

## NORTHWEST FISHERIES SCIENCE CENTER OBSERVER PROGRAM CONSIDERATIONS AND IMPACTS REGARDING ELECTRONIC MONITORING IMPLEMENTATION

The West Coast Groundfish Observer Program (WCGOP) is responsible for providing fishery-dependent data for management of west coast groundfish fisheries. Observer data supports stock assessments, bycatch estimates, protected species management and fisheries research. The latter includes important information for management decisions including EFH delineation, stock complex designation and more. Under the Individual Fishing Quota (IFQ) program, vessels are required to have 100% observer coverage. The observer program provides in-season discard estimates to the Vessel Account System (VAS) for quota management and collects scientific data.

Implementing Electronic Monitoring (EM) for compliance monitoring will affect the observer program, observer providers, and logistics of the program. Scientific data collection will continue to be a need for fisheries management. There may be options for obtaining this information under different EM scenarios, such as:

- Observer coverage under a scientifically-based sampling plan
- Electronic logbooks
- Increased shoreside monitoring/sampling
- Combination(s) of the above
- In all cases, sampling plans and reporting requirements will need to be developed

Implementation of EM via an EFP for January 1, 2015, will likely create workload issues and a very short timeline for the WCGOP to develop and implement plans for scientific observer coverage. A regulatory approach will allow for more strategic planning of what an EM program will look like and more time to develop efficient observer coverage plan. Typically EFPs require an observer to be present on the vessel to help monitor the effectiveness of the EFP. The proposed EM EFPs request exemption from observer coverage; therefore, the proposals should contain contingency plans for how discard will be reported when equipment failures occur. There will not be an observer on board to validate or provide discard or catch estimates.

A main driver of EM implementation seems to be to reduce the costs to vessels for at sea observers and a cost analysis will be vital in the overall discussion of EM. It is unclear the monetary benefit that will be realized by implementing EM compared to the current status quo. Overall costs, including training, equipment, and data management and processing should be included. Data management in particular needs to be considered in regards to cost. There will likely be significant costs associated with integrating existing data systems and creating new EM data infrastructures. There is likely to be a need to use EM data directly for quota management as well as for scientific uses and there should be standardization of the data so those that need it are able to use and integrate it efficiently.

### **Relevant Observer Program Needs to Support Robust Science**

- Unbiased, random sampling of fleets/fisheries with spatial distribution
- Ability to quantify and randomly sample;
  - IFQ species
  - Non-IFQ groundfish species
  - Other non-groundfish species
  - Protected resources
    - In the future PR monitoring mandates could affect observer coverage levels needed in any fishing sector including those with EM
- Vessel and trip level information (spatial and effort data, landings information, etc.)
  - Electronic logbooks for reporting spatial, trip and vessel information along with electronic reporting methods should be considered with any EM program and will aid in fishery dependent data needs
    - Not all sectors currently require vessel logbooks
  - Relevant EM data should be in a format useable for the observer program and fishery managers to provide needed fishery dependent data products in lieu of observers
- 20%-30% coverage need for scientific observer data
  - These are pre-IFQ observer coverage levels
  - Assumption that vessels not carrying EM will continue to have 100% observer coverage
  - Likely need for a new trip by trip call-in type notification system as used by other regional observer programs
  - Research is currently underway to help inform future appropriate coverage levels and coverage level effects on bycatch estimation
- Adequate declaration timelines that allow for the planning and preparation of an observer workforce
  - Training and placement of observers requires time and money
  - Liberal switching from EM and observer coverage will create problems and likely result in observer shortage and retention issues as well as increase training and briefing needs
  - The level of participation in EM will affect how the observer program and providers are able to operate
- Knowledge of the funding mechanism for scientific observer coverage in the fishery sectors implementing EM

## **General Sector-specific considerations**

### ***At-Sea Mothership Sector*** **General**

The Mothership Catcher Vessels (MSCV) seems like a good candidate for EM due to the nature of the fishing operations (high volume, low bycatch with single codends tied off and delivered to motherships (MS)) along with the general lack of sorting or discarding from the deck.

### **Sampling design/coverage**

This fishery currently has observer coverage on the MSCVs and motherships. With maximized retention, an EM system with an electronic logbook and continued mothership observer coverage, it is feasible that EM could collect the discard or compliance information needed to monitor catch allocations and scientific observers would not be needed on the MSCVs. Data collected on the motherships is of much higher value than that on the MSCVs: therefore, the collection of scientific data from the motherships coupled with adequate logbook data should supply the necessary scientific data needed for the fishery.

