Solutions Exercise on Work Protocols and Sampling Strategies for Tuna Purse-seine

IOTC ROS SFO TR16.1

Category: Sampling strategies as a function of the IOTC fishery

[IOTC ROS SFO TR16]

Food and Agriculture Organization of the United Nations

Indian Ocean Tuna Commission
Commission des Thons de l'Ocean Indien
iotc ctoi

CapMarine
Capricorn Marine Environmental

Exercise 1: Solution

TARGET CATCH = [(N° of brails/ brail fullness) x (Brail Av. Weight)]

= [(3 full + 2 ½ full + 4 ¼ full) x (5 t)]

= 25 tons

1. Spp.	2. Fate	3. Sampling method	4. Number	5. Processing type	6. Weight value (√ unit used)			7. Weight est. method
YFT	RET	Proportional (SPS)	NA	Round (RD)	22	Ton	Kg	Brail (BR)
BET	RET	Proportional (SPS)	NA	Round (RD)	3	Ton	Kg	Brail (BR)
TUG	DUD	Exaustive (EXS)	1	Round (RD)	60	Ton	Kg	Eye (EM)
OCS	DUD	Exaustive (EXS)	3	Round (RD)	250	Ton	Kg	Eye (EM)
BLM	RET	Exaustive (EXS)	2	Round (RD)	150	Ton	Kg	Eye (EM)

TOTAL CATCH = TARGET CATCH + BYCATCH

= 25,46 tons

Exercise 2: Solution

A. Calculate set bycatch species composition

Species	Sample (Kg)	% Spp on sample	Spp bycatch value	Unit
C. hippurus	60	8%	385	Kg
A. thazard	150	19%	962	Kg
E. affinis	500	64%	3205	Kg
C. maculatus	40	5%	256	Kg
C. falciformis	30	4%	192	Kg
Total	780	100%	5000	Kg

Exercise 2: Solution (continued)

C. Set catch composition

1. Spp.	2. Fate	3. Sampling method	4. Number	6. Weight value (√ unit used)		7. Weight est. method
SKJ	RET	Vessel estimates (VES)	NA	36	Ton	Vessel logbook
YFT	RET	Vessel estimates (VES)	NA	64	Ton	Vessel logbook
BET	RET	Vessel estimates (VES)	NA	10	Ton	Vessel logbook
C. hippurus	RET	Proportional (SPS)	NA	385	Kg	Calculation
A. yhazard	RET	Proportional (SPS)	NA	962	Kg	Calculation
E. affinis	RET	Proportional (SPS)	NA	3205	Kg	Calculation
C. maculatus	RET	Proportional (SPS)	NA	256	Kg	Calculation
C. falciformis	DUS	Proportional (SPS)	NA	192	Kg	Calculation
Black Marlin	RET	Exhaustive (EXS)	2	200	Kg	Eye measurement
Stripped M.	RET	Exhaustive (EXS)	3	200	Kg	Eye measurement
Green turtle	DUD	Exhaustive (EXS)	1	60	Kg	Eye measurement
White tip S.	DUD	Exhaustive (EXS)	2	150	Kg	Eye measurement
Manta ray	DUD	Exhaustive (EXS)	1	150	Kg	Eye measurement

Exercise 3: Solution

A. Calculate set bycatch species composition

Species	Sample (Kg)	% Spp on sample	Spp bycatch value	Unit
C. hippurus	140	13%	667	Kg
A. thazard	200	19%	952	Kg
E. affinis	500	48%	2381	Kg
C. maculatus	180	17%	857	Kg
C. falciformis	30	3%	143	Kg
Total	1050	100%	5000	Kg

Exercise 3 - Solution (continued)

1. Spp.	2. Fate	3. Sampling method	4. Number	6. Weight value (√ unit used)		7. Weight est. method
SKJ	RET	Vessel estimates (VES)	NA	36	Ton	Vessel logbook
YFT	RET	Vessel estimates (VES)	NA	64	Ton	Vessel logbook
BET	RET	Vessel estimates (VES)	NA	10	Ton	Vessel logbook
C. hippurus	RET	Proportional (SPS)	NA	667	Kg	Calculation
A. yhazard	RET	Proportional (SPS)	NA	952	Kg	Calculation
E. affinis	RET	Proportional (SPS)	NA	2381	Kg	Calculation
C. maculatus	RET	Proportional (SPS)	NA	857	Kg	Calculation
C. falciformis	DUS	Proportional (SPS)	NA	143	Kg	Calculation
Black Marlin	RET	Exhaustive (EXS)	2	200	Kg	Eye measurement
Stripped M.	RET	Exhaustive (EXS)	3	200	Kg	Eye measurement
Green turtle	DUD	Exhaustive (EXS)	1	60	Kg	Eye measurement
White tip S.	DUD	Exhaustive (EXS)	2	150	Kg	Eye measurement
Manta ray	DUD	Exhaustive (EXS)	1	150	Kg	Eye measurement

ANY QUESTIONS?

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