

COMISION INTERAMERICANA DEL ATUN TROPICAL INTER-AMERICAN TROPICAL TUNA COMMISSION

8604 La Jolla Shores Drive, La Jolla CA 92037-1508, USA – www.iattc.org
Tel: (858) 546-7100 – Fax: (858) 546-7133 – Director: Robin Allen

WORKING GROUP ON BYCATCH

MINUTES OF THE 6th MEETING (REVISED)

La Jolla, California (USA)
9 February 2007

AGENDA

1. Opening of the meeting
2. Adoption of the agenda
3. Results of the October 2006 workshop on reducing purse-seine bycatch
4. Sea turtles
5. Seabirds
6. Sharks
7. Research on sorting grids to avoid catches of small tuna
8. Other business
9. Recommendations to the Commission
10. Adjournment

DOCUMENTS

- [BYC-6-06](#) Research on reducing shark bycatch in the tuna purse-seine fishery in the eastern tropical Pacific Ocean
- [BYC-6-INF A](#) Preliminary overall estimations of bycatch landed by the Spanish surface longline fleet targeting swordfish (*Xiphias gladius*) in the Pacific Ocean and interaction with marine turtles and sea birds: 1990-2005
- [BYC-6-INF B](#) The Eastern Pacific Regional Program to reduce the mortality of sea turtles in longlines: an update – February 2007

APPENDIX

1. List of attendees

The 6th Meeting of the IATTC Working Group on Bycatch was held in La Jolla, California (USA) on 9 February 2007. The attendees are listed in Appendix 1.

1. Opening of the meeting

Because the previous Chairman of this Working Group was not present, Dr. Robin Allen of the IATTC asked for nominations to chair the Working Group. Dr. Luis Fleischer of the Mexican delegation was elected.

2. Adoption of the agenda

Spain announced that under item 4, *Sea turtles*, it wished to present scientific information derived from its

research on incidental mortality in the swordfish fishery, as well as on experiences with experimental floating objects in a pilot action carried out in the Indian Ocean with the aim of mitigating the capture of sea turtles, and, under *Other business*, it would present another study on acoustic methods relevant to reducing the mortality of juveniles.

The provisional agenda was adopted.

3. Results of the October 2006 workshop on reducing purse-seine bycatch

Mr. Jeremy Rusin, of the United States, summarized the results of a Bycatch Workshop of 24 experts held in 2006 by the US National Marine Fisheries Service (NMFS) and the IATTC, which reviewed four research proposals to reduce bycatch in the tuna purse-seine fishery. The four proposals were:

- 1) Using IATTC data to determine whether time/area closures would be effective in reducing bycatch. The Workshop recommended that a subgroup of the participants interact with the IATTC staff to formulate new questions that could be analyzed with IATTC data. This effort could be coordinated through the IATTC Bycatch Working Group.
- 2) Attracting sharks away from floating objects to reduce bycatch. A feasibility study funded by the NMFS is described under Agenda item 6.
- 3) Modifying FAD designs to reduce sea turtle entanglements. The Workshop recommended that the AIDCP seminars for fishing captains would be appropriate venues to explore new designs that would contribute to eliminating sea turtle entanglement.
- 4) A suite of field experiments focused on removing incidentally-caught species from the net. One of the proposals considered by the Workshop is the sorting-grid study described in Agenda item 7.

4. Sea turtles

Dr. Martin Hall introduced Document BYC-6-INF B on the regional program to study and reduce the bycatch of sea turtles in artisanal longline fisheries. Olive Ridley and black sea turtles are the species taken most frequently in the fishery. Workshops have been conducted to standardize data collection, hook exchange programs have allowed comparisons of circle hooks and the regular “J” hooks, hook-extraction techniques were tested on a cruise to develop guidelines for safe release of sea turtles, and observers from several nations have accompanied 430 trips by vessels fishing for dorado or tuna/billfish/sharks. Preliminary data suggest that circle hooks can reduce sea turtle hookings and injuries in fisheries for tuna and billfish. However, a complete statistical analysis has yet to be completed. Other hook-modification experiments are ongoing. It should be noted, however, that in some places, J hooks had higher catch rates of target species than did circle hooks.

