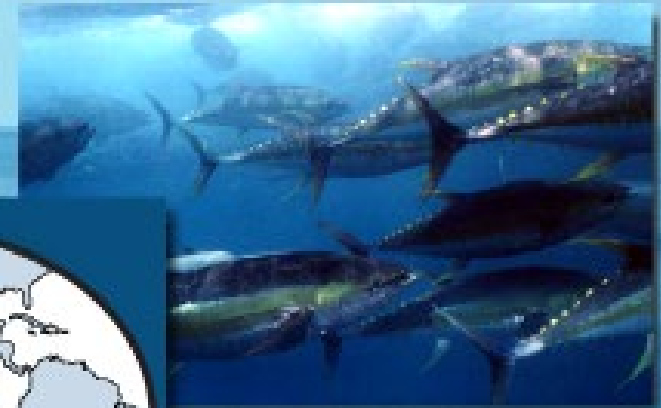


Comisión Interamericana del Atún Tropical  
Inter-American Tropical Tuna Commission



**Standardization of reporting formats and effort reporting for longline fisheries (Resolution C-11-08)**

Shane Griffiths and Brad Wiley

10<sup>th</sup> Meeting of the Scientific Advisory Committee La Jolla, California USA, 13-17 May 2018

Document: SAC-10 INF-H

# Resolution C-11-08

- IATTC Resolution C-11-08 mandates:
  - A minimum 5% observer coverage of the effort by each CPC's fleet of longline vessels >20 m LOA,
  - That coverage be representative of the activities of the fleet,
  - Observers to *“record 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”*,
  - These data, as well as a report summarizing the activities of the observed vessels, be reported to the Director by 31 March each year using *“a common reporting format detailing the required data to be collected by scientific observers”* by the Director, in cooperation with the Scientific Advisory Committee.

# Minimum data fields

- Under IATTC Resolution C-11-08, CPCs are required to include 15 data fields in their summary reports:
  1. Country (or fishing entity)
  2. Fishing year
  3. Total catches of the longline fleet, by weight
  4. Total fishing days in the year of the longline fleet (subsequently defined as “effective days fishing”)
  5. Percent coverage of fishing effort by observers (also to be expressed in “effective days fishing”)
  6. Total catch by vessels with observers on board
  7. Species composition of catches by vessels with observers on board
  8. Number of vessels with observers on board
  9. Number of sea turtles caught incidentally on trips with observers
  10. Whether caught sea turtles were released
  11. Numbers of sharks caught in trips with observers
  12. Numbers of rays captured in trips with observers
  13. Numbers of billfishes captured in trips with observers
  14. Numbers of fishing hooks used in trips with observers
  15. Type of hooks used

# Deficiencies in reported data

- Data for many of the 15 required fields are currently not provided
- SAC-08-07b revealed several requirements of C-11-08 are not being met:
  - Interactions with seabirds, sea turtles, and marine mammals
  - Fundamental operational data (e.g. HPB) are lacking
- Such data deficiencies compromise the rigor of scientific analyses (e.g. standardizing CPUE) by staff to meet mandates of the Antigua Convention.

# Inconsistencies in reported formats

- At SAC-03 (2012), some CPCs stated number of hooks was not always recorded, so “effective day’s fishing” (defined as a day on which a longline set was made, excluding transit days) was adopted as the effort metric
- However, SAC-09 INF-A showed it is rarely used, with 9 of 10 CPCs analyzed reporting total no. of hooks observed, and the other reported the range of number of hooks per set.
- It appears no. of hooks is now available for longline vessels for all CPCs.

**Recommendation 1:** Use number of hooks as the measure of longline fishing effort, and calculate the % of observer coverage by dividing the total no. of hooks for the fleet by the no. of observed hooks.

