

<b>Pacific Islands Regional Office And Science Center Bycatch Implementation Plan Action Items (FY07 and FY08) and Accomplishments for FY07</b>						
<b>Action</b>	<b>Status/Specific Accomplishments as of 9/30/07</b>	<b>2008</b>	<b>2009</b>	<b>How Progress Will Be Measured and/or Monitored</b>	<b>Milestone</b>	<b>Milestone Completion Date</b>
<b>Monitoring</b>						
High-Seas Protected Species Observer Reporting System	Continuous project. Satellite phones used by observers continue to prove their value when monitoring real-time sea turtle interaction in the Hawaii shallow-set longline fishery. Fishery managers were able to allow fishing for swordfish and effectively monitor the fishery while not exceeding ITS or regulatory interaction limits on leatherback and loggerhead sea turtles.	Use of satellite telephones by PIRO observers will continue pursuant to regulations setting sea turtle interaction limits.	Use of satellite telephones by PIRO observers will continue pursuant to regulations setting sea turtle interaction limits.	The system has already been proven effective in promoting two-way communications between ship and shore. The system will continue to be evaluated on how well it allows fisheries managers to keep the numbers of leatherback and loggerhead interactions below the interaction limits set forth in the regulations.	Observed interaction limits for leatherback and loggerhead sea turtles remain consistent with limits set forth in 50 CFR 665.33	Jan-08
Cooperative PIRO/State of Hawaii Bottomfish Tagging Project	Project discontinued due to termination of bottomfish observer program in FY07.	N/A	N/A		First tag return.	N/A
<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. Fisherman interviews were conducted in late FY07.	Project is expected to be complete in FY08 including project findings.	N/A	Project completion	Report on findings	Sep-08

Testing of Dehooking Gear on Fish Bycatch Species	On-going project. Observers continue to record comments documenting the use of dehooking equipment in observer trip reports. A report describing trials using dehookers to release sharks during a research cruise was completed by PIRO in FY07.	Compile brief summary of results based on observer comments. Continue evaluations.	Continue evaluations.	Cruise summaries for various platforms	Test equipment on commercial fishing vessels.	On going
Experiment testing new dehooker design for sharks. Joint project between PIFSC and PIRO	Experiments were conducted at Virginia Institute of Marine Science in July and August of 2007. Limited data were collected that showed no significant difference between standard dehookers and the new design.	N/A	N/A	Progress will be monitored	1) Completion of experiment in the field. 2) Report on experiment is complete.	1) Aug-07 2) Nov-08
Testing safe-leads intended improve fisherman safety and further reduce seabird interactions	Contact awarded to contractor. Project completion including report expected in June 2008.	N/A	N/A	1) PIRO personnel will maintain communications to ensure at-sea portion of experiment is completed. 2) Report summarizing project will be due after at-sea research is completed.	1) Research is completed. 2) Report detailing results is completed	1) Mar-08 2) July-08
PIFSC additions						
EOD TurtleWatch Project to identify spatial temporal areas of high sea turtle bycatch	Analyses produce a map with that suggested avoiding fishing in areas north of an 18.5 degree isotherm would greatly reduce sea turtle bycatch in the shallow-set longline fishery.	Further refinements to the product will be added. Product will be translated into Vietnamese and distributed to Hawaii-based longline fishermen. Paper detailing FY07 results will be completed.	Continue refinements including more oceanographic data.	Maps detailing areas of high bycatch will be produced. Paper detailing project results.	Distribution of completed maps to fishermen	Dec-07

