Trawlers Cooperative
- Terry Hillman, Catch Shares Field Supervisor, Alaska Observers, Inc.
- Geoff Bettencourt, F/V Moriah Lee

1:45-3:00 Economics Session 1 Breakout Session

- Are there ways that you could cooperate with other industry members to reduce your costs and costs to the fishery as a whole?
- What regulatory changes would contribute most to reducing operational costs or allowing more effective operational planning

3:00-3:15 Break

3:15-4:00 Economics Session 2: Harvesting More Fish

Panelists:

- Sara Skamser, Foulweather Trawl
- Paul Kujala, Cape Windy Fisheries
- Andrew Bornstein, Bornstein Seafoods, Inc.
- Michelle Norvell, Advisor, California Groundfish Collective

4:00-5:15 Economics Session 2 Breakout Session

- What is needed to support individual fishermen and sectors in accessing the necessary portfolio of quotas? Where is flexibility needed to accommodate variable quota needs?
- How can we share and the build on the lessons learned from gear testing and modification the past 5 years related to getting more target species out of the water?

5:30-6:30 pm Cocktail hour and Poster Session

6:30-9:00 pm Dinner

***Thursday, February 18th –***

7:00-8:30 am Breakfast

8:30-8:45 Introduction to Day 2 Pacific Northwest Ballroom

8:45-10:00 Economics Session 3: Growing Demand and Increasing Value for the Fish

Panelists:

- Mike Okoniewski , Fisheries Policy and Management Advisor, Pacific Seafood
- Bob Dooley, J&R Dooley, Inc.
- Anthony Jordon, Whole Foods Market
- Daisy Berg, Seafood Buyer/Merchandiser, New Seasons Market

10:00-10:15 Break

10:15-11:30 Economics Session 3 Breakout Session

- How might fishermen and processors work together to generate more revenue and increase market share?
- What can be done to generate greater demand for groundfish and thus greater value throughout the supply chain?

11:30-12:45 pm Lunch

12:45-1:30 Recap of Economics Sessions

1:30-2:30 Looking ahead: The Future for Communities, Retiring Fishermen and New Entrants

Panelists:

- Suzanne Russell, Social Scientist, NW Fisheries Science Center
- Kevin Dunn, F/V Iron Lady
- Steve Scheiblauer, Harbormaster, City of Monterey
- Lisa Damrosch, Half Moon Bay Commercial Fisheries Trust

2:30-3:30 Looking ahead Breakout Session

- Looking ahead, what is your vision for the economic and social stability of the groundfish fishery and the coastal communities it supports (e.g., opportunities for new entrants and crew advancement, sustained ports and infrastructure, etc.)?

- What aspects of the management program support this vision? What aspects of the program are not consistent with this vision?

3:30-4:00 Break

4:00-4:30 Looking Ahead Recap

4:30-5:15 Putting it all together

Panelists:

- Emily Menashes, Deputy Director, Office of Sustainable Fisheries, NOAA Fisheries
- Rod Moore, Senior Policy Advisor, West Coast Seafood Processors Assoc.
- Don McIsaac, Executive Director, Pacific Fisheries Management Council

5:15-5:30 Next steps

5:30 pm Adjourn

# Appendix 2. Panel and Presentation Summaries

The following appendix includes summaries of presentations and panel remarks provided by speakers at the Pacific Groundfish Quota Program Workshop. Video of presentations and panel sessions, presentation materials, and handouts are available on the West Coast Trawlers Network website (www.westcoasttrawlers.net).

## Welcome Reception Keynote

**Will Stelle, Regional Administrator, NOAA Fisheries West Coast Region,** gave opening remarks to welcome participants and reflect on both the great progress of the catch share program and the challenges that lie ahead. He felt that everyone at the workshop should take a moment to celebrate the successes of the catch share program, as it was not an easy task to develop the program and transform the groundfish fishery. Mr. Stelle spoke about some of the specific positive changes including improved biological performance, increased landings, rebuilding, and decreased bycatch. He noted that the economic performance is solid but mixed, with an increase in profits, revenues, and landings, and a decrease in trip frequencies depending on the fishery. The high quality of the observer data is also playing an important role in having accountability. Mr. Stelle felt that generally, looking at the overall biological and economic performance of the fishery in this initial implementation phase, the catch shares program is an improvement, and a solid, positive program.

Mr. Stelle asked the audience to recognize that the collective work with the program is not yet complete and there are many challenges to look forward to tackling together. Some of the areas of concern that need improvement include:

- The issue of aging infrastructure and the distribution of the infrastructure coast-wide, which is especially an issue in the smaller ports.
- Approaches for electronic monitoring are currently being developed through EFPs, but this may not be the silver bullet to solve most problems.
- Big ports vs. small ports issues, specifically thinking about the cumulative affect of the costs associated with the catch share program, which are causing problems for some of the local ports and communities.

Mr. Stelle observed that the strength and depth of the collaboration between the industry, the Council family, NGO's, and NMFS has built a unique culture of problem solving that is a powerful tool to tackle difficult challenges. It is important for all of these groups to push one another to work through the tough issues and the inertia found throughout the system. Mr. Stelle concluded by asking everyone to recommit him or herself to problem solving, to working together, and to developing the next generation of the groundfish catch share program.

## Current Status of the Fishery and Quota Program

**Chuck Tracy, Deputy Director, Pacific Fishery Management Council**, provided an overview of the goal and objectives for the Groundfish Quota Program, established under Amendment 20 to the Groundfish FMP. The goals of the program are to:

- Increase net economic benefits – for the sectors as a whole, individual business and communities, and to reduce the costs of the program.
- Create individual economic stability – by minimizing the instability of derby fishing, provide increased flexibility and a more reliable planning horizon.
- Attain full utilization of trawl allocations – provide for significant and improved utilization.
- Consider environmental impacts – including biological impacts such as habitat, social impacts, as well as economic impacts.
- Establish individual accountability for both bycatch and target species – through the use of incentives and allowing market forces more than regulations to inform fishing behavior.

Mr. Tracy also reviewed the objectives and guiding principles established under Amendment 20 that support the achievement of the program's goal. These objectives and principles are included in Appendix 6.

**Frank Lockhart, Senior Policy Advisor, West Coast Region, Sustainable Fisheries Division,** described the components of the program that have been successful over the course of the last five years, including, the quota share and quota pound online trading and tracking database, 100% percent at-sea and on-shore monitoring, and the individual accountability and adherence to ACLs.

Mr. Lockhart described several concerns that have emerged with the program:

- Costs to the industry in terms of the buyback loan, monitoring, and cost recovery.
- Potential agency costs with implementing and maintaining an effective electronic monitoring program.
- Challenges to small ports.
- Minimal progress with increasing utilization rates.
- Lack of appeal and opportunity for new entrants.

Mr. Lockhart ended his presentation by outlining upcoming rulemaking, current actions in the pipeline and the suite of trailing actions outlined in the Omnibus document (see Appendix 7 and 8).

**Mr. Tracy** provided an overview of the proposed process and timeline for conducting the quota program's mandated five-year review. The Council, NOAA Fisheries, Tribes, states and constituents will conduct the review jointly. The Council will initiate the review at its June 2016 meeting. Substantively, the review will compare the program's performance with its stated goal and objectives, and identify potential program improvements. The five-year review process will include a Community Advisory Board (as required under Amendment 20), coastal hearings and a project team. There will be at

least two opportunities for Council guidance before a final public review draft report, which is scheduled for the winter of 2018, followed by final Council approval in April 2018. Identified program improvements will be considered as part of the 2018 Omnibus Process.

**Erin Steiner, Economist, Northwest Fisheries Science Center**, reviewed the most recent statistics from the Economic Data Collection (EDC) program, an annual cost earnings data collection of vessels participating in the catch share program. Her analysis aimed to represent the fishery as a whole, while also focusing on the whiting and non-whiting catcher vessel sectors given the diversity of participation. For the purpose of this presentation, different components of the sectors are presented in aggregate; economic data for the fishery will be analyzed at more refined scales for the program's five-year review.

