

E-training tool descriptor

Supra-category: IOTC ROS Scientific Field Observer Training (IOTC ROS SFO)

Category: Gillnet onboard data collection and recording (TR17)

The following case study is designed to familiarized observers with data gathering processes and priorities for the pelagic longline fisheries, the type of information gathered and how to capture it into the relevant IOTC ROS data collection forms. This exercise also aims to raise observers awareness on work and sampling protocols to follow when deployed on-board a longliner.

The narrative of the exercise is presented in the Case Study in three formats:

1. Short explanatory narratives for the exercise to provide certain information in situations which the observer would be expected to record (*provided in italics*); and
2. extracts from an observer's daily notebook (which they would be expected keep onboard). Attached below, which contains most of the information you will require to fill in the Data Forms.
3. information that an observer would record while on deck or sampling. This would be on a waterproof slate. Attached below.

As far as possible, the exercise and information are designed to be as realistic and practical to what an observer is likely to experience in the field.

IOTC ROS Guidelines to be followed

Guidelines for observers on pelagic longliners.

Data forms to be filled in

FORM 1-GN	IOTC REGIONAL OBSERVER SCHEME VESSEL AND TRIP INFORMATION SHEET
FORM 2-GN	IOTC REGIONAL OBSERVER SCHEME GILLNET GEAR SPECIFICATIONS
FORM 3-GN	IOTC REGIONAL OBSERVER SCHEME GILLNET FISHING EVENT
FORM 4-GN	IOTC REGIONAL OBSERVER SCHEME GILLNET FISHING EVENT - CATCH DETAILS
FORM 5-GN	IOTC REGIONAL OBSERVER SCHEME GILLNET – CATCH DETAILS - BIOMETRIC INFORMATION

Reports to be completed

VESSEL PRE-SEA SAFETY CHECK REPORT
OBSERVER DEPLOYMENT REPORT

Case Study: Observer deployment on a Pelagic Gillnet Vessel

You were briefed by your coordinator on the **18/07/2022**.

The next day (**19/07/2022**) you arrive at Dikkowita port (Sri Lanka) for deployment onboard **IMULA0736NBO** at 0800.

You meet the captain upon your arrival to the vessel, and ask him to provide you with [vessel specific details](#). You compare these to the information you got off the IOTC website on vessels.

You also request permission to conduct the vessel “pre-sea safety” check inspection in the company of a crew member. At the end of the visit, you use the information you’ve collected on your [observer notebook](#) to fill in the [Vessel pre-sea safety check form](#).

After confirming that the vessel meets minimum safety requirements, which is recorded in your notebook you embark the vessel and the vessel leaves harbour.

TASK 1 Fill in vessel pre-sea safety check form using your [observer notebook](#).

Shortly after leaving the harbour, you prepare your [observer deployment report](#). You go to the bridge and ask the skipper to send the report to your coordinator by email. He is happy to do it and tells you that you can communicate with your coordinator when you want.

TASK 2 Complete [observer deployment report](#) using information from the text and from your [observer notebook](#).

You check vessel’s electronic equipment with the captain, and start filling IOTC Form 1-LL, with the information you recorded in your [notebook](#) on the **19/07/22**.

TASK 3 Start filling IOTC Form 1-GN using information from your [observer notebook](#).

On the following day (**20/07/2022**), crew start preparing radio buoys and stacking the net on the deck ready to set. You inspect vessel fishing gear with the bosun, and record the information in your notebook to assist you to fill in the IOTC Form 2-GN.

TASK 4 Fill in IOTC Form 2-GN using information from your [observer notebook](#).

Fishing Operations

Note steaming time as “transit days to fishing grounds 20 to 21 /07/2022” **two days**

After checking in on the bridge, the fishing master indicates that he will start setting at sunset on **21/07/2022** at approximately 19:00. He will ride the net out at about **2 knots**, setting a total of 24 net panels each 100 m long.

TASK 5 Start filling IOTC Form 3-GN using information you recorded in your [observer notebook](#).

On the morning of 22 July 2022,

The crew start gathering on the deck, some preparing the hydraulic machinery and some keeping watch for the first radio-buoy which appears quickly on the horizon shortly after a crew member points to it with a straight arm.

You record hauling information on your notebook, while you wait for the radio-buoy to be brought onboard.

TASK 6 Finish filling IOTC Form 3-GN using information provided in the text and in the [observer notebook](#).

You get the [sampling slate](#) you used to record on-deck observations and biological sampling records and you transfer the information to the respective IOTC data collection forms.