Development of estimation models for the take of nontarget billfish in the tuna and swordfish longline fisheries	Two peer-reviewed journal articles (2005, 2006) on techniques for creating estimates from fishermen's logbook data. Third paper on completed and submitted for publication in 2007.	Publication of 2007 paper. Continue to develop bycatch estimation models using fishermen logbook information.	Continue to develop bycatch estimation models using fishermen logbook information.	Publications. Cited uses of Improved estimates of true catch of nontarget species	Publication of third paper.	Apr-08
Estimation of fishery takes of sea turtles, seabirds, and marine mammals for the Hawaii-based longline fishery based on observer data and logbooks.	Historical takes estimated. Annual report of 2006 quarterly estimates for turtles, birds, and mammals in the tuna longline fishery (the swordfish longline fishery is 100% observed and requires no estimation. Note also that bottomfish fishery observer data is no longer collected).	Annual report of 2007 quarterly estimates for the tuna longline fleet. Special summaries and estimates as requested. Explore observer data to look for effects of operational characteristics on bycatch rates	Annual report of 2008 quarterly estimates for the longline fleet. Special summaries and estimates as requested. Explore observer data to look for effects of operational characteristics on bycatch rates	Timely submission of PIFSC reports to PIRO, Estimation for more fisheries or more strata (inside outside EEZ etc.), estimation of more dimensions (e.g. degree of injury, etc.)	Estimate protected species bycatch by Hawaii-based fisheries: 1) in 2007 2) in 2008	1) Jun-08 2) Jun-09
Cooperative testing of turtle bycatch reduction methods with other nations as a means of exporting conservation engineering.	Cooperated in studies in the longline fisheries of Japan, Korea, Phillipines, Costa Rica, Ecuador, Guatemala, Brazil, Mexico, Peru, Panama, Brazil, and Spain. Experiments tested alternate hooks or bait. Promoted turtle handling methods. Conducted workshops in Costa Rica in 2006 and 2007. Initiated work in Indonesia and Uruguay. Initiated testing of stiffer lines to reduce entanglement.	Continue projects, analyze, and report on results of work with Korea, Indonesia, Pacific coastal Nations of Latin America, Brazil, Uruguay, Italy, and Spain.	Continue 2008 Projects and initiate new projects 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 meetings of RFO's and provide scientific documentation of the efficacy of sea turtle bycatch reduction methods in May (North Pacific ISC) and August (Western and Central Pacific Fisheries Commission).	May and August of every year.

Estimation of fishery bycatch of sharks and other fishes using longline logbook and observer data	First estimates of total numbers of bycatch for all fish species in the Hawaii-based longline fisheries completed. Weight estimated for that bycatch based on observer measurements and length-weight regressions..	Produce updated annual estimate. Review and incorporatrrion of estimates into the expanded and updated National Bycatch Report.	Produce updated annual estimate.	Timely submission of PIFSC reports to PIRO and/or S&T, Estimation for more fisheries, or more strata (by areas, condition, etc).	1) Complete input to National Bycatch Report. 2) Estimate shark and other fish bycatch by Hawaii-Based Fisheries annually	1) Dec-07 2) Jun-08 Jun- 9
Development and testing additional bycatch reduction technology in Hawaii fisheries	Completed testing of large circle hooks and separate testing of deeper (all hooks deeper than 100m) hooks in tuna longline fishing. Reported results to Regional Fisheries Organizations (RFO's). Published NOAA Technical Memorandum and several other papers on results of work on behavioral and sensory aspects of bycatch. Tested barbless circle hooks in the shore and longline fishery.	Complete and submit for publication papers on the efficacy of using modified longline fishing gear or modifying fishing operations as means of reducing bycatch (e.g. a paper on a deep longline setting technique with no shallow hooks).	Complete and submit for publication papers on the efficacy of using modified longline fishing gear or modifying fishing operations as means of reducing bycatch (e.g. paper(s) comparing large circle hooks to other hook types.	Number of publications and reports to PIRO, the Council, and RFMO's. Adoption of methods into conservation measures.	Publish Research on the Causes and Mitigation of Sea Turtle Interactions with Longline Fisheries, and summarize scientific information in working papers and meeting reports for fishery managers	1) Jul-08 2) Jul- 09
Shark bycatch reduction experiments using circle hooks, semiochemicals, and metals with various electronegativities as deterrents.	Shark bycatch was reduced in the circle hook tests. Semiochemicals were tested and repelled sharks but were hard to apply in fishing. Next,experiments indicated that sharks exhibit aversive behaviors to electropositive (e+) metal. Paired experiments using bait associated with small pieces of e+metal decreased the chance that sharks take the bait.	Continue experiments, and write up results.	Initiate fishing trials. Continue fishing trials and write up results. Publish papers	Experiments will be conducted, reported on, and published.	Completion of 2008 experiments and report results.	Sep-08

