

**SUMMARY OF INTERNATIONAL ACTIVITIES RELATED TO REDUCTION OF BYCATCH
OF SEA TURTLES IN LONGLINE FISHERIES** (updated September 20, 2004)

| DESCRIPTION OF ACTIVITY | LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE) | LEAD FMC | CONTACT PERSON FOR ADDITIONAL INFORMATION (NAME ONLY) |
|--|--|----------------|---|
| A. Technology Transfer (Training and Outreach) | | | |
| A.1 A Workshop was held in conjunction with the Sea Turtle Symposium in San Jose, Costa Rica on February 28, 2004. Focus was on providing information on safe release to participants from nations with longline fleets. | Potential to reach multiple longlining nations | SEFSC | John Mitchell Charlie Bergman |
| A.2 A workshop was held in Panama City, FL during March 2004 to provide instruction to domestic vessels in the Gulf on the use of de-hookers and line cutters. | U.S. Gulf | SEFSC | John Watson |
| A.3 Laminated cards with sea turtle ID and handling guidelines and the safe handling video developed by the SEFSC are being provided to numerous countries as requested. These materials were used in training sessions held in Ecuador in collaboration with IATTC and WWF in March 2004. | Pacific Atlantic | SEFSC PIFSC | Sheryan Epperly Yonat Swimmer |
| A.4 Staff will be following up on requests for technical information and materials that have been received from Mexico ¹ , Israel, and Australia. | Pacific Atlantic | SEFSC PIFSC | All involved staff |

¹Feb. 24, 2004 email inquiry from Mexico, Maria Ruiz Slater, State Government Michoacan; request assistance in duplicating gear modification experiments

| DESCRIPTION OF ACTIVITY | LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE) | LEAD FMC | CONTACT PERSON FOR ADDITIONAL INFORMATION (NAME ONLY) |
|--|---|-----------------|--|
| A.5 SEFSC staff conducted longline mitigation training and workshops in Peru, June 1-12, 2004 in cooperation with IATTC (Martin Hall). | Peru | SEFSC | Charlie Bergmann |
| A.6 As a follow up to the workshop held at the Sea Turtle Symposium in Costa Rica, a workshop on the use of dehookers, safe handling and release techniques was held with the crew of the Marviva, the Coast Guard, INCOPECA, sport fishers and NGOs in Golfito, CR in July 2004. The focus was on the sportfishing community, but workshops are planned for early 2005 to target shark and mahi longline fleets. | Costa Rica | SEFSC | Charlie Bergmann |
| A.7 Workshops were held to help domestic fishers comply with the recent HMS BiOp. Workshops covered results from the NED, safe handling, gear removal and release. Workshops were held in Dulac, LA, Larose, LA, and Panama City, FL in July. An enforcement workshop was also held at the USCG training facility in New Orleans on August 11. Workshops were held in Pompano Beach, FL, Ft. Pierce, FL, Charleston, SC, and Wanchese, NC in August and in Barnegat Light, NJ and East Setauket, NY in September. Similar workshops will be held by PIRO for Hawaii-based longline fishermen in September 2004 and quarterly thereafter. | U.S. Gulf and Atlantic U.S. Hawaii | SEFSC PIRO | Charlie Bergmann Charles Karnella |

| DESCRIPTION OF ACTIVITY | LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE) | LEAD FMC | CONTACT PERSON FOR ADDITIONAL INFORMATION (NAME ONLY) |
|---|---|-----------------|--|
| A.8 As a follow up to the workshop held at the Sea Turtle Symposium in Costa Rica, dehookers are being tested on Uruguayan vessels. In response to a March 22 email from Martin Laporta (Uruguayan fisheries observer), a Careful Handling and Release Kit has been provided for field testing. | Uruguay | SEFSC | John Watson |
| A.9 In August 2004 a workshop was held in Panama on conducting circle hook experiments similar to Ecuador and on the use of dehookers, safe handling and release techniques. | Panama | SEFSC | Charlie Bergmann |
| A. 10 In August 2004 a workshop was held in Guatemala on conducting circle hook experiments similar to Ecuador and on the use of dehookers, safe handling and release techniques. | Guatemala | SEFSC SWFSC | Charlie Bergmann Chris Boggs |
| A.11 In October 2004 SWFSC staff will follow up on a training workshop held in 2003 in cooperation with IMARPE for fisheries observers by working with Peruvian researchers to initiate circle hook implementation and experiments in the artisanal mahi and shark fisheries. | Peru | SWFSC | Peter Dutton |
| A.12 The PIFSC has been involved in training Korean and Japanese representatives to train their own fisheries observers in protocols utilized by NMFS observers. | Korean and Japanese fleets | PIRO | Charles Karnella |
| A.13 The PIRO is following up on requests for safe handling workshops from the Federated States of Micronesia, Papua New Guinea, and the Marshall Islands. | FSM, PNG, Marshall Islands | PIRO | Charles Karnella |