Ms. Steiner provided an overview of the economic status of the catch share program. During her talk, she emphasized that although her presentation of the economic status of the catcher vessels only separated the program into two fisheries, whiting, and non-whiting groundfish, the EDC reports that were released in 2014, and the updated reports that will be in the briefing book report on five "sectors": at-sea whiting, shoreside whiting, dover-thornyhead-sablefish (DTS) trawl groundfish, non-whiting, non-DTS groundfish, and fixed gear groundfish. The following represent highlights from her presentation. Catcher vessel revenues from whiting have increased 60%. Meanwhile, revenues from other groundfish have increased 5% since the implementation of the program, and vessels participating in the groundfish trawl fishery also had 50% increase in revenue from other sources (mostly crab and shrimp). Top variable costs are crew, captain, and fuel, with crew payments increasing proportionally to increases in revenue, and fuel costs increasing with high prices in 2013-2014. Total cost net revenue (revenue less operational and fixed costs) doubled from pre-catch shares to 2011-2014 in Washington and Oregon. California had a reduction in the number of trips after catch shares, resulting in negative total cost net revenue in 2012. While value of processed fish is increasing, the share of that value attributable to groundfish is decreasing. Catcher processors have the largest net revenue of any sector of the catch share program, and motherships despite negative net revenue in several years, have had positive values in 2013-14.

Presentation materials from Mr. Tracy, Mr. Lockhart and Ms. Steiner are available the West Coast Trawlers Network website.

## Economics of the Fishery: Overview of Current Status and Challenges

**Heather Mann, Executive Director, Midwater Trawlers Cooperative,** described her perspective on the fishery's performance. She noted several aspects of the program that are working well, including increased flexibility to time fishing operations, cost reductions with electronic monitoring, the in progress fix to allow declaration at sea for

whiting catcher vessels, and the benefits of industry cooperatives in the at-sea and shoreside sectors.

Ms. Mann noted that regulations often manage to the lowest common denominator and that we must move away from the culture of distrust in the fishery. She highlighted several challenges for the whiting fishery under the quota program:

- Lack of access to bycatch quota;
- Inefficiency created by the prohibition on processing south of Oregon border;
- Limited access to markets and shifting power dynamics as the result of a closed class of processors under Amendment 20; and
- Uncertainty created by litigation over initial allocations.

Ms. Mann focused the end of her presentation on the issue of costs. In addition to the costs of 100% monitoring and cost recovery, the buyback loan has a substantial financial impact on the fishery. Significant effort has been invested by a broad coalition of stakeholders to refinance the loan. Despite these effort and initial progress, the Office of Management and Budget will require payment of ten million dollars to cover the revenue that would be lost with refinancing of the loan. Ms. Mann emphasized that this is unacceptable and that NMFS should work within its discretionary authority to reduce the required payments.

**James Mize, Premier Pacific Seafoods, Inc**., described that the key to success for mothership processors in the at-sea whiting fishery is consistent supply of the type of fish that fit within production processes. Predictability provides opportunity to maximize product recovery and innovate for accessing new markets. Rationalization program provisions specific to motherships, such as the MS permit and processor obligation requirements, have not had a significant affect as participation in the fishery has been largely a function of market conditions and longstanding harvester-processor relationships. However, the allocations of quota to catcher vessels based on catch history provided the basis for cooperatives, which have had a number of benefits in the mothership sector. These include formalizing bycatch avoidance methods and organizing fishing activity into sub-seasons, mitigating the risk of unforeseen bycatch events and lightning strikes. These benefits increase the industry's ability to plan and organize their operations; however, these benefits are limited by constraining allocations of non-target rockfish quota. Mr. Mize emphasized the disruption that these low allocations have had on the fleet and encouraged further exploration of the ideas in the omnibus document to address this situation.

**Brad Pettinger, Director, Oregon Trawl Commission**, reflected on the quota program's goal, objectives and guiding principles and gave the program a report card: goals: C+/B-, objectives: B, guiding principles: B. He noted a dichotomy with the program's performance: for conservation aspects, the program gets an A, but the economics and efficiency in the program comes in at C's, D's and some F's. The conservation successes in the program (e.g., rebuilding, reduced discard, etc.) have helped change the image of trawl fishery, resulting in Marine Stewardship Council certification and improved ratings by the Monterey Bay Aquarium.

The shoreside non-whiting fleet has gone through an expected contraction, but is only harvesting about 28% of their quota (with an acknowledgement that 100% utilization may not be realistic). Mr. Pettinger explained that the under-utilization is a result of several factors:

- The high costs of fishing (observer coverage, cost recovery, buyback, etc.);
- A fear of encountering overfished species and the impact of halibut mortality rates;
- Higher returns and values in other fisheries;
- Lack of flexibility; and
- Mismatch between quotas and the biomass in the water.

In closing, Mr. Pettinger emphasized that we are barely scratching the surface of the benefits the program can provide, and that more needs to be done to reduce costs where possible, increase flexibility and efficiency, simplify the program and increase the value of harvest (volume and value).

**Robert Eder, F/V Timmy Boy**, shared his experience and perspective on how the quota program has performed for trawl IFQ vessels that fish with fixed gear. The quota program introduced a provision that provides all vessels in the shoreside non-whiting sector with the option to fish their quota using fixed gear. During the first year of the program, about 30 vessels used fixed gear, landing about 39% of the total sector catch. In the following years, the number of vessels using fixed gear, and the respective percentage of the sector's catch, has decreased. Thus, the role of fixed gear in the IFQ fishery has declined since the beginning of the program.

The IFQ fixed gear sector has consistently achieved goals for individual accountability and minimizing environmental impacts. The gear also supports utilization goals as the selectivity of the gear allows for higher utilization of sablefish. While quota holders in the fixed gear sector support utilization of other stocks in the fishery through leasing and trading non-sablefish quota, there is a long way to go toward achieving the utilization goals for the trawl fishery as a whole. In terms of the program's economic goals, economic returns have improved on average for the IFQ fixed gear sector, though not as much as they had hoped. Fishery-wide improvements in net economic benefit and creating individual economic stability have not yet been achieved under the program.

Mr. Eder stressed the importance of efficiency in the fishery, and highlighted actions in the pipeline that could support this improvement:

- Joint registration of trawl and fixed gear permits.
- Eliminate the odd-month permit transfer regime to eliminate rush openings.
- Apply a discard survival credit for returning healthy juvenile sablefish to the water would support optimal use of quota pounds and support maximum productivity of the resource.
- Electronic monitoring is promising for fixed gear vessels. However, it remains to be seen how much cost savings will result from this option.

**Andrew Bornstein, Bornstein Seafoods, Inc.,** reflected on the five years since the program's implementation and noted that while there are pluses and minuses with the program, participants are largely still treading water. While all are managed under an overarching program, he noted that there are very distinct fisheries within the program that each have distinct economics and markets. Additionally, groundfish catches are part of a global market, which can greatly impact demand and prices.

Mr. Bornstein highlighted a number of benefits from the program, including:

- Improved flexibility in fishing operations that supports a more steady supply;
- The ability to plan as a result of having defined allocations; and
- Improved communication and cooperation, both formal and informal, that has allowed for better coordination and sharing of resources and information between and among harvesters and processors.

He also shared insights into a number of challenges under the program:

- Low allocations under the quota program mean that participants don't have enough quota to operate on a full time basis without leasing additional quota.
- For both fishermen and processors, participation in and catch from other fisheries is subsidizing groundfish.
- The costs in the program are enormous and add up to a significant proportion of revenues. Additionally, methods for reducing costs, such as electronic monitoring may shift costs from harvesters to processors rather than reducing costs overall.

Mr. Bornstein concluded by noting that the fishery has achieved environmental sustainability but has not achieved economic sustainability. The problems in the fishery are complex, but they are solvable; by addressing all aspects of the problem (reducing costs, harvesting more and making more money), the future for the fishery is bright.

**Michelle Norvell, Advisory Member, California Groundfish Collective**, shared the experiences of fishermen south of 40:10 and highlighted successes, challenges and opportunities in the fishery. She also expressed serious concern about the process, transparency, and timeline for the five-year review, and stressed the importance of engaging industry and seeking assistance from the private sector in the development and analysis of the review. She emphasized the five-year review as an opportunity to make much needed adjustments in the fishery.

Ms. Norvell noted the successes of the program, crediting it with having world-class information, highlighting the rebuilding and environmental gains, and emphasizing the importance and value of industry efforts under the program:

- The collaborative process and risk pool structure have enabled California fishermen to defy the odds and become part of a winning team. Through sharing information and quota, responsive local management and real-time decision-making, they are keeping fishing operations on the water.
- The ability to secure and implement exempted fishing permits has supported the development of electronic monitoring. The experimentation allowed by EFPs needs to be preserved and fostered by improved timeliness.

