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SCIENTIFIC ADVISORY COMMITTEE

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ESTABLISHING MINIMUM DATA STANDARDS AND REPORTING REQUIREMENTS FOR LONGLINE OBSERVER PROGRAMS UNDER RESOLUTION C-11-08

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1. BACKGROUND

The adoption of Resolution C-11-08 on scientific observers for longline vessels was based on the Commission's recognition of the "*need to collect scientific information on target species as well as comprehensive data on interactions with non-target species,* inter alia*, sea turtles, sharks and seabirds*." The large-scale tuna longline fishery—herein referred to as the "longline fishery"—is one of the most important fisheries in the eastern Pacific Ocean (EPO), especially for bigeye and albacore tunas and swordfish. Additionally, many other species are also caught incidentally in longline fisheries. The scientific need for high-resolution operational, effort, and species-specific catch data for the longline fishery is well understood, and has been discussed extensively at meetings of the Commission and its scientific bodies; for details, see Document SAC-08-07b. As an example, an Ecological Risk Assessment (ERA), using Productivity-Susceptibility Analysis (PSA), was successfully conducted for species caught in the purse-seine fishery, whereas the lack of fundamental operational information and species-specific catch data stymied efforts to extend the ERA to include the longline fishery.

Document SAC-08-07b notes the paucity of data pertaining to interactions with sea turtles, marine mammals, and seabirds in the IATTC longline database. Furthermore, catches of several other taxa, when reported, were reported within highly-aggregated taxonomic groups, which thwarts attempts to conduct ERAs and single-species population assessments. Also noted was the near-complete absence in the IATTC longline database (only 84 of 82,053 records) of basic operational-level data that are crucial for the standardization of effort and computation of relative abundance indices (*e.g.* set-by-set data describing set date, time, duration, hooks per basket, and length of floatlines, branchlines, and mainlines).

Due to this paucity of important data for longline fisheries, in Resolution C-11-08 (paragraph 7) the Commission agreed that "*every year, CPCs shall submit to the Scientific Advisory Committee … the scientific observers' information on the previous year's fishery in a format established by the Scientific Advisory Committee*." However, the SAC has not yet established such a format for operational-level data[1], and CPCs continue to submit highly-summarized data from their respective national scientific observer programs, which limits their usefulness for conducting stock assessments, ERAs, and other research. These reports, usually less than ten pages long, typically summarize the characteristics of the program, provide total observed catch data for some species, and indicate whether the goal of 5% coverage of relevant longline effort was met. Unfortunately, the formats used by CPCs to report the summarized data are often inadequate

[1] In 2016 the SAC did adopt a format for reporting some metadata on longline fisheries, based on an approach used by ICCAT.

to determine by what criterion the minimum 5% observer coverage was met; *i.e.*, insufficient data are provided on the number of effective fishing days, vessels, sets, and hooks.

At its meeting in 2016, the SAC attempted to reach a decision that would fully implement paragraph 7 of C-11-08 and require CPCs to submit observer data for all the fields included in the IATTC longline observer forms. It was clarified that the use of those specific forms was not required—since they are only in English and Spanish—and that individual CPCs could develop forms they considered appropriate for their own program, including incorporating additional data fields, as long as, at a minimum, all the observer data specified in the IATTC forms would be submitted to the Commission. However, due to the reservations expressed by one CPC, no consensus was reached, and there is therefore currently no mandate that detailed observer data collected by these programs be shared with the Commission.

2. PROPOSAL FOR IMPROVING DATA COLLECTION AND REPORTING

From a scientific perspective, the minimum requirement for data submitted to the IATTC would be the set-by-set catch, effort, and gear configuration data specified in the example observer forms. By comparison, the IATTC currently receives complete set-by-set observer records for all trips made by purse-seine vessels operating under the Agreement on the International Dolphin Conservation Program (AIDCP), including those observed by national programs. These potentially sensitive data are protected under IATTC and AIDCP data confidentiality rules, and are handled accordingly by the IATTC staff. Operational-level longline data submitted to the Commission will also be protected by the same IATTC data confidentiality rules.

