

**Northeast Region Bycatch Reduction Action Items (FY09 and FY10) and Accomplishments (FY08)**

The list below is a sample of the special activities underway in the Northeast Region that aim to improve our understanding and management of bycatch in the region's fisheries. The statutes governing the work of NOAA's National Marine Fisheries Service (NMFS) and the Fishery Management Councils require that bycatch be considered and addressed as part of every fishery management action. Consequently, much of what goes on related to bycatch, though very important, is rather routine and not easily presented in a table such as this. For example, every management action submitted by the Councils to NMFS is designed, pursuant to National Standard 9 of the MSFCMA, to minimize bycatch to the extent practicable. The management actions are also closely scrutinized with regard to the likelihood that fisheries will interact with marine mammals and endangered species, and measures are designed to avoid the interactions or render them harmless to the animals. In addition, the Northeast Region helps prepare a National Bycatch Report which defines, scores, and provides bycatch estimates for each fishery in the Region.

To fulfill these obligations, NMFS staff and the staff and members of the Fishery Management Councils engage in thousands of hours of data collection, analysis, issue identification, education/outreach, alternatives development, decision-making, and post-decision analysis. While most of the activities are not listed below, these more routine activities are constantly ongoing and critical to reducing discards in the region's fisheries.

Ref #	Action	Status/Accomplishments through 9/30/08	2009	2010	How Progress Will Be Measured and/or Monitored	Milestone	Milestone Completion Date
<b>EDUCATION/OUTREACH</b>							
<b>EO1</b>	Continuing outreach to enhance Northeast Fisheries Science Center (NEFSC) communication with constituents concerning Observer Program	Attend various fisheries forums, industry conferences, fisheries management council meetings, etc. to speak about the NEFSC Observer Program and gather feedback.	Continue outreach efforts.	Continue outreach efforts.	Number of outreach meetings attended.	Attend six or more outreach meetings per year.	Annual.
<b>EO5</b>	Gain feedback from observed vessel operators.	Fishermen's comment card implemented via postage-paid postcard and online at: <a href="http://www.nefsc.noaa.gov/femad/fishsamp/fsb/">http://www.nefsc.noaa.gov/femad/fishsamp/fsb/</a> . Have received 270 comment cards with productive exchange of information and summaries created.	Continue to distribute comment cards and collect responses via mail and the internet. Continue to prepare reports on the feedback received.	Continue activity.	Feedback program will be measured by the number of comments received. The Observer Program will be assessed by the comments received.	Reports on the feedback received on the Observer Program.	Biennial summaries.

