



Food and Agriculture  
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United Nations



Indian Ocean Tuna Commission  
Commission des Thons de l'Océan Indien

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# Assessment Work and Sampling Strategies to be used with Pole and Line

***IOTC ROS SFO TR16.4***

Category: Sampling strategies as a function of the IOTC fishery

*[IOTC ROS SFO TR16]*



CapMarine  
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# EXERCISE 1:

The vessel starts a fishing event. There are a maximum of 12 poles fishing at the same time and the Observer monitor the catches from a single pole at a time for a fixed time period (15 minutes). He monitors a total of four poles during the fishing event. The vessel fishes for 1 hour.

Complete the following table using the information provided:

Number of 'poles monitored' (A)	Max number of poles fishing at the same time (B)	Sampling strategy used for catch estimation (C)	Proportion of the fishing event monitored (D)

A – 4; B – 12; C – Systematic Proportional Sampling; D – 8%





# EXERCISE 2:

The vessel starts a fishing event. There are a maximum of 10 poles fishing at the same time. Using a random table for the number of poling crew, the observer selects a crew member to observe and count their catch over 10 minutes. He repeats this process four times. The vessel fishes for 1 hour.

Complete the following table using the information provided:

Crew (= poles) selected via RANDBETWEEN function.			
2	10	5	8

Number of 'poles monitored' (A)	Max number of poles fishing at the same time (B)	Sampling strategy used for catch estimation (C)	% of the fishing event monitored (D)

A – 5; B – 10; C – Random Sampling; D – 8%





# EXERCISE 3:

The vessel starts a fishing event. There are a maximum of 5 poles fishing at the same time. The observer decides to count all fish caught. The vessel fishes for 30 minutes.

Complete the following table using the information provided:

Number of 'poles monitored' (A)	Max number of poles fishing at the same time (B)	Sampling strategy used for catch estimation (C)	% of the fishing event monitored (D)

A – 5; B – 5; C – Exhaustive Sampling; D – 100%





## EXERCISE 4:

The vessel starts a fishing event. There are a maximum of 5 poles fishing at the same time. The observer decides to count all fish caught. The observer stops monitoring the event for 10 minutes, the time to go to the bathroom. The vessel fishes for 60 minutes.

Complete the following table using the information provided:

Number of 'poles monitored' (A)	Max number of poles fishing at the same time (B)	Sampling strategy used for catch estimation (C)	% of the fishing event monitored (D)

A – 5; B – 5; C – Exhaustive When Present; D – 83%





## EXERCISE 5:

1. The vessel starts a fishing event. There are a maximum of 10 poles fishing at the same time. Using a random table for the number of poling crew, the observer selects a crew member to observe and count their catch over 10 minutes. He repeats this process four times. The vessel fishes for 1 hour.
2. Determine catch composition based on the number of fish caught during the monitoring of a tuna fishing event. Complete the table below.

MAXIMUM NUMBER OF POLES FISHING	10	RAISED TOTAL CATCH PER SPP.
PERCENTAGE (%) OF THE EVENT OBSERVED (A)		
Skipjack	31	a)
Yellowfin	24	b)
Bigeye	1	c)
Dorado	1	d)
Kawakawa	4	e)

Answer: A – 8%; a) 248; b) 192; c) 8; d) 8; e) 32





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