To date, the work with the fishery targeting dorado in some coastal areas has not been so successful.

The problem of sea-turtle entanglement in the suspender lines connecting the floats to the rest of the gear was addressed as well in an experiment; preliminary results indicated that the use of thicker monofilament line practically eliminated entanglements. For small boats, however, this type of line may be too bulky to carry.

Dr. Javier Ariz of Spain spoke about Indian Ocean research on FAD designs to reduce sea turtle bycatch entanglement. Five experimental designs were tested; only one live sea turtle associated with an experimental object. The experimental objects lacked the traditional webbing, to avoid entanglement. The most promising design replaced net webbing under the FAD with a flexible cylinder. The preliminary data suggested that this design had lower bycatch and discard rates than controls. Tuna catch rates were lower using one measure, but higher using another, with similar sized tuna being caught by both designs. Mexico asked about the comparative costs of construction of the new prototype aggregators presented but estimates were not available. The United States asked about plans for expanding these pilot studies, and it was reported that the intention is to expand them to other oceans in which the Spanish fleet operates.

The United States mentioned that the three-year program to mitigate the impact of tuna fishing on sea turtles established by Resolution C-04-07 will be completed this year, and announced that, at the annual meeting, it would present a resolution to prolong it.

5. Seabirds

Dr. Hall presented information on seabird bycatch in artisanal longline fisheries. In the EPO, there is particular concern for the waved albatross because it nests only in the Galapagos and is endemic to the EPO. The observed longliners set at night, have low freeboards, and use fast-sinking bait, all factors that contribute to reducing bycatches of seabirds. The data from 12 trips and a survey of observers indicate that no significant bycatch of seabirds.

Japan asked about the assessment systems that are used in the estimates of abundance of the populations of those birds and asked for a detailed explanation of how these populations are counted. Dr. Hall answered that, for the Galapagos population, systematic counts are made during the nesting season, and that this is not so difficult since their total number is not very great and is manageable. Dr. Hall discussed published estimates of the abundance trend of the waved albatross that purport to show a decline of 40%, but noted that they may be confounded by sampling variability associated with having only three data points, or by El Niño and other environmental events. The staff believes more information is required to determine whether the decline is real or not, and has been consulting with bird experts to evaluate the data.

The United States expressed concern that, in the absence of observers, there is little information available about the effect of the industrial fisheries that operate alongside the coastal fisheries. The Working Group agreed on the need for expanded observer programs to determine bycatch impacts, particularly in high-seas fisheries, and for mitigation measures to reduce seabird mortality. Japan noted that its program is concentrating on mitigation measures, such as the use of streamers, and is also attempting to start a program of monitoring vessels with observers and video, but funding is limited.

Dr. Allen noted that China had a small number of observers on longline vessels, and that he was expecting a copy of a report from the first trip shortly.

Spain suggested that the Commission should establish programs and mitigation methods in high-risk areas, such as those established in the Indian Ocean and in the WCFPC. There are already simple measures that can be applied, such as lines that sink rapidly and bird-scaring devices, and it is not necessary to wait for new developments.

The United States noted that there is a great deal of data available outside the IATTC, and organizations such as BIRDLIFE and ICAP have very useful databases. It was noted that information from these sources had been considered by the stock assessment WG and presented to the Commission by the staff.

The United States described the observer coverage and the application of mitigating measures in its Hawaiian longline fisheries, and noted that many of these measures are developed or applied voluntarily by the fishermen themselves.

Spain and the United States suggested that the IATTC Scientific Committee define which areas have the highest priority and what could be done to mitigate the problem in them.

6. Sharks

Dr. Michael Scott introduced Document BYC-6-06, an experimental plan to reduce shark bycatch by attracting them away from tuna associated with FADs prior to a set. A feasibility study to test this concept is being funded by the NMFS. The key questions for this study are 1) whether a bait station (using chum, sound and/or olfactory attractants) can lure sharks away from a FAD prior to a set; 2) whether the sharks can be attracted without the tunas being attracted as well; and 3) whether the use of bait stations is practical and efficient within the constraints of a purse-seine fishing operation. The experiment will require the voluntary cooperation of the owner, captain and crew of a purse seiner that

fishes on FADs; therefore, the experiment has been designed so as to impinge as little as possible on normal fishing operations and to not negatively affect tuna catches. The staff is currently attempting to engage the cooperation of a purse seiner to participate in this study.