### **Maximized Retention vs. Discarding at-sea**

This fishery already operates in a maximized retention manner which supports a simpler compliance EM system and could facilitate observers on the motherships only. If discarding practices or catch compositions change, scientific observer coverage may be needed at the 20-30% level for vessels with EM.

### **Cost**

Under the scenario described above no increased costs to the observer program are anticipated at this time. If at-sea scientific observers were needed and were agency funded, then increased costs would be realized. Observer costs for vessels without EM could increase since there may be less business available for observer providers.

## ***Shoreside Whiting Sector***

### **General**

The Shoreside Whiting sector seems a likely candidate for a successful EM program due to the nature of the fishery (high volume, low bycatch, little to no sorting at sea). There is also extensive data on EM pilots to help inform an EM strategy for this fishery.

### **Sampling design/coverage**

Unlike the at-sea whiting fishery there is no observer sampling at the delivery site, only on the vessels. Some type of at-sea or shoreside observer program for biological data collection is likely to be important.

### **Maximize Retention vs. Discarding at-sea**

This fishery already operates in a maximized retention manner which supports a simpler compliance EM system and could facilitate the need for shoreside observer sampling only, particularly when coupled with electronic reporting. If discarding practices or catch compositions changed, scientific observer coverage may be needed at-sea at the 20-30% level.

## **Cost**

Implementation of a shoreside observer program or expansion of the shoreside catch monitoring program would likely increase observer program training and operational costs. If at-sea or shoreside observers are needed and were to be agency funded, that would increase agency costs as well. Observer costs for vessels without EM could increase since there may be less business available for observer providers.

### ***Shoreside Fixed Gear Sector (longline and pot)***

#### **General**

While this is a multi-species, potentially high-volume fishery, fishing operations seem to be captured fairly well with EM. There are issues with species identification and discarding at sea that could be problematic under EM for some species. There is also data from previous pilot projects to help inform EM decision making.

#### **Sampling design/coverage**

This is a multi-species, multi-target fishery that lands multiple sets at a time at each delivery. Even under a maximized retention EM system the mixing of catch that occurs with this type of fishing doesn't allow for collection of spatially specific biological data and species complex data at the landing site, as in the whiting fishery. For vessels electing to carry an EM system, random observer coverage would likely be needed at sea at a 20-30% rate to collect this data.

#### **Maximized Retention vs. Discarding at-sea**

Due to the large number of species caught and the current limitations of EM to identify species, it seems that a maximized retention fishery would be a better candidate for EM.

## **Cost**

If observer coverage is to be agency funded, this will be an increased cost for the observer program. If shoreside sampling needs to be increased this could increase cost and workload as well, depending on funding sources and implementation. Observer costs for vessels without EM could increase since there may be less business available for observer providers.

### ***Shoreside Bottom Trawl Sector***

#### **General**

This is a multi-species, high-volume fishery, with fishing operations that generally involve discarding a number of species at sea. This fishery encounters a high number of groundfish species and has seen habitat and protected species interactions as well. Research and testing are currently underway to help develop EM options in this

fishery. Unfortunately there isn't a history of applicable EM pilot studies on the west coast in this fishery sector.

### **Sampling design/coverage**

This is a multi-species, multi-target fishery that lands multiple sets at a time at each delivery. Targets often vary significantly from tow to tow on a given trip and by depth. Even under a maximized retention EM system, the mixing of catch that occurs with this type of fishing activity doesn't allow for collection of spatially specific biological data and species complex data at the landing site, as in the whiting fishery. For vessels electing to carry an EM system, random observer coverage would most likely be needed at sea at a 20-30% rate to collect this data.

### **Maximized Retention vs. discarding at-sea**

Due to the large number of species caught and the current limitations of EM to identify species, it seems that a maximized retention fishery would be a better candidate for EM. The decision on the ability to discard species like corals should be addressed in the larger EM discussions in the light of EFH.

### **Cost**

If observer coverage is to be agency funded, this will be an increased cost for the observer program. If shoreside sampling needs to be increased this could increase cost and workload as well, depending on funding sources and implementation. Observer costs for vessels without EM could increase since there may be less business available for observer providers.