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EO6	Support education and outreach on gear modifications to reduce bycatch in Northeast fisheries	NEFSC has supported several workshops evaluating ongoing conservation engineering research focused on finfish bycatch reduction in Northeast groundfish and small mesh fisheries (shrimp and squid). The "Ruhle large mesh rope trawl" (also referenced as the Eliminator trawl) won the World Wildlife Fund International Smart Gear Competition. Follow-up funding has been provided to support testing of two scaled-down trawls suitable for lower-power vessels (field studies underway), and a lease arrangement is in place so that the University of Rhode Island Sea Grant Extension can make that net available for interested fishermen to test during haddock trips (winter-spring 2009).	The NEFSC Cooperative Research Program will continue working with the New England Fishery Management Council (NEFMC) Research Steering Committee, the Mid-Atlantic Fishery Management Council (MAFMC) Research Set Aside Committee, and collaborating industry and academic partners to identify priority conservation engineering projects. Additional regional technology transfer activities will be coordinated so that highly rated net designs can receive more extensive testing under standard fishery operating procedures. Net lease and leveraged technology purchases will be coordinated with Sea Grant extension programs and collaborating fleets to expand technology transfer.	Based on regional workshops and reviews of proposals submitted under various Cooperative Research grant or contract competitions, funding and technical support will be provided for conservation engineering projects.	Successfully solicit, select, and fund research projects that support the objectives of reducing bycatch in priority fisheries. Annual reports on projects funded, completed, and implemented.	Reports on implementation activities.	FY2009
<b>MONITORING</b>							
M5	Improve quantitative estimates of bycatch by gear and fishery.	1) Continued to use algorithm to provide guidance for sea day coverage ; 2) Estimated fish, sea turtle, marine mammal, seal, and seabird bycatch in those fisheries for which there is sufficient observer coverage; 3) Continued to develop methodology to estimate bycatch of fish, sea turtles, marine mammals, seals, and seabirds.	Continue to provide guidance for sea day coverage and estimate bycatch of fish, sea turtles, marine mammals, seals, and seabirds in all observed fisheries.	Continue to provide guidance for sea day coverage and estimate bycatch of fish, sea turtles, marine mammals, seals, and seabirds in all observed fisheries.	1) Provide sea day schedules to NEFSC staff to monitor coverage of fisheries; 2) Provide estimates of precision when reporting discard estimates, when appropriate; 3) Provide annual sea turtle, marine mammal, seabird, and seal bycatch estimates, including a measure of variability; and 4) Provide annual estimates of fish bycatch, including a measure of variability when stock assessments are updated.	1) Complete data analyses; 2) Update sea day schedule as needed; 3) Update Annual Marine Mammal Stock Assessments; and 4) Update fish stock assessments as required.	Annual or as required.

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M9	Gear modifications to reduce bycatch in regional priority fisheries.	A) NEFSC has awarded contracts for four new studies to occur in 2009: (1) Turtle excluder device (TED) testing in scallop trawl fishery; (2) TED testing in flounder trawl fishery; (3) effect of hanging ratio on bycatch of cetaceans in bottom set gillnet fishery; (4) development of a data logger to assess tow duration in the bottom trawl fishery.	The four projects awarded in 2008 will commence and may be completed in 2009. Additional work to support regional gear-based solutions to bycatch is anticipated.	Additional work to support regional gear-based solutions to bycatch is anticipated.	Reports from projects will be reviewed.	Reports from bycatch reduction projects.	Dates per the contract specifications.
		(B) Flume tank work was completed in 2008 that provided information on optimal TED configurations.					
		(C) A modified flounder TED design was constructed and is in the process of being certified for use in the summer flounder fishery.					
		(D) A study, which used turtle carcasses as a proxy for live sea turtles, designed to ascertain the effectiveness of a modified scallop dredge to cause turtles to go over the dredge as opposed to under the dredge (where they are likely to be injured) was successfully completed. Nine turtle carcasses went over the dredge and none went under the dredge.					
		(E) Over six trips were completed that looked at the scallop catch rates between the modified dredge design and the standard dredge design. At this time, there does not appear to be a significant loss of scallops using the modified dredge design and there appears to be some reduction in prohibited finfish bycatch.					
M10	Study of animal behavior as it relates to development of gear to reduce bycatch in regional priority fisheries.	Assisted scallop industry using remotely operated vehicle (ROV) to track turtles. Work was accomplished under NEFSC's Endangered Species Act (ESA) permit. Several hours of behavior were documented, and some undocumented behaviors were recorded. Two proposals submitted to track turtles using satellite tags that record pressure (depth) as well as location.	Continue previous work, if appropriate.	Continue previous work, if appropriate.	Reports from projects will be reviewed.	Reports from bycatch reduction projects.	Dates per the contract specifications.
M11	Improve habitat and ecosystem information relevant to bycatch.	1) Habitat and bycatch analyses that were presented to the December 2007 Harbor Porpoise and Gillnet Take Reduction Team were published. 2) Several papers from the EMAX project (which incorporates bycatch and discards in an ecosystem analysis) are in press and published. 3) Continued updating Essential Fish Habitat reports.	Continue previous work, as appropriate.	Continue previous work, as appropriate.	Reports from EMAX, Essential Fish Habitat investigation, habitat/bycatch investigations; and success of Take Reduction Plans.		Annual.
	Gear modifications to reduce sea turtle bycatch in regional priority fisheries.	(A) NEFSC has awarded contracts for three new studies that focus on Sea Turtle issues for 2009: (1) TED testing in scallop trawl fishery; (2) TED testing in flounder trawl fishery; (3) development of a data logger to assess tow duration in the bottom trawl fishery.	NEFSC has awarded contracts for three new turtle-related studies to occur in 2009: (1) TED testing in scallop trawl fishery; (2) TED testing in flounder trawl fishery; (3) development of a data logger to assess tow duration in the bottom trawl fishery. More work in the scallop dredge fishery is planned, and we anticipate that more gear-based research will	Continue previous work, if appropriate.	Reports from projects will be reviewed.	Reports from bycatch reduction projects.	Dates per the contract specifications.
		(B) Flume tank work was completed in 2008 that provided information on optimal TED configurations.					