To facilitate the Committee's discussions on minimum data requirements, the staff has compiled a draft list of minimum standard data fields for longline observer programs (Appendix 1). If adopted by the SAC, the minimum data fields would provide data that are critical to improving the work of the IATTC scientific staff in areas such as stock assessments, ERAs, and bycatch mitigation studies. Almost all of these fields are included in Minimum Standard Data Fields used by the Regional Observer Program of the Western and Central Pacific Fisheries Commission (WCPFC), and most of them are also included in the IATTC Longline Observer Forms (Appendix 2), which are used by some IATTC CPCs. Thus, the data fields in Appendix 1 attempt to harmonize the collection and reporting of longline observer data by the IATTC and WCPFC. Since many IATTC CPCs with longline fleets operating in both WCPFC and IATTC convention areas have already agreed to collect most of these data fields under the WCPFC regime, changes to existing observer forms and data collection procedures would be minimal. The fields highlighted in yellow in Appendix 1 are those that the IATTC scientific staff recommends be added to WCPFC Minimum Standard Data Fields. Similarly, Appendix 2 also lists the data fields contained in Appendix 1 that are not included in the IATTC forms but that the staff recommends be collected.

In addition, so that the level of observer coverage relative to total fleet activity can be easily determined, and to allow IATTC staff to calculate total catches and effort from the reported observer data, the staff has also drafted a data summary template for use by CPCs when submitting their annual reports (Appendix 3).

The IATTC scientific staff requests that, at its 8th meeting, the SAC establishes a set of minimum data fields to be recorded by the scientific observers on longline vessels and submitted to the IATTC. Once the minimum fields have been established, the required observer data should be submitted retroactively, so that CPCs submit all required observer data covering the period from 1 January 2013.

The IATTC staff will prepare an annual report for the SAC summarizing each CPC's data submissions and, as appropriate, recommend ways of improving their sufficiency and accuracy, along with any proposals for changes to the list of required data fields deemed appropriate. Once approved, the list of required minimum data fields may be amended by a decision of the Scientific Advisory Committee or the Commission.

Appendix 1

IATTC MINIMUM STANDARD DATA FIELDS FOR LONGLINE OBSERVER PROGRAMS

The following list of minimum standard fields has been developed by the IATTC staff for use by national longline observer programs. Most of the fields are also found in the WCPFC Regional Observer Program Standard Data Fields. The additional fields, highlighted in yellow, are from the IATTC Longline Observer Forms (Appendix 2).

Data field	Description/Instructions/Comments
GENERAL VESSEL AND TRIP INFORMATION	
VESSEL IDENTIFICATION	
Name of vessel	Name, including all numbers or other characters
Flag Registration Number	The number issued to the vessel by the authorities of its flag State.
International Radio Call Sign	If issued.
Vessel Owner/Company	Name (individual or company) and contact information, if available, of the vessel owner.
IATTC Vessel Number	As reflected in the IATTC vessel database.
International Maritime Organization 'IMO' or Lloyd's Register number 'LR"	If issued.
VESSEL TRIP INFORMATION	
Date and time of departure from port	The date and time the vessel leaves port to start its fishing trip.
Port of departure	Include both the port name and country.
Date and time of return to port	The day and time the vessel returns to a port at the completion of its trip.
Port of return	Include both the port name and country.
OBSERVER INFORMATION	
Observer name	Full name.
Observer provider	Name of the organization or agency that employs the observer and has placed him on the vessel.
Date, time and location of embarkation	The date, time, and location where the observer boards the vessel to start his trip.
Date, time and location of disembarkation	The date, time, and location where the observer leaves the vessel and concludes his observer duties.
CREW INFORMATION	
Name of captain	Full name.
Name of fishing master	Full name.
Total number of crew	Total number of people aboard the vessel, excluding the observer
VESSEL ATTRIBUTES Note: These attributes only need to be noted if what is observed differs from specifications reflected on the IATTC vessel register.	
Vessel fish hold capacity	The total combined capacity, in metric tons (MT), of the vessel freezers, wells, and any other areas that can be used to store catch.
Freezer type	Some vessels may have more than one type of freezer. List all types present.

