

Developing a Methodology and Indicators for Evaluating West Coast Trawl ITQ Program

DRAFT Workshop Summary Report
February 21, 2011
Portland, Oregon

1 Background

The use of catch shares as a fisheries management tool has become increasingly popular with legislative mandates to end overfishing, rebuild fish stocks, and develop annual catch limits and accountability measures for all fisheries. NOAA Fisheries has provided guidance on the use of catch shares in fisheries management through a National Catch Shares Policy. Catch share programs are getting both positive and negative attention among stakeholders, constituents, in the press, and among lawmakers. Whether these programs are attaining the benefits they promised in their development is the subject of program reviews called for by the new policy. In the case of New England Catch Sectors and the West Coast Trawl ITQ program, both of which are relatively recent entries in the catch share or limited access privilege program sphere, evaluation by NOAA lies in the future. However, it is crucial to establish baselines and performance measures for evaluation at the five-year mark if in the interim we are to gather key information, and adequately monitor the effectiveness of these programs and their total cost to the system.

MRAG Americas and a University of Washington-led team of scientists were contracted by the Gordon and Betty Moore Foundation to conduct a 6-month planning exercise to develop a durable and pragmatic system for monitoring and evaluating performance of U.S. catch share programs, with an emphasis on the Pacific groundfish ITQ program and the New England groundfish sector program. This planning phase is intended to inform future potential grantmaking by the Foundation. These two catch share programs are in the preliminary stages of implementation, and the project team is working to incorporate pre- and post-implementation social, economic, and ecological information. These include: What are the goals against which we judge success of these programs? What is necessary to monitor? What information already exists? Where are there gaps? The goal of this project is to develop a methodology for this investigation that represents multiple disciplines, diverse expertise, and a variety of regional and sector experiences.

The team convened a technical workshop of experts on the West Coast Trawl ITQ program in Portland, Oregon on February 21, 2011. The West Coast Trawl ITQ program was developed through Amendment 20 to the Pacific Groundfish FMP and implemented in January 2011. The purpose of the workshop was to discuss ideas and develop indicators for both evaluating that program and that could apply to assessing other catch share programs. Participants included the MRAG and UW team, NOAA Fisheries scientists and managers, Pacific Fishery Management Council staff, fishery and processor representatives, coop representatives, and conservation advocates. A summary of the discussion is provided here. A complimentary workshop was conducted in Portsmouth, NH on February 7, 2011 to discuss the New England Sector Management Program developed under Amendment 16 to the New England Multispecies FMP. A summary of that meeting is available on the MRAG [website](#).

2 Overarching Principles

Throughout the day a number of ideas circulated repeatedly with respect to evaluating management programs and indicator development. These are provided here as ‘overarching principles’ to inform development of an evaluation plan. This workshop focused on technical measures for consideration in evaluating catch share programs, though catch shares are one tool available to fishery managers and any fishery management tool should be regularly evaluated against performance measure criteria. Overarching principles to consider when developing indicators and evaluating catch share programs include:

General Guiding Principles

- Catch shares are one management tool among many, and all tools used to manage fisheries require evaluation and performance measures.
- The evaluation must be guided first and foremost by the goals and objectives of the programs under review; those goals and objectives come from a hierarchy of sources, including the Magnuson-Stevens Act, and they may or may not be explicit in documents of the catch share program itself. Evaluation should also be explicit about the goals or objectives of the Moore Foundation, which is sponsoring the work. This is extremely important when developing objective indicators.
- The indicators and methodology should be designed to integrate with and support, not duplicate, the performance measures that NOAA Fisheries is developing for its five-year evaluation.
- Success and failure may differ in eye of the beholder. Indicators need to be neutral/non-normative; provide analytical information that can be used for variety of perspectives.

Establish a Baseline

- It is important to establish a clear baseline for measurements, and to accept that this baseline will shift with data availability.
- Identify distinct time periods in which events occurred that significantly affected the fishery.
- For West Coast these might be 1997-2003 reductions in allowable catch because of MSA, participants remained constant; 2003-2010, buyback which changed effort but not biological effects; rockfish conservation zone closures; continued low catches constrained by overfished species; 2010-onwards, and post IQ.

Data Considerations

- When establishing indicators consider that there may be sources of data available outside of the agency, including studies free from the NMFS rule against reporting on units where there are fewer than three entities involved. Ensure that confidentiality rules do not force aggregations of data that may mask significant information about outcomes and consequences.
- There must be precaution taken with aggregation of data; averages can and mask valuable information.
- Be cautious about periodicity of assessment and management feedback cycle, e.g. frequency of stock assessments and interval between when surveys conducted and information analyzed and reported.

