

GROUND FISH ELECTRONIC MONITORING POLICY ADVISORY COMMITTEE (GEMPAC)
RECOMMENDATIONS FOR ELECTRONIC MONITORING FOR THE PACIFIC COAST LIMITED ENTRY TRAWL GROUND FISH
FISHERY CATCH SHARES PROGRAM

Recommendations and Rationale for Preferred Alternatives and Options for an Electronic Monitoring Program:

1. Midwater Trawl Whiting (Table 2-9)

The GEMPAC does not recommend a final alternative for Step 1 at this time. Uncertainties still exist regarding overall costs for Alternative 2 (Camera Recordings Use to Estimate Discards) or 3 (Logbooks with Video Audits). We are also uncertain which alternative better meets the goals of the program and what their effect is on operational efficiencies for both the vessels and for video review. The GEMPAC believes the EFP will provide this information.

The GEMPAC recommends under 2.2.1.1 Video Reading Protocol,

- For Alternative 2, use Option A (100% Video Review) because of the problems of expanding rare events for a single vessel and because the expense is probably not significantly different from lower sampling rates.
- For Alternative 3, the percent review should be a minimum of 10 percent review across all trips with an escalation clause for non-compliance.

The GEMPAC does not recommend any option under 2.2.2, Discard Accounting, and would like more information on costs and logistics to make a decision. The GEMPAC believes the EFP will provide this information.

The GEMPAC recommends, under 2.2.4, Option A (Maximized Retention). This is the only option available for the whiting fishery.

The GEMPAC recommends, under 2.2.5, Option D (Discard Exemption to Retain Halibut). This is the only option available for the whiting fishery.

The GEMPAC recommends, under 2.2.6 Discard Species List Adjustment, Option B (Routine Process). This would include stakeholders and the GEMPAC assumes this would be the most expedient and transparent process.

The GEMPAC recommends, under 2.2.7.2 Eligibility Requirements, Option A (Initial and Continued Eligibility Requirements). This is the only option available for the whiting fishery.

The GEMPAC recommends, under 2.2.7.5 EM Vessel Operation Plan - IVMP Expiration, Option A (No Expiration) and notes that the option includes caveats to review plans when changes are made. Option A would likely be more cost effective for the government; NMFS would not need to annually review IVMPs.

The GEMPAC recommends, under 2.2.7.6 Declaration of EM Use, Option C (Declare until Changed with some limit of frequency within the sector). This incorporates some flexibility for vessels.

The GEMPAC does not recommend any option at this time under 2.2.8.2, Data Transfer Process, and would like more cost and logistic information to make a decision. The GEMPAC believes the EFP will provide this information.

The GEMPAC recommends, under 2.2.8.4 Video Review, Option C (EM Provider) for ease of adaptability and integration of changes in technology.

The GEMPAC recommends, under 2.2.8.5 Payment for Scientific Data Collection/Observers, Option A (Government Pays) because it's a government mandated function and previously funded by NMFS.

The GEMPAC recommends, under 2.2.11 Implementation, B and E. The EFPs will be used to either Test the Policy (Option B) or Further Develop the Policy (Option E). For example, if final action is taken, then the choice would be to test the policy.

Table 2-9. Shoreside and mothership whiting fishery decision making template of alternatives and options.

| Alternatives/Option Choices for Shoreside and Mothership Whiting Fishery | | | | |
|--|--|---|---|--|
| Step 1. Choose Overall Alternative (this will be the primary data source for discard estimates) | | | | |
| Alternative 1: No Action – Human Observers Estimate Discards | | | | |
| Alternative 2. Camera Recordings Use to Estimate Discards | | | | |
| Alternative 3. Logbooks used to Estimate Discard with Logbook Audits | | | | |
| Step 2. For Alternative 2 or 3, Choose an Option from Each of the Following Rows | | | | |
| EM Component | Options for Each EM Component Category | | | |
| 2.2.1.1 Video Reading Protocol (% review) | A. 100% (Alt 2 only) | B. X% (Alt 2 Only) | C. X% (Alt 2 Only) plus logbook review | Select % Logbook Audit (Alt 3 Only) |
| 2.2.2 Discard Accounting - Individual or Fleetwide | A. One Discard Category, Full Accounting for All Discards a/ | B. Two Discard Categories, Sector or ACL Deduction for Category 2 Discards b/ | C. Two Discard Categories, No Accounting for Category 2 Discards b/ | D. For MS Whiting, Deduct "unintentional minor" Discards Preseason, For SS Whiting Deduct Category 2 from ACL. |
| 2.2.4 Retention Requirements | A. Maximize | | | |
| 2.2.5 Halibut Retention/ Discard with Fishery Specific Options | D. Discard Exemption (100% retained, 100% mortality) | | | |
| 2.2.6 Discard Species List Adjustment | A. NMFS Rulemaking Process | B. Routine Process c/ | C. Full Council Rulemaking Process | |
| 2.2.7.2 Eligibility for Camera Use | A. Initial and Continued Eligibility Requirements | | | |
| 2.2.7.5 EM Vessel Operation Plan - IVMP Expiration | A. No Expiration | B. Annual | | |
| 2.2.7.6 Declaration of EM Use | A. Annual - choose for entire year | B. Annual - project for year (monthly/quarterly) | C. Declare Until Changed (some limit on frequency of change) | D. Declare Until Changed (no limit on frequency) |

