

INTER-AMERICAN TROPICAL TUNA COMMISSION

94TH MEETING

Bilbao, Spain, 22-26 July 2019

PROPOSAL IATTC-94 E-1

SUBMITTED BY THE EUROPEAN UNION

RESOLUTION ON SCIENTIFIC OBSERVERS FOR LONGLINE VESSELS

EXPLANATORY MEMORANDUM

The revision of Resolution C-11-08 proposed by the EU intends to increase observer coverage on board longline vessels from the current 5% to 20%, as recommended by the Scientific Advisory Committee (SAC), over the next 5 years. The proposal also taps into the potential offered by electronic monitoring systems of observation (EMS) in order to complement human observation and envisages the future development of standards for electronic monitoring in IATTC. The proposal also reflects the current reporting requirements that have been established by the SAC under Resolution C-11-08 and consolidates them in a single Resolution. A decision should be made on whether to use Minimum Data Reporting Standards harmonised with WCPFC or use the ones developed by IATTC (Annex C).

RESOLUTION C-19-XX

REPLACES RESOLUTION C-11-08 ON SCIENTIFIC OBSERVERS FOR LONGLINE VESSELS

The Inter-American Tropical Tuna Commission (IATTC), gathered in Bilbao, Spain, on the occasion of its 94th Meeting;

Recognising the need to collect scientific information on target species as well as comprehensive data on interactions with non-target species, in particular, sea turtles, sharks and seabirds;

Noting the need to ensure uniform and equitable treatment of all tuna-fishing vessels operating in the Convention Area;

Noting that all large purse-seine vessels operating in the Antigua Convention Area are required to carry scientific observers aboard, in accordance with the Agreement on the International Dolphin Conservation Program and that the Commission has recommended the extension of observer coverage to smaller purse seine vessels on a voluntary basis;

Taking into account that IATTC scientific staff and the IATTC Working Group on Bycatch have reiteratedly recommended at least 20% observer coverage on longline vessels fishing for tunas in the Convention Area, and that the Working Group on Bycatch suggested that human observer coverage could be supplemented by electronic monitoring systems (EMS) in order to achieve that goal.

Noting that the Scientific Advisory Committee SAC) at its 10th meeting in May 2019 determined that the appropriate measure of longline fishing effort for calculating observer coverage is “number of hooks.”

Agrees that:

1. For the purposes of this Resolution, longline fishing effort is defined as the number of hooks deployed.
2. The main task of the scientific observers and/or EMS systems shall be to record, consistent with data standards established by the SAC, any available biological information, the catches of targeted fish species, species composition and any available biological information as well as any interactions with non-target species such as sea turtles, seabirds and sharks.

3. Each Member and Cooperating Non-Member (CPCs) shall ensure that at least 5% of the fishing effort made by its longline fishing vessels greater than 20 metres length overall carry a scientific observer.
4. Consistent with the recognition that observation of minimum of 20% of longline fishing effort is needed- in particular, in order to collect adequate information on bycatch and non-target species, CPCs shall increase their rate of observation for all of their longline vessels greater than 20 metres length overall, as well as those less than or equal to 20 meters length overall that operate on the high seas in the Convention Area, according to the following schedule:
 - a. Observation of a minimum of 10% longline fishing effort by January 1, 2022.
 - b. Observation of a minimum of 15% longline fishing effort by January 1, 2023.
 - c. Observation of a minimum of 20% longline fishing effort by January 1, 2024.
5. Each CPC shall endeavor to ensure that observer coverage will be representative of the activities of its fleet, including in terms of gear configuration, target species and areas fished.
6. Beginning in 2020, CPCs with qualifying longline vessels will report to the Scientific Advisory Committee on their progress and future plans for meeting the observation coverage rates referred to in Paragraph 4, and will continue to report in this manner until they achieve the 20% observation coverage target.
7. The SAC, at its 2025 session, shall evaluate the results of the targeted observation coverage of 20% of the longline effort and assess if this rate is sufficient to fulfil the mandate of the Commission under the Antigua Convention.
8. CPCs may use a combination of human observers and EMS to achieve the observation rates in Paragraph 4, provided that the baseline of 5% human observer coverage for longline vessels over 20 meters length overall specified in Paragraph 3 is met.
9. CPCs shall:
 - a. Ensure that the minimum level of coverage is met;
 - b. Take all necessary measures to ensure that observers are able to carry out their duties in a competent and safe manner;
 - c. Endeavour to ensure that observers alternate vessels between their assignments.
 - d. Ensure that the vessel on which an observer is placed provide suitable food and lodging during the observer's deployment at the same level as the officers, where possible. Vessel masters shall ensure that all necessary cooperation is extended to observers in order for them to carry out their duties safely, including providing access, as required, to the retained catch, and catch which is intended to be discarded.
10. The reporting requirements established by the SAC can be found in Annexes A, B and C. The SAC may decide to modify these reporting requirements or establish new ones whenever deemed necessary and shall notify the Commission as appropriate.
11. CPCs shall submit operational data collected by human observers or EMS systems from the previous year, consistent with the Minimum Data Reporting Standards (Annex C), to the Director no later than June 30 of each year.
12. Unless otherwise specified by the SAC, CPCs shall submit other reporting under this Resolution by March 31 of each year.
13. The SAC shall, no later than at its 2021 session, adopt any modifications or additions to the Minimum Data Reporting Standards (Annex C) needed to accommodate observations by EMS.
14. The IATTC Scientific Staff, in consultation with CPCs and the Scientific Advisory Committee shall develop minimum standards for the implementation of an EMS for the longline fleets to be adopted by the Commission by 2021 at the latest.