Dr. Hall reported improvement in data quality in regards to the IATTC observer identifications of sharks and rays due to better training. He also reported on time/area studies of shark bycatch in collaboration with the University of Washington.

Spanish presentation

Dr. Ariz presented Document BYC-6-INF A on the bycatch by the Spanish longline fleet in the Pacific.

The Spanish longliners fish for swordfish in the eastern Pacific Ocean (EPO) and there has been an expansion of fishery from the coast of Chile out to the west. Sharks are the primary bycatch, although they are utilized when taken. Observer coverage has been about 15% in the last two years. For seabirds, there have been about 40 interactions per 1 million hooks in the EPO, 31 in the western Pacific Ocean (WPO), and 37 overall. Virtually all hookings result in mortality. For sea turtles, there have been 65 interactions and 8 mortalities per 1 million hooks in the EPO, and 166 interactions and 4.4 mortalities in the WPO. The fleet does use some seabird deterrents, such as setting at night, and lineshooters to get the hooks underwater quickly.

In response to a question from Mexico about the magnitude of the discards, Dr. Ariz said that, although the fishery does not target secondary species, many of them are retained, utilized, and reported in the total catches. However, further work is required to allow the observer data to be extrapolated to the whole fleet.

Regarding the effect on seabirds, it was clarified that certain mitigation devices are used to make the bait sink more rapidly and, in the swordfish fishery, the gear is set at night, which reduces the problem of bycatches of seabirds. This gave rise to a brief discussion and a listing of some of the simple developments that already exist such as setting at night, side-setting, changing the gear to the so-called "Florida Style", and other methods that allow the bait to sink rapidly.

7. Research on sorting grids to avoid catches of small tuna

Dr. Allen discussed an experimental plan to test the use of sorting grids to reduce the discard of small tunas. There is an interested vessel owner and the equipment is in place to conduct the study, but the draft resolution agreed *ad referendum* at the 74th meeting of the Commission, which would have allowed fishing during the closure period as an incentive to conduct the study, was in the end not approved. Dr. Allen noted that the IATTC has a history of using waivers of the closure as an incentive. After some discussion, there was general agreement that this outstanding issue could be resolved and that this type of approach for research to mitigate bycatch should be encouraged. The Working Group agreed that this issue and an appropriate resolution should be addressed at the June 2007 Commission meeting. Ecuador noted that it should first talk again with the owner of the vessel to see it was still available.

Dr. Allen will circulate information concerning the Commission's previous practices regarding research conducted during closures.

8. Other business

Dr. Ariz described ongoing research on acoustic methods to identify juvenile tunas and determine the spatial relationship of tuna to a FAD and the behavior of tuna species. Spain was encouraged to present this research at the Stock Assessment Working Group

9. Recommendations to the Commission

In general it was recognized that the study of bycatches is an important and necessary area for the Commission, and the Working Group therefore was of the opinion that such studies should be maintained and strengthened, improving coordination, cooperation and communication, both internally among the

members of the Commission, and also internationally to obtain and exchange data and information, above all in the case of seabirds with existing groups that manage that information on a global or regional basis.

The Working Group also recognized that there are countries that are already applying specific research and mitigation programs, that there are methods available that are being applied in some fisheries which are simple, cheap and do not interfere with fishing activities, and that these could be encouraged in other areas and fisheries of the EPO.

The whole group also recognized the need to define special areas and fisheries in which the problems of incidental mortalities are major or a priority.

It was also recognized that there is a need to recommend to the Commission that it explore in greater detail the incidental mortality in the purse-seine fisheries on FADs and also in the longline fishery. Therefore, it was agreed to ask the Stock Assessment Working Group to identify the specific programs that should be developed, and that it define the main areas in which they should be applied, so as to allow a reduction and mitigation of those problems in a short time.