Alternatives/Option Choices for Shoreside and Mothership Whiting Fishery

Step 1. Choose Overall Alternative (this will be the primary data source for discard estimates)

- Alternative 1: No Action – Human Observers Estimate Discards
- Alternative 2. Camera Recordings Use to Estimate Discards
- Alternative 3. Logbooks used to Estimate Discard with Logbook Audits

Step 2. For Alternative 2 or 3, Choose an Option from Each of the Following Rows

| | | | | | |
|---|----------------|-------------------------------|---|--|----------------------------------|
| 2.2.8.2 Data Transfer Process (Not Mutually Exclusive) | A. PSMFC Staff | B. EM provider | C. SS Catch Monitor | D. Vessel Operator (crew) | E. 3rd Party |
| 2.2.8.4 Video Review | A. NMES | B. PSMFC | C. EM Provider | D. 3rd Party | |
| 2.2.8.5 Payment for Scientific Data Collection/Observers | A. Government | B. Industry | C. Combination | | |
| 2.2.11 Implementation | A. None | B. Use EFPs to Test Policy | C. Phase in By Sector - Whiting; BTW/Mid- nonwhiting, Fixed Gear | D. Loosen Species Retention Over Time | E. Use EFPs to Develop Policy |

- a/ Category 1 discards include fish dumped off deck (e.g., shoveled, picked out of net), dumped/washed out of net for safety reasons (bleeding, pull zipper, etc.), unobserved sets/hauls, fish that drop off gear, are left floating in water, are consumed or used as bait and estimates for entanglement or catch by lost gear.
- b/ Category 2 discards include fish that drop off gear, are left floating in water, are consumed or used as bait and estimates for entanglement or catch by lost gear.
- c/ "Routine process" would establish a list of species for which discard requirements can be changed through routine inseason action as specified in Section 6.2.1 of the groundfish FMP.

2. Fixed Gear (Longline and Pot) (Table 2-10)

The GEMPAC recommends under Step 1, Alternative 3 (Logbook with Video Audit). It may be suitable for this fishery since this type of system is currently used and successful in British Columbia.

The GEMPAC recommends, under 2.2.1.1 Video Reading Protocol, the percent review under Alternative 3 should be a minimum of 10 percent review of fishing events in each trip with an escalation clause for non-compliance.

The GEMPAC recommends, under 2.2.2 Discard Accounting, Option A since there is no fixed gear specific allocation of sablefish within the trawl allocation.

The GEMPAC recommends, under 2.2.4 Option B (Optimized Retention), and sub-option d (allow discard of species that are verifiable with EM). This would provide the opportunity to discard, potentially, unmarketable and immature fish. The discard priorities are skates, sharks and immature sablefish.

The GEMPAC recommends, under 2.2.5 Halibut Retention, Option A (IPHC Gear Rate) and F (Use EM Data with Approval from IPHC). Option A may be the method that can be applied at this time. The GEMPAC prefers Option F if the method is approved by IPHC.

The GEMPAC recommends, under 2.2.6 Discard Species List Adjustment, Option B (Routine Process). This would include stakeholders and assumes this would be the most expedient process.

The GEMPAC recommends, under 2.2.7.2 Option A (Initial and Continued Eligibility Requirements). This is the only option available to the fixed gear fishery.