Socioeconomic Considerations

- Consider socio-economic and ecological factors in parallel, particularly if the expectation is that economic benefits will only follow from ecological responses. The notion of “sustainability” should incorporate both socio-economic sustainability matters and ecological ones, and identify that there is some degree of interrelationship.
- Capture a snapshot of what existed prior to the program in terms of business value, community economic condition, age of fleet, who wanted to get out who could not because no value.

3 Data Considerations

There was discussion during the workshop on data availability and current evaluation efforts underway. The Northwest Fisheries Science Center Social Science Branch is collecting economic and sociological information using 2009 as a baseline for economic information and 2010 for social. The Northwest Fisheries Science Center Observer Program collects biological information through the observer program, landings data from fish tickets and additional information through catch monitoring program.

3.1 Available data from NOAA

Fishery data presently collected by NOAA include fishing effort information such as days, tow/set duration, start and end position and depth, target species. Catch data include total catch estimates, species composition; biological data include length, sex, discard mortality rate estimates and otoliths. Observers also collect information on protected species interactions. Although raw data cannot be released for confidentiality purposes, aggregated data are available. Changes to data collection process to respond to the catch share program include estimates of retained overfished species and change in the priority for estimating discards of the shoreside trawl fleet. No change in the program for observation of the at-sea fleet. In addition, fishery independent data from surveys is collected and incorporated into stock assessments.

The Northwest Fisheries Science Center devised an economic data collection program for the West Coast ITQ with advice from the Pacific Fishery Management Council, advisory panels, regulatory workgroup, industry, and other fishery participants. The program will examine the contribution of fishery to regional economies using cost, earnings, profitability. They will collect baseline data from 2009 & 2010, and annual economic data collection would start with 2011 data collected in 2012. The program will ask questions on vessel/plant information/characteristics, owner or operator information, permits and licenses, fuel use, speed while fishing, crew size and days at sea, capitalized investments (fishing gear, processing equipment, large ship repairs), quota permit and license expenses. Data compilation has begun. The program also is attempting to query annual expenses, although geographic detail is difficult because of restrictions. They will look for information on annual earnings, changes across sectors, and some indicators of economic performance such as cost, earnings, profitability, economic efficiency, capacity measures, capitalized investments (such as fishing gear, processing equip), quota permit and license expenses, annual expenses (such as crew costs, repairs/maintenance, insurance), annual earnings (from landings, sale of quota shares/pounds, sale of product).

To understand the regional economic impacts of the program, the NWFSC will do economic analysis of the contribution of the fishery to regional economies, effects at different levels, and distributional effects. Among issues they will examine are product quality, functioning of the quota market through

tracking price of shares, incentives to reduce bycatch and spillover into other fisheries. They have a combination of information collected from the open access fishery in the past, and some voluntary surveys to support this analysis.

On the social impacts side, the NWFSC has collected baseline information prior to implementation of the catch shares, and will collect data at intervals to measure change. Follow-up surveys will be taken every two years through at least 2015. The multi-year design includes in person and on-line surveys, in-person interviews, and photographic documentation. Types of data to be compiled include demographic information, individual participant information, job history, changes over time in equipment and supply retailers, service providers, sources of information. Researchers also queried how well-informed interviewees were about the system and what their perspective was on the program (increase stability, beneficial or negative impact. Processors were asked about species handled, relationships within their sector and with fishermen, and about sale, marketing and distribution of product. Supplemental interviews have been offered to any person linked to the fishery at all (wives, crew, processors, cable companies, fixed gear fishermen). Thus far the program has completed 300 surveys.

A qualitative analysis of the information gathered will produce key themes, maps of social networks, and summaries of basic information for regional offices, council, and participants.

3.2 Missing Data

Participants raised a concern about whether information had been captured regarding changes that occurred pre-implementation. According to participants, behavior began changing once the control date for the program was announced. Although baseline data go back to 2009, it is difficult to capture what was happening before that in a systematic way. As the NWFSC gets feedback, they will identify gaps where information is not being collected.

Another difficult trend to document will be patterns that would have occurred in absence of the program. The baseline survey did query what fisheries respondents participated in, what species they targeted, and what could contribute to any changes in that, which might provide an idea of movement between fisheries and gears.

3.3 Alternative Data Sources

Data collection performed by the Pacific States Marine Fisheries Commission (PacFin), information from quota brokerages, census data, county and state business and demographic information, and academic studies were additional sources of data noted by participants.

Participants wanted assurance that whatever methodology emerged from this project, it would be compatible, integrated, and not duplicative of NOAA's data collection and evaluation program, and that the indicators would be consistent measures over time, collected in a systematic manner.

4 Top Tier Issues

Major issues that emerged from the morning discussion were:

- Economic pressures on the West Coast fleet that began years prior to the initiation of the catch share program.
- Consolidation and loss of active fishing vessels through quota cuts, buy back program, and now ITQ.
- Trawl fleet wanted to preserve their sector, businesses, jobs and infrastructure that go along with it.