She emphasized that fishermen are doing their part and that managers need to do more to address the challenges in the program:

- The program needs to be more responsive and adaptive to new information, innovation and stock assessments;
- Costs with observers and catch monitors need to be addressed; even with the progress made toward EM, smaller ports are struggling with the availability and costs of catch monitors. Qualification requirements exacerbate the issue.

Ms. Norvell concluded her presentation with a call to action for the industry. Participants need to seize the opportunity to push forward on refinancing the buyback loan, and to engage actively in the quota program's five-year review. The review is a critical opportunity – stakeholders need to demand timeliness, transparency and accountability in the process.

## Reducing Costs and Improving Operational Planning

**Geoff Bettencourt, F/V Moriah Lee**, described that for small ports in California, such as his home port in Half Moon Bay, maintaining the viability of family fishing businesses is a challenge. He highlighted that there are a lot of moving parts, and that the constant changes in the fishery and its regulations make it hard to find stability. Current participants have all invested so much to stay afloat and adapt. Mr. Bettencourt noted that when participants position themselves as individuals rather than as an industry as a whole, it undermines the success of everyone in the fishery. He stressed that approaching the challenges in the program collaboratively is the best way to reduce costs and achieve stability and success for everyone in the fishery.

Mr. Bettencourt shared his experience with electronic monitoring (EM) exempted fishing permits, and described that the process had a huge benefit in providing proof to attest to clean fishing practices and build trust. He suggested that the list of trailing actions could be streamlined by industry cooperating to identify priorities. Additionally, industry collaborations can help provide the Council with the tools to better manage the fishery and address the underlying challenge of stability. Mr. Bettencourt ended his presentation by expressing the hope that by working together the fishery can have a prosperous future.

**Terry Hillman, Catch Shares Field Supervisor, Alaska Observers, Inc**. shared insights into the costs of observer coverage from a service provider perspective. Going into the program, he noted that the high cost of 100% coverage was known going into the program, and that getting observers where they are needed has been a big success. While the costs borne by the industry have increased due to the expiring reimbursement, he noted that the rates for observers have stayed the same since last year.

Mr. Hillman explained that the price for observers and monitors is based on activity and the number of vessels that need coverage. Since the implementation of the quota program, activity has gone down while the number of boats needing coverage has

remained the same. This is the result of more productive (and thus shorter and fewer) fishing trips, and vessels moving in and out of groundfish to participate in other fisheries. Service providers have responded by moving to more seasonal employment for observers, and refining opportunities to hire and retrain staff to encourage retention. He acknowledged the need for electronic monitoring, but noted the implication of EM on observer costs by further reducing activity.

Mr. Hillman noted that while it may be possible to bring costs down, industry members can help service providers avoid any future cost increases by:

- Increasing activity (more trips);
- Improved planning of fishing trips and communication with service providers, particularly avoiding last minute requests with EM; and
- Working together to develop a new model for dockside monitoring in the whiting fishery.

Mr. Hillman concluded by expressing his desire to continue to collaborate and provide feedback in order to provide the industry with the services they require.

**Heather Mann, Executive Director, Midwater Trawlers Cooperative,** shared insights into the costs of electronic monitoring under the whiting exempted fishing permits. EM represents a significant savings for the whiting sector, costing less than $20,000 a year compared to $30,000 - $80,000 for human observers. Ms. Mann shared that the majority of costs with EM for whiting has to do with data storage, and that there is uncertainty as to where and for how long footage needs to be stored. One of the biggest challenges with EM more broadly is that the technology and associated regulations are taking the longest for the people who need it most: the shoreside non-whiting sector. Ms. Mann also noted that while costs may appear to shift to processors for dockside monitoring under EM, the vessels previously subsidized those costs by paying for at-sea observers who also functioned as catch monitors. She suggested continuing to explore options for electronic dockside monitoring.

Ms. Mann highlighted the differences between the observer requirements for the Pacific and New England groundfish fisheries. The industry in New England is subject to only 20% coverage and has begun litigation over bearing the cost for that coverage. In the Pacific, the industry is paying for 100% coverage and is working collaboratively to ensure accountability objectives are met. The industry has made significant investments in cooperative initiatives to support performance in the fishery and achievement of the program's objectives; this cooperative spirit has extended beyond the members in the coops. Ms. Mann noted that her experience working with the agency on EM has been positive, and that all parties have worked together to make EM a reality for the fishery. As the industry and agency get more experience with EM, costs will go down and the benefits will become even greater.

## Harvesting More Fish

**Sara Skamser, Foulweather Trawl,** shared her experience working on gear modifications, and discussed how these innovations can improve target catch and efficiency on the water. Ms. Skamser described her work with halibut excluders and how the development of the gear was a vehicle for cooperation. Working with fishermen, the agency, processors and gear technicians, broke down barriers that had prevented people from working together previously. She noted that fishermen want to do the right thing and avoid bycatch, but didn't know how. Through additional funding and collaboration, Ms. Skamser and her colleagues were able to give the fleet an idea of what tools work and don't work.

Ms. Skamser highlighted several important lessons from her experience developing a number of gear modifications, or gear "filters."

- Sharing information about innovative ways to be more selective in harvesting and avoid bycatch is really important.
- The sense of community that is built by sharing information, talking through problems, and brainstorming creative ideas is critical to the continued success of the fishery.
- Grants and funding for gear testing and analysis can spark more interest and foster more innovation throughout the fleet and reduce costs across the board in the long-term.

**Paul Kujala, Cape Windy Fisheries**, shared his perspective on how pending regulatory changes could support better utilization. He noted that the overlap in historical and new regulations under the quota program is too restrictive and hinders innovation.

Mr. Kujala highlighted four regulatory changes that would support better utilization in the fishery:

- Gear regulations – the selective flatfish requirement is outdated and does not facilitate the targeting of rockfish.
- Mesh restrictions – removing mesh restrictions would allow more innovation with excluders.
- Rockfish conservation areas – fishermen need the ability to follow fish into the RCAs.
- Midwater trawling seasons – removing artificial time constraints would allow for a more efficient midwater fishery.

Under the groundfish quota program, Mr. Kujala emphasized that these historical effort based controls are not longer needed with the individual accountability in the fishery. Fishermen are researchers and innovators, and need the flexibility to collaborate, share ideas and maximize the benefits from the fishery.

**Andrew Bornstein, Bornstein Seafoods, Inc**., discussed the regulatory framework and shared his perspective on specific ideas for harvesting more fish. He began by pointing out that the quota program – a 21$^{st}$ century fishery management tool – was placed on top

of the old 20th century management tool. He stressed that the outdated regulatory framework, consisting of time and area controls such as the RCA and midwater trawling season, needs to be removed. Mr. Bornstein noted that vessels should be allowed to carry multiple gears on board, not only to harvest more fish, but also to align their harvest portfolio with market demand so that the value of catch can be maximized. The current halibut mortality rates applied to the fishery also constrains harvest.

Mr. Bornstein concluded his talk by highlighting how the industry works together and collaborates through informal channels. He stressed that the industry needs more options and more flexibility so that they can do what they are best at – solving the problems that constrain harvest.

**Michelle Norvell, Advisory Member, California Groundfish Collective**, discussed formal risk pools as a strategy for accessing more fish. Ms. Norvell shared her perspective on how collaboration, relationship-building, and risk pools have supported fishing operations in California. The California Groundfish Collective was started in response to a strong desire to maintain viable fishing operations in California South of 40:10 under the new quota program.

Given the small amounts of overfished species quota available to fishermen, they needed to find a way to work with like-minded fishermen who were willing to commit to collaboration across multiple ports and share their information, knowledge, and quota with each other based on common sets of goals and rules.

Ms. Norvell explained that members of the Collective establish goals, develop fishing plans, and create spatial maps to identify important fishing grounds and voluntarily close bycatch hot spots and sensitive habitat areas. The collaborative nature of the Collective has resulted in a very successful local management model that operates within the parameters of the quota program. The information exchange and immediate access to constraining quota has allowed vessel operations in the Collective to fish longer in the year, access historical fishing grounds, and harvest more abundant target stocks while encountering fewer constraining species. The Collective continues to innovate, exploring new ways to increase harvest and add value through markets and new products.