TASK 7 Fill in IOTC Form 4-GN and Form 5-GN using information provided on the [sampling slate](#).

Due to injured crew the vessel returns early to port arrives to the Dikkowita harbour 15:30
The observer disembarks at 16:00

TASK 8 Complete IOTC Form 1-GN with the information provided in the text.



VESSEL INFORMATION

Identification

Vessel Name: **IMULA0736NBO**

Vessel identifiers

IOTC: 16827

TUVI: 41991

IMO: 9824813

Country: **Sri Lanka**

Flag: 

IRCS: **4SF4920**

Specifications

Type: **Gill Netters**

LOA: **26.30m**

GRT: **-**

GT: **95**

Gear: **Gill nets**

Owner

Owner: **MANAGING DIRECTOR . M/S RICHWIN
CEYLON FISHERIES (PVT)LTD**

Owner address: **54/A , THALADUWA ROAD ,
NEGOMBO**

Operator

Operator: **MANAGING DIRECTOR . M/S RICHWIN
CEYLON FISHERIES (PVT)LTD**

Operator address: **54/A , THALADUWA ROAD ,
NEGOMBO**

Beneficial owner

Beneficial owner: **MANAGING DIRECTOR . M/S
RICHWIN CEYLON FISHERIES (PVT)LTD**

Beneficial owner address: **54/A , THALADUWA
ROAD , NEGOMBO**

Company

Company: **RICHWIN CEYLON FISHERIES (PVT)LTD**

Company address: **54/A , THALADUWA ROAD ,
NEGOMBO**

Company registration number: **PV114073**

Authorization period

From: **2021-11-12**

To: **2022-11-11**



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கடற்றொழில் நீரியல் வளங்கள் அபிவிருத்தி அமைச்சு
MINISTRY OF FISHERIES AND AQUATIC RESOURCES DEVELOPMENT



Registration Port of registration: Dikkowita Registration number:	Fishing Licence-Gill Net Species: Tuna and tuna like species Licence period: 2021-11-12 to 2022-11-11
Vessel Contact Details IRCS: 4SF4920 Satellite phone: 0087077322831 Email: imula0736NBO@amosconnect.com MMSI: 235 762000	Vessel Compliment Skipper : Mr Ranil Rajapaksa Skipper nationality: Sri Lanka Fishing master: Same as skipper Crew number: 12
Other Vessel Specifications Hull material: Wood Autonomy: 15 days	Main engine: Caterpillar 3516C IMO II (1650bhp) Fish storage: Refrigeration chamber 0° to -30°C (20 mT) + blast freezer -30°C (1mT)

OBSERVER NOTEBOOK

DATE **19 JULY 2022**

Note: all dates and times have been recorded in the notebook in Sri Lanka / Vessel time (GMT+5:30)

Notebook information to fill in FORM GN-1

Vessel owners particulars are found in copies of vessel licence and information from IOTC website.

DEPLOYMENT DETAILS

Harbour	Dikkowita	(07° 00' 20" N / 079° 52' 02" E)
Arrive at vessel		0800
Introduced to Mate/Bosun		<u>Mr Jaura Bindu</u> , and to the
Vessel Skipper and fishing master		<u>Mr Ranil Rajapaksa</u>

Request Pre-sea Inspection before embarkation. Accompanied by Mr Jaura, points noted:

- Safety Certificate In date and issues by Sri Lanka Maritime Safety Authority and vessel certified for 14 crew.
- Flares both rocket and smoke (in-date) located in cupboard below chart table. Expire on 01 January 2025.
- Automatic Kannad EPIRB (battery expiry date May 2025) located outside starboard bridge door in float free holder.
- McMundo S5A SART (battery expiry date May 2025) located inside the bridge next to the starboard door in float free holder.
- First aid box in skipper's cabin, skipper also medical officer
- One life raft (not in date or capacity for crew and observer) Make "Viking 10" next service date was due on 12/2017. Mr Jaura indicated that a new life raft had been ordered and was due to arrive today. (Photo taken P1)
- Life Jackets Total of 25, flexible foam and all SOLAS approved. One located at each bunk (15-bunks) and 10 in a box located at the muster station behind the bridge next to the life raft.
- Fire Extinguishers all serviced in May 2022 and painted red and located:
 - CO2 1-located inside galley door and 1-located in mess hall just outside galley
 - Foam/water located in each corridor to accommodation (3-in total)
 - Foam and CO2 at entrance to engine room. Apparently more inside engine room but not seen.
 - Foam outside bridge door
 - CO2 inside bridge door
- Life Buoys/Rings (6 in total, free release)
 - Located each side of bridge with smoke and light markers attached Page 1
 - 2 located on either side of stern with no markers attached

- 1 located in front of the line hauler on starboard side with no markers attached
- 1 located on bow rail with smoke and light marker attached
- No emersion-suits onboard
- Radio and communication equipment includes:
 - VHF, HF and SSB MF located in cupboard on back of the bridge
 - MMSI No. 235 762000 located in cupboard on back of the bridge
 - NAVTEX located in the small chartroom behind the bridge
 - Inmarsat terminal for email and Satellite phone located in the FM cabin behind the bridge.

