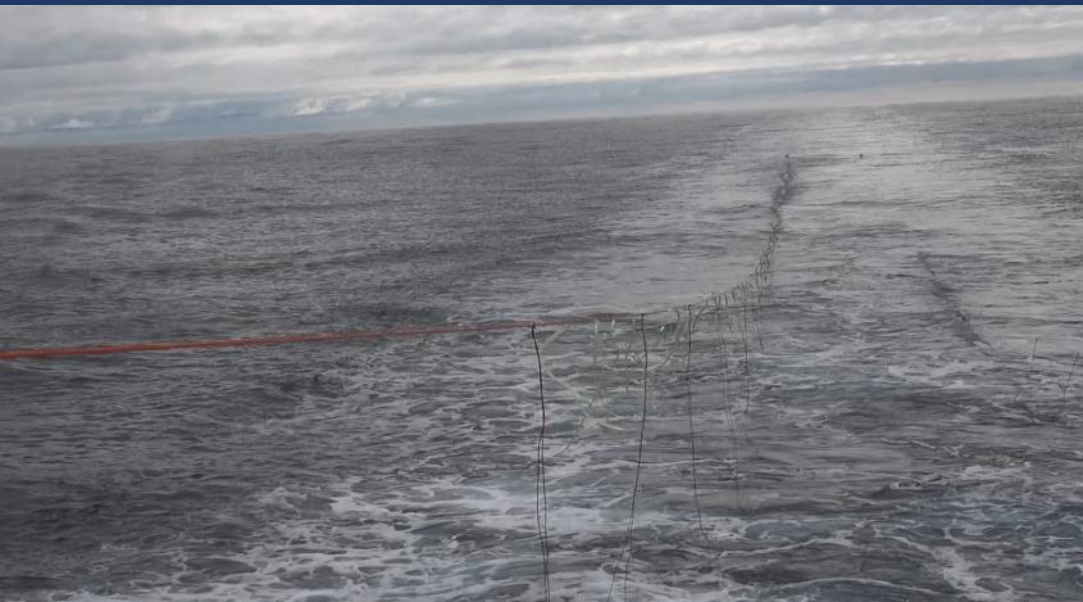


# Review of Tori-Line Specifications for Large Longline Vessels in the South Pacific under CMM 2018-03



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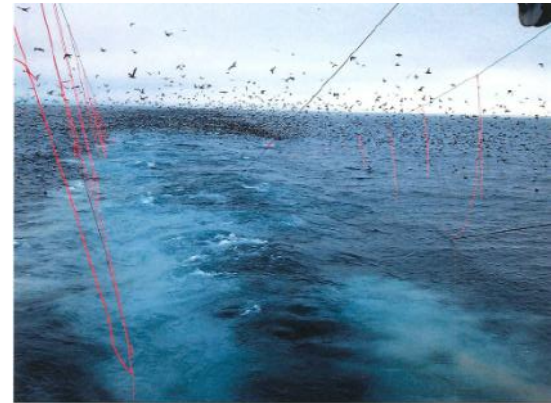
# Background & Context