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M12		(C) A modified flounder TED design was constructed and is in the process of being certified for use in the summer flounder fishery.	more gear based research will be requested to address regional bycatch issues and to address the needs of a planned trawl rule designed to reduce sea turtle interactions.				
		(D) A study, which used turtle carcasses as a proxy for live sea turtles, designed to ascertain the effectiveness of a modified scallop dredge to cause turtles to go over the dredge as opposed to under the dredge (where they are likely to be injured) was successfully completed. Nine turtle carcasses went over the dredge and none went under the dredge.					
		(E) Over six trips were completed that looked at the scallop catch rates between the modified dredge design and the standard dredge design. At this time, there does not appear to be a significant loss of scallops using the modified dredge design and there appears to be some reduction in prohibited finfish bycatch.					

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M13	Establish long-term research funding program.	The NEFSC has been working with the Bycatch Reduction Engineering Program to establish regional gear-based bycatch groups to address regional bycatch problems.	Continuing activity.	Continuing activity.	Successfully solicit, select, and fund research projects that support the objectives of the NEFMC, including gear modifications to reduce bycatch.	Cooperative Research Partners Program (CRPP) projects selected for coming fishing year.	Projects selected by September of each year.
M15	Implement an electronic data entry at sea system.	Working towards a complete electronic data entry at sea system with DMS.	Further developing equipment and software to allow data entry at sea.	Continuing activity.	Documentation of concepts and systems.	Beta testing of concept in 2009.	FY2010
M16	Conservation engineering data archiving and retrieval system.	Initiation of database design delayed because of other priorities and limited resources.	The National Cooperative Research Program (NCRP) will work with state and university partners on training programs that will allow use of Study Fleet and Fisheries Scientific Computer System (FSCS) equipment and software for at-sea data collection. The use of these data capture systems will help support efficient and standardized data collection and processing.	Building upon progress in expanding use of standard data capture systems in conservation engineering, the NCRP will then develop data access and public display systems similar to the systems developed for web display of Industry Based Survey data.	The number of projects that will utilize standard data capture systems. The number of cooperative research projects that have archived their data in a system that will support greater scientific and management access and public dissemination of results.	Data capture and delivery systems will become operational.	FY2010
M17	Explore the use of video monitoring systems to view scallop dredge interactions with sea turtles.	A study that used video cameras and turtle carcasses as a proxy for live sea turtles was initiated to ascertain the effectiveness of a modified scallop dredge to cause turtles to go over the dredge as opposed to under the dredge (where they are likely to be injured) and was successfully completed. Nine turtle carcasses went over the dredge and none went under the dredge. The NEFSC supported work with remotely operated vehicles (ROVs) to ascertain sea turtle behavior in areas frequented by scallop dredge fishing activities. Many hours of video were attained that yielded some new information on sub-adult sea turtle behaviors.	Continue to work with fishing industry representatives to develop a sonar and video system that is capable of detecting and tracking sea turtles using a towed system and that is also capable of operating as an ROV.	Continue previous work, if appropriate.	Collection and inventory of video tapes (if funded).	Report summarizing study results completed (if funded).	December-07
M18	Provide an annual discard report summarizing Northeast Fisheries Observer Program (NEFOP) data.	As required by the Standardized Bycatch Reporting Methodology (SBRM) Omnibus Fishery Management Plan (FMP) amendment, the SBRM annual discard report was developed.	Provide the SBRM annual discard report containing an annual summary of NEFOP data.	Continue to provide the SBRM annual discard report summarizing the NEFOP data.	The SBRM annual discard report will be presented to the NEFMC, MAFMC, and the public during the SBRM Prioritization and Consultation process.	1) Complete SBRM annual discard report; 2) Present the SBRM annual discard report at the NEFMC and MAFMC meetings during the SBRM Prioritization and Consultation process.	Spring 2009; and annual thereafter.