Data field	Description/Instructions/Comments
Length Over All (specify unit)	The "LOA" can typically be found in the vessel plans or other documents.
Tonnage (specify unit)	The vessel tonnage, as recorded in the vessel's registration documents; may be expressed as Gross Tonnage (GT) or Gross Register Tonnage (GRT).
Engine power (specify unit)	The engine power is typically listed in the vessel plans.
Distance from deck to water	The distance, in meters, from the work deck to the water surface.
Mothership	Does the vessel to which the observer is assigned operate as a mothership for multiple, associated fibra vessels? (Yes or No).
Number of fibras	If the vessel serves as a mothership, indicate the number of fibra vessels associated with it.
VESSEL ELECTRONICS Indicate "Yes" if present, "No" if absent. If more than one of type is present, indicate the total number present	
Radars	"Yes" if present, "No" if absent.
Depth Sounder	"Yes" if present, "No" if absent.
Global Positioning System (GPS)	"Yes" if present, "No" if absent.
Track Plotter	"Yes" if present, "No" if absent.
Weather Facsimile	"Yes" if present, "No" if absent.
Sea Surface Temperature (SST) gauge	"Yes" if present, "No" if absent.
Sonar	"Yes" if present, "No" if absent.
Radio/ Satellite Buoys	"Yes" if present, "No" if absent.
Doppler Current Meter	"Yes" if present, "No" if absent.
Expendable Bathythermograph (XBT)	"Yes" if present, "No" if absent.
Satellite Communications Services (Phone/Fax/Email)	Indicate all the vessel Satellite numbers if the vessel has Satellite communications on board
Fishery information services	"Yes" if present, "No" if absent. Please also list the information service used.
Vessel Monitoring System	Indicate the type(s) of VMS used on the vessel (*e.g.* INMARSAT, ARGOS, etc.)
Refrigeration Method	List all refrigerator types used on the vessel.
GENERAL GEAR ATTRIBUTES	
Mainline material	List the of the mainline used by the vessel (*e.g.* Kuralon, Braided nylon, Monofilament Nylon, etc.).
Mainline length (specify unit)	The total length of the mainline when it is fully set
Mainline diameter (specify unit)	
Branch line material(s)	A branch line can consist of one type of material like monofilament or it can be made up of many different materials like braided nylon wire trace and mono filament, etc. If different types are used in different branch line positions, please describe.
Branch line diameter (specify unit)	
Float line Material	List the material(s) used.