| DESCRIPTION OF ACTIVITY | LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE) | LEAD FMC | CONTACT PERSON FOR ADDITIONAL INFORMATION (NAME ONLY) |
|---|--|----------------|---|
| A. 14 At the Annual ICCAT meeting in New Orleans Nov 15-21 NMFS staff will conduct a workshop on experimental results and the use of circle hooks; the use of dehookers; and safe handling and release techniques. | Atlantic | SEFSC | Charlie Bergmann |
| A. 15 In November 2004 a workshop will be conducted at the meeting of the Gulf and Caribbean Fisheries Institute in St. Petersburg, Fl. | Atlantic/Caribbean | SEFSC | Charlie Bergmann |
| B. Gear Experiments (Field) | | | |
| B.1 NMFS, in collaboration with WWF, IATTC, and the WPRFMC, is providing hooks, dehookers, and technical assistance to Ecuador for the testing of non-offset 14/o and 15o circle hooks in the mahi mahi fishery and 10 degree offset 16o and 18o circle hooks in the tuna/shark fisheries. Work began in March 2004. Initial results are mostly from the tuna/shark fishery and indicate that the majority of the bycatch is entangled, not hooked. Four of the 17 turtles hooked so far were caught on 16o circle hooks, and none on 18/o. | Ecuador | SEFSC PIFSC | John Watson Chris Boggs |
| B.2 As of June 28, 2004 Peru has retrofitted two vessels with 16o and 18o circle hooks and will be conducting work similar to Ecuador above. | Peru | SEFSC | Charlie Bergmann |
| B.3 1 Caribbean and 4 Gulf vessels will be testing an 18o, non offset circle hook vs the 16o circle hook typically used in the tuna fishery, with standard squid/herring/sardine bait. Evaluations of 18/0 circle hook in the GOM tuna directed fishery have been completed and a report has been submitted. | Gulf/Caribbean | SEFSC | John Watson |

| DESCRIPTION OF ACTIVITY | LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE) | LEAD FMC | CONTACT PERSON FOR ADDITIONAL INFORMATION (NAME ONLY) |
|--|---|-----------------|--|
| B.4 PIFSC staff will work cooperatively with the NGO PRETOMA to test 160 circle hooks in the Costa Rican tuna longline fishery. | Costa Rica | PIFSC | Yonat Swimmer |
| B.5 PIFSC assisted with experimental design for blue dyed bait in the shallow water mahi mahi fishery in Costa Rica. Initial testing starting in Nov. 2003 was unsuccessful, and work has shifted to hook testing (see B.4 above). | Costa Rica Brazil | PIFSC | Chris Boggs |
| B.6 Over the past 2 ½ years satellite tags have been provided to Costa Rican longline observers to investigate post-hooking survival. A total of 10 longline caught and 5 free-swimming turtles were tagged and monitored, with no apparent behavioral differences between the groups. As tagging becomes possible in the re-opened Hawaii swordfish fishery, tagging in Costa Rica is being phased out. | Costa Rica | PIFSC | Yonat Swimmer |
| B.7 In 2003 circle hooks were provided to approx. 10 swordfish vessels. An 180 circle hook with 10 degree offset will be tested during the 2004 fishing year. | Chile | SWRO SWC | Peter Dutton |
| B.8 In summer of 2004 the SEFSC will provide circle hooks with for experiments that will be conducted by Uruguayan longliners. Hook size and offset TBD. | Uruguay | SEFSC | Charlie Bergmann |
| B.9 In the fall of 2004 University of Florida researchers (Alan Bolten) will undertake testing of an 180 10 degree offset circle hook baited with squid versus an 180 circle hook with no offset in the Azorean swordfish longline fishery. | Azores | PIFSC OPR | Chris Boggs Barbara Schroeder |