## Seabird bycatch mitigation measure in WCPFC

- Review of CMM 2018-03 currently under discussion

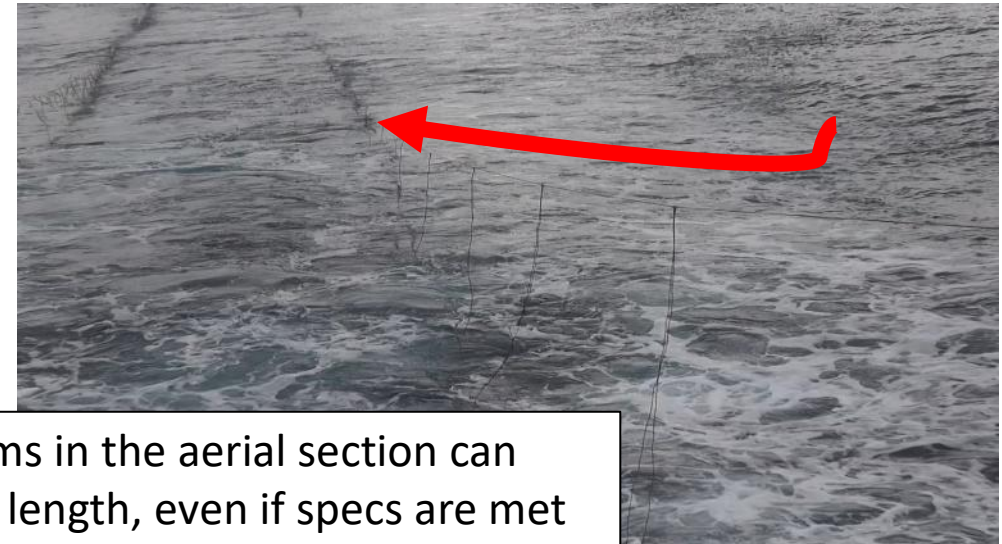
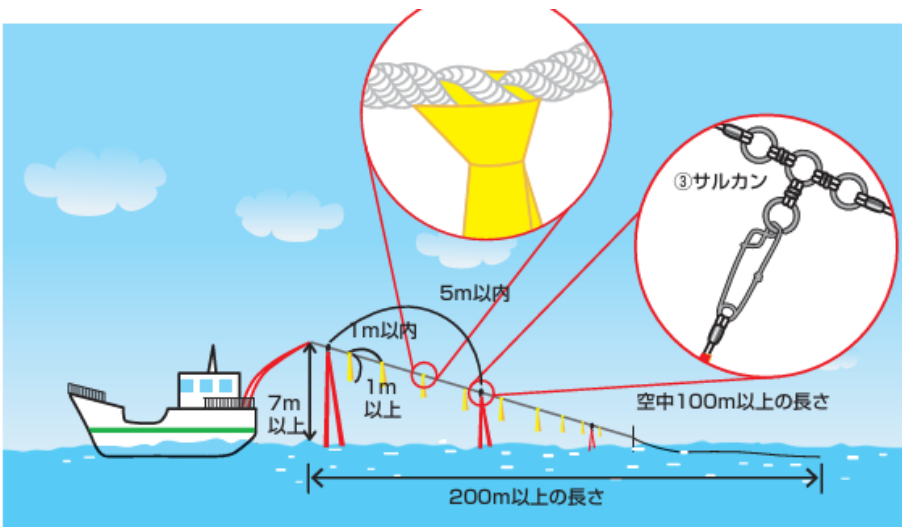
## Revision of tori-line specification

- Past discussions focused **on small vessels** & Northern Hemisphere
- **Gap:** limited debate on **large vessel** specifications in **Southern Hemisphere**
- Specifications largely unchanged since early 2010s



# Objective of this review

- Compare current large-vessel tori-line requirements in Southern Hemisphere across tRFMOs
- Evaluate specifications for both:
  - **Bycatch mitigation effectiveness**
  - **Operational practicality**
    - The strict implementation of specifications occasionally reduce mitigation effectiveness
    - Ambiguous specification may lead confusion and inconsistency in compliance verification



# Scope & Definitions

- **Large vessel:**  $\geq 35$  m overall length
- **Area:** Southern Hemisphere focus
- **Sources:** RFMO CMMs, Resolutions, Recommendations, Best Practice Guidelines
  - Reference organizations: WCPFC, IATTC, IOTC, ICCAT, CCAMLR, ACAP
- **Categories for comparison:**
  - ✓ Main Line
  - ✓ Streamers
  - ✓ Poles
  - ✓ Operational practice/Others