Data field	Description/Instructions/Comments
SPECIAL GEAR ATTRIBUTES	
Wire trace	**At the trip level** indicate “Yes” or “No” -if the vessel uses wire traces on some or all of its lines. If wire traces used on all lines during the trip then record "ALL LINES." If the vessel used wire traces on certain branch line positions during the trip, describe the configuration. For example, “wire traces were used on first and tenth branch lines of each basket”. If the proportion of leaders that are wire varies within a trip, record the average based on a sample of ten total baskets from a range of sets.
Mainline hauler	Does the vessel use an instrument to haul in the main line after it is set or is the line hauled by hand?
Branch line hauler	Does the vessel use a special hauler to coil branch lines?
Line shooter	Does the vessel use a line shooter?
Automatic bait thrower	Does the vessel use a bait thrower or are bait and branch lines thrown overboard manually?
Automatic branch line attached	Does the vessel have an automatic branch line mechanism that attaches the branch at regular intervals or is this done manually?
Hook type	**For each set,** record the type of hook or hooks used, using the codes in the hook catalogue (*e.g.* J hooks, circle hooks, offset circle hooks, etc.)
Hook size	**For each set,** record the size of the hooks used. If not sure, ask the bosun or refer to a hook catalogue.
Rings	**For each set**, record whether separate rings are used at the end of the hook shaft, as an attachment point between hooks and the branch line (Yes) or the hooks are attached directly to the branch line, without rings (No). Note: this is not the same as a ring that is made by shaping the hook shaft itself.
Average hook depth (specify unit)	**For each Set**, record the average depth of hooks
Tori Lines	**For each set,** record whether the vessel uses Tori lines when setting; if yes, how many and their length.
side setting with bird curtain and weighted branch lines	**For each set,** record whether the vessel used side-setting with a bird curtain in combination with weighted branch lines.
Weighted branch lines-	**For each trip** where weighted branch lines are used, record the mass of the weight attached to the branch line. If more than one type of weighting is used during a trip, describe each type and indicate the proportion based on a sample of ten baskets from a range of different sets.
Shark lines	**For each set,** record the number of shark lines (branch lines running directly off the longline floats or drop lines) observed. Where possible, record the length of this line for each set.
Blue dyed bait	**For each set,** record whether the vessel used blue-dyed bait.
Distance between weight and hook (in meters)	**For each set,** record the distance in meters from where the bottom of the weight is attached on the branch line to the eye of the hook.
Deep setting line shooter	**For each set,** record whether the vessel used a deep setting line shooter.
Management of offal discharge	**For each set,** record whether the vessel used the management of offal discharge**.**

Data field	Description/Instructions/Comments
Date and time of start of set	**For each set,** record the date and time the first buoy is thrown into the water to start the setting of the line.
Latitude and Longitude of start of set	**For each set,** record the GPS reading at the time the first buoy is thrown into the water
Retrieval Direction	Indicate whether the vessel returned to the original end of the mainline to begin the retrieval process (Start to end), or if after setting the entire line they began retrieval from the end that was the last to enter the sea (End to start).
Date and Time of end of set	**For each set,** record the date and time the last buoy (usually has radio beacon attached) at the end of the mainline is thrown into the water
Latitude and Longitude of end of set	**For each set,** record the GPS reading at the time the last buoy is thrown into the water
Total number of baskets or floats	**For each set,** record the number of baskets utilized. A basket is the sum of all the hooks set between two buoys on a longline; usually it is the same as the number of floats set minus one.
Number of hooks per basket (number of hooks between buoys)	**For each set,** record how many hooks set from one buoy to another, the number is usually constant along the line, but can vary in some cases, also if the vessel also sets a branch line on the buoy, count this as a hook between floats as well.
Total number of hooks used	**For each set,** record how many hooks were used. This is typically calculated by multiplying number of baskets by the number of hooks per basket.
Line shooter speed	**For each set** where the vessel uses a line shooter, record the shooter speed. The shooter will normally have an indicator to show its running speed, as well as a sound indicator or light, that beeps at a regular interval, when it is time to attach a branch line.
Length of float-line	**For each trip,** record **l**ength of the line that is attached to the floats, get a coil and measure the length. It usually remains the same throughout the trip.
Distance between branch-lines	**For each set,** record the distance between branch line attachments to the mainline. This can be determined easily if vessel has a line shooter with electronic attachment indicator.
Length of branch-lines	**For each set, m**easure the length of a sample of the majority of branch lines used, some may vary slightly due to repairs.
Time-depth recorders (TDRs)	Does the vessel use TDRs on its line? If yes record the number of TDRs used it may use and their location along the mainline.?
Number of light-sticks	**or each set,** indicate whether the vessel uses light sticks on its line, record the number used, and where possible, information on the location (*e.g.* "used on first and tenth branch lines from the float").
Target species	What species does the vessel target? Tuna (BET YFT), Swordfish, Sharks, etc.
Bait Species	**For each set,** record the bait species used Pilchard, Sardine, Squid, artificial bait, etc.
Date and time of start of haul	**For each set,** record the date and time the first buoy of the mainline is hauled from the water to start the haul.