All communication equipment appeared to be in working order and an email sent to office to confirm email contact.

Staying on officers' deck below the bridge, on a small cabin, neat and clean with a small working desk. Well ventilated. Was cooks cabin.

A Viking 15 life raft certified for 15 persons was delivered at 0900 on 19th July 2022. It was installed with the hydrostatic release in place (photo P2).

EMBARKATION AND DEPARTURE DETAILS

- Embarked at 0800 at the same berth.
- Vessel sailed at 13:30.

Shortly after leaving the harbour went over the vessel's electronic equipment with the skipper and noted;

- 2- GPS units one on bridge console and one in the chart room
- VMS (Argos) in cupboard with radios. Light switch showed it was on
- One radar on the bridge
- One track plotter was combined with the skipper computer
- One Echosounder
- No sonar fitted
- No current meter fitted
- No bathythermographs
- One SST gauge was situated on the bridge consul
- A weather facsimile in the chart room
- Fisheries information unit in the chart room

No familiarisation tour was offered as the observer had been around the vessel with the Mate during the pre-sea inspection, but the skipper sounded the emergency alarm for the observer to be familiar with.

Vessel emergency evacuation and muster station lists are displayed in the bridge, cabins and corridors.

DATE **20 JULY 2022**

Notebook information to fill in FORM GN-2

Net No 1 Details

Gear on the deck

- The vessel only had one net onboard and spare panels for repairs.
- A net drum to haul the net was situated on the starboard forward of the bridge and a stainless steel channel guided the net aft for setting.

Net mesh details recorded

- Counted a total of 24 panels each 100 m long, calculated total length of the net was 2400 m.
- The vertical depth of a panel was 15 m and panels were not stacked to make the net deeper.
- The net material was green monofilament
- Ten net mesh measurements recorded in centimetres using vernier callipers:
- 28; 28; 31; 30; 29; 28; 29; 30; 31; 30.
- Minimum 28 cm
- Maximum 31 cm
- Average 29.4 cm
- Hung-length of ten meshes = 120 cm (2.2 m)
- Stretched length of ten meshes = 294 cm (2.94 m)
- Horizontal hanging ratio [$120/294 = 0.4081$]
- Vertical mesh count 50

Top Rope Floats

- The floats were round yellow Styrofoam (approximately 15 cm diameter).
- Floats had head rope stung through the centre and spaced 120 cm apart
- Total calculated number of floats on the net approximately 854
- No droplines were used, and the net was set on the surface.

Bottom rope weighting

- The bottom rope was a weighted rope with a lead strand worked into the rope.
- The weight per meter was calculate to 0.6 kg per metre
(Weighed a 3-m length to get average weight per meter. *Photo taken*)



DATE **21 JULY 2022**

Captain confirmed he would start setting at 1900, just after sunset and would ride out the net at approximately 2 knots as it is newly stacked and can get tangled.

SET 1 SETTING (Net # 1)

A radio and light buoy were attached to the start of the net

Time radio buoy set was 19:00

GPS position 06° 35' 07"N / 077° 45' 23"E

15 m from the 1st radio buoy the net entered the water.

The vessel headed directly south in a straight line

Light buoys were attached to the net every 500 m (total of 6)

No radio buoy as attached to the end of the net

Finished setting the net at 20:35

GPS position 06° 33' 57"N / 077° 44' 20"E

Net was left drifting

All 24 net panels set were monitored by the observer and no mitigation devised were attached.

DATE 22 JULY 2022

SET 1 HAULING

During the night the vessel steamed slowly north, back to the start position.

Time start-hauling, radio buoy was recovered 07:30

GPS position 06° 35' 07"N / 077° 45' 23"E

The vessel hauling in south direction.

Finished hauling the net at 11:15

GPS position 06° 33' 57"N / 077° 44' 20"E

MONITORING OF HAULING OPERATION

All 24 net panels were recovered and observed by the observer being hauled back.