The GEMPAC recommends, under 2.2.7.5 EM Vessel Operation Plan - IVMP Expiration, Option A (No Expiration) and notes that the option includes caveats to review plans when changes are made. Option A would likely be more cost effective for the government; NMFS would not need to annually review IVMPs.

The GEMPAC recommends, under 2.2.7.6 Declaration of EM Use, Option A (Annual - choose for entire year) because vessels fish for sablefish under trawl IFQ for only a limited period each year.

The GEMPAC recommends, under 2.2.8.2 Data Transfer Process, Option C (catch monitors) and D (vessel operators). These options may be the most cost effective. In addition, these individuals would be immediately available to transfer the data.

The GEMPAC recommends, under 2.2.8.4 Video Review, Option C (EM Provider) for ease of integration and adaptability to changes in technology.

The GEMPAC recommends, under 2.2.8.5 Payment for Scientific Data Collection/Observers, Option A (Government Pays) because it's a government mandated function and previously funded by NMFS.

The GEMPAC recommends, under 2.2.11 Implementation, B and E. The EFPs will be used to either Test the Policy (Option B) or Further Develop the Policy (Option E). For example, if final action is taken, then the choice would be to test the policy.

Table 2-10. Fixed gear fishery (longline and pot) EM decision making template of alternatives and options.

| Alternatives/Option Choices for Fixed Gear Fishery (longline and pot) | | | | | |
|--|--|---|---|-------------------------------------|--|
| Step 1. Choose Overall Alternative (this will be the primary data source for discard estimates) | | | | | |
| Alternative 1: No Action – Human Observers Estimate Discards | | | | | |
| Alternative 2. Camera Recordings Use to Estimate Discards | | | | | |
| Alternative 3. Logbooks used to Estimate Discard with Logbook Audits | | | | | |
| Step 2. For Alternative 2 or 3, Choose an Option from Each of the Following Rows | | | | | |
| EM Component | Options for Each EM Component Category | | | | |
| 2.2.1.1 Video Reading Protocol (% review) | A. 100% (Alt 2 only) | B. X% (Alt 2 Only) | C. X% (Alt 2 Only) plus logbook review | Select % Logbook Audit (Alt 3 Only) | |
| 2.2.2 Discard Accounting - Individual or Fleetwide | A. One Discard Category, Full Accounting for All Discards a/ | B. Two Discard Categories, Sector or ACL Deduction for Category 2 Discards b/ | C. Two Discard Categories, No Accounting for Category 2 Discards b/ | | |
| 2.2.4 Retention Requirements | A. Maximize | B. Optimize | | | |
| 2.2.5 Halibut Retention/ Discard with Fishery Specific Options | Default Rates A. IPHC Gear Rate longline 16%; pot 18% mortality | Default Rates B. WCGOP Rate C. Vessel Specific Rate | D. Discard Exemption (100% retained) | E. Captain/Crew Evaluation | F. With EM Data - Via IPHC Approved Method |
| 2.2.6 Discard Species List Adjustment | A. NMFS Rulemaking Process | B. Routine Process | C. Full Council Rulemaking Process | | |

Alternatives/Option Choices for Fixed Gear Fishery (longline and pot)

Step 1. Choose Overall Alternative (this will be the primary data source for discard estimates)

Alternative 1: No Action – Human Observers Estimate Discards

Alternative 2. Camera Recordings Use to Estimate Discards

Alternative 3. Logbooks used to Estimate Discard with Logbook Audits

Step 2. For Alternative 2 or 3, Choose an Option from Each of the Following Rows

| | | | | | |
|--|---|--|---|--|--------------------------------|
| 2.2.7.2 Eligibility for Camera Use | A. Initial and Continued Eligibility Requirements | | | | |
| 2.2.7.5 EM Vessel Operation Plan - IVMP Expiration | A. No Expiration | | B. Annual | | |
| 2.2.7.6 Declaration of EM Use | A. Annual - choose for entire year | B. Annual - project for year (monthly/quarterly) | C. Declare Until Changed (some limit on frequency of change) | D. Declare Until Changed (no limit on frequency) | |
| 2.2.8.2 Data Transfer Process (Not Mutually Exclusive) | A. PSMFC Staff | B. EM provider | C. SS Catch Monitor | D. Vessel Operator (crew) | E. 3rd Party |
| 2.2.8.4 Video Review | A. NMFS | B. PSMFC | C. EM Provider | D. 3rd Party | |
| 2.2.8.5 Payment for Scientific Data Collection/Observers | A. Government | B. Industry | C. Combination | | |
| 2.2.11 Implementation | A. None | B. Use EFPs to Test Policy | C. Phase in By Sector - Whiting; BTW/Mid-nonwhiting, Fixed Gear | D. Loosen Species Retention Over Time | E. Use EFPs to Develop Policy; |