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<b>M19</b>	Conduct analysis of the number of sea days needed to achieve a 30%CV with application of SBRM filters.	1) Conduct analysis of the number of sea days needed to achieve a 30%CV with application of SBRM filters using the most recent 12 months of data; 2) Compare the needed sea days with the funded sea day schedule.	1) Provide update of the number of sea days needed to achieve a 30%CV with application of SBRM filters; 2) Provide a comparison of the required sea days and the funded sea day schedule.	1) Continue to provide update of the number of sea days needed to achieve a 30%CV with application of SBRM filters; 2) Continue to provide a comparison of the required sea days and the funded sea day schedule.	The number of needed sea days and the funded sea day schedule will be presented to the NEFMC, MAFMC, and the public during the SBRM Prioritization and Consultation process.	1) Complete sea day analysis using most recent 12 months of data; 2) Present sea day schedule comparison at NEFMC and MAFMC meetings during the SBRM Prioritization and Consultation process.	Spring 2009; and annually thereafter.
<b>M20</b>	Assess bycatch of Atlantic sturgeon in sink gillnet fisheries.	Submitted funding proposals.	If funded, conduct study to assess Atlantic sturgeon bycatch, and the effects of gear modifications on bycatch, in the monkfish and spiny dogfish fisheries.	Complete study initiated in FY2009.	Review of status updates and interim reports.	Receipt of final report.	FY2010
<b>M21</b>	Support studies to collect information on abundance and distribution, movement, genetic origin, feeding ecology, and health assessments of sea turtles.	Provided funding for tagging and health assessment studies in FY2008.	If funding available, conduct health assessment and tagging studies in FY2009. Complete analysis of data collected in FY2008.	N/A	Review of status updates and interim reports.	Receipt of final report.	FY2009

