Electronic Monitoring Program Pacific States Marine Fisheries Commission Annual Meeting September 23, 2013 Coeur D'Alene, ID

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To test the viability of Electronic Monitoring (EM) as a source of data to document individual accountability of catch and bycatch in the Pacific Trawl Rationalization Program.

Is it Science or Compliance?

Pacific Fisheries Management Council Decision from April 2013 Council Meeting

"The Council indicated their desire to move ahead with consideration of electronic monitoring (EM) by stating that **compliance monitoring, rather than the collection of biological data, would be the primary focus for EM in the trawl catch share program**[...]"

Moving parts of an EM Program



Working Solution

Accurate Speciation	Digital cameras, full retention/discard chute study
Obtaining weights of catch and bycatch	Volumetric density, length/weight relationships with measurement strips, and full retention studies
Changes in fisher behavior needed for clear camera views	Feedback forms and direct contact
Defining catch and discard	NMFS working to develop clear definitions
Data review time / Cost	Logbooks as data source and audit a percentage of the video data
Data security	Encryption



2012 Results – Fixed Gear Sector



Issue – 1. Speciation

Digital cameras improve the resolution of images captured

Analog Camera

Digital Camera Still Difficult to Speciate Small Red Rockfish and Mixed Flatfish







Digital Camera



Minor Slope Rockfish

Aurora Rockfish



Rougheye Rockfish



Shortraker Rockfish



POP Rockfish Minor Slope South of 40 10', Individual North of 40 10'



Issue – 2. Weights

Volumetric Density





Length-Weight Relationships





Stewart, I.J., J.T. Thorson, and C. Wetzel. 2011. Status of the U.S. Sablefish resource in 2011. NOAA-NMFS-NWFSC

How Close Is Close Enough?



Issue – 3. Changes in Fishing Behavior to Accommodate Cameras



2012 Results – Hake Sector

At-sea Catcher Vessel Discarded Catch

At-Sea Compliance Monitor (Thousands of Pounds)



At-Sea Compliance Monitor (Thousands of Pounds)

Issue – 4. Definitions of Catch and Discard

Issue – 5. Data review time / Cost

- Data collection mechanism (affects % review of video)
 - Video data (100% Review)
 - Self-reported catch and discard (logbook) (< 100% Review?)
 - Trawl: Mirrored retained federal logbook for discard reporting
 - Fixed gear: Used Oregon FG logbook as a template
 - At-sea Catcher Vessel: New logbook to capture location of haul, retained and discarded weights.
- Speed results are needed
 - Frequency of data retrievals
 - Will a shoreside CM, tech, or the skipper be allowed to pull own drive?
 - Confidentiality concerns (encryption)
 - % review of video

Vision

I. Logbooks as data collection mechanism

- I. PSMFC receives Logbook at landing
- II. Logbook catch data into a database within 72 hours
- III. Vessel Account System hits logbook database for discard debits

So far, 100% self-reported

Vision

I. Logbooks as data collection mechanism

II. Video for auditing

Video is reviewed to confirm accurate reporting on the logbook

Still to be addressed:

- I. Frequency of hard drive retrievals
- II. % of video to be reviewed
- III. Speed of video review

Vision

- I. Logbooks as data collection mechanism
- II. Video for auditing
- III. Emulate CM/eTix protocols to check haul and species level reporting

- I. Trip passes if logbook record is "good enough"
- II. Trip gets flagged if not

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