Ms. Norvell concluded her remarks by emphasizing the importance of continuing to build relationships in the fishery, and that those relationships and collaborations are going to be critical for the fishery as a whole to be successful.

## Growing Demand and Increasing Value for the Fish

**Bob Dooley, J&R Dooley, Inc**. shared his experience improving the value of catch in the Bering Sea Pollock fishery by increasing cooperation between harvesters and processors. Under the American Fisheries Act (AFA), the quota assigned to each vessel was generally less than had been previously harvested, which meant that vessels needed to get more money for the fish they were allowed to harvest. Mr. Dooley and his colleagues

engaged with processors to understand what they needed (quality and species), and how they could align harvest to get a better price for their catch. Through this process, a group of industry members negotiated an incentive-based schedule that paid premiums for the quality and product delivered. A modified version of this incentive system was rolled out to the entire fleet, which encouraged the industry to really focus on quality. By focusing on quality and working together to share the risk with the processors, the fleet was able to achieve a much higher ex-vessel price.

Mr. Dooley noted that he learned a lot through this process, and that by slowing down and investing in value, both the processors and the industry benefitted. He emphasized that the key to understanding what different players in the supply chain need is communication. Mr. Dooley concluded by expressing the hope that through increasing cooperation and building trust, processors and harvesters can work together to increase the value in the Pacific groundfish trawl fishery for all involved.

**Mike Okoniewski, Fisheries Policy and Management Supervisor, Pacific Seafoods**, began his presentation by highlighting that good things can happen when people work together and understand their roles in the supply chain. He noted that for non-whiting the most value is in fresh markets, however, hitting fill rates and competition with imports constrains access to these markets. Mr. Okoniewski shared optimism that by aligning the efforts of harvesters, processors and retailors, we could increase the amount of product arriving in the market, increase demand and maximize value for everyone in the supply chain.

Mr. Okoniewski also shared his thoughts on the program's performance more broadly, stating that the non-whiting groundfish fishery is an economic sinkhole. For example, Pacific Seafoods has lost 45% of its fillet workforce since the program began due to extended lapses in groundfish deliveries. The British Columbia groundfish fishery was held up as a model when the Pacific quota program was being developed, but the program has yet to produce comparable economic performance due to a number of variances in the regulatory frameworks. Mr. Okoniewski highlighted several areas of poor performance in the fishery:

- Inconsistent fresh market supply chain;
- Vessel and processor revenues are stagnant or reduced;
- Costs to vessels and processors have increased;
- ACL attainment rates have decreased across the board;
- Trailing amendment process is confusing to the industry.

To address these areas of poor performance, Mr. Okoniewski suggested making net economic benefit and optimum yield the first priority, increasing regulatory flexibly (vessel caps, access to quota, covering overages), reducing costs, and exploring ways for the industry to take more ownership in the fishery (such as through formal coops). Presentation materials are available the West Coast Trawlers Network website.

**Daisy Berg, Seafood Buyer/Merchandiser, New Seasons Market**, shared a retailor perspective on how to generate demand and increase value for groundfish. She

emphasized the importance of customer engagement and consumer education in promoting seafood. Seafood often intimidates consumers; it's expensive, unfamiliar and people are uncertain about how to handle and cook the product. Ms. Berg outlined that promoting seafood through ads, doing cooking demonstrations, and telling the story behind the product break down these barriers. Consumers are increasingly interested in where their food is coming from; sharing information about where the product is coming from, how it was caught, and connecting with fishermen behind the product can all help to tell the story and increase value.

Ms. Berg emphasized the importance of consistency and quality. A more consistent presence of groundfish products can help increase demand and thus value. Consistency also allows retailors to market and promote the product to move more volume. Finally, Ms. Berg highlighted the opportunity to tap into the local food movement. Helping consumers understand that the products in the seafood counter come from local fisheries can help tell the story and connect consumers with local products.

**Anthony Jordan, Whole Foods Market,** began by reflecting on how the fishery has changed over the last five years. Retailors have seen a tremendous change – an estimated 50-60% increase on dover sole, petrale sole, and sablefish, all as a direct result of the quota program. The program has improved the continuity of products, and helped to create stronger markets. He noted that there are a lot of opportunities on the table to continue to increase the value of the groundfish fishery.

Mr. Jordan highlighted some tools that could be used to increase demand to keep fishermen and processors busy with supply:

- Focus on planning so that promotions (e.g., digital coupons, weekender specials, discounted weekly flyers, one-day-only events and flyer coupons) can drive sales before the fish even hits the counter;
- Maintain and develop good working relationships with distributors and processors;
- Expand the market for Pacific groundfish across the country to increase demand; and
- Leverage Marine Stewardship Council (MSC) certification in marketing.

Mr. Jordan closed by highlighting the potential in the fishery that could be realized with better utilization. Harvesters, processors and retailers are all connected. Whole Foods likes to support the people and the business in the fishery; everyone in the supply chain benefits from increasing utilization, demand and value for groundfish.

## Looking Ahead: The Future for Communities, Retiring Fishermen and New Entrants

**Suzanne Russell, Social Scientist, Northwest Fisheries Science Center**, shared information and insights from a voluntary social and cultural study conducted in the groundfish fishery from 2010-2012. Fishing tends to be an intergenerational occupation;

results from this study show that the majority of study participants learn about and enter the fishing profession from their families. However, Ms. Russell noted that she and her colleagues are beginning to see a break in this legacy, which may be due to disinterest by younger generations, or the need to use fishing investments (e.g., vessels and quota) to support retirement.

Ms. Russell also discussed how many study participants talked about age, and the "greying" of the fleet. The average age of participants in the fishery (harvesters, infrastructure and service industry members) is above 50 years old, and it appears that there are not a lot of younger individuals entering the fishery. Ms. Russell noted that there are some caveats to the greying trends in some communities, but it appears to be a general trend at this point in the data collection effort. This trend may have some negative implications in terms of losing critical institutional knowledge and skill needed to engage in the trawl fishery. Presentation materials are available on the West Coast Trawlers Network website.

**Kevin Dunn, F/V Iron Lady**, shared how he entered the fishery and came to operate a trawl vessel. He noted that there is not a lot of new blood in the fishery, though there is some money to be made. Mr. Dunn noted that while the challenges in the fishery are different for every operator, his success has resulted from focusing on communication. Developing strong relationships with processors has allowed him to better understand processor pricing structures and marketing mechanisms so that he can tailor his behavior to maximize profit. Mr. Dunn concluded by touching on the adaptive management quota, hoping that if it is no longer passed through to quota owners, that current operators have the opportunity to access that quota.

**Steve Scheiblauer, Harbormaster, City of Monterey, CA,** reinforced that the problems discussed over the course of the workshop make for a challenging situation in California, and shared some key challenges that create a grim situation for Monterey:

- The loss of quota shares, permits, and boats to other ports;
- Species caps make a community structure harder to manage;
- High cost and difficulty securing observers;
- The pace of regulations is too slow to keep up with managing a dynamic fishery, as evidenced by the time that it is taking to develop electronic monitoring;
- Loss of markets, processing infrastructure, reliable deckhands and fishing opportunity; and
- Choke species limit the overall effort in the fishery and the ability for smaller boats to participate through gear switching.

Mr. Scheiblauer emphasized that the solutions to these problems starts with community support. The City of Monterey prepared a fishing community sustainability plan to restore its groundfish fishery and support other key infrastructure. The City is invested in its fisheries and established the Monterey Bay Fisheries Trust to help keep groundfish trawl quota in the community. The trust borrowed money to acquire locally grounded quota and hopes to lease quota at a discount and re-establish the processing capacity in Monterey that was lost years ago.

Mr. Scheiblauer also discussed the topic of new entrants. In order for new individuals to enter the fishery, they need to see a future. Creating a sense of hope and a clear path for advancement is critical to maintain the success of current participants and to promote the success of future participants. Community investments in the fishery, such as the Monterey Bay Fisheries Trust, are a step in this direction.