Data field	Description/Instructions/Comments
Date and time of end of haul	**For each set,** record the date and time the last buoy of the mainline is hauled from the water to end the haul.
Total number of baskets, floats monitored by observer in a single set	**For each set,** record how many floats or baskets were monitored by the observer?
INFORMATION ON CATCH FOR EACH SET	
Hook number (location between floats)	For each individual capture, record the hook number that the animal is caught on, counting from the last float hauled on board.
Hook type	Use the appropriate code to record the type of hook on which the individual was caught.
Species	Use FAO species code.
Length of fish	Measure length of specimen, using the recommended measurement approach for the species.
Length measurement code	Reflect the type of length measurement taken using the appropriate measurement code. For example, all tunas are measured from the end of the upper Jaw to fork of the tail, measurement code UF.
Sex	Sex the species if possible. If an unsuccessful attempt is made to sex the individual, record "I" for indeterminate. If no attempt to sex the individual is made, record "U" for unknown.
Condition when caught	For bycatch species (*e.g.* sharks, sea turtles, seabird, marine mammals, etc.) also reflect hooking location [*i.e.* hooked in mouth, hooked deeply (throat/ stomach), and hooked externally].
Fate	Record the ultimate disposition of the capture using the appropriate code (*e.g.* retained, discarded, etc.)
Condition when released	If released, record the animal's status when returned to the sea.
Tag recovery information	Record as much as information as possible on any tags recovered
SPECIES OF SPECIAL INTEREST **Sea turtles, marine mammals, sea birds, and sharks**	
GENERAL INFORMATION	
Type of interaction	Indicate the type of interaction (*e.g.* entangled, hooked internally, hooked externally, interaction with vessel only, etc.).
Hook type	If hooked, use the appropriate code to record the type of hook on which the individual was caught.
Date and time of interaction	Record ships date and time of interaction
Latitude and longitude of interaction	Record position of the interaction.
Species code of sea turtle, marine mammal, or seabird.	Use FAO codes for Species.
LANDED ON DECK	
Length	Measure length, in centimeters.
Length measurement code	Measure using the measure method determined for that species.
Sex	Sex the animal if possible.
Estimated fin weight (for sharks)	Weigh the fins separately if shark has been finned by crew. If no scales, estimate the weight.

Data field	Description/Instructions/Comments
Estimated carcass weight (for sharks)	Weigh the carcass of a finned shark. If no scales available, carcass is discarded, or if it is too large to handle, estimate the weight.
Clasper length (for male sharks)	Record in centimeters, the clasper length of male sharks.
Clasper calcification (for male sharks)	Record presence (Y)/absence (N) of calcification in the claspers of male sharks.
Semen (for male sharks)	Record presence (Y)/absence (N) of semen for male sharks.
Embryos (for female sharks)	Some female sharks abort embryos upon capture. If this is observed, record (Y), if not record (N).
Immature/adult (for seabirds)	Record whether the encountered individual is mature or juvenile, based on the marking characteristics for the species.
Condition when landed on Deck	Record the animal's condition when landed on deck, using appropriate code.
Condition when released	If released, record the animal's condition at the time of release, using appropriate code.
Tag recovery information	Record as much as information as possible on any tags recovered
Tag release information	Record as much as information as possible on any tags placed on the species before release.

Appendix 2

FIELDS INCLUDED IN APPENDIX 1, BUT NOT ON IATTC LONGLINE OBSERVER FORMS

Vessel Identification
International radio call sign
IMO/Lloyds number

Observer Information
Observer provider
Date, time location of embarkation and disembarkation (different from vessel departure info)

Crew Information
Name of Fishing Master

Vessel Electronics

Note: IATTC Longline Observer Forms provide a blank space for the observer to record the vessel's electronics. Appendix 1 has individual fields for recording the presence/absence of each of the following items:
Radars, depth sounder, GPS, track plotter, weather fax, SST gauge, sonar, radio/satellite buoys, Doppler current meter, XBT, satellite communications and contact info, fishery information services, VMS

Gear attributes
Branchline hauler
Line shooter
Automatic bait thrower
Automatic branch line attachment mech.
Shark lines
Time-depth recorders
Total number of floats/baskets monitored by observer in a given set