Annex A: Annual Summary Reporting (established by SAC10)

Annex B: Annual Metadata Reporting (established by SAC07)

Annex C: Minimum Data Reporting Standards (2 Options, established by SAC08)

Option 1(Harmonized with WCPFC)

Option 2 (IATTC-developed LL observer forms)

EU PROPOSAL TO AMEND RESOLUTION C-11-08 ANNEX A

Template for annual summary reports on fleet information and observer data for longline vessels >20m operating in the EPO; adopted by the 10th Meeting of the IATTC Scientific Advisory Committee, May 2019.

Member, or cooperating non-member	Country name
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FLEET INFORMATION (vessels >20m)									
	All sets types combined			Shallow sets (<15 HPB/HBF ¹ or <100m max hook depth)			Deep sets (≥15 HPB/HBF or ≥100m max hook depth)		
Period covered	date range mm/dd/yyyy– mm/dd/yyyy			date range mm/dd/yyyy– mm/dd/yyyy			date range mm/dd/yyyy– mm/dd/yyyy		
Area fished	from (XXX) ^o W to (XXX) ^o W and from (XXX) ^o S/N to (XXX) ^o S/N			from (XXX) ^o W to (XXX) ^o W and from (XXX) ^o S/N to (XXX) ^o S/N			from (XXX) ^o W to (XXX) ^o W and from (XXX) ^o S/N to (XXX) ^o S/N		
	Total Fleet	Observed	% observed	Total Fleet	Observed	% observed	Total Fleet	Observed	% observed
No. of vessels that fished									
No. of trips									
No. of effective days fishing									
No. of sets									
No. of hooks (in thousands) <i>If unknown, approx. no. of hooks/set, using a *</i>									
Predominant ² hook type/size (IATTC code)									
Predominant bait type ³									

¹ Hooks per Basket / Hooks Between Float

² Predominant indicates most common, e.g. >50%

³ Bait code: SQ – squid (e.g. Cephalopods), M – mackerel (e.g. Scomber spp.), A – artificial lure (e.g. plastic jig)

NON-RETAINED SPECIES (vessels >20m)									
	No. of Individuals Observed								
	All sets types combined			Shallow sets (<15 HPB/HBF ¹ or <100m max hook depth)			Deep sets (≥15 HPB/HBF or ≥100m max hook depth)		
	Released Alive	Released Dead	Released Condition Unknown	Released Alive	Released Dead	Released Condition Unknown	Released Alive	Released Dead	Released Condition Unknown
Taxa - Sea turtles									
leatherback (<i>Dermochelys coriacea</i>)									
loggerhead (<i>Caretta caretta</i>)									
green (<i>Chelonia mydas</i>)									
olive ridley (<i>Lepidochelys olivacea</i>)									
Add more rows for each additional species									
Taxa – Sharks and Rays									
silky (<i>Carcharhinus falciformis</i>)									
oceanic whitetip (<i>Carcharhinus longimanus</i>)									
blue shark (<i>Prionace glauca</i>)									
shortfin mako (<i>Isurus oxyrinchus</i>)									
scalloped hammerhead (<i>Sphyrna lewini</i>)									
smooth hammerhead (<i>Sphyrna zygaena</i>)									
great hammerhead (<i>Sphyrna mokarran</i>)									
giant manta ray (<i>Manta birostris</i>)									
Add more rows for each additional species									
Taxa – Marine Mammals									
false killer whale (<i>Pseudorca crassidens</i>)									
Risso's dolphin (<i>Grampus griseus</i>)									
Guadalupe fur seal (<i>Arctocephalus townsendi</i>)									
Add more rows for each additional species									
Taxa – Seabirds									
Antipodean albatross (<i>Diomedea antipodensis</i>)									
waved albatross (<i>Phoebastria irrorata</i>)									
Laysan albatross (<i>Phoebastria immutabilis</i>)									
short-tailed albatross (<i>Phoebastria albatrus</i>)									
Add more rows for each additional species									
Taxa – Billfish									
striped marlin (<i>Kajikia audax</i>)									
shortbill spearfish (<i>Tetrapturus angustirostris</i>)									
blue marlin (<i>Makaira nigricans</i>)									
Add more rows for each additional species									