| DESCRIPTION OF ACTIVITY | LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE) | LEAD FMC | CONTACT PERSON FOR ADDITIONAL INFORMATION (NAME ONLY) |
|--|--|----------|---|
| C. Possible Future Gear Experiments | | | |
| C.1 PIFSC staff will be analyzing results from the re-opened shallow set fishery in HI which will use only 10 degree offset 180 circle hooks and fish bait. PIFSC will also analyze results from several vessels in the deep-set tuna fishery which are voluntarily trying smaller circle hooks. Controlled (circle versus tuna hook) testing of non-offset 180 circle hooks will shift to the tuna fishery, in conjunction with action C.2 below. | HI | PIFSC | Chris Boggs |
| C.2 PIFSC staff have been consulting with WESPAC, Blue Ocean Institute, and Japan on the initial planning stages of a cooperative research design to test the efficiency of circle hooks in the Japanese tuna fishery. A draft research plan was reviewed in May and a meeting to refine the draft was held in Honolulu September 13-17. | Pacific | PIFSC | Chris Boggs |
| C.3 PIFSC is actively continuing to seek longline platforms throughout Asia for the deployment of archival tags. | Pacific | PIFSC | Chris Boggs |
| C.4 PIFSC is providing 180 circle hooks for upcoming experiments by one research vessel in the Brazilian swordfish fishery. | Brazil | PIFSC | Yonat Swimmer |

| DESCRIPTION OF ACTIVITY | LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE) | LEAD FMC | CONTACT PERSON FOR ADDITIONAL INFORMATION (NAME ONLY) |
|---|--|----------------|---|
| C.5 Guatemala has expressed an interest in experimenting with circle hooks in their swordfish fishery. This discussion was continued at the Sea Turtle Symposium in Costa Rica in February 2004. The dorado and shark targeting longline fishery will be supplied with non-offset 14/0 and 15/0 circle hooks for controlled comparison with other hook styles in use, during a week long visit to Guatemala August 14-21, 2004. | Guatemala | PIFSC | Chris Boggs |
| D. Gear Experiments (Laboratory) | | | |
| D.1 Continued hook size experiments compared to turtle size were initiated in March 2004 with headstarted turtles in Galveston. PIFSC is providing funds | Galveston, TX | SEFSC PIFSC | Sheryan Epperly Chris Boggs |
| D.2 Physiology and behavior experiments (olfactory and visual cues, etc.) are ongoing at PIFSC. A review meeting to summarize results to date was held at PIFSC in winter 2004. | HI and various affiliated research institutions | PIFSC | Yonat Swimmer |
| D.3 Odor/repellant studies are being conducted with captive and semi-wild turtles that are also monitored for hook expulsion and post-hooking health over time. | Brazil | PIFSC | Yonat Swimmer |

| DESCRIPTION OF ACTIVITY | LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE) | LEAD FMC | CONTACT PERSON FOR ADDITIONAL INFORMATION (NAME ONLY) |
|--|---|----------------------------------|---|
| E. Bi- and Multi-Lateral Efforts | | | |
| E.1 Research results from the NED experiments were presented at the IATTC Bycatch Working Group January 2004 Kobe, Japan. The Group examined information on status of sea turtles; identified short and long-term conservation measures; and recommended research areas to address sea turtle interactions in fisheries. | Member Countries: Costa Rica, Japan, Spain, Ecuador, Mexico, United States, El Salvador, Nicaragua, Vanuatu, France, Panama, Venezuela, Guatemala, Peru | SEFSC PIFSC SWR | John Watson Tina Fahy |
| E.2 The March 2004 Bilateral with Mexico provided an opportunity to follow up on their request for longline technical assistance. | Mexico | SF/HQ | Dean Swanson |
| E.3 NMFS staff involved in longline bycatch research participated in the 2 nd WPRFMC Western Pacific Sea Turtle Cooperative Research and Management Workshop held in Honolulu, HI May 17-21. | Pacific | PIFSC, PIRO, SWFSC SWRO | Chris Boggs |
| E.4 Research results from the NED and Pacific longline gear experiments were presented at the World Fishery Congress, May 2-6, Vancouver, BC, Canada | Global | PIFSC SEFSC | Yonat Swimmer John Watson |
| E.5 An MOU has been developed between the SEFSC and IMARPE (Peru) to collaborate on sea turtle/fisheries research. Final approval and signature are pending as of June 2004. | Peru | SWFSC | Peter Dutton |