**Lisa Damrosch, Half Moon Bay Commercial Fisheries Trust**, began her talk by expressing appreciation for the group in recognizing that communities and vessels in California face a different suite of challenges. Despite these challenges, participants south of 40/10 have succeeded in some very important ways and have implemented some really innovative approaches. In addition to participating in the California Groundfish Collective, Half Moon Bay formed a Commercial Fisheries Trust. The goals of the trust are to anchor historical quota in the community and to provide support for conservation fishing businesses. To support local businesses, Ms. Damrosch emphasized the purpose of the Trust in supporting the conservation gains of the Collective and operating a lean organization. Creating entities or staff that add more cost to industry without adding significant value does not truly "support" the industry.

Ms. Damrosch concluded her presentation by reflecting on the topic of new entrants. She raised the question of what is meant by "new entrants," and explained that focusing on new entrants at this point in time may not be appropriate. She suggested instead focusing on shoring up the fishery's foundation with the participants who have fought so hard to remain in the fishery. Creating stability in the fishery with existing participants will then allow future opportunities for new entrants. Ms. Damrosch concluded her presentation by sharing her belief and hope that the fishery has a bright future ahead.

## Putting It All Together

**Emily Menashes, Deputy Director, NOAA Fisheries Office of Sustainable Fisheries**, shared some reflections on the two days of workshop discussions. The goal of the meeting was to facilitate the exchange of information, ideas and solutions, and the group had some productive conversations about where to go from here. Ms. Menashes noted that the fishery has a really good foundation – accountability and transparency, robust data and the strong biological state of the fishery provide options for moving ahead. Participants want the groundfish trawl fishery to be successful now and in the future, and share a common goal about how to make the fishery better for everyone involved. Ms. Menashes also reflected on the challenges with the program – costs, limitations, utilization and quota movement. With the information in the fishery and the desire to solve these problems, she expressed that the group can do a lot to overcome these barriers.

Ms. Menashes noted that with the progress to date and addressing the current challenges, there is significant potential in the fishery to do innovative things and leverage new tools. There is a strong desire to get there and a lot of consistency and synergy among

workshop participants in how to move forward. Ms. Menashes concluded her remarks by emphasizing that NMFS believes in these types of programs and wants the groundfish trawl rationalization program to be successful. She and her colleagues will continue working at the national level to support the program.

**Rod Moore, Senior Policy Advisor, West Coast Seafood Processors Association,** reflected on what he heard at the workshop. He shared that what come across loud and clear is that IQs are not bad in theory, but in practice have some real problems. To address these problems, the fishery needs to get more fish out of the water, to the processor, and to the consumer – and to do that consistently and reliably. Mr. Moore emphasized that once ACL utilization is increased, a lot of the other problems are solved. For example, the relative costs of observers, buyback and cost recovery all go down when the industry is generating more revenue.

In order to harvest more fish, regulatory changes are needed. Mr. Moore highlighted the changes in the pipeline (gear changes, RCAs, vessel limits), and the outcomes from the five-year review. He shared his frustration with the time that it takes to make these changes happen, and expressed concern about the timeline for implementing any changes resulting from the program review. Mr. Moore concluded his remarks by asking the Council to please find a way to speed up the process so that the industry can get more fish out of the water.

**Don McIsaac, Executive Director, Pacific Fishery Management Council**, began by congratulating the workshop organizers on a successful workshop and stating that from his perspective the workshop will serve as a good precursor for the five-year review required by the Magnuson-Stevens Act. He also responded to stated concerns that work on the trailing actions associated with the catch-share program will stop during the review; he emphasized that the Council is currently planning on continuing the work on ongoing actions in the pipeline and submitting them to NMFS for Secretarial review on schedule.

Dr. McIsaac reflected on the trawl rationalization program's performance from a high, big-picture level, and shared that from this vantage point the beginning years of the program have not been a failure for West Coast groundfish fishery management. He noted that the program was developed in response to a request from fishermen that they needed a new approach to management of the groundfish trawl fishery, because it just wasn't working. Prior to the program, the fishery was managed by trip limits, had issues with discards, and required lengthy in-season management. Additionally, public relations issues about the impacts of bottom trawling plagued the trawl fishery. The economics of the fishery were poor and the groundfish fishery was declared a disaster by the federal government standards. He reminded participants that when reviewing the last five years of the trawl rationalization program, it's important not to forget the major problems that came before.

Dr. McIsaac noted that while the economics in the fishery are improving overall, looking at the program in closer detail is entirely appropriate, and there are things that can and

need to be better. There are some things can be done by the industry without Council action, some by NMFS without Council action, and some through Council action; both in the near term and following a close examination of the program through the five-year review.

Dr. McIsaac shared thoughts from a Council perspective about what the Council might do to support improvement in the fishery:

Reducing costs through:

- Continuing to move forward with electronic monitoring;
- Reviewing the cost recovery program in the spirit of transparency; and
- Supporting the industry's efforts in refinancing the buyback loan.

Harvesting more fish by:

- Enhancing flexibility in dealing with choke species;
- Relaxing gear restrictions; and
- Reevaluating the RCAs closures.

He supported the value of increasing market demand and value through collaboration and positive branding, but noted that those efforts are largely outside the Council's purview. Dr. McIsaac closed by remembering the role that industry innovation has had in the success of the fishery. This can reinforce further innovation by industry and managers to continue moving improvements forward.

## Appendix 3: Workshop Steering Committee and Sponsors

**Workshop Steering Committee Members**
Geoff Bettencourt, F/V Moriah Lee
Andrew Bornstein, Bornstein Seafoods, Inc.
Michele Longo-Eder, F/V Timmy Boy Argos, Inc.
Shems Jud, Environmental Defense Fund
Paul Kujala, Cape Windy Fisheries
Rex Leach, Ms. Julie, Inc.
Frank Lockhart, NOAA Fisheries West Coast Region
Dorothy Lowman, Lowman and Associates
Heather Mann, Midwater Trawlers Cooperative
Rod Moore, West Coast Seafood Processors Association
Michelle Norvell, Ft Bragg Groundfish Association
Brent Paine, United Catch Boats
Brad Pettinger, Oregon Trawl Commission
Jim Seger, Pacific Fishery Management Council

**With additional support from:**
Lisa Damrosch, Half Moon Bay Commercial Fisheries Trust
Bob Dooley, J&R Dooley, Inc.
Lori Steele, West Coast Seafood Processors Association
NOAA Fisheries Staff: Abigail Harley, Erin Steiner, Sarah Towne and Jon McVeigh

**Workshop Sponsors:**
Environmental Defense Fund
Fisherman's Marketing Association
Midwater Trawlers Association
NOAA Fisheries
Oregon Trawl Commission
United Catcher Boats
West Coast Seafood Processors Association

**Fish Donation:**
Bornstein Seafoods, Inc.

**Facilitators:**
David Crabbe
Kim Gordon
Caitlin Hamer
Amy Kenney
Katie Latanich
Jennifer Ise

**Poster Session Coordinator:**
Abigail Harley

**Workshop Branding and Visual Design:**
DeLapp Design, Inc.

**AV Team:**
Todd Campbell, The AV Department
Jonathan Wade and Staff, AVMS

**Videographer**:
Chris Peterson, Portland Center for the Media Arts

## Appendix 4. Participant List

| Name | Affiliation |
|---|---|
| Marit Aarvik | Windjammer Fish Northwest Inc. |
| Maggie Allen | NOAA; Pacific States Marine Fisheries Commission |
| Chris Allinson | F/V Miss Leona, Captain |
| Jada Anderson | Wilderness Markets |
| Phil Anderson | Pacific Council Member |
| Albert Arthur | NOAA |
| Don Ashley | F/V Gold Rush Fisheries LLC |
| Daisy Berg | New Seasons Market |
| Geoff Bettencourt | F/V Moriah Lee |
| Steve Bodnar | Coos Bay Trawlers' Association, Inc. |
| Andrew Bornstein | Bornstein Seafoods |
| Nathan Braun | PSMFC |
| Jimmy Burns, Jr. | F/V Ossian; F/V Ocean Invictus |
| Sarah Calhoun | NOAA; Pacific States Marine Fisheries Commission |
| Christi Campbell | Pacific States Marine Fisheries Commission |
| Susan Chambers | West Coast Seafood Processors Association |
| Carrie Chioino | Irene's Way |
| Kimberlee Cochran | Marathon FV; New Life FV; Bay Islander FV |
| Keith Cochran | F/V Bay Islander |
| April Cochran | F/V Bay Islander |
| Dave Colpo | Pacific States Marine Fisheries Commission |
| Mark Cooper | F/V Pacific |
| Nanci Cooper | F/V Pacific |
| Casey Cooper | F/V Pacific |
| John Corbin | Buck & Ann Fisheries |
| Scott Coughlin | Fieldwork Communications |
| David Crabbe | PFMC Council Member |
| Craig Cross | Aleutian Spray Fisheries |
| Lisa Damrosch | Half Moon Bay Groundfish Marketing Assoc.; Half Moon Bay Commercial Fisheries Trust |
| Jessi Doerpinghaus | Washington Department of Fish and Wildlife/GMT |
| Carolyn Doherty | Fisheries Leadership & Sustainability Forum, Contractor |
| Courtney Donovan | Pacific States Marine Fisheries Commission |
| Bob Dooley | J & R Dooley Inc |