The Working Group agreed that the Commission should solicit the support of its members that fish on FADs to be able to develop opportunely the shark research program that the staff proposed and also, promote the possibility of carrying out the experiment with sorting grids in the purse-seine fishery on FADs during the closure period, which was proposed last year by Ecuador.

Specifically, the Working Group recommended that:

- 1) The Stock Assessment Working Group suggest areas where mitigation measures for reducing seabird mortality could be most effectively adopted (*i.e.*, where bird distributions and longline effort overlap), as well as suggest possible mitigation measures in these areas of vulnerability. The Commission should then consider mitigation measures at its June 2007 meeting.
- 2) Seabird bycatch data be collected from all tuna longliners, with consideration given to making the provision of such data mandatory.
- 3) The three-year program of data collection on sea turtle bycatches begun in 2004 (see IATTC Resolution C-04-07) be continued.
- 4) Research on using circle hooks to reduce bycatches and injuries to sea turtles without reducing tuna catches be continued.
- 5) IATTC members assist as appropriate in obtaining the participation of a suitable purse seiner for the shark attraction study (Document BYC-6-06).
- 6) The sorting grid research be conducted.

The United States advised the Working Group that it would present a resolution regarding sea turtle bycatch at the June Commission meeting.

With this the meeting finished, with various delegations thanking Mexico for its effective direction of this group.

10. Adjournment

The meeting was adjourned.

Appendix 1.

ASISTENTES – ATENDEES

COSTA RICA

CARLOS VILLALOBOS
INCOPESCA/Instituto Costarricense de Pesca
cvillas@racs.co.cr
ASDRÚBAL VÁSQUEZ
Ministerio de Agricultura, Ganadería y Pesca
vazquezal@ice.co.cr

BERNAL CHAVARRÍA
Asesor Jurídico
bchavarria@bufetel.com

ECUADOR

RAFAEL TRUJILLO
Cámara Nacional de Pesquería
direjec@camaradepesqueria.com

RAMÓN SIERRA
Cámara Ecuatoriana de Industriales y Procesadores
Atuneros
rjsierra@eurofishmanta.com

EL SALVADOR

MANUEL OLIVA
Ministerio de Agricultura y Ganadería
moliva@maga.gob.sv
SONIA SALAVERRÍA
Ministerio de Agricultura y Ganadería
ssalaverria@mag.gob.sv

CARLOS SÁNCHEZ
Calvo Pesca – Grupo Calvo
Carlos.sanchez@calvo.es

SPAIN – ESPAÑA

MIGUEL A. BLASCO
Secretaría General de Pesca Marítima
mblascom@mapya.es
JAVIER ARÍZ
Instituto Español de Oceanografía
javier.ariz@ca.ieo.es

JULIO MORÓN
OPAGAC
opagac@arrakis.es
JON URÍA
OPAGAC

GUATEMALA

ERICK VILLAGRÁN
Ministerio de Agricultura, Ganadería y Alimentación
villagranerick@hotmail.com

HUGO ALSINA
Ministerio de Agricultura, Ganadería y Alimentación
h_alsina@ufm.edu.gt

JAPAN – JAPÓN

KIYOSHI KATSUYAMA
Fisheries Agency of Japan
HIDEO INOMATA
Fisheries Agency of Japan
hideo_inomata@nm.maff.go.jp
MASASHI KIYOTA
National Research Institute of Far Seas Fisheries
kiyo@affrc.go.jp
MASAMICHI MOTOYAMA
National Ocean Tuna Fishery Association
k-higaki@zengyoren.jp-net.ne.jp

HIROAKI OKAMOTO
National Research Institute of Far Seas Fisheries
okamoto@affrc.go.jp
YOSHITSUGU SHIKADA
Fisheries Agency of Japan
yoshitsugu-shikada@nm.maff.go.jp
TAKAAKI SUZUKI
Fisheries Agency of Japan
takaaki_suzuki@nm.maff.go.jp