# Inconsistency in reported formats

- Minimum standards for reporting operational-level observer data were adopted in 2017, CPCs agreed to provide those data from 2013.
- Only five CPCs have provided data, and most incomplete (SAC-10-04).
- Various formats used by CPCs confound % of observer coverage, many do not report set type (shallow vs. deep) observed – needed to be *“representative of the activities of the fleet”*.
- Therefore, the no. of hooks and % observed for shallow (<15 HPB) and deep (>15 HPB) sets be reported; and main bait and hook type and size

**Recommendation 2:** All CPCs use a standard template for observer summary reports.

# Standardized reporting template

- Summary operational data, % coverage, & non-retained species by set type

Member, or cooperating non-member	Country name
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FLEET INFORMATION (vessels >20m)									
	All sets types combined			Shallow sets (<15 HPB/HBF <sup>1</sup> 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) <sup>o</sup> W to (XXX) <sup>o</sup> W and from (XXX) <sup>o</sup> S/N to (XXX) <sup>o</sup> S/N			from (XXX) <sup>o</sup> W to (XXX) <sup>o</sup> W and from (XXX) <sup>o</sup> S/N to (XXX) <sup>o</sup> S/N			from (XXX) <sup>o</sup> W to (XXX) <sup>o</sup> W and from (XXX) <sup>o</sup> S/N to (XXX) <sup>o</sup> S/N		
	Total Fleet	Observed	% observed	Total Fleet	Observed	% observed	Total Fleet	Observed	% observed
No. of vessels that fished	100	9	9	60	3	5	90	8	8.9
No. of trips	300	19	6.3	150	15	10	300	10	3.3
No. of effective days fishing	4500	260	5.8	3700	238	6.4	800	22	2.8
No. of sets	5000	320	6.4	4000	800	20	1000	25	2.5
No. of hooks (in thousands) <i>If unknown, approx. no. of hooks/set, using a *</i>	1000	60	6	700	120	17	300	12	4
Predominant <sup>2</sup> hook type/size (IATTC code)	C-40	C-40		C-40	J-02		C-33	C-33	
Predominant bait type <sup>3</sup>	SQ	SQ		SQ	SQ		M	M	

<sup>1</sup> Hooks per Basket / Hooks Between Float

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

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

<sup>4</sup> Hooks per Basket / Hooks Between Float



# Standardized reporting template

NON-RETAINED SPECIES (vessels >20m)									
	No. of Individuals Observed								
	All sets types combined			Shallow sets (<15 HPB/HBF <sup>4</sup> 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
<b>Taxa - Sea turtles</b>									
leatherback ( <i>Dermochelys coriacea</i> )									
loggerhead ( <i>Caretta caretta</i> )									
<i>Add more rows for each additional species</i>									
<b>Taxa – Sharks and Rays</b>									
silky ( <i>Carcharhinus falciformis</i> )									
oceanic whitetip ( <i>Carcharhinus longimanus</i> )									
scalloped hammerhead ( <i>Sphyrna lewini</i> )									
giant manta ray ( <i>Manta birostris</i> )									
<i>Add more rows for each additional species</i>									
<b>Taxa – Marine Mammals</b>									
false killer whale ( <i>Pseudorca crassidens</i> )									
Risso's dolphin ( <i>Grampus griseus</i> )									
Guadalupe fur seal ( <i>Arctocephalus townsendi</i> )									
<i>Add more rows for each additional species</i>									
<b>Taxa – Seabirds</b>									
Antipodean albatross ( <i>Diomedea antipodensis</i> )									
waved albatross ( <i>Phoebastria irrorata</i> )									
<i>Add more rows for each additional species</i>									
<b>Taxa – Billfish</b>									
striped marlin ( <i>Kajikia audax</i> )									
shortbill spearfish ( <i>Tetrapturus angustirostris</i> )									
<i>Add more rows for each additional species</i>									



# Recommendation 1

Beginning in 2020:

- 1. CPCs use number of hooks as the measure of longline fishing effort, and calculate the percentage of observer coverage by dividing the total number of hooks for the fleet by the number of observed hooks.**
  - Optimizes transparency, consistency, and comparability in reporting effort and observer coverage.
  - Already the standard metric used by tRFMOs and by IATTC for scientific purposes.

