

## E-training tool assignment

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

Category: Sampling strategies as a function of the IOTC fishery (IOTC ROS SFO TR16)

*Course: Work Protocols and Sampling Strategies for Tuna Purse-seine (TR16.1)*

### Individual assignment

- The captain identifies a group of birds with the Bird Radar and heads in their direction to check if there's a school of tuna.
- The captain confirms the presence of a school of tuna of approximately 40 tons using indications provided by the sonar.
- The captain decides to fish for the school of tuna. He sets the net, encircles the school of tuna and starts hauling.
- The Observer monitors the hauling of the 1st brail, requests first officer to note large bycatch specimens that are discarded.
- The Observer moves to the main deck and reminds the Bosun to ask the crew to put aside any large dead bycatch specimens for sampling.
- The Observer moves to the lower deck and places itself at the end of the conveyor belt next to the discard net.
- The Observer collects four (4) random samples of discards (target species + bycatch), from the sorting conveyor belt at different moments of the brailing operation.
- The samples are collected by allowing the contents of the conveyor belt to spill directly into a series of baskets.
- When the sorting of the catch ends and discard nets are moved to upper deck to be thrown at sea, the Observer asks the Factory manager for an estimation of the total volume of the discards. He says he estimates it at 4 tons.

The Observer records on its sampling slate the following information:

**Sample 1 (from the 1st brail)**

Species	N°	Weight
Trigger fish	10	2 Kg
Rainbow runner	1	1 Kg
Mackrel	8	1 Kg
Blue sea chub	5	0,5 Kg
Kawakawa	1	1 Kg

**Sample 2 (from the 3th brail)**

Species	N°	Weight
Trigger fish	7	2 Kg
Rainbow runner	1	1 Kg
Mackrel	5	0,5 Kg
Barracuda	1	1 Kg
Kawakawa	3	3Kg

**Sample 3 (from the 5th brail)**

Species	N°	Weight
Dorado	1	3 Kg
Kawakawa	5	5 Kg
Silky shark	3	10 Kg

**Sample 4 (from the 7th brail)**

Species	N°	Weight
Silky shark	8	40 Kg

**Q1 – Estimate set discard composition by following the next steps.**

1. Add your samples.
2. Calculate species composition for your added sample (%).
3. Raise it to the total discards volume given by Factory Manager
4. Cross-check if correct by adding the weights of your raised sample and checking it against the value given by the Factory Manager.
5. Fill in the table below

Species (FAO code)	Sample (Kg)	% Spp on sample	Sp. total discard value	Unit
				Kg
TOTAL		100%	4000	Kg

**Q2 – Complete IOTC Form 4-PS table on catch composition with the result of the calculations you have done for Q1.**

Catch details				Weight			Additional details on non-target species	
1. Spp.	2. Fate	3. Sampling method	4. Nb.	5. Type of Processing	6. Value (mT/Kg)	7. Estimation method	8. Condition at capture	9. Condition at release
	DUS	MRS	NA	RD		CA	D	D
	DUS	MRS	NA	RD		CA	D	D
	DUS	MRS	NA	RD		CA	D	D
	DUS	MRS	NA	RD		CA	D	D
	DUS	MRS	NA	RD		CA	D	D
	DUS	MRS	NA	RD		CA	D	D
	DUS	MRS	NA	RD		CA	D	D
	DUS	MRS	NA	RD		CA	A2	D
Blue Marlin				RD		EM		
Striped Marlin				RD		EM		
Green turtle				RD		EM		
Oceanic white tip shark				RD		LO		
Manta ray				RD		LO		
Silky shark				RD		LO		

DUS -Discarded - unwanted species; MRS - Random Sample; CA – Calculation; EM – Eye measurement by the observer; LO – logbook; D – Dead; A2 - Alive - injured, distressed

- When the brailing ends, the Observer goes up to the main deck and samples the dead bycatch set aside by the crew and collects information on large bycatch released alive with the 1st Officer.
- The 1st officer informs the Observer that the information provided is exhaustive.

**The Observer records on its sampling slate the following information:**

**Large bycatch set aside by the crew**

Species	N°	Weight	
Blue Marlin	1	150 Kg	
Striped Marlin	3	200 Kg	
Green turtle	1	60 Kg	

**Large bycatch released alive by the vessel (info given by 1st Officer)**

Species	N°	Weight
Oceanic white tip shark	2	250 Kg
Manta ray	1	150 Kg
Silky shark	10	100 Kg

**Q5 – Complete IOTC Form 4-PS table above with the information on large bycatch catch composition collected by the Observer on the main deck and with the 1<sup>st</sup> Officer.**