Report of the National Observer Programs for pelagic fisheries under the IATTC Convention Area

Observer Program

Reporting CPC

Name of the program

Scientific contact

Email

Year start

Vessel type monitored

Average number of vessels observed per year

Observer Program: Data recorded from interactions with fishing operations

Level data record:

Other:

Frequency record:

Other:

Data recorded please check if the following information is recorded			
	Target species	Non-target commercial spp	Other bycatch spp
Catches estimates (Kg/No)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dead discards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Releases alive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Species identification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Main taxa groups monitor by observers	<input type="radio"/> Yes
Fish target spp	<input type="radio"/>
All fish species (sharks/rays)	<input type="radio"/>
Sea turtles	<input type="radio"/>
Seabirds	<input type="radio"/>
Mammals	<input type="radio"/>
Other taxa (specify)	

Record on condition of discards and reasons for	<input type="radio"/> Yes
Reason(s) for discard of commercial catches	<input type="radio"/>
General state of the discards	<input type="radio"/>

Biological sampling and samples collections	Target spp	Non-target sp	Bycatch
Species identification (photo)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Size and weight measurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sex and/or fecundity status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hard parts (otoliths, spines)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tissues (muscle, gonads, blood)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tagging (release)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Vessel information recorded	<input type="radio"/> Yes
ID, Name	<input type="radio"/>
IMO Number	<input type="radio"/>
LOA, GRT, HP	<input type="radio"/>
Main gear(s) operation	<input type="radio"/>
Electronics (GPS, sonar)	<input type="radio"/>
Home port	<input type="radio"/>

At fishing operation please check if the following information is recorded	<input type="radio"/> Yes	Start operation	End operation
Fishing on FADs or not	<input type="radio"/>		
Gear type	<input type="radio"/>		
Geo-position (lat - lon)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Date/type operation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bait type	<input type="radio"/>		
Crew number	<input type="radio"/>		

Environmental data recorded	<input type="radio"/> Yes
Sea surface temperature	<input type="radio"/>
At gear catch sea temperature	<input type="radio"/>
Depth of gear operation	<input type="radio"/>
Wind speed and direction	<input type="radio"/>
Other environmental data	

Observer Program: Qualifications and training

Observer qualifications and training	Before enter observer program	Evaluation during program
Minimum qualifications describe		
Training course	<input type="radio"/>	<input type="radio"/>
Training materials and forms	<input type="radio"/>	<input type="radio"/>
Observer evaluation(s)	<input type="radio"/>	<input type="radio"/>
Validation of data recorded	<input type="radio"/>	<input type="radio"/>
On vessel training / experience	<input type="radio"/>	<input type="radio"/>

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.
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.
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.
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.

Data field	Description/Instructions/Comments
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.
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.
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.

Data field	Description/Instructions/Comments
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.
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
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 length 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 , measure 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

Data field	Description/Instructions/Comments
	location (<i>e.g.</i> “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.
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.
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 (<i>e.g.</i> sharks, sea turtles, seabird, marine mammals, etc.) also reflect hooking location [<i>i.e.</i> hooked in mouth, hooked deeply (throat/stomach), and hooked externally].
Fate	Record the ultimate disposition of the capture using the appropriate code (<i>e.g.</i> 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 (<i>e.g.</i> entangled, hooked internally, hooked externally, interaction with vessel only, etc.).
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.
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.
Condition when landed on Deck	Record the animal’s condition when landed on deck, using

Data field	Description/Instructions/Comments
	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.