a/ Category 1 discards include fish dumped off deck (e.g., shoveled, picked out of net), dumped/washed out of net for safety reasons (bleeding, pull zipper, etc.), unobserved sets/hauls, fish that drop off gear, are left floating in water, are consumed or used as bait and estimates for entanglement or catch by lost gear.

b/ Category 2 discards include fish that drop off gear, are left floating in water, are consumed or used as bait and estimates for entanglement or catch by lost gear.

c/ "Routine process" would establish a list of species for which discard requirements can be changed through routine inseason action as specified in Section 6.2.1 of the groundfish FMP.

3. Bottomtrawl Groundfish/Non-whiting midwater Trawl (Table 2-11)

The GEMPAC recommends, under Step 1, Alternative 3 (Logbook with Video Audit) because it may be the most cost effective alternative.

The GEMPAC recommends, under 2.2.1.1, Video Reading Protocol, the percent review under Alternative 3 should be a minimum of 10 percent review of fishing events in each trip with an escalation clause for non-compliance.

The GEMPAC recommends, under 2.2.2 Discard Accounting, Option A (One Discard Category, Full Accounting under IFQ) since it maintains accountability in the IFQ program.

The GEMPAC recommends, under 2.2.4 Option B (Optimized Retention) and sub-option d, (Allow discard if species that are verifiable with EM). This would provide the opportunity to discard, potentially, unmarketable and immature fish. The discard priorities are skates, sharks, immature sablefish, and unmarketable, sublegal fish.

The GEMPAC recommends, under 2.2.5 Halibut Retention, Option A (IPHC Gear Rate) and F (Use EM Data with Approval from IPHC). Option A may be the method that can be applied at this time. The GEMPAC prefers Option F if the method is approved by IPHC.

The GEMPAC recommends, under 2.2.6 Discard Species List Adjustment, Option B (Routine Process). This would include stakeholders and assumes this would be the most expedient process.

The GEMPAC recommends, under 2.2.7.2 Option A (Initial and Continued Eligibility Requirements) since bottomtrawl trawl fishery participants operate in different areas (shoreward and seaward of the RCA). Participants in cooperative agreement may not want to pool their allocations or cover an individual that has exceeded their IFQ. It also adds another layer of complexity and cost.

The GEMPAC recommends, under 2.2.7.5 EM Vessel Operation Plan - IVMP, Option A (No Expiration) and notes that the option includes caveats to review plans when changes are made. Option A would likely be more cost effective for the government; NMFS would not need to annually review IVMPs.

The GEMPAC recommends, under 2.2.7.6 Declaration of EM Use, Option C (Declare Until Changed with some limit of frequency within the sector). This incorporates some flexibility for vessels.

The GEMPAC recommends, under 2.2.8.2 Data Transfer Process, Option C (Catch Monitors) and D (Vessel Operators). These options may be the most cost effective. In addition, these individuals would be immediately available to transfer the data.

The GEMPAC recommends, under 2.2.8.4, Video Review, Option C (EM Provider) for ease of integration and adaptability to changes in technology.

The GEMPAC recommends, under 2.2.8.5 Payment for Scientific Data Collection/Observers, Option A (Government Pays) because it's a government mandated function and previously funded by NMFS.

The GEMPAC recommends, under 2.2.10 Option A (None). Spatial management may add too much complexity to the management of the IFQ fishery and would require identifying additional management areas which in turn may be difficult and costly to manage.

The GEMPAC recommends, under 2.2.11 Implementation, B and E. The EFPs will be used to either Test the Policy (Option B) or Further Develop the Policy (Option E). For example, if final action is taken, then the choice would be to test the policy.