# Recommendation 2

Beginning in 2020:

## **2. CPCs use a standard template for summary reports by CPCs.**

- Reduces reporting burden on CPCs by focusing on key aspects of observer coverage and catches of discards, by set type. Retained species data is omitted, since they are reported in detail by CPCs.

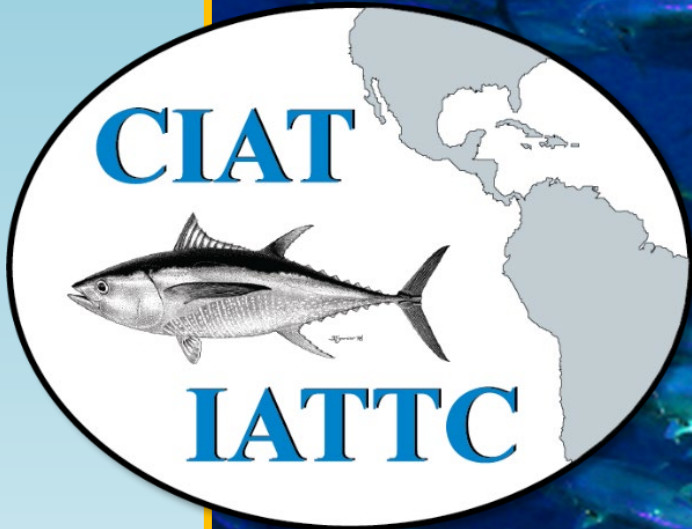
# Recommendation 2

Beginning in 2020:

## 2. CPCs use a standard template for summary reports by CPCs.

- Reduces reporting burden on CPCs by focusing on key aspects of observer coverage and catches of discards, by set type. Retained species data is omitted, since they are reported in detail by CPCs.
- Once all CPCs are submitting complete operational-level observer data in the agreed format (SAC-08-07e), non-retained species can be omitted from the template.

NON-RETAINED SPECIES (vessels >20m)									
	No. of Individuals Observed								
	All sets types combined			Shallow sets (<15 HPB/HBF <sup>4</sup> 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
<b>Taxa - Sea turtles</b>									
leatherback ( <i>Dermochelys coriacea</i> )									
loggerhead ( <i>Caretta caretta</i> )									
<i>Add more rows for each additional species</i>									
<b>Taxa – Sharks and Rays</b>									



Questions?



# Proposed template at SAC-09

Member country or CPC	Country x					
	Shallow sets (<15 HPB or 150m max hook depth)			Deep sets (≥15 HPB or >150m max hook depth)		
Period covered	20 Feb 2018 to 27 April 2018			1 Feb 2018 to 5 April 2018		
	Observed	Total Fleet	%	Observed	Total Fleet	%
No. vessels	5	100	5.0	6	100	6.0
No. trips	2	20	10.0	2	40	5.0
No. hooks (thousands)	50	1000	5.0	7	100	7.0
Hook type (IATTC code)	C-30	C-30		C-32	C-30	
Hook size	13/0	12/0		13/0	12/0	
<b>Non-retained species (in numbers)</b>						
	Observed	Total Fleet	%	Observed	Total Fleet	%
Sea turtles	1	20	5.0	0	2	0
Marine mammals	1	5	20.0	0	0	0
Seabirds	12	50	24.0	0	0	0
Sharks	3256	22568	14.4	123	2036	6.1
Mobulid rays	5	200	2.5	0	0	0
Rays (not Mobulid rays)	1	100	1.0	0	0	0
<b>Retained species (in numbers or weight)</b>						
	Observed	Total Fleet	%	Observed	Total Fleet	%
Bigeye tuna	456	34355	1.2	5654	56756	11.3
Yellowfin tuna	5465	24242	8.6	565	56777	2.5
Albacore tuna	56	4332	.	4564	67756	.
Billfishes	876	6755	.	78	6487	.
Swordfish	868	7655	.	2134	54656	.
Sharks	4353	85445	.	678	34536	.
Mahi-mahi	6867	46545	.	234	5644	.
Other						