 <p>COMMISSION FIFTIETH REGULAR SESSION Honolulu, Hawaii, USA 10 – 14 December 2018</p> <p>CONSERVATION AND MANAGEMENT MEASURE TO MITIGATE THE IMPACT OF FISHING FOR HIGHLY MIGRATORY FISH STOCKS ON SEABIRDS</p> <p>Conservation and Management Measure 2018-03</p>		<p>INTER-AMERICAN TROPICAL TUNA COMMISSION</p> <p><b>82<sup>ND</sup> MEETING</b> LA JOLLA, CALIFORNIA (USA) 4 – 8 JULY 2011</p> <p><b>RESOLUTION C-11-02</b> RESOLUTION TO MITIGATE THE IMPACT ON SEABIRDS OF FISHING FOR SPECIES COVERED BY THE IATTC</p>	
<p>11-09</p> <p>SUPPLEMENTAL RECOMMENDATION BY ICCAT ON REDUCING INCIDENTAL BYCATCH OF SEABIRDS IN ICCAT LONGLINE FISHERIES</p> <p>BYC</p>		<p>CONSERVATION MEASURE 25-02 (2014)<sup>1,2</sup> Minimisation of the incidental mortality of seabirds in the course of longline fishing or longline fishing research in the Convention Area</p>	
 <p>Food and Agriculture Organization of the United Nations</p>		 <p>Indian Ocean Tuna Commission Commission des Thons de l'Océan Indien IOTC CTOI</p>	
<p>RESOLUTION 23/07 ON REDUCING THE INCIDENTAL BYCATCH OF SEABIRDS IN LONGLINE FISHERIES</p>		 <p>ACAP 2024 Summary Advice for Reducing the Impact of Pelagic Longline Fisheries on Seabirds</p> <p>Agreement on the Conservation of Mammals and Pelagic Reviewed at the Fourteenth Meeting of the Advisory Committee Lima, Peru, 12 - 16 August 2024</p>	

# Comparison table:

Specifications		WCPFC	IATTC (type a)		IATTC (type b)	ICCAT*	IOTC*	CCAMLR (non-tuna LL)	ACAP-BP
Mainline	Mainline length	≥200m	≥100m	≥100m or ≥x3 total vessel length		N/A	N/A	≥150m	N/A
	Aerial extent	≥100m	Maintained over sinking hooks			≥100m	≥100m	Optimise as far as possible	≥100m
	Material	N/A	N/A			• [With appropriate weight] • [Insertion of break point]	• [With appropriate weight] • [Insertion of break point]	N/A	Lightest practical strong fine line Insertion of break point
	Towing device	N/A	Yes (<150m mainline length)	N/A		[Yes]	[Yes]	Yes	Yes
Streamer	Streamer type	Long and short	Long	Short		Long	Long	Long	Long and short
	Streamer length	Long: Close to the water Short: >1m	Close to the water	≥30cm		Close to the water	Close to the water	• 6.5m from the stern to 1m for seaward end • Close to the water	Close to the water
	Interval	Long: <5m Short: <1m	<5m	<1m		<5m	<5m	<5m	<5m (none for short?)
	Material	N/A	N/A			• [≥ 2 strands] • [Fine line w/ red polyurethane tubing]	• [≥ 2 strands] • [Fine line w/ red polyurethane tubing]	Plastic tubing or cord (≥3 mmφ)	N/A
	Color	Brightly coloured	N/A			[Red]	[Red or Yellow]	Brightly coloured	Brightly coloured
	Attachment Method	Swivels (MUST)	Swivels (MUST)	N/A		• [Swivel] • [Clip attachment]	• [Swivel] • [Clip attachment]	Swivels or a similar device	Unweighted swivel
	Where streamers should be attached?	N/A	N/A			N/A	[Aerial extent part]	5m from pole along with aerial extent	N/A
Pole	Height (from sea surface)	>7m	>5m			[>7m]	[>7m]	>7m	>8m
	Mainline and pole placement	Windward deployment	Windward deployment			• [Windward deployment] • [Barrel swivel for mainline]	• [Windward deployment] • [Barrel swivel for mainline]	Poles should be set <5m from stern, Windward deployment	Barrel swivel for mainline
Other	Number of tori-line	1-2	1-2			1-2	1-2	1-2	2
	Operation practice	N/A	N/A			• [Bait casting practice] • [Spare tori line]	• [Bait casting practice] • [Spare tori line]	N/A	N/A