KOREA - COREA

KYU JIN SEOK
Ministry of Maritime Affairs and Fisheries
icdmomaf@chil.com

JEONG SOONYO
Ministry of Maritime Affairs and Fisheries
Haha9944@momaf.go.kr

MEXICO

MARIO AGUILAR
Comisión Nacional de Acuicultura y Pesca
mariogaguilars@aol.com

LUÍS FLEISCHER
Centro Regional de Investigación Pesquera
L.fleischer21@hotmail.com

NICARAGUA

EMB. MIGUEL A. MARENCO

ADPESCA/Administración Nacional de Pesca y
Acuicultura
seawolf@turbonett.com.ni

PANAMA

DAVID SILVA

Autoridad Marítima de Panamá
davidsilvat@yahoo.com

ARNULFO FRANCO

FIPECA
afranco@cwpanama.net

MARIA PATRICIA DÍAZ

Abogada Consultora
Pinky_diaz@hotmail.com

UNITED STATES OF AMERICA - ESTADOS UNIDOS DE AMÉRICA

DAVID HOGAN

Department of State
hogandf@state.gov

RODNEY MCINNIS

NOAA/National Marine Fisheries Service
Rod.Mcinnis@noaa.gov

HEIDI DEWAR

NOAA/National Marine Fisheries Service
Heidi.dewar@noaa.gov

OTHA EASLEY

NOAA/National Marine Fisheries Service
Otha.Easley@noaa.gov

WILLIAM FOX

NOAA/National Marine Fisheries Service
William.Fox@noaa.gov

KIM RIVERA

NOAA/National Marine Fisheries Service
Kim.Rivera@noaa.gov

ALLISON ROUTT

NOAA/National Marine Fisheries Service
Allison.Routt@noaa.gov

JEREMY RUSIN

NOAA/National Marine Fisheries Service
Jeremy.Rusin@noaa.gov

YONAT SWIMMER

NOAA/National Marine Fisheries Services
Yonat.Swimmer@noaa.gov

BRADLEY WILEY

NOAA/National Marine Fisheries Services
Brad.Wiley@noaa.gov

DALE SWEERNAM

California Department of Fish and Game
Dales.sweetnam@noaa.gov

PAUL KRAMPE

American Tuna Boat Association
krampepaul@aol.com

MICHAEL MCGOWAN

Bumble Bee Seafoods, Inc.
mcgowan@bumblebee.com

RANDI THOMAS

United States Tuna Foundation
TunaRPTThomas@aol.com

VENEZUELA

ALVIN DELGADO

PNOV/Fundatun
fundatunpnov@cantv.net

LILLO MANISCALCHI

AVATUN

OBSERVERS - OBSERVADORES

BELIZE – BELICE

ANGELO MOUZOUROPOULOS

International Merchant Marine Registry
angelom@immarbe.com

CANADA

NATHALIE GIROUAND

Fisheries and Oceans Canada

TIM YOUNG

Fisheries and Oceans Canada

EUROPEAN UNION - UNIÓN EUROPEA

STAFFAN EKWALL

European Commission
staffan.ekwall@cec.eu.int

NON-GOVERNMENTAL ORGANIZATIONS – ORGANIZACIONES NO GUBERNAMENTALES

ERIC GILMAN

Blue Ocean Institute
egilman@lava.net

RUSSELL NELSON

The Billfish Foundation
drrsnnc@aol.co

INTERNATIONAL ORGANIZATIONS – ORGANIZACIONES INTERNACIONALES

SAMASONI SAUNI
Pacific Islands Forum Fisheries Agency
Samasoni.sauni@ffa.int

CAMERON DARREN
Pacific Island Forum Fisheries Agency
Cameron.darren@ffa.int

TOOTI TEKINAITI
Consultant
tootit@mfmrd.gov.ki

STAFF - PERSONAL

ROBIN ALLEN, Director
rallen@iattc.org
ALEJANDRA FERREIRA
aferreira@iattc.org
MÓNICA GALVÁN
mgalvan@iattc.org
MARTIN HALL
mhall@iattc.org

BRIAN HALLMAN
bhallman@iattc.org
CLERIDY LENNERT
clennert@iattc.org
MICHAEL SCOTT
mscott@iattc.org
NICHOLAS WEBB
nwebb@iattc.org