Gillnet sea turtle bycatch reduction	Initiated testing the role of lightstick use and shark shapes as possible means to reduce the incidental capture of sea turtles in coastal gill net fisheries. Work is being conducted in Baja California, Mexico. Initial results suggest that lightsticks on nets reduce the number of turtles caught by close to 29% and a shark shaped "scarecrow" decreases the number of turtles caught by 50%.	Experiments will continue in 2008, and results reported. behavioral and physiological experiments indicate that turtles can see UV light while certain pelagic fish such as some billfish and mahi mahi cannot. Transparent UV-absorbing plastics may be used to test shark shaped silhouettes visible to sea turtles, but not to targeted pelagic fish such as mahi mahi..	Experiments will continue in 2009 and results will be reported.	Experiments will be conducted, reported on, and published.	Completion of 2008 experiments and report results.	Sep-08
Conduct and update stock assessment of species that comprise a significant bycatch	Multifan CL model assessment completed and compared with production model assessment, and working paper drafted in collaboration with the National Fisheries Research Institute of Japan. Striped marlin Assessment completed and reported to the North Pacific ISC and the Scientific Committee of the Central and Western Pacific Tuna Commission	Complete review and obtain collaborators approval to present working paper on the blue shark assessment.	Conduct stock assesments of other species that comprise a significant bycatch.	Number of publications and reports to PIRO, the Council, and RFO's. Adoption of methods into conservation measures.	Report on the Assesment of North Pacific Blue Shark Stock.	Sep-08
Report on Case Studies of Successful Bycatch Reduction Strategies in the Hawaii-Based Longline Fleet	The contractor has completed most of the fieldwork, the outline of the report has been developed, and key pieces drafted.	Complete the report, with one focus is on particular techniques, such as side-setting to reduce seabird interactions, and another focus is on individual vessel owners with unique perspectives and experiences.		Completion of report	Complete Final Report on Case Studies of Successful Bycatch Reduction Strategies in the Hawaii-Based Longline Fleet	Mar-08
Analysis of observer data to characterize marine mammal interactions with pelagic longline vessels.	Analysis of observer data completed in FY07.	Results of analysis presented at various international fora.	N/A	Completion of analysis.	Presentation of results	Nov-08
<b>Management</b>						

International transfer of bycatch mitigation technology (dehookers and training)	Dehooking materials and training were transferred to New Caledonia and the Marshall Islands in FY07.	Distribution of dehooking materials will continue in concert with sea turtle enhancement projects in Fiji and the Cook Islands.	Distribution of dehooking materials will continue in concert with sea turtle enhancement projects	Records will be kept of number of informational packets handed out.	Continuation of program in FY08 contingent on continued funding.	On going
Development of International Seabird Bycatch Mitigation Requirements in Western Pacific	Worked within the context of the Western and Central Pacific Fisheries Commission (WCPFC) to implement seabird mitigation measures for pelagic longline vessels within the treaty zone.	Will continue working within the context of WCPFC to suggest proposals for international seabird mitigation requirements.	Will continue working within the context of WCPFC to develop proposal for international seabird mitigation requirements.	Evaluations of Proposals from member nations and submission of suggested proposals.	Implementation of technical specifications for seabird mitigation measures.	Dec-07
<b>Education/Outreach</b>						
Protected Species Workshops for Longline Fishermen	Workshops conducted in Hawaii training 246 persons. Workshops conducted in American Samoa training 92 persons. One person from Guam trained in Hawaii.	Conduct Protected Species Workshops in American Samoa December 4-6, 2008 and August 2008 Hawaii workshops on-going.	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	On going
Interactive Protected Species Workshops	Storyboards for English version completed. Beta testing English version on-going. Translations of storyboard into Korean and Vietnamese completed	Complete Interactive Protected Species Workshop Use Policy statement. Program will be fully on-line in FY08.	Evaluate success of program	Summary report on progress and results of project	Implementation of finished product on PIRO server.	Jan-08
Building Capacity to Minimize Seabird bycatch in Hawaii's Pelagic Longline Fisheries	Program completed. In FY07 35 vessels were side setting. Overall, seabird bycatch numbers have been reduced by ~95%, interaction rates have been reduced by ~83% in Hawaii pelagic longline fisheries.	N/A	N/A	Report summarizing project complete.	Project Report complete.	Feb-07
Dehooking Training for Fishermen and Observers	Trainings conducted at Protected Species Workshops and observer training sessions. Trained international observers in Pohnpei and Spain.	Continue dehooking trainings.	Continue dehooking trainings	Records kept of numbers trained		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.	Protected Species Workshop Coordinator progress report.	Completion of Video	Mar-08
Loggerhead Education in New Caledonia	An outreach specialist was hired to teach New Caledonians about the small nesting population in their country.	Program will be continued in FY08.	Program will be continued contingent upon needs and funding.	Records will be kept of the number of persons trained.	First class is taught in FY08	Jan-08