- Recognition that council and stakeholders will adapt, change, revise program as it evolves.

5 Indicators

The indicator discussion was prefaced with explanation that the project will try to develop indicators that cover a diverse scope of perspectives, that can demonstrate where the fishery might have gone in absence of program, that track trends, and that compare results to goals and objectives as stated in the program.

5.1 Program Elements/Goals

Participants did not see how indicators would be useful in evaluating how the program was developed, but thought it would be useful as a framing device to understand the procedural history, expectations, and outcomes and would form a basis for evaluation in year five by understanding the documentary record. After several rounds of comment, some possible indicators of design emerged.

- Length of time spent in developing and debating the program
- Number of meetings
- Level of knowledge about management before and after catch share program, among fleets
- How many limited access programs have stakeholders experienced
- Difference in perception about when (how long) stakeholders thought information became available compared to record
- Goals and objectives in the FMP, expected outcomes predicted in alternatives, against actual outcomes

5.2 Effectiveness

- Catching full quota, not over or under
- Harvest rate responsive to ACL
- Flexibility, stability, consistent exploitation rates over time
- Better stock assessments (through observer coverage)

5.3 Ecological

Ecological impacts to track to show trends over time for key environmental impacts:

- Retention by species
- Changes in gear to be more selective
- Link between threatened, endangered and protected species and gear switching
- Operational changes, e.g. different area, to avoid prohibited species
- Duration of tow
- Changes in amount of time people spending fishing, total trawl hours, by area
- Communications about avoiding hot spots
- Trades used to cover overfished species
- How quota is monetized
- Changes in “value” of bycatch (via trades)
- Gear switching (trawl to fixed)

5.4 Socio-economic indicators

- Financial viability (good wage, financially successful, reasonable crew wage, year round fishery that supports infrastructure such as fuel dock, ice house, processing)
- Annual incomes and number of jobs both important to measures, though maximizing jobs not as important.
- New boats
- Processing plants (part year, year around employment, wage and benefit level changes)
- Crew share systems, average number of crew per vessel are available from observer data
- Hours worked, percent of household income are basic indicators, but not accessible for crew except through voluntary surveys.
- Total wages paid, crew turnover, ease/difficulty in acquiring crew
- Time at sea—if not fishing as much or are working harder for less. Some acknowledge that working harder, but it's positive, while others want more time at home, and yet other perspective is that the fishery is a “milk run.” Indicator that enables you to understand perspective.
- Financial viability: do vessel also—new allocation, stratification among new entrants and initial allocation.
- See if any difference in community associations and individual quota holders regarding how handle “stewardship,” e.g. testimony, bycatch, gear innovations.

5.5 Cost Indicators:

General discussion about costs brought out considerations that some costs will accrue early in the program, but perhaps go down later. Also that benefits might offset costs or provide savings. One of the things 100 percent observer coverage gives you is information that could alleviate other things: gear restrictions, closed areas, etc. if you have good monitoring.

- Incremental costs—lot of discussion about what is an incremental cost. What and how measuring, especially with prior management.
- What costs have been negotiated by coop as a collective, and were reduced?
- Have costs shifted, for example from government to industry, from owner to crew?

5.6 Efficiency:

Efficiency was discussed in a broader fashion than economic efficiency, though participants concurred that if the program makes catch of target species per vessel increase and catch of non-target species go down, that would be an efficiency to track. Other potential efficiencies that might be realized and could be of interest as indicators were activities that are being undertaken by coops and associations, such as:

- Pooling for best prices, cooperative buying of fuel, nets, etc.
- Shared data collection
- Hot spot reporting
- Communication and education
- Formation of coops

List of Workshop Participants & Observers

Steve Bodnar, Coos Bay Trawlers Assn
Trevor Branch, University of Washington
Richard Carroll, Ocean Gold Seafood Processing
Katherine Cheney, Northwest Regional Office
Dave Colpo, PSMFC,
Tim Essington, University of Washington
Steve Freese, Northwest Regional Office
Emily Goodwin, Moore Foundation
Madeleine Hall-Arber, MIT
Heidi Happonen, Ocean Gold Seafood Processing
Suzanne Iudicello, MRAG Americas
Shems Jud, Environmental Defense
Todd Lee, NWFSC
Pete Leipzig, Fishermen's Mktng Assn
Frank Lockhart, Northwest Regional Office
Megan Mackey, EcoTrust
Janell Majewski, NWFSC
Rod Moore, West Coast Seafood Processors
Brad Pettinger, Oregon Trawl Commission
Suzanne Russell, NWFSC
Jim Seger, PFMC
Maggie Sommer, ODFW/MRP
Bob Trumble, MRAG Americas
Dan Waldeck, Whiting Coop
Lynn Walton, Independent Consultant
Rich Young, Harbormaster