Table 2-11. Bottomtrawl and non-whiting midwater trawl fisheries EM decision making template of alternatives and options.

| Alternatives/Option Choices for Bottomtrawl and Non-Whiting Midwater Trawl Fisheries | | | | | |
|--|--|---|---|-------------------------------------|--|
| Step 1. Choose Overall Alternative (this will be the primary data source for discard estimates) | | | | | |
| Alternative 1: No Action – Human Observers Estimate Discards | | | | | |
| Alternative 2. Camera Recordings Use to Estimate Discards | | | | | |
| Alternative 3. Logbooks used to Estimate Discard with Logbook Audits | | | | | |
| Step 2. For Alternative 2 or 3, Choose an Option from Each of the Following Rows | | | | | |
| EM Component | Options for Each EM Component Category | | | | |
| 2.2.1.1 Video Reading Protocol (% review) | A. 100% (Alt 2 only) | B. X% (Alt 2 Only) | C. X% (Alt 2 Only) plus logbook review | Select % Logbook Audit (Alt 3 Only) | |
| 2.2.2 Discard Accounting - Individual or Fleetwide | A. One Discard Category, Full Accounting for All Discards a/ | B. Two Discard Categories, Sector or ACL Deduction for Category 2 Discards b/ | C. Two Discard Categories, No Accounting for Category 2 Discards b/ | | |
| 2.2.4 Retention Requirements | A. Maximize | B. Optimize | | | |
| 2.2.5 Halibut Retention/ Discard with Fishery Specific Options | Default Rates A. IPHC Gear Rate MDWT non-whiting and BTW 90% mortality if discarded | Default Rates B. WCGOP Rate C. Vessel Specific Rate | D. Discard Exemption (100% retained) | E. Captain/Crew Evaluation | F. With EM Data Via IPHC Approved Method |
| 2.2.6 Discard Species List Adjustment | A. NMFS Rulemaking Process | B. Routine Process c/ | C. Full Council Rulemaking Process | | |

Alternatives/Option Choices for Bottomtrawl and Non-Whiting Midwater Trawl Fisheries

Step 1. Choose Overall Alternative (this will be the primary data source for discard estimates)

Alternative 1: No Action – Human Observers Estimate Discards

Alternative 2. Camera Recordings Use to Estimate Discards

Alternative 3. Logbooks used to Estimate Discard with Logbook Audits

Step 2. For Alternative 2 or 3, Choose an Option from Each of the Following Rows

| | | | | |
|--|--------------------------------------|---|---|--|
| 2.2.7.2 Eligibility for Camera Use | A. Initial and Continued Eligibility | B: Initial and Continued Eligibility with BTW Vessel Must be in Co-op to use EM | | |
| 2.2.7.5 EM Vessel Operation Plan - IVMP Expiration | A. No Expiration | B. Annual | | |
| 2.2.7.6 Declaration of EM Use | A. Annual - choose for entire year | B. Annual - project for year (monthly/quarterly) | C. Declare Until Changed (some limit on frequency of change) | D. Declare Until Changed (no limit on frequency) |
| 2.2.8.2 Data Transfer Process (Not Mutually Exclusive) | A. PSMFC Staff | B. EM provider | C. SS Catch Monitor | D. Vessel Operator (crew) E. 3rd Party |
| 2.2.8.4 Video Review | A. NMFS | B. PSMFC | C. EM Provider | D. 3rd Party |
| 2.2.8.5 Payment for Scientific Data Collection/Observers | A. Government | B. Industry | C. Combination | |
| 2.2.10 Spatial Variation for High Bycatch Areas (BTW Only) | A. None | B. In High Bycatch Areas Use Observers | C. In High Bycatch Areas Review more Video | |
| 2.2.11 Implementation | A. None | B. Use EFPs to Test Policy | C. Phase in By Sector - Whiting; BTW/Mid-nonwhiting, Fixed Gear | D. Loosen Species Retention Over Time E. Use EFPs to Develop Policy; |

a/ Category 1 discards include fish dumped off deck (e.g., shoveled, picked out of net), dumped/washed out of net for safety reasons (bleeding, pull zipper, etc.), unobserved sets/hauls, fish that drop off gear, are left floating in water, are consumed or used as bait and estimates for entanglement or catch by lost gear.

b/ Category 2 discards include fish that drop off gear, are left floating in water, are consumed or used as bait and estimates for entanglement or catch by lost gear.

c/ "Routine process" would establish a list of species for which discard requirements can be changed through routine inseason action as specified in Section 6.2.1 of the groundfish FMP.