1. 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 *	Distance btwn. hooks↓	Max. hooks on mainline↓	Number of lights↓	Number of radio buoys↓
Mainline			mm	Nm		bz			
Upper gangion			mm	fath		Mainline weights: Yes () No () Mainline retrieval By hand ()			
Middle gangion			mm	fath		Manual crank () Dropline connection to mainline: Hydraulic crank () Knots () Snaps () Other_ ()			
Lower gangion			mm	fath					
Floatline / dropline				cm		Fishing gear diagram			
Buoy			cm						
Flag									
Float			cm						

Hooks	Type (J / C)	Size	J-straight/ J-curved	Material*	Manufac-turer	Offset	Ring (Yes / No)	Other details	Observations
Hook A	<input type="checkbox"/>								
Hook B									
Hook C									

* Use numbers from code tables

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. C	Type of bait	% of total
	Start	End	Start	End		<input type="checkbox"/>		<input type="checkbox"/>		
↓ Date ↓	LAT								Bait 1	
	LON					Total no. of hooks in set:			Bait 2	
	TIME					No. of hooks lost:			Bait 3	
Target Fishery	Set Special? <input type="checkbox"/>	Yes <input type="checkbox"/>	Retrieval direction Start to end <input type="checkbox"/>	Sea surf. temp.	No. hooks btwn. floats	Avg. hook depth	Bottom longline? Yes <input type="checkbox"/> No <input type="checkbox"/>			
	Patrolled? <input type="checkbox"/>		End to start <input type="checkbox"/>			fath				

Observations: _____

Set number	SET		RETRIEVAL		Number of hooks in the set by type:	Hook. A	Hook. B	Hook. C	Type of bait	% of total
	Start	End	Start	End		<input type="checkbox"/>		<input type="checkbox"/>		
↓ Date ↓	LAT								Bait 1	
	LON					Total no. of hooks in set:			Bait 2	
	TIME					No. of hooks lost:			Bait 3	
Target Fishery	Set Special? <input type="checkbox"/>	Yes <input type="checkbox"/>	Retrieval direction Start to end <input type="checkbox"/>	Sea surf. temp.	No. hooks btwn. floats	Avg. hook depth	Bottom longline? Yes <input type="checkbox"/> No <input type="checkbox"/>			
	Patrolled? <input type="checkbox"/>		End to start <input type="checkbox"/>			fath				

Observations: _____

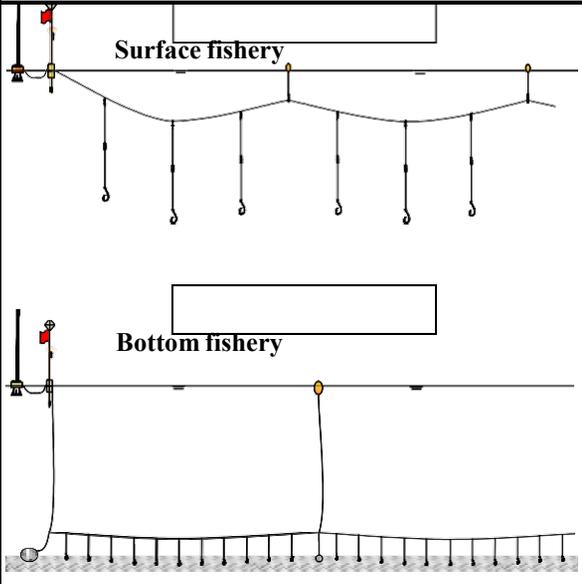
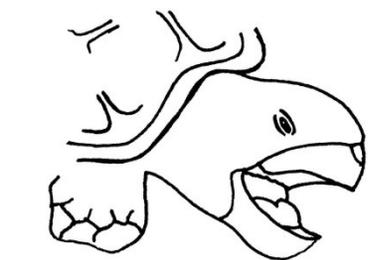
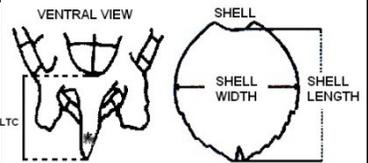
Set number	SET		RETRIEVAL		Number of hooks in the set by type:	Hook. A	Hook. B	Hook. C	Type of bait	% of total
	Start	End	Start	End		<input type="checkbox"/>		<input type="checkbox"/>		
↓ Date ↓	LAT								Bait 1	
	LON					Total no. of hooks in set:			Bait 2	
	TIME					No. of hooks lost:			Bait 3	
Target Fishery	Set Special? <input type="checkbox"/>	Yes <input type="checkbox"/>	Retrieval direction Start to end <input type="checkbox"/>	Sea surf. temp.	No. hooks btwn. floats	Avg. hook depth	Bottom longline? Yes <input type="checkbox"/> No <input type="checkbox"/>			
	Patrolled? <input type="checkbox"/>		End to start <input type="checkbox"/>			fath				

Observations: _____

2. 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							
 <p>Surface fishery</p> <p>Bottom fishery</p>									
									
		Existing tag 1:							
		Existing tag 2:							
		New tag 1:							
		New tag 2:							

CCL: Curved carapace length W: Curved carapace width

* Use numbers from code tables

