

<b>Pacific Islands Regional Office (PIRO) and Science Center Bycatch Implementation Plan Action Items (FY09 and FY10) and Accomplishments for FY08</b>						
<b>Action</b>	<b>Status/Specific Accomplishments as of 9/30/08</b>	<b>2009</b>	<b>2010</b>	<b>How Progress Will be Measured and/or Monitored</b>	<b>Milestone</b>	<b>Milestone Completion Date</b>
<b>Monitoring</b>						
Vessel Electronic Monitoring	Contract awarded to Archipelago Marine Research Ltd. to conduct the project in coordination with PIRO and Western Pacific Fishery Management Council (WPFMC) staff.	Cameras and digital recording equipment installed on Hawaii longline fishing vessels (3 shallow-set and 1 deep-set). Images will be evaluated for quality and utility to monitor longline fisheries for effort and catch composition. Report on findings due by end of FY 09.	N/A	PIRO and WPFMC staff will work with contractor to ensure that project remains on schedule.	Completion of project report	Sept-09
<b>Bycatch Reduction Engineering and other Research</b>						
Study to reduce false killer whale take in Hawaii pelagic longline fisheries	In FY07 a contractor was hired to complete the project. Survey design was agreed upon. Fisherman interviews were conducted in late FY07 and FY08.	Project was expected to be completed in FY08 including project findings. However, contractor had problems with translator and getting transcripts of interviews. Report should be complete in early 2009.	N/A	Project completion	Report on findings	Feb -09
TurtleWatch Project to identify spatio-temporal areas of high sea turtle bycatch	Analyses produced a map that suggests avoidance of fishing in areas between 17.5-18.5 degrees sea surface temperature would greatly reduce sea turtle bycatch in the shallow-set longline fishery. Manuscript detailing construction and application of TurtleWatch product published in Endangered Species Research in July 2008.	Dive behavior from loggerheads will be used to further refine the product where possible. Product will be distributed to Hawaii-based longline fishermen. Paper detailing refinement will be completed.	Continue refinements including dive behavior and in-situ oceanographic data.	Maps detailing areas of high bycatch will be produced. Paper detailing project results will be completed.	Distribution of completed maps to fishermen	Apr-09
Shark bycatch reduction experiments using metals with various electronegativities as deterrents.	Completed an Environmental Assessment to fulfill the requirements of NEPA and NOAA Administrative Order NAO 216-6. Completed field-based behavioral experiments that indicated sharks exhibited aversive behaviors to electropositive (e+) metal. Organized a multidisciplinary workshop, 'Shark Deterrent and Incidental Capture Workshop'.	Continue with experiments, analyze results, present findings at national meetings, and publish results. Continue with behavioral and field experiments. Publish NOAA Technical Memo based on 2008 Shark bycatch deterrent workshop	Initiate fishing trials, continue behavioral experiments, and write up results.	Experiments will be conducted, reported on, and published.	Analysis of 2008 field-based behavioral experiments and publication of proceedings from Shark Deterrent and Incidental Capture Workshop.	Jun-09

Cooperative testing of turtle bycatch reduction methods with other nations as a means of exporting conservation engineering.	To varying degrees, have cooperated in studies in the longline fisheries of Japan, Korea, Indonesia, Philippines, Costa Rica, Vietnam, Ecuador, Guatemala, Brazil, Mexico, Peru, Uruguay, Panama, Brazil, Italy and Spain. Experiments tested alternate hooks or bait. Promoted turtle handling methods. Conducted workshops in Costa Rica, Brazil and Ecuador in 2005, 2006 and 2007.	Continue projects, analyze, and report on results of work with all collaborating countries.	Continue 2008 projects and initiate new projects, including data analysis based on results of prior studies.	In addition to the above (and also contributing to previous milestone), the number of countries participating, and the number reporting positive results for turtle bycatch reduction or continued fishery viability.	Participate in RFO meetings and provide scientific documentation of the efficacy of sea turtle bycatch reduction methods in January 2009 (North Pacific ISC Bycatch Working group) and August (Western and Central Pacific Fisheries Commission (WCPFC) Scientific Committee).	1) ISC – Jan-09, 2) WCPFC – Aug-09
Gillnet sea turtle bycatch reduction	Completed initial testing of illuminating gillnets and using shark shapes in Baja California as a possible means to reduce the incidental capture of sea turtles in coastal gill net fisheries.	Further refinements to gillnet illumination will be made and tested in coastal fisheries. Experiments will continue in 2009, and results reported. Refinements with the attachment of shark shapes will also be examined and tested in gillnet fisheries.	Experiments will continue in 2010 and results will be reported.	Experiments will be conducted, reported on, and published.	Completion of illuminated net and shark shape experiments and report findings at international meetings.	Dec-09
Development of estimation models for the take of non-target sharks, wahoo, and mahimahi in the Hawaii-based tuna and swordfish longline fisheries	Draft manuscript describing observer catch data for sharks in this fishery given management resolutions of shark finning ban and adoption of circle hooks and fish bait in the swordfish longline fishery.	Publication of the observer catch data for sharks	N/A	Preparation of papers relating to catches of sharks reported in logbooks, and for catches of mahimahi and wahoo from observer reports and logbooks.	Publication of papers relating to catches of sharks reported in logbooks, and for catches of mahimahi and wahoo from observer reports and logbooks.	Dec-09
Estimation of fishery takes of sea turtles, seabirds, and marine mammals for the Hawaii-based deep-set longline fishery based on observer data and logbooks.	Historical takes estimated. Annual reports of 2007 estimates for turtles, birds, and mammals in the tuna longline fishery.	Annual reports of 2008 estimates for the tuna longline fleet.	Annual report of 2009 estimates for the longline fleet.	Timely submission of Pacific Islands Fisheries Science Center reports to PIRO.	Estimate protected species bycatch by Hawaii-based deep-set fishery.	1) Jun-09 (sea turtles and sea birds) 2) Jan-10 (marine mammals) 3) Jun-10 (sea turtles and seabirds) 4) Jan-11 (marine mammals)