Little damage was noted to the net, except where three blue sharks were caught and sections of nearly a meter were torn (less than 5% of the net was damaged)

All the fish caught were recorded to get a total catch estimate for the haul. (EX)

INCIDENT REPORT

Crew slipped and cut off finger. Captain applied medical assistance. Stopped bleeding and applied pain killers.

Vessel immediately set to return to port.

DATE 23 JULY 2022

Heading to port

Crew still in pain but ok

DATE 24 JULY 2022

Arrived to Dikkowita port at 15:30

Ambulance waiting

Vessel will discharge catch next day and sail within the week

Observer disembarked at 16:00

Set N°1: Catch composition (Sampling method for the estimation of catch EX)

Real time recording during Hauling

Spp.	Fate	Sampling Method	Processing	Wt Est / Est method	Information on depredation, condition @ capture & release, SSIs gear interaction & handling and other comments
YFT	RET	EXS	GT	23 / EM	
YFT	RET	EXS	GT	24 / EM	
BSH	RET	EXS	FT	21 / EM	Alive
YFT	RET	EXS	GT	25 / EM	
BSH	RET	EXS		34 / EM	Alive and injured
YFT	RET	EXS	GT	EM	
YFT	RCC	EXS	GT	EM	Shark depredation, filleted for crew consumption, fillets weight, eye measured
YFT	RET	EXS	GT	23 / EM	
YFT	RET	EXS	GT	23 / EM	
BSH	RET	EXS	FT	15 / EM	Dead
YFT	RET	EXS	GT	23 / EM	
SKJ	RET	EXS	GT	3 / EM	
SKJ	RET	EXS	GT	3 / EM	
YFT	RET	EXS	GT	22 / EM	
SKJ	RET	EXS	GT	4 / EM	
YFT	RET	EXS	GT	25 / EM	
KAW	RET	EXS	GT	2 / EM	
KAW	RET	EXS	GT	2 / EM	
OCS	DUD	EXS	n/a	n/a	Entangled flipper, swimming away with strength, in good health
BSH	RET	EXS	FT	22 / EM	Alive healthy
YFT	RET	EXS	GT	25 / EM	
YFT	RET	EXS	GT	25 / EM	
SFA	RET	EXS	GG	35 / EM	Alive and injured, hooked in the gills, gaffed and brought onboard
YFT	RET	EXS	GT	25 \ EM	
YFT	DPQ	EXS	GT	25 / EM	Shark depredation, not fit for consumption, discarded unprocessed. Whole weight estimated by the Observer.
YFT	RET	EXS	GT	25 / EM	
YFT	RET	EXS	GT	25 / EM	
YFT	RET	EXS	GT	25 / EM	
YFT	RET	EXS	GT	25 / EM	
DOL	RET	EXS	GT	4/ EM	
DOL	RET	EXS	GT	4 / EM	

Catch Summary

Species	Fate	Count	Total No.	Weight information collected from vessel logbook
YFT	RET	\	16	514
BSH	RET		4	160
YFT	RCC	\	1	15
SKJ	RET		3	9
KAW	RET		2	3
OCS	DUD	\	1	n/a
SFA	RET	\	1	35
YFT	DPQ	\	1	25
DOL	RET		2	8

Set 1: Biometrics

All lengths collected with a hard tape except for turtles collected with a flexible tape.

SPECIMENS BIOMETRIC SAMPLING PERIOD (sampling method for the collection of biometrics MRS approximately 20%)

Spp.	Fate	Reference Length (cm)	Sex	Weight (Kg)	Product	Comments
YFT	RET	127	U	23	Dressed	
YFT	RET	120	U	18	Dressed	
BSH	RET	207	M	18	Fins and trunk	Caught dead. Measured for TL
YFT	RET	158	U	48	Dressed	
BSH	RET	177	F	14	Fins and trunk	Caught dead
YFT	RET	137	U	29	Dressed	
SFA	RET	147	U	9	Headed, gutted & tailed	Dead at capture, retained, hooked in the gills. Bait fish, branchline with no light stick
DOL	RET	103	U	6	Whole	
YFT	RET	116	U	21	Dressed	
YFT	RET	115	U	18	Dressed	
YFT	RET	126	U	24	Dressed	
DOL	RET	97	F	5	Whole	
YFT	RET	112	U	17	Dressed	
YFT	RET	101	U	15	Dressed	
BSH	RET	204	M	17	Fins and trunk	Caught alive and in good health. TL

Weights from vessel logbook except ETPs