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<b>MANAGEMENT</b>							
<b>MG1</b>	Improve data available to the management process so that it can effectively address bycatch.	Conversion to electronic data entry at sea via PDAs completed for OBSCON and SAP quota monitoring data.	Working towards a complete electronic data entry at sea system with DMS with shared access by Northeast Regional Office (NER).	Continuing activity.	Evaluate the efficiency of digital data versus paper reports.	Timely data availability meeting data quality standards.	Annual improvements.
<b>MG3</b>	Amendment to the Harbor Porpoise Take Reduction Plan.	The NER convened two meetings of the Harbor Porpoise Take Reduction Team during FY2008 (December 2007 and January 2008) to develop strategies and options for reducing harbor porpoise bycatch in New England and Mid-Atlantic gillnet fisheries.	NMFS will publish a proposed rule by February 2009 and will publish a final rule by July 2009.	Activity complete.	Publication of proposed rule, response to public comments, and publication of final rule.	Development and implementation of an Amendment to the Harbor Porpoise Take Reduction Plan (HPTRP) that reduces bycatch of harbor porpoise in Northeast and Mid-Atlantic sink gillnet fisheries.	Final rule implementation by July 2009.
<b>MG4</b>	Amendment to the Atlantic Large Whale Take Reduction Plan (ALWTRP).	NMFS published a proposed and final rule to delay the effective date of the sinking groundline provision for all trap/pot gear from October 5, 2008 to April 5, 2009. NMFS also reinstated the Dynamic Area Management (DAM) program north of the Seasonal Area Management (SAM) area from October 5, 2008 to April 5, 2009.	NMFS to investigate gear modifications to reduce the risk of entanglement that may occur from endlines associated with trap/pot and gillnet gear. NMFS to develop a compliance plan and monitoring plan to evaluate the effectiveness of the gear modifications contained within the ALWTRP.	Continue development of product.	Consensus recommendations will be sought from the Atlantic Large Whale Take Reduction Team (ALWTRT) along with promising gear research results. Gear workshops may also be convened. Consensus recommendations will also be sought from the ALWTRT concerning the compliance and monitoring plans.	Development of a product that contains ideas for reducing bycatch of large whale species from endlines associated with gillnet and trap/pot gear. Development of plan to monitor the effectiveness of the ALWTRP, including a plan to evaluate the compliance rate of the current ALWTRP gear modifications.	The product produced from the ALWTRT will be used as part of NMFS scoping process for the development of an Amendment to the ALWTRP to address entanglement risks associated with endlines.
<b>MG5</b>	Convene Meetings of the Atlantic Trawl Gear Take Reduction Plan.	NMFS convened subgroup meetings for both the education/outreach and research subgroups to finalize draft plans. The draft plans were presented to the full Take Reduction Team (TRT) during FY2008 for consideration. NMFS has also contracted for outreach materials to help educate fishermen of the marine mammal bycatch issues regarding trawl fisheries.	NMFS will finalize the Atlantic Trawl Gear Take Reduction Strategy. NMFS will also provide copies of the education/outreach material to the TRT and continue to monitor the fishery for marine mammal bycatch. NMFS will also investigate funding for additional gear research to help further reduce marine mammal bycatch in the Atlantic trawl fisheries.	Activity complete.	Response to public comments and publication and distribution of outreach material. Continued annual monitoring of marine mammal bycatch in trawl fisheries.	Finalize Atlantic Trawl Gear Take Reduction Strategy including gear research and education and outreach plans, as well as plans for monitoring marine mammal takes in Atlantic trawl fisheries. Finalize and distribute education and outreach material to all Atlantic trawl gear vessels.	All products to be completed by the end of FY2009.

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<b>MG6</b>	Investigate methods to reduce sea turtle bycatch in endlines of fixed gear and to improve disentanglement response.	In Spring 2008, NER held a workshop to better understand how and why turtles become entangled in vertical lines, to explore potential solutions and ideas to reduce entanglements, and to improve entanglement response and reporting.	Report will be finalized.	Activity complete.	Draft report from workshop submitted to NMFS and reviewed.	Finalized report from the workshop will be available to all interested parties.	Report completed early 2009.
<b>MG7</b>	Revision of North Atlantic Right Whale Critical Habitat.	The NEFSC responded to NER follow-up questions regarding a request for additional analysis for designation of critical habitat for North Atlantic right whales.	The NER will draft a proposed and final rule to revise the North Atlantic Right Whale Critical Habitat for the Northeast feeding areas and Southeast calving areas. The NEFMC will complete an economic analysis to support the proposed and final revision.	Continue development of product.	Publication of proposed rule, response to public comments, and publication of final rule.	The NEFMC will complete its economic analysis and the NER will complete the draft proposed rule by March 2009. NMFS to publish a proposed rule by August 2009 and a final rule by April 2010.	Final rule implementation in 2010.