Note: On IATTC Longline Observer Forms, observers record the seabird mitigation methods used by the vessel for eoch seabird capture/interaction, whereas Appendix 1 requires that seabird mitigation methods (tori lines, side setting, weighted branch lines, blue-dyed bait, deep-setting line shooter, offal discharge management, line shooter speed) be recorded for each set. Then, catch and interactions records are associated with the set number. Thus, the mitigation measures used can be associated with individual seabird interactions, but the details of the measures employed are recorded only once per set

Catch
Hook number (location within the basket)
Condition when released
Tag recovery info

LONGLINE GEAR FORM

F2

VESSEL: _____ **SAMPLE No:**____ **OBSERVER:** _____

Registration		**Length**	m	**Fuel capacity**	gal	**Number of crew**	
Company name		**Width**	m	**Fuel used**	gal	**Water capacity**	gal
Captain Name		**Draft**	m	**Type of fuel**		**Catch conserve method**	
Departure date/time		**Distance deck to water**	m	**Type (fibra-mother ship)**		**If the vessel is a 'fibra', ↓ name of mother ship ↓**	
Arrival date/time		**Well capacity**	MT	**Number of fibras**			
Departure port		**Main motor**		**Navigation and fishing equipment:**			
Arrival port		**Aux. motor**					

Characteristics	**Quantity**	**Material ***	**Diameter**	**Length**	**Color ***
Mainline			mm	Nm	
Upper gangion			mm	fath	
Middle gangion			mm	fath	
Lower gangion			mm	fath	
Floatline / dropline				cm	
Buoy			cm		
Flag					
Float			cm		

Distance btwn. hooks↓	**Max. hooks on mainline↓**	**Number of lights↓**	**Number of radio buoys↓**
bz			

Mainline weights:
Yes ( ) No ( )

Dropline connection to mainline:
Knots ( ) Snaps ( )

Mainline retrieval
By hand ( )
Manual crank ( )
Hydraulic crank ( )
Other _____( )

Fishing gear diagram

Hooks	**Type (J / C)**	**Size**	**J-straight/ J-curved**	**Material***	**Manufac-turer**	**Offset**	**Ring (Yes / No)**	**Other details**	**Observations**
Hook A									
Hook B									
Hook ©									

* Use numbers from code tables

F2s v2: 02/2012

LONGLINE SET FORM

F3

VESSEL: ______________________ **SAMPLE No:** _____ **OBSERVER:** ______________________

Set number		SET		RETRIEVAL		Number of hooks in the set by type:	Hook. A	Hook. B	Hook. ©		Type of bait	% of total
		Start	End	Start	End							
↓ Date ↓	LAT									Bait 1		
	LON					Total no. of hooks in set:				Bait 2		
	TIME					No. of hooks lost:				Bait 3		

Target Fishery	Set	Yes	Retrieval direction		Sea surf. temp.	No. hooks btwn. floats	Avg. hook depth	Bottom longline? Yes	No
	Special?	☐	Start to end	☐				☐	☐
	Patrolled?	☐	End to start	☐			fath		

Observations:

Set number		SET		RETRIEVAL		Number of hooks in the set by type:	Hook. A	Hook. B	Hook. ©		Type of bait	% of total
		Start	End	Start	End							
↓ Date ↓	LAT									Bait 1		
	LON					Total no. of hooks in set:				Bait 2		
	TIME					No. of hooks lost:				Bait 3		

Target Fishery	Set	Yes	Retrieval direction		Sea surf. temp.	No. hooks btwn. floats	Avg. hook depth	Bottom longline? Yes	No
	Special?	☐	Start to end	☐				☐	☐
	Patrolled?	☐	End to start	☐			fath		

Observations:

Set number		SET		RETRIEVAL		Number of hooks in the set by type:	Hook. A	Hook. B	Hook. ©		Type of bait	% of total
		Start	End	Start	End							
↓ Date ↓	LAT									Bait 1		
	LON					Total no. of hooks in set:				Bait 2		
	TIME					No. of hooks lost:				Bait 3		