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| Kevin Dunn | F/V Iron Lady |
| Trisha Dunn | F/V Iron Lady |
| Christina Durham | NOAA |
| Michele Longo Eder | F/V Timmy Boy Argos, Inc. |
| Bob Eder | F/V Timmy Boy Argos, Inc. |
| Jake Erickson | Alyssa Ann |
| Tom Estes | F/V Tara Dawn, Inc. |
| Julee Estes | F/V Tara Dawn, Inc. |
| Steve Fitz | F/V Mr. Morgan; Mr. Mogan Fisheries, Inc. |
| Sherry Flumerfelt | Monterey Bay Fisheries Trust |
| Dave Fraser | Whiting Mothership Cooperative |
| Kim Gordon | Fisheries Leadership & Sustainability Forum; Facilitator |
| Marc Gorelnik | PFMC; Coastside Fishing Club |
| Marie Guldin | NOAA Fisheries, Northwest Fisheries Science Center |
| Caitlin Hamer | Fisheries Leadership & Sustainability Forum; Facilitator |
| Stacey Hansen | Saltwater, Inc. |
| Abigail Harley | NOAA Fisheries |
| Peter Hassemer | Idaho Fish and Game - Council Member |
| Julian Hawkins | IQMI (Integrated Quota Management Inc.) |
| Brett Hearne | F/V Last Straw Ltd. |
| Eileen Hearne | F/V Last Straw Ltd. |
| Gerry Hemmingsen | POLLUX |
| Phoebe Higgins | Environmental Defense Fund |
| Terry Hilman | Alaskan Observers, Inc. |
| Melissa Hooper | NOAA |
| Warren Howe | Ilwaco Landing Fishermen |
| Stoian Iankov | F/V Michelle Renee; Black Sea Fisheries, Inc. |
| Jennifer Ise | NMFS WCR |
| Jan Jacobs | American Seafoods |
| Anthony Jordan | Whole Foods |
| Shems Jud | Environmental Defense Fund |
| Kate Kauer | TNC (The Nature Conservancy) |
| Amy Kenney | Fisheries Leadership & Sustainability Forum; Facilitator |
| Thomas Kent | F/V Lady Cecelia |
| Tim King | Mark I Inc - F/V Mark I |
| Gway Kirchner | The Nature Conservancy |
| Paul Kujala | Cape Windy Fisheries |

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|---|---|
| Ana Kujundzic | Pacific Seafood |
| Jeff Lackey | Seeker; Miss Sue |
| Katie Latanich | Fisheries Leadership & Sustainability Forum; Facilitator |
| Jesse Latham | IQMI (Integrated Quota Management Inc.) |
| Randy Layman | Marie Kathleen |
| Rex Leach | Ms. Julie; Texas Lady; Cap Eliza |
| Chris Leach | Ms. Julie; Texas Lady; Cap Eliza |
| Chang Lee | Da Yang Seafood |
| Tom Libby | California Shellfish CO., Inc. |
| Richard Lincoln | PFMC - Council Member |
| Frank Lockhart | NOAA Fisheries - West Coast Region |
| Amy Loewen | EDF Consultant |
| Dorothy Lowman | Consultant |
| Mike Luchino | Trident Seafoods |
| Katherine Mah | Environmental Defense Fund |
| Heather Mann | Midwater Trawlers Cooperative |
| Dayna Matthews | NOAA/OLE |
| Johnny May | F/V Lady Cecelia |
| Howard McElderry | Archipelago Marine Research Ltd. |
| Huff McGonigal | Fathom Consulting |
| Donald McIsaac | PFMC (Pacific Fisheries Management Council) |
| Jon McVeigh | NOAA Fisheries - NWFSC Observer Program |
| Emily Menashes | NOAA |
| Michael Millstein | |
| Blair Miner | Columbian Star |
| James Mize | Premier Pacific Seafoods, Inc. |
| Rod Moore | West Coast Seafood Processors Association |
| Robert Mussgnug | Pacific Seafood |
| Dale Myer | Sea Storm |
| Roxanne Nanninga | Environmental Defense Fund |
| Corey Niles | WDFW (Washington Department of Fish and Wildlife) |
| Roxanne Noble | F/V Miss Leona |
| Donna J Norvell | Donna J |
| Michelle Norvell | FB Groundfish Conservation Trust & CA Groundfish Collective |
| Bernie Norvell, Sr. | Donna J |
| Dwayne Oberhoff | Morro Bay Community Quota Fund |
| Sarah O'Brien | Environmental Defense Fund |

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| Dan Occhipinti | Pacific Seafood |
| Mike Okoniewski | Pacific Seafood |
| Brent Paine | United Catcher Boats Association |
| Burt Parker | Pacific Challenger |
| Peggy Parker | SeafoodNews.com |
| Kyle Pemberton | F/V Mr. Morgan; Mr. Morgan Fisheries, Inc. |
| Giovanni Pennisi | Irene's Way |
| Giuseppe Pennisi | Pioneer |
| Alan Perzanowski | Saltwater, Inc. |
| Christopher Peterson | Pacific Challenger |
| Brad Pettinger | Oregon Trawl Commission |
| Lisa Pfeiffer | NOAA/NMFS/NWFSC |
| Herb Pollard | Private Citizen; PFMC Member |
| Michael Retherford | Excalibur; Winona J; Mandy J |
| Kelley Retherford | Excalibur; Winona J; Mandy J |
| Michael Retherford | Winona J |
| Tia Retherford | Winona J |
| Chris Retherford | Excalibur; Winona J; Mandy J |
| Angie Retherford | Excalibur; Winona J; Mandy J |
| Gary Ripka | Western Breeze |
| Tom Rudolph | The Pew Charitable Trusts |
| Suzanne Russell | NOAA Fisheries |
| Colin Sayre | University of Washington: School of Marine and Environmental Affairs |
| Steve Scheiblauer | City of Monterey |
| James Seger | Pacific Fishery Management Council (Staff); NOAA |
| John Serra | Office of Congressman Kurt Schrader |
| Mike Shirley | Ilwaco Landing Fishermen |
| Sara Skamser | Foulweather Trawl, LLC |
| Robert Smith | F/V Raven |
| Dave Smith | Lisa Melinda |
| Aileen Smith | Pacific States Marine Fisheries Commission |
| Maggie Smith | NOAA Office of General Counsel |
| Mary Sober | SEARCHER1 |
| Jeff Sober | SEARCHER1 |
| Maggie Sommer | ODFW (Oregon Department of Fish and Wildlife) |
| Chris Sposeto | F/V Moriah Lee |
| Lori Steele | West Coast Seafood Processors Association |

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| Erin Steiner | NOAA - Northwest Fisheries Science Center |
| Mike Storey | F/V Pegasus |
| Rachel Strader | Gordon & Betty Moore Foundation |
| Andrew Theriault | Pacific States Marine Fisheries Commission |
| Sarah Towne | NOAA Fisheries |
| Chuck Tracy | NOAA; PFMC |
| Bob Turner | NOAA/NMFS |
| Max Van Oostenburg | NOAA; Pacific States Marine Fisheries Commission |
| Denise Vandecoevering | F/V Karen |
| David Vandecoevering | F/V Karen |
| Tony Vandecoevering | F/V George Allen |
| Irene Vandecoevering | F/V George Allen |
| Ali Vander Zanden | Office of Congresswoman Suzanne Bonamici |
| Kyle Venema | Aleutian Spray Fisheries (West Coast Fishery Investments) |
| Daniel Waldeck | Pacific Whiting Conservation Cooperative |
| Kate Wilson | Archipelago Marine Research Ltd. |
| Dan Wolford | PFMC; Coastside Fishing Club |
| Casey Wray | F/V Ocean Invictus; Ocean Invictus LLC; Olympic Star LLC; Rainier Star LLC |
| Dave Wright | Pacific Shrimp General Manager |
| Tyson Yeck | Pacific Seafood |

## Appendix 5: Groundfish Trawl Cost Profile

Workshop participants highlighted a suite of costs that are incurred by harvesters and processors in the groundfish trawl rationalization program fishery. Many of these costs are discussed in section 4.1. This is not a comprehensive list, and is included here to capture additional information from these discussions.