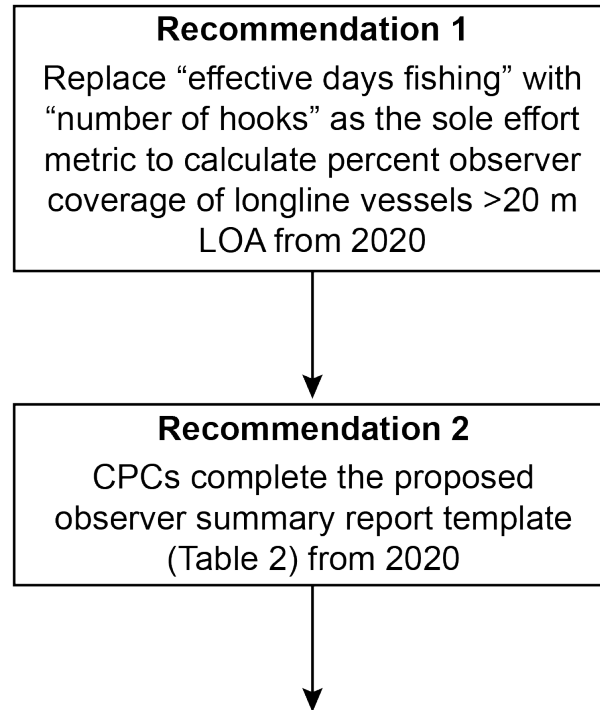
# Strategy to improve and simplify observer reports

## **Recommendation 1**

Replace “effective days fishing” with  
“number of hooks” as the sole effort  
metric to calculate percent observer  
coverage of longline vessels >20 m  
LOA from 2020