| DESCRIPTION OF ACTIVITY | LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE) | LEAD FMC | CONTACT PERSON FOR ADDITIONAL INFORMATION (NAME ONLY) |
|---|---|-----------------|--|
| E.6 In June, 2004 the PIFSC hosted a representative of the Pacific Fisheries Section of the Deep Sea Fisheries Division of the Taiwanese Fisheries Agency. He participated in a WPFMC sea turtle workshop and a fisheries observer workshop held at the PIRO. | Taiwan | PIFSC | Yonat Swimmer |
| E.7 NMFS staff gave a presentation promoting cooperative research and the use of circle hooks at a Symposium on Bycatch Reduction hosted by NFRDI in Korea, June 7-11, 2004. | Pacific | PIFSC | Chris Boggs |
| E.8 The EU Fisheries Bilateral in Brussels, June 30-July 1, 2004 provided an opportunity to highlight sea turtle longline issues. | EU | HQ | Dean Swanson |
| E.9 The Fisheries Bilateral with Iceland in Reykjavik July 27-28, 2004 provided an opportunity to highlight sea turtle longline issues. | Iceland | HQ | Dean Swanson |
| E.10 The Fisheries Bilateral with Canada in Washington July 22 provided an opportunity to continue to engage Canada in sea turtle longline issues. | Canada | HQ | Dean Swanson |
| E.11 The Fisheries Bilateral with Chile in Juneau July 27-29, 2004 provided a forum to call attention to the cooperative circle hook research that is underway and to discuss possible expansion of that program. | Chile | SF/HQ SWFSC | Dean Swanson |

| DESCRIPTION OF ACTIVITY | LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE) | LEAD FMC | CONTACT PERSON FOR ADDITIONAL INFORMATION (NAME ONLY) |
|---|--|-----------------|--|
| E.12 The ISC (Interim Scientific Committee for Tuna and Tuna-like Species in the North Pacific) has agreed to establish a working group to address sea turtle bycatch issues. | Member States: Canada, Chinese Taipei, Japan, Korea, Mexico, People's Republic China, United States | SF/HQ PIFSC | Dean Swanson Chris Boggs |
| E.13 An FAO Technical Consultation on the issue of sea turtle interactions with fishing gear will be held November 29 - December 3, 2004 in Bangkok, Thailand. Japan has pledged financial support for this meeting, and NMFS provided \$100,000. Documents for this meeting are currently under development as well as the selection of the U.S. delegation. | Global | SF/HQ | Dean Swanson |
| E.14 The 4 th International Fisheries Observer Conference will be held Nov 8-11, 2004 in Sydney, Australia. There will be a NOAA Fisheries sponsored workshop prior to the Conference that will focus on standardizing longline observer data collection and sampling protocols. | Global | ST/HQ | Vicki Cornish |
| E.15 NMFS staff gave a presentation promoting cooperative research and the use of circle hooks at a Symposium on Bycatch Reduction hosted by NFRDI in Korea, June 7-11, 2004. | Pacific | PIFSC | Chris Boggs |

| DESCRIPTION OF ACTIVITY | LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE) | LEAD FMC | CONTACT PERSON FOR ADDITIONAL INFORMATION (NAME ONLY) |
|--|--|----------|---|
| F. Non U.S. Activities | | | |
| F.1 Workshops on mitigation research, de-hooking, line cutting, handling techniques and data collection have been conducted with 41 fishers in Queensland and Western Australia. More workshops are planned. 13 ARC de-hooking and line cutting kits have been distributed. A handling video is under development. | Queensland and Western Australia, Australia | n/a | Carolyn Robins |
| F.2 Workshops with Columbian fishers on handling techniques and the use of circle hooks were conducted in July 2004. | Columbia | n/a | Martin Hall with WWF Columbia |
| F.3 A cable response to State 118401 contained information on longline effort out of Durban and the east coast of S. Africa as well as proposed mitigation measures, including dropper lines that are 2 meters longer than the depth of the buoy line and the potential use of non-stainless circle hooks. | South Africa | n/a | Jill Derderian |
| F.4 The National Research Institute of Far Seas Fisheries (NRIFSF) has tested non-offset 160 circle hooks in comparison to tuna hooks and found no difference in the rate of bycatch, and a substantial reduction in deep hooking with the circle hooks. Work with larger circle hooks is being planned (C2) | Japan | n/a | Hideki Nakano |
| F. 5 With input from the SEFSC, the Organization for the Promotion of Responsible Tuna Fisheries (OPRT) in Tokyo Japan has developed pamphlets and a poster on sea turtle mitigation measures that will be distributed to Japanese fishers. | Japan | n/a | Yuichiro Harada |