# Review: Main Line

- **Total Length:** Some specify the total length, while others provide only for length of the aerial extent.
- **Aerial Extent:** Commonly require a 100m aerial extent.
- **Line Material:** Many tRFMOs do not specify the material.  
But ICCAT and IOTC include preferred materials in their guidelines.
- **Towing Device:** The use of a towing device is specified the IATTC, CCAMLR and ACAP-BP but no detailed specifications provided.

Specifications		WCPFC	IATTC (type a)	IATTC (type b)	ICCAT*	IOTC*	CCAMLR (non-tuna LL)	ACAP-BP
Mainline	Mainline length	≥200m	≥100m	≥100m or ≥x3 total vessel length	N/A	N/A	≥150m	N/A
	Aerial extent	≥100m	Maintained over sinking hooks		≥100m	≥100m	Optimise as far as possible	≥100m
	Material	N/A	N/A		• [With appropriate weight] • [Insertion of break point]	• [With appropriate weight] • [Insertion of break point]	N/A	Lightest practical strong fine line Insertion of break point
	Towing device	N/A	Yes (<150m mainline length)	N/A	[Yes]	[Yes]	Yes	Yes



# Review: Streamers

- **Streamer type:** long to reach water; short streamer requirements vary
- **Color:** Requiring “brightly color” **but no details**
- **Material:** No requirement but only CCAMLR specified that.
- **Attachment method:** Many require swivel, **but too heavy to get aerial ext.**
- **Attachment position:** mostly unspecified;  
underwater attachment → ineffective + risk of entanglement

Specifications		WCPFC	IATTC (type a)	IATTC (type b)	ICCAT*	IOTC*	CCAMLR (non-tuna LL)	ACAP-BP
Streamer	Streamer type	Long and short	Long	Short	Long	Long	Long	Long and short
	Streamer length	Long: Close to the water Short: >1m	Close to the water	≥30cm	Close to the water	Close to the water	<ul style="list-style-type: none"> <li>• 6.5m from the stern to 1m for seaward end</li> <li>• Close to the water</li> </ul>	Close to the water
	Interval	Long: <5m Short: <1m	<5m	<1m	<5m	<5m	<5m	<5m (none for short?)
	Material	N/A	N/A		<ul style="list-style-type: none"> <li>• [≥ 2 strands]</li> <li>• [Fine line w/ red polyurethane tubing]</li> </ul>	<ul style="list-style-type: none"> <li>• [≥ 2 strands]</li> <li>• [Fine line w/ red polyurethane tubing]</li> </ul>	Plastic tubing or cord (≥3 mmφ)	N/A
	Color	Brightly coloured	N/A		[Red]	[Red or Yellow]	Brightly coloured	Brightly coloured
	Attachment Method	Swivels (MUST)	Swivels (MUST)	N/A	<ul style="list-style-type: none"> <li>• [Swivel]</li> <li>• [Clip attachment]</li> </ul>	<ul style="list-style-type: none"> <li>• [Swivel]</li> <li>• [Clip attachment]</li> </ul>	Swivels or a similar device	Unweighted swivel
	Where streamers should be attached?	N/A	N/A		N/A	[Aerial extent part]	5m from pole along with aerial extent	N/A

# Review: Pole Spec & Operational Practices

- **Height:** Requiring 5-8m height from sea.
- **Pole placement:** Pole on windward side required by most.
- **Paired tori-lines:** Requiring At least one, paired use encouraged, ACAP-BP requires two
- **Operational practice:** No specification but ICCAT&IOTC provide a guideline