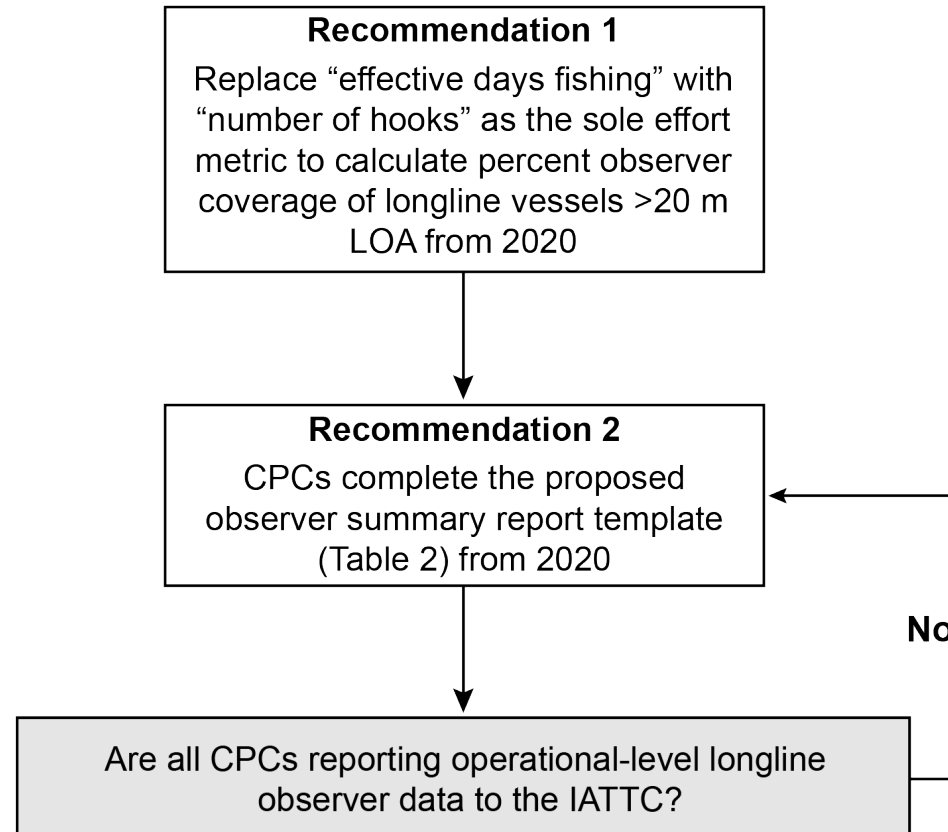


# Strategy to improve and simplify observer reports

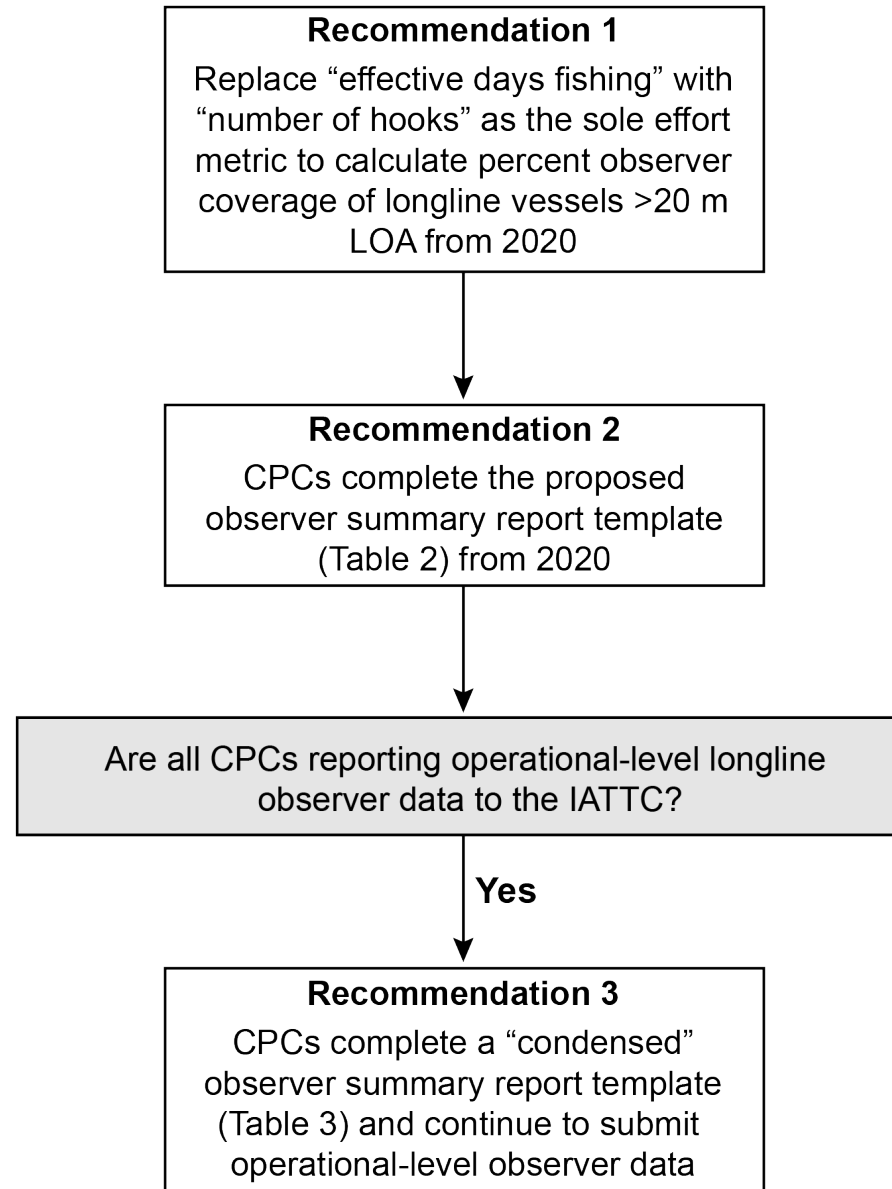




# Strategy to improve and simplify observer reports



# Strategy to improve and simplify observer reports



# Strategy to improve and simplify observer reports