Conduct and update stock assessment of species that comprise a significant bycatch	North Pacific blue shark stock assessment completed and report drafted in collaboration with the National Fisheries Research Institute of Japan. External review of report is scheduled for Oct-Nov. 2008.	Complete external review, address reviewer's comments, and finalize report. Present report at meetings of the WPRFMC, ISC and WCPFC.	N/A	Finalize and publish report.	Report on the Stock Assessment of North Pacific Blue Shark.	Aug-09
Analysis of observer data to characterize marine mammal interactions with pelagic longline vessels.	Analysis of observer data completed in FY07. NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-412 published.	Results of analysis presented at various international fora. Continued analysis on oceanographic correlates and gear effects.	N/A	Completion of analyses and publication of results.	Presentation of Results.	Nov-09
Experimental longline study with shallow hooks removed	Manuscript submitted to the journal: Fisheries Research Title: Effects of eliminating shallow hooks from tuna longline sets on target and non-target species in the Hawaii-based pelagic tuna fishery.	Manuscript accepted for publication. Utilizing catch by hook number and fish length data for a related research project	N/A	Publication of results	Fisheries Research publication	Jan-09
<b>Management</b>						
International transfer of bycatch mitigation technology (dehookers and training)	Projects completed in New Caledonia, Marshall Islands, Fiji, and the Cook Islands.	No funding available in FY09.	N/A	N/A	N/A	N/A
Development of international seabird, sea turtle, and shark bycatch mitigation requirements in the Western Pacific	PIRO, in coordination with PIFSC, worked within the context of the WCPFC to Implement seabird mitigation measures for pelagic longline vessels within the Convention Area and to implement restrictions on shark finning.	Will continue working within the context of WCPFC to modify and improve international seabird mitigation requirements, to establish a sea turtle measure, and to extend shark finning restrictions to include smaller vessels.	Will continue working within the context of WCPFC to establish, modify, and improve international seabird, sea turtle, shark, and other bycatch mitigation requirements.	Evaluations of proposals from member nations and submission of suggested proposals.	Enactment of a WCPFC binding measure to mitigate sea turtle bycatch	Dec-08
<b>Education/Outreach</b>						
Protected species workshops for longline fishermen	Workshops conducted in Hawaii training 173 vessel owners (captains) in classroom. Workshops conducted in American Samoa training 98 persons.	Conduct Protected Species Workshops in American Samoa and Hawaii.	Workshops are federally mandated. Therefore, workshops will continue. If longline fishery expands to Guam and CNMI, workshops will be held for longliners in those areas as well.	Records of numbers of person trained	Completion of workshops	Ongoing

Hawaii interactive protected species workshops	English version completed and on-line in FY08. Use policy completed. 76 persons trained using Interactive Protected Species Workshops in FY08.	Vietnamese and Korean versions will be implemented in early FY09.	Evaluate success of program.	Records of numbers of person trained	Implementation of Vietnamese and Korean versions.	On going
American Samoa interactive protected species workshops	Contractor hired to build American Samoa version of interactive workshops.	American Samoa version to be completed in FY09.	Evaluate success of program.	Records of numbers of person trained	Implementation of interactive applications on work stations in American Samoa.	On going
Dehooking training for fishermen and observers	Trainings conducted at Protected Species Workshops and observer training sessions. Trained international observers in Pohnpei, Spain, Samoa, Palau, and Papua New Guinea	Continue dehooking trainings.	Continue dehooking trainings.	Records kept of numbers trained	Completion of trainings.	On going
Pelagic longline seabird regulation, take mitigation, and handling video	Filming and production started.	Complete polished version of seabird video with separate modules. Discrete modules will increase versatility of the video. Begin using video in Protected Species Workshops and other outreach venues.	Continue to use video in workshops and in interactive web based workshop.	Completion of video	Completion of video.	Sep-09