Target Fishery	Set	Yes	Retrieval direction		Sea surf. temp.	No. hooks btwn. floats	Avg. hook depth	Bottom longline? Yes	No
	Special?	☐	Start to end	☐				☐	☐
	Patrolled?	☐	End to start	☐			fath		

Observations:

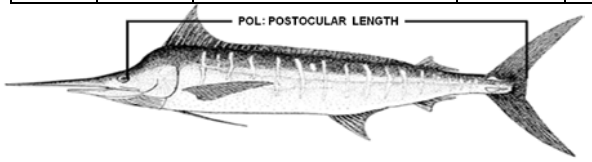
F3s v1: 02/2012

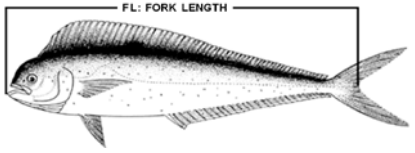
CATCH FORM

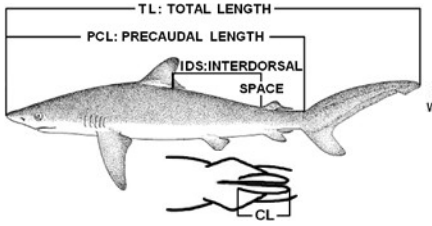
F4

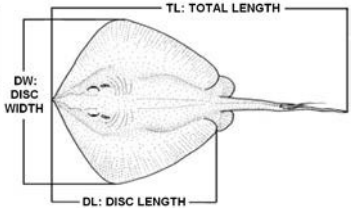
VESSEL: _____ **SAMPLE No:** ____ **OBSERVER:** _____

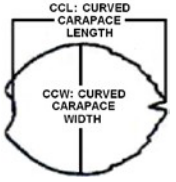
Set No.	Time	Species name	Number caught	Hook A B ©	Hook location *	Dispo-sition *	Sex M=1 F=2	Weight (kg)	LENGTHS (cm)			Male sharks			Observations
									POL-FL-TL-CCL	PCL-*DL*	IDS-*DW*-CCW	CL (cm)	CAL	SEMEN	











* Use numbers from code tables

F5

TURTLE FORM

(Record turtle sightings only for hawksbill, loggerhead and leatherback turtles)

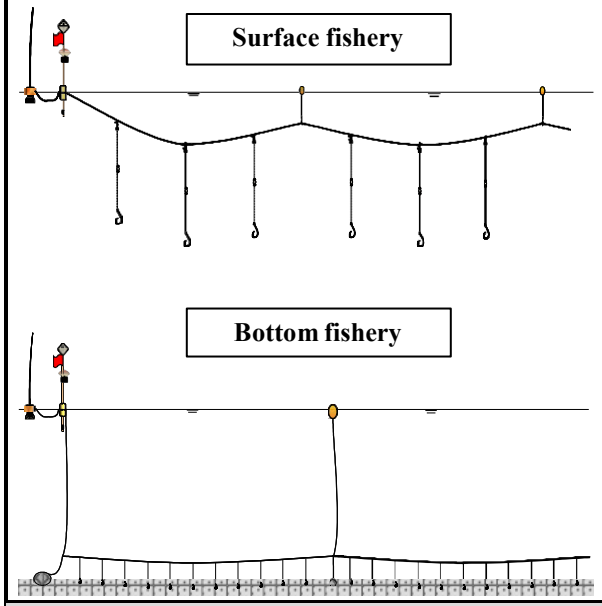
VESSEL: _____ **SAMPLE No:** ____ **OBSERVER:** _____

Date	Time	Set number	Species	Sex	CCL [1] (cm)	CCW [2] (cm)	Tail LTC (cm)	Hook A B C	Color of the nearest float or buoy*