***Operational costs*** include the day-to-day operational expenses of running a fishing business; both variable and fixed costs.

***Fixed costs*** include costs that do not vary with output or effort level, such as:

- Insurance
- Storage for gear and equipment
- Harbor Fees
- Moorage
- Purchase/lease of vessel
- Safety (survival suits, rafts, etc.)
- Maintenance
- Technology and communication equipment and upgrades
- Depreciation in assets
- Marketing
- Fishing gear
- On-board equipment
- Processing equipment
- Building rental/lease

***Variable costs*** change with the level of effort and output, such as:

- Fuel
- Groceries for trips
- Daily maintenance
- Power/utilities
- Bait
- Captain and crew share
- Processing crew/other labor
- Personnel costs
- Fishing supplies
- Processing supplies
- Shrink/spoilage
- Ice/refrigeration
- Offloading fees
- Packing materials

***Management costs*** include the management and regulatory costs associated with participating in the fishery, such as:

- Buyback loan payments
- Cost recovery fees
- Observer costs (including travel and expenses above daily rate)
- Catch monitoring costs
- State landings taxes
- Quota share and quota pound lease/purchase (e.g., fees, price of quota, interest on debt)
- Submitting logbooks and required documentation
- Purchase/lease of permits

***Administrative costs*** include costs in addition to the traditional costs of running a business, both time and expenses, associated with managing participation in the quota program, such as:

- Fishing organization and licensing fees/expenses (trade organizations, cooperatives and risk pools)
- Quota management expenses (e.g., bookkeeping, trading)
- Keeping up on changing regulations

- Professional services (e.g., quota managers, cooperative/risk pool managers, bookkeepers for economic data collection and taxes)
- Arranging observer and monitoring coverage
- Lawsuits and legal fees
- Lobbying
- Continued education (e.g., workshops)
- Participation in the Council process

***Indirect costs*** include costs that can result from missed opportunity, such as forgone harvest/revenue or unproductive use of time. Examples of these costs include:

- Opportunity costs (e.g., lost revenue from participating in the groundfish fishery rather than another fishery)
- Foregone revenue due to interruptions and delays in business (e.g., waiting for observers, sitting out while covering overages)
- Foregone revenue due to delays in implementing trailing actions
- Costs of quota overages or lightning strikes (e.g., costs of purchasing quota, or forgoing fishing)
- Lack of quota value assessment (e.g., not using quota as collateral)
- Investments in research & innovation

# Appendix 6. Program Goal and Objectives

**Trawl Catch Shares (Amendment 20) Goal and Objectives**

**Goal**

Create and implement a capacity rationalization plan that increases net economic benefits, creates individual economic stability, provides for full utilization of the trawl sector allocation, considers environmental impacts, and achieves individual accountability of catch and bycatch.

**Objectives**

The above goal is supported by the following objectives:

1. Provide a mechanism for total catch accounting.
2. Provide for a viable, profitable, and efficient groundfish fishery.
3. Promote practices that reduce bycatch and discard mortality and minimize ecological impacts.
4. Increase operational flexibility.
5. Minimize adverse effects from an IFQ program on fishing communities and other fisheries to the extent practical.
6. Promote measurable economic and employment benefits through the seafood catching, processing, distribution elements, and support sectors of the industry.
7. Provide quality product for the consumer.
8. Increase safety in the fishery.

Constraints and Guiding Principles: The above goals and objectives should be achieved while the following occurs:

1. Take into account the biological structure of the stocks including, but not limited to, populations and genetics.
2. Take into account the need to ensure that the total OYs and allowable biological catch (ABC) are not exceeded.
3. Minimize negative impacts resulting from localized concentrations of fishing effort.
4. Account for total groundfish mortality.
5. Avoid provisions where the primary intent is a change in marketing power balance between harvesting and processing sectors.
6. Avoid excessive quota concentration.
7. Provide efficient and effective monitoring and enforcement.
8. Design a responsive mechanism for program review, evaluation, and modification.
9. Take into account the management and administrative costs of implementing and oversee the IFQ or co-op program and complementary catch monitoring programs, as well as the limited state and Federal resources available.

# Appendix 7. Trailing Actions

**Trawl Catch Shares – Trailing Action Pipeline**

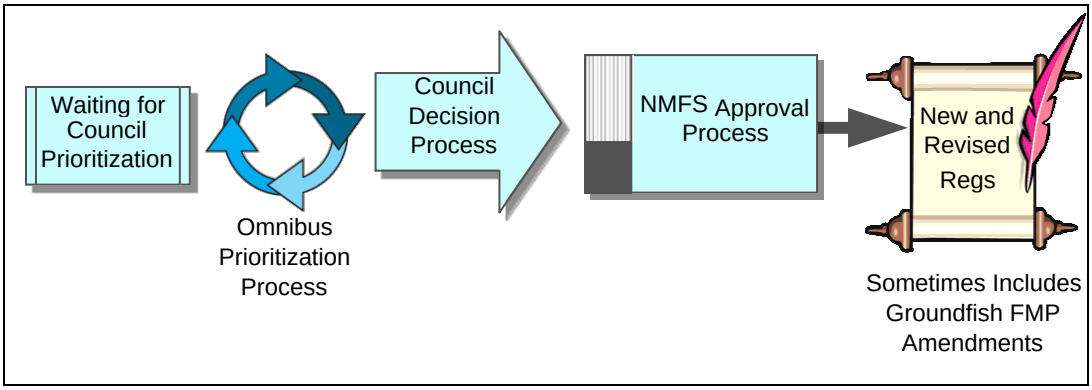
Current as of February 2016

After completing work on the catch share program (Amendment 20) and its implementing regulations, the Council began a series of trailing actions for the program, which have continued up through the present. These trailing actions:

- Complete elements of the program that were outstanding at the time of its implementation in 2011 (e.g. rules for the distribution of the quota set aside for the Adaptive Management Program and safe harbors from control rules for risk pools);
- Respond to problems with the program that have been identified post implementation (e.g. effective implementation of quota pound QP carry over provisions); and
- Modify pre-trawl rationalization regulations, which were outdated by the trawl rationalization program (e.g. elimination of certain gear restrictions based on individual accountability and 100 percent at-sea monitoring of catch).

To date, eleven trailing action rules have been published--some covering multiple trailing actions issues.

## The Pipeline and Omnibus Process




The trailing action pipeline includes items in the wings (waiting for Council prioritization), an omnibus prioritization process, the Council decision process, and the NMFS approval process that leads to the publication of new or revised regulations. Potential actions identified at this workshop will start as ideas waiting in the wings, unless they are already part of the Council decision process or further down the pipeline.

Every two years the Council engages in a groundfish omnibus process during which it prioritizes groundfish management issues that will enter the process for the coming two year period. This process includes consideration of conservation and management issues related to all groundfish sectors. The next omnibus process is scheduled for the June 2016 Council meeting.

The Council decision process usually takes at least two Council meetings, and additional time is generally required to develop policy and the accompanying analysis. Once the Council takes final action, that action is forwarded to NMFS for review and approval. If approved by NMFS, the action results in new and revised regulations. Some actions also may also entail amendments to the groundfish fishery management plan (FMP).

## What's In the Current Pipeline?

Items in the pipeline are tracked on the trawl trailing action webpage (http://bit.ly/17PlFT7). A date at the top of the page indicates the last full update of that page. A full update of the current page was completed on February 2, 2016. The following is a list of the more significant trailing actions that are in the pipeline.