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MG8	Improve landings data collection programs (vessel trip report (VTR), vessel monitoring system (VMS), dealer data) to allow the identification of trips participating in Special Access Programs (SAPs), trips using gear modifications to reduce bycatch, trips participating in Sectors, and the verification of VTR serial number to accurately link the VTR and Dealer data.	A white paper was written describing the need to improve the landings data collection programs (VTR, VMS, Dealer data) to accurately identify trips participating in SAPs, trips using gear with bycatch modifications, and trips participating in Sector management as well as the need to verify the VTR serial number used to link the VTR and Dealer data.	A 'Data Summit' is scheduled to discuss data needs and how these needs can be achieved.	Continue previous work, if appropriate.	Modify the existing data collection programs (and databases) to collect the necessary data elements in the VTR (or other databases) to accurately link VTR and Dealer data, identify fishing trips participating in SAPs (at a trip level), trips using gear modified to reduce bycatch, and trips participating in Sector management.	Obtain the necessary data elements in the VTR (or other databases) to accurately link VTR and Dealer data, identify fishing trips participating in SAPs (at a trip level), trips using gear modified to reduce bycatch, and trips participating in Sector management.	May-09
MG9	Improve data collection to support Annual Catch Limits (ACLs), Accountability Measures (AM), and groundfish Sector measurement.	Expand the data collection programs and develop the methodology to support ACLs, AM, and groundfish Sector management.	Expand the data collection programs and develop the methodology to support ACLs, AM, and groundfish Sector management.	Continue previous work, if appropriate.	Modify the existing data collection programs (and databases) to collect the necessary data elements to support ACLs, AM, and Sector management and develop and/or expand the current estimation methods.		
MG10	Provide input into developing monitoring programs to measure the success of FMPs and TRTs in reducing bycatch and identifying bycatch trends.	Review and provide support where needed to manage and develop at-sea and dock-side monitoring programs, as well as and industry-funded scallop and at-sea observer programs, and provide observer reports to locate time and areas of bycatch concerns.	Will review and provide input during the development of Amendment 4 of the Herring FMP, Amendment 10 of the Squid, Mackerel, and Butterfish FMP, and Amendments and Frameworks to the Groundfish FMP, Scallop FMP, and Take Reduction Teams in the Northwest Atlantic.	Continue review.			Ongoing
MG11	Evaluated the effectiveness of management alternatives for Amendment 10 to the Squid, Mackerel and Butterfish FMP to reduce butterfly and other finfish bycatch in the small-mesh otter trawl fleets.	NMFS review and completion of Amendment 10 Draft Environmental Impact Statement.	NMFS review of Final Environmental Impact Statement for Amendment 10.	Implementation of Amendment 10.	FMAT will regularly review effectiveness of bycatch reduction measures.	Continued FMAT review until butterfly stock is rebuilt.	Ongoing

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<b>MG12</b>	Evaluated gear impacts from the small-mesh otter trawl fleets on Essential Fish Habitat (EFH) for Amendment 9 to the Squid, Mackerel and Butterfish FMP	Implemented Amendment 9 (an area closure to reduce gear impact on EFH) to the Squid, Mackerel and Butterfish FMP.	Activity complete.	Activity complete.			
<b>MG13</b>	Conducted selectivity study to assess a codend mesh size increase in Loligo nets to reduce butterfish bycatch.	Collected data to support analysis of selectivity study.	Data evaluation, report preparation, and presentation of results to MAFMC.		Review of analysis by MAFMC for management purposes.		
<b>MG14</b>	Implemented regulation to allow use of "Ruhle Trawl" to reduce cod bycatch in the haddock fishery.	Published proposed and final rules to authorize Ruhle Trawl for use in the Regular B-Days at Sea (DAS) Program and in the Eastern U.S./Canada Haddock SAP. Published inseason action to allow temporary use in the Eastern Area under an A DAS.	Extend authorization to use Ruhle Trawl in the Eastern Area through Emergency Interim Action.	Indefinitely extend authorization to use Ruhle Trawl in the Eastern Area through Amendment 16.	Timely completion of each regulatory action.		