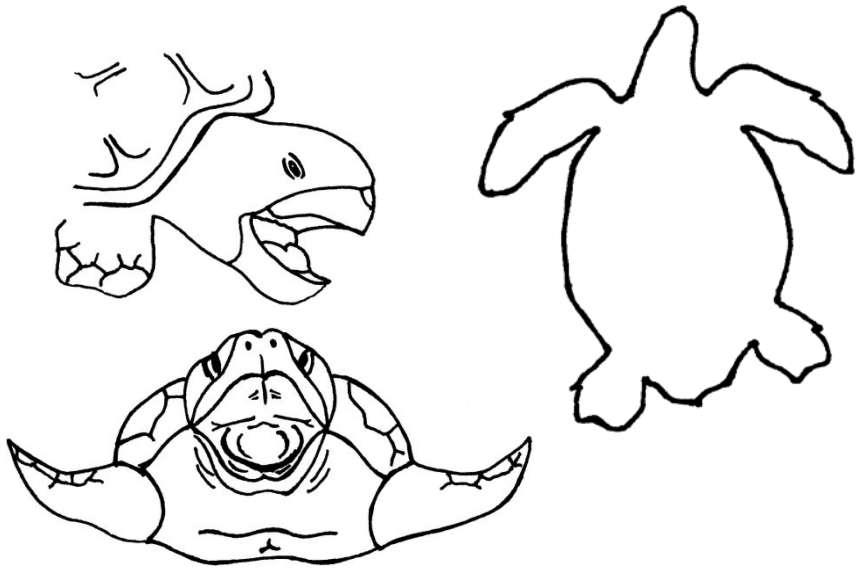
Position:	Latitude		Longitude	

Condition *( )	Entanglement *( )	Hooking *( )	Disposition*( )	Observations:

Turtle location in relation to the fishing gear



Hook location and turtle entanglement

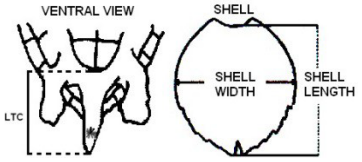


Existing tag 1:

Existing tag 2:

New tag 1:

New tag 2:



[1]CCL: Curved carapace length [2]W: Curved carapace width

* Use numbers from code tables

BIRD FORM

F5

VESSEL: _____ SAMPLE No: _____ OBSERVER: _____

Set No.	Date	Time	Species name	Position		Age Immature=1 Adult=2	Sex M=1 F=2	Caught in set Yes/No	Hook A B ©	Cond-ition *	Mitig. 1 *	Mitig. 2 *	Dispo-sition *	Photo Yes/No	Observations
				Latitude	Longitude										

* Use numbers from code tables

Appendix 3

IATTC MINIMUM DATA SUMMARY TEMPLATE FOR ANNUAL LONGLINE OBSERVER REPORTS

The annual data summaries in CPC reports should to contain, at a minimum, the fields in the table. Separate tables should be submitted for shallow sets (*e.g.* swordfish and shark sets) and deep sets (*e.g.* bigeye and albacore tuna sets)

CPC name	No. trips	No. days at sea	No. effective fishing days	No. sets	No. hooks	Catch (by species)						
						Tuna	Sharks	Rays	Sea turtles	Marine mammals	Seabirds	Other fishes
Observed												
Total fleet												
% coverage												

Data field descriptions

No. of trips: From departure to unloading more than 50% of the catch.
No. of days at sea: Number ofw days from departure to return to port
No. of effective fishing days: Number of days when fishing operations were undertaken
No. of sets: Number of fishing operations undertaken
No. hooks: Number of hooks deployed in each fishing operation
Catches:
Tuna: Total number of individuals and weight of tunas caught (separate column for each species)
Sharks: Total number of individuals and weight of sharks caught (separate column for each species)
Rays: Total number of individuals caught (separate column for each species)
Sea turtles: Total number of individuals caught (separate column for each species)
Marine mammals: Total number of individuals caught (separate column for each species)
Seabirds: Total number of individuals caught (separate column for each species)
Other fish: Total number of individuals caught (separate column for each species if possible)