Specifications		WCPFC		IATTC	ICCAT*	IOTC*		CCAMLR (non-tuna LL)	ACAP-BP
Pole	Height (from sea surface)	>7m		>5m	[>7m]	[>7m]		>7m	>8m
	Mainline and pole placement	Windward deployment		Windward deployment	<ul style="list-style-type: none"> <li>[Windward deployment]</li> <li>[Barrel swivel for mainline]</li> </ul>	<ul style="list-style-type: none"> <li>[Windward deployment]</li> <li>[Barrel swivel for mainline]</li> </ul>		Poles should be set <5m from stern, Windward deployment	Barrel swivel for mainline
Other	Number of tori-lines	1-2		1-2	1-2	1-2		1-2	2
	Operation practice	N/A		N/A	<ul style="list-style-type: none"> <li>[Bait casting practice]</li> <li>[Spare tori line]</li> </ul>	<ul style="list-style-type: none"> <li>[Bait casting practice]</li> <li>[Spare tori line]</li> </ul>		N/A	N/A



# Flexible “Two-tier Approaches” in Other RFMOs

- IOTC & ICCAT: “MINIMUM STANDARDS” + “TECHNICAL GUIDELINES”
- Guidelines provide practical options – non-mandate specifications

*The guidelines take into account environmental and operational variables such as weather conditions, setting speed and ship size, all of which influence tori line performance and design in protecting baits from birds. Tori line design and use may change to take account of these variables provided that line performance is not compromised.*

—ICCAT Rec. 11-09 & IOTC Res. 23/07

- Could be model for WCPFC revision

# Proposed revision to the tori-line specifications in SPO

Split to “Minimum standard”  
and “Technical guideline”

**Minimum standard** – mandate specs  
to keep three essentials:

- Securing a sufficiently long aerial section to provide an effective spatial deterrent
- Ensuring the presence of visible and stable streamers in the aerial section
- Casting baited hooks within the area protected by the tori-line(s)

**Technical guideline** – non-mandate:

- Provide supportive information for the requirement of the minimum standard

Specification	Current measure	Suggested revision	
	South of 25S >=35m vessel	Minimum Standard	Technical Guideline
Mainline length	≥ 200m		✓
Aerial extent	≥ 100m	✓	
Mainline material	N/A		✓
Towing device	N/A		✓
Streamer type	Mix of long and short	✓	
Streamer length	Long: sufficient length to sea surface Short: >1m	✓	
Streamer interval	Long: <5m Short: <1m	✓	
Streamer material	N/A		✓
Streamer color	Brightly coloured		✓
Attachment method	Swivels (MUST)	✓	✓
Where streamers should be attached?	N/A	✓	
Pole height	>7m		✓
Mainline and pole placement	Windward side of sinking bait	✓	
Number of tori-lines	1 or 2	✓	✓
Operational practice	N/A	✓	✓

# Proposed revision: Mainline

- **Aerial extent:**

Main essential specification for mitigation effectiveness, **keep in MS**

- **Mainline length:**

Supporting specification for sufficient aerial extent, **move to TG**

- **Material & towing device:**

Technical information for sufficient aerial extent should be **provided in TG**

Specification	Current measure	Suggested revision	
	South of 25S ≥35m vessel	Minimum Standard	Technical Guideline
Mainline length	≥ 200m		✓
Aerial extent	≥ 100m	✓	
Mainline material	N/A		✓
Towing device	N/A		✓

# Proposed revision: Streamers

- **Streamer type, length and interval:**

Essentials for effectiveness, **keep in MS**

- **Material:**

Technical information should be **provided in TG**

- **Color:**

Little evidence for specific color. **Move to TG** and provide “to be avoided” colors (e.g. black/blue).

