

Table 1 Actions to improve SBRMs for the BSAI and GOA groundfish fisheries and the Pacific halibut fishery.

Activity Number	Action	2004	2005	Beyond	Outcome	Type of Activity		
						Monitoring	Research	Management
<b>BSAI and GOA Groundfish Fisheries</b>								
1	Develop improved protocols for observer documentation of seabird interactions and mortalities	Conduct pilot studies and develop protocols	Implement protocols	Ongoing	Improved accuracy and precision in estimates of seabird interactions and bycatch	Subsequent	Initial	No
2	Improved species identification by observers	Ongoing	Ongoing	Ongoing	Improved accuracy in identification of catch and bycatch species and quantification of removals. Improved bycatch estimates through comparison of catch and estimated retention.	Yes	Yes	Maybe
3	Develop and implement methods for shoreside sampling of skates	Conduct pilot studies and develop methods	Implement methods if appropriate	Ongoing	Understanding of magnitude and composition of skate fishery in currently unobserved vessels. Ability to compare removals with deliveries if fishery is observed	Yes	Yes	Maybe
4	Enhancements to observer sampling for catch composition determination	Evaluate recent work and develop recommendations	Evaluate alternative approaches	Implement changes	Improved accuracy and precision in estimates of total removals by species. Improved bycatch estimates through comparison of catch and estimated retention.	Subsequent	Initial	Maybe

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5	Evaluate placement of observers on small (<60ft) groundfish vessels	Conduct pilot studies, in part to explore and address safety concerns	Complete study, analyze results, develop recommendations	Implement if cost effective and supported by regulations	Basis for evaluating costs and benefits associated with direct observation of bycatch on small groundfish vessels. Potential for improved bycatch estimates.	Subsequent	Initial	Yes
6	Certify observer workstations and monitor flow scale testing on certain vessels fishing groundfish	Ongoing	Ongoing	Ongoing	Improved accuracy in estimating total catch and catch composition,	Yes	No	No
7	Place observer program staff on specific groundfish vessels to customize sampling protocols	Ongoing	Ongoing	Ongoing	Improved sampling precision and reduction in bias. Improvements in vessel-specific and overall estimates of catch and bycatch.	Yes	No	Yes
8	Evaluate technologies suitable for monitoring groundfish fisheries	Complete contract to evaluate candidate technologies	Conduct field testing if funds available	Implement as appropriate and cost effective	Basis for determining best mix of technological and human resources to address specific monitoring needs. Potential for improved bycatch estimates.	Possibly subsequent	Initial	Yes

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9	Develop approaches for optimizing observer deployment and tasking	Initiate contract and complete initial evaluation	Develop system and evaluate capabilities	Implement in Gulf of Alaska as appropriate and subject to funding and regulatory authority	Improved efficiency in allocation of observer resources. Flexibility in assigning observers based on priorities, logistics, and costs.	Subsequent	Initial	Yes
10	Change observer service delivery model to improve flexibility and data quality	Evaluate alternatives and conduct draft rulemaking	Complete rulemaking & develop implementation plan	Implement if supported by statutory and regulatory provisions.	Improved efficiency in allocation of observer resources. Flexibility in assigning observers based on priorities, logistics, and costs.	Yes	Yes	Yes
11	Review compliance issues associated with current bycatch reduction programs	Initiate review	Complete review, develop recommendations and draft strategy	Implement strategy	Bycatch reduction programs which greatly reduce or eliminate incentives for interfering with monitoring	Yes	Yes	Yes
12	Promote the use of electronic logbooks to facilitate identification and correction of bias in estimating bycatch for unobserved vessels	Expand contract to provide e-logbook software to fishing vessels if funds available	Extend contract if funds are available	Extend contract if funds are available	More complete, accurate and timely data will be available to identify and correct for bias in estimating bycatch for unobserved vessels	Ongoing	Initial (to make effective use of improved data)	Maybe
13	Promote interagency efforts to develop electronic reporting of landings data by trip	Participate in interagency meeting to develop an electronic reporting system	If feasible, implement more extensive electronic reporting and use that data to improve SBRMs	Continue to improve electronic reporting systems and the SBRMs	More complete, accurate and timely data will be available to identify and correct for bias in estimating bycatch for unobserved vessels	Ongoing	Initial (to make effective use of improved data)	Maybe

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14	Evaluate the need for additional compliance resources to maintain the integrity of observer data.	Initiate evaluation.	Pursue additional resources if justified.	Utilize additional compliance resources.	Decreased occurrences of interference with observer sampling or reporting by crew and stricter adherence to performance requirements by observers.	Subsequent	Initial	Maybe
15	Initiate development of behavior measures for delayed mortality in discards from fisheries	Initiate research	Complete research and prepare findings	Use findings to improve SBRMs	The development of new, sensitive behavioral measures of delayed mortality in discards from fisheries will improve the SBRMs and the resulting estimates of bycatch mortality and could be used to improve discard procedures.	Subsequent	Initial	Maybe

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16]	Initiate studies of the effect of environmental factors on swimming behavior and performance in fish caught by trawl	Initiate research	Complete research and prepare findings	Use findings to improve SBRMs	Research results will be used: (1) to predict how these stress effects may control immediate and delayed mortality of fish that escape from trawls and (2) to develop new strategies for reduction and elimination of mortality in fish that escape from trawls as a result of bycatch reduction devices (BRD).	Subsequent	Initial	Maybe
<b>Pacific Halibut Fishery</b>								
17	Evaluate potential for placing observers on commercial halibut vessels	Establish contract if funds available, develop priorities and sampling protocols, and address safety concerns	Complete study, analyze results, develop recommendations	Implement if cost effective and supported by regulations	Basis for evaluating costs and benefits associated with direct observation of bycatch on halibut vessels	Subsequent	Initial	Yes