### Starting With the End – Items Awaiting NMFS Approval

| In NMFS Process | |
|---|---|
| Item | Status |
| **Electronic Monitoring (EM)**. Midwater whiting trawl and fixed gear | Council has selected it final preferred alternative but needs to approve draft proposed regulations prior to formal start of the NMFS approval process. That Council approval is scheduled for April 2016 Council meeting. *Tentative timing for NMFS action:*<br>Proposed rule – summer 2016<br>Final rule – fall 2016 |
| **Electronic Monitoring**. Midwater nonwhiting (pelagic rockfish) trawl and bottom trawl | Council has taken final action but regulations are still under development, partially contingent on results from the EM exempted fishing permits (EFPs). The number of vessels authorized in the EM EFPs will likely be expanded and NMFS will be considering extension of the 2015-2016 EFPs into the 2017-2018 management period. Implementation is expected sometime in 2017 at the earliest. |
| **Joint Registration.** Allowing fixed gear and trawl permits to be jointly registered to the same vessel at the same time | *Tentative timing for NMFS action:*<br>Proposed Rule – summer 2016<br>Final Rule – fall 2016<br>Effective January 1, 2017 |
| **Widow Rockfish Quota Share (QS)** | *Tentative timing for NMFS action:* |

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| **Reallocation**. Because widow rockfish was overfished but the stock has now been rebuilt, widow QS is being reallocated. Widow QS trading moratorium in effect until reallocation is completed | Rule-making dates to be determined – effective 2017 |
| **Removal of Blackgill Rockfish from the Slope Rockfish Complex**. Blackgill rockfish south of 40° 10' N. latitude is currently managed in the southern minor slope rockfish complex. | *Tentative timing for NMFS action:* Rule-making dates to be determined – effective January 1, 2018 |

## In the Middle – Items the Council is Working On

| In Council Process | |
|---|---|
| Item | Status |
| **Vessel Movement Monitoring**. Allowing vessels to change declarations from at-sea whiting to shorebased IFQ while at sea and to test gear without an observer on board (other issues covered in this package are not considered trawl trailing actions). | The Council is expected to take final action at its April 2016 meeting. NMFS projects implementation by the start of 2017. |
| **Gear Rule**. The gear rule covers a suite of eight issues, as follows: (1) minimum mesh sizes, (2) measuring mesh size, (3) codend regulations, (4) selective flatfish trawl, (5) chafing gear, (6) multiple gears on board, (7) fishing in multiple management areas, and (8) fishing before previous catch is stowed. These actions are intended to eliminate or liberalize regulations that are less needed given the individual accountability of the trawl catch share program. | Council final action is scheduled for its March 2016 meeting. NMFS projects publication of a final rule by the fall of 2016. |
| **Area Modifications.** The Council is considering trawl RCA modifications concurrently with the essential fish habitat (EFH) amendment process. This package includes consideration of whether or not to reduce or eliminate the areas closed to trawl gears by the trawl RCA, as well as modifying EFH closed areas. | The Council selected a range of alternatives at its September 2015 meeting and is scheduled to address the issue again, potentially narrowing the range of alternatives, at its April 2016 meeting. Selection of a preliminary preferred alternative is tentatively scheduled for the September 2016 Council meeting and final Council action is scheduled for November 2016. |
| **Allow Between Sector Transfers of Rockfish QP from the Shorebased to** | At its March 2016 meeting, the Council will decide whether to include this action in its |

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| **Mothership Sector.** This measure would allow participants in the mothership (MS) sector to use shorebased QS for mothership deliveries of four rockfish species (canary, darkblotched, widow, and Pacific Ocean perch). The total QP that could be transferred to the MS sector would be limited. | 2017-2018 management measures, and, if so, take final action at its June 2016 meeting. |

## Ending With the Start – Items Awaiting Council Prioritization

The following items have not been prioritized for work at this time but may be taken up after items on the current workload list are addressed or through EFPs.

**Sablefish Weight Conversions.** Consider revisions to weight conversion factors and conversion for new product forms based on new information.

**Size Endorsements.** Consider eliminating limited entry permit size endorsements.

**Year-Round Whiting Fishery.** Consider a year-round whiting opening for all trawl sectors (shorebased, mothership, and catcher-processor).

**Surplus QP Carryover for Nonwhiting.** Resolve long-term surplus QP carryover provision for nonwhiting species to ensure surplus carryover can occur each year.

**Trawl IFQ Carryover When Management Units Change.** Consider adding provisions to cover how carryover should be handled when there is a reallocation as a result of changes in management areas (area subdivision, combination, or line movement) or subdivision of a species group. This issue was identified with the recent geographic subdivision of lingcod and relates to 50 CFR 660.140(c)(3)(vii).

**Allow Trading of Previous Year Quota Pounds in Current Year.** Consider allowing the trading of QP issued for a previous year to occur in the current year up until the last landings data for the previous year is in the catch and QP accounting system. This would allow greater flexibility for the fleet as a whole to use unused QP from a previous year to cover catch in that year.

**Discard Survival Credit for Lingcod and Sablefish.** Consider providing an IFQ survival credit for discarded lingcod and sablefish, and particularly for the discard of small-sized lingcod—for which discard is currently required.

**Develop Criteria for Distributing Adaptive Management Program QP.** Consider a formula for the distribution of QP issued for QS held for the adaptive management program (AMP). Under the Amendment 20 trawl rationalization program, the shoreside IFQ program includes a set-aside of 10 percent of the nonwhiting QS (including halibut individual bycatch quota, IBQ) for the AMP. The AMP QP, issued each year for those QS, are to be distributed to address the following objectives: community stability; processor stability; conservation; unintended/unforeseen consequences of IFQ management; and

facilitating new entrants. However, to date, the QP associated with this program have been passed through to QS holders on a pro rata basis in proportion to their QS holdings. The Council has recommended that this pass-through continue until after the upcoming catch share program review.

**Allow Between Sector Transfers of Unneeded Overfished Species.** Consider allowing the in-season transfer of choke species between trawl sectors but do not consider changes to any of the existing sector allocations. Choke species are species for which limited quota availability constrains the harvest of other species in a multispecies fishery. The question is whether choke species can be better utilized and/or shared among the trawl sectors to ensure attainments of optimum yield for all target species. The item "Allow Between Sector Transfers of Rockfish QP from the Shorebased to Mothership Sector" is a narrower version of this policy issue.

**Elimination of the Prohibition on Whiting At-sea Processing South of 42$^{o}$ N. Lat.** This issue arose in the context of the need to avoid bycatch. The issue might be explored through an EFP or through regulatory action.

**Use of Midwater Trawl to Target Nonwhiting Year Round in RCAs and EFH Areas North of 40$^{o}$ 10' N. lat.** The National Marine Fisheries Service (NMFS) has suggested that the best route for consideration of this issue would be first as an EFP (see item #12 in Agenda Item D.1.a, NMFS Report 3, June 2015). The EFP would be used to collect information that could then be used to support an analysis of a possible regulatory change. During its next EFP cycle, the Council may consider issuing EFPs to allow this activity. The Council may also consider prioritizing this issue for regulatory action during the omnibus process.

**Use of Midwater Trawl in RCAs South of 40$^{o}$ 10' N. lat.** In the north, midwater trawl gear may be used within the RCAs once the whiting fishery is open. South of 40$^{o}$10' N. latitude, midwater gear may not be used in the RCAs even when the whiting fishery is open. This may be another issue that is explored first through EFPs in order to collect information to support analysis of a regulatory change.

**Additional Gear Issues.** At its September 2015, meeting the Council endorsed a GAP report that included a number of items for the gear regulatory package. Three of the issues covered by that report (by the section on review of existing regulations) could not be moved forward in the gear package without causing a delay in that package. Those three issues will need to be prioritized through the omnibus process for scoping at a later time and are as follows:

- Allow the targeting of whiting with nonwhiting gear.
- Eliminate the distinction between midwater whiting and midwater nonwhiting trips.
- Eliminate the distinction between midwater and bottom trawl gear.

## Appendix 8. Helpful Links

West Coast Trawler's Network

Pacific Fishery Management Council

- Pacific Fishery Management Council: Groundfish
- Pacific Fishery Management Council: Amendment 20
- Pacific Fishery Management Council: Amendment 20 Trailing Actions

NOAA Fisheries: West Coast Groundfish

Economic Data Collection (EDC) Reports

FISHeries Economics Explorer (FISHEyE)