- **Attachment:**

Heavy swivels are troublesome for aerial ext. So just describe as “streamers should not be entangling with the mainline” **in MS** and additional technical information will **provided in TG**

- **Streamer attached area:**

Additional description **in MS** for the place where streamers should be inserted

Specification	Current measure	Suggested revision	
	South of 25S ≥35m vessel	Minimum Standard	Technical Guideline
Streamer type	Mix of long and short	✓	
Streamer length	Long: sufficient length to sea surface Short: >1m	✓	
Streamer interval	Long: <5m Short: <1m	✓	
Streamer material	N/A		✓
Streamer color	Brightly coloured		✓
Attachment method	Swivels (MUST)	✓	✓
Where streamers should be attached?	N/A	✓	

# Proposed revision: Pole and Operational Practice

- **Pole height:**

As a supporting specification for sufficient aerial extent, **move to TG**  
Higher pole is not always effective for creating aerial ext(next slide)

- **Pole placement position:**

Essential specification, **keep in MS**

- **Number of tori-line:**

**Keep in MS** as “at least one tori-line” and “encouragement of two tori-lines” **move to TG**

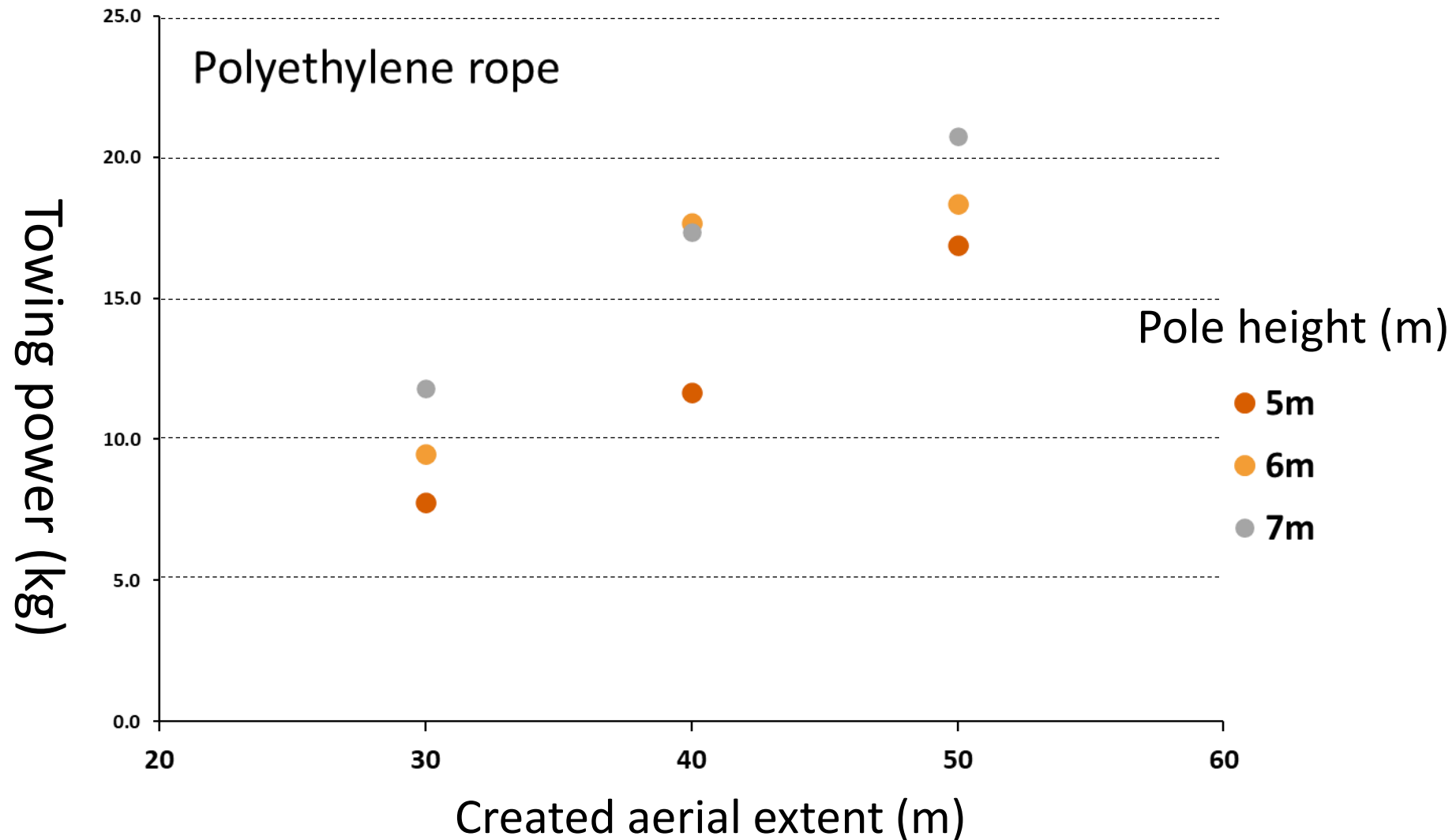
- **Operation practice:**

Add **new description in MS** about “bait landing point should be close to tori-line with avoiding propeller turbulence” and some practical information should be **provided in TG** (such as spare line and modification with bait-casting machine)

Specification	Current measure	Suggested revision	
	South of 25S ≥35m vessel	Minimum Standard	Technical Guidline
Pole height	>7m		✓
Mainline and pole placement	Windward side of sinking bait	✓	
Number of tori-lines	1 or 2	✓	✓
Operational practice	N/A	✓	✓

# Supplemental information: High pole may cause of reduction in aerial extent

Katsumata, N., Matsunaga, H., Okamoto, K., Ochi, D., Inoue, Y., Oshima, K. and Minami, H.  
2018 Trials of extension of horizontal aerial extent of tori line for the Japanese small  
longliners operating in the Northwest Pacific Ocean. WCPFC-SC14-2018/ EB-IP-13



# Proposed revision: Pole and Operational Practice

- **Pole height:**

As a supporting specification for sufficient aerial extent, **move to TG**  
Higher pole is not always effective for creating aerial ext(next slide)

- **Pole placement position:**

Essential specification, **keep in MS**

- **Number of tori-line:**

**Keep in MS** as “at least one tori-line” and “encouragement of two tori-lines” **move to TG**

- **Operation practice:**

Add **new description in MS** about “bait landing point should be close to tori-line with avoiding propeller turbulence” and some practical information should be **provided in TG** (such as spare line and modification with bait-casting machine)

Specification	Current measure	Suggested revision	
	South of 25S ≥35m vessel	Minimum Standard	Technical Guidline
Pole height	>7m		✓
Mainline and pole placement	Windward side of sinking bait	✓	
Number of tori-lines	1 or 2	✓	✓
Operational practice	N/A	✓	✓



# Conclusions

- ◆ The current tori-line specifications are all mandatory and highly restrictive, lacking flexibility and in some cases even reducing effectiveness.
- ◆ Comparative review with other RFMO measures/best practices reveals there are significant differences among specifications across organizations.
- ◆ The two-tier approach adopted by ICCAT/IOTC is a useful idea for simultaneously achieving flexibility and effectiveness.
- ◆ As a revision proposal for WCPFC specifications, we recommend adopting the two-tier approach, dividing the requirements into minimum standards and technical guidelines.
  - The minimum standards would contain the essential measures for bycatch mitigation performance and be mandatory.
  - Technical guidelines would present several technological options to achieve minimum standards, but adherence would not be required.
- ◆ Especially for the technical guidelines, since multiple options may be appropriate depending on fleet-specific operation style it is necessary to discuss with relevant CPCs and further develop the details.

Questions/Comments?