



# Development of a draft list of ray species under the purview of the IATTC

Document SAC-16-08

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# Ecological sustainability

- IATTC mandated to ensure ecological sustainability of its fisheries
  - Antigua Convention, specific IATTC Resolutions (e.g., sharks, rays, turtles, dolphins)

To ensure the “*long-term conservation and sustainable use of the stocks of tunas and tuna-like species and other associated species of fish taken by vessels fishing for tunas and tuna-like species in the eastern Pacific Ocean (EPO)*”

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Article VII. “...adopt, as necessary, conservation and management measures and recommendations for species belonging to the same ecosystem and that are affected by fishing for, or dependent on or associated with, the fish stocks covered by this Convention, with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened”

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- Difficult, given the IATTC has not adopted a prescriptive list of ray species, but a list of sharks was adopted by the Commission in 2024.

# Resolution C-23-07 on Sharks

- **Resolution C-23-07 - Conservation Measures for the Protection and Sustainable Management of Sharks**

13. *“In 2024, the IATTC scientific staff, in consultation with the IATTC SAC and EBWG, shall develop a draft list of shark species under the purview of the Commission in the Convention Area for its consideration”*

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- Resolution C-23-07 - Conservation Measures for the Protection and Sustainable Management of Sharks**

13. *“In 2024, the IATTC scientific staff, in consultation with the IATTC SAC and EBWG, shall develop a draft list of shark species under the purview of the Commission in the Convention Area for its consideration”*

- 18 shark species adopted in 2024 in Resolution C-24-05**

Annex 4			
List of priority species for research and management			
Familia	Nombre científico	Common name	Nombre común
Alopiidae	<i>Alopias pelagicus</i>	Pelagic thresher	Zorro pelágico
Alopiidae	<i>Alopias superciliosus</i>	Bigeye thresher	Zorro ojón
Alopiidae	<i>Alopias vulpinus</i>	Common thresher	Tiburón zorro pinto
Carcharhinidae	<i>Carcharhinus brachyurus</i>	Copper shark	Tiburón cobrizo
Carcharhinidae	<i>Carcharhinus falciformis</i>	Silky shark	Tiburón sedoso
Carcharhinidae	<i>Carcharhinus galapagensis</i>	Galapagos shark	Tiburón de Galápagos
Carcharhinidae	<i>Carcharhinus longimanus</i>	Oceanic whitetip shark	Tiburón punta blanca oceánico
Galeocerdonidae	<i>Galeocerdo cuvier</i>	Tiger shark	Tintorera tigre
Lamnidae	<i>Isurus oxyrinchus</i>	Shortfin mako shark	Mako de aleta corta
Lamnidae	<i>Isurus paucus</i>	Longfin mako shark	Marrajo carite
Lamnidae	<i>Lamna ditropis</i>	Salmon shark	Marrajo salmón
Lamnidae	<i>Lamna nasus</i>	Porbeagle shark	Marrajo sardinero
Carcharhinidae	<i>Prionace glauca</i>	Blue shark	Tiburón azul
Pseudocarchariidae	<i>Pseudocarcharias kamoharai</i>	Crocodile shark	Tiburón cocodrilo
Rhincodontidae	<i>Rhincodon typus</i>	Whale shark	Tiburón ballena
Sphyrnidae	<i>Sphyrna lewini</i>	Scalloped hammerhead shark	Cornuda común
Sphyrnidae	<i>Sphyrna mokarran</i>	Great hammerhead	Cornuda gigante
Sphyrnidae	<i>Sphyrna zygaena</i>	Smooth hammerhead shark	Cornuda cruz



# SAC Recommendation for Rays

- In 2024, the SAC made a similar recommendation for rays:

6.1(b) *“Recommends that the IATTC staff develop a draft list of ray and mobulid species under the purview of the IATTC for consideration by the EBWG and the SAC.”*

# Ray interaction data

- Similar to the process to develop the list of shark species
- IATTC staff collated data documenting interactions with ray species for the following EPO pelagic fisheries:
  - Large-scale longline ('industrial')
  - Purse seine (Class 6) – NOA, OBJ, DEL
  - Purse seine (Class 1–5) – NOA, OBJ
  - Small-scale coastal multispecies longline/gillnet





# Ray interaction data

- 17 species identified to interact with IATTC fisheries

**TABLE 2.** Number of sets where at least one individual ray was recorded for each species in IATTC data sources for each of the seven pelagic fisheries in the eastern Pacific Ocean. Abbreviations are purse seine (PS), Class 6 (C6), Classes 1-5 (C1-5), dolphin sets (DEL), non-associated sets (NOA) and sets on floating objects (OBJ). Species are listed in decreasing total number of observations.

Species	Common name	Industrial longline	PS-C6 (DEL)	PS-C6 (NOA)	PS-C6 (OBJ)	PS-C1-5 (NOA)	PS-C1-5 (OBJ)	Small scale coastal	Total
<i>Pteroplatytrygon violacea</i>	Pelagic stingray	14430	2064	1072	1816	8	14	299	19703
<i>Mobula mobular</i>	Spinetail manta	129	661	580	177	2		6	1555
<i>Mobula thurstoni</i>	Smoothtail manta	13	589	604	179	8	3	4	1400
<i>Mobula tarapacana</i>	Chilean devil ray		313	201	79	3			596
<i>Mobula birostris</i>	Giant manta	70	97	252	69			7	495
<i>Mobula munkiana</i>	Munk's devil ray		145	135	38			9	327
<i>Pseudobatos leucorhynchus</i>	Whitesnout guitarfish							30	30
<i>Rhinoptera steindachneri</i>	Pacific cownose ray		4	20				4	28
<i>Hypanus longus</i>	Longtail stingray				2			11	13
<i>Aetobatus narinari</i>	Spotted eagle ray							10	10
<i>Dasyatis brevis</i>	Whiptail stingray							7	7
<i>Bathyraja violacea</i>	Okhotsk skate	1							1
<i>Styracura pacifica</i>	Pacific whiptail stingray		1						1
<i>Pseudobatos glaucostigma</i>	Speckled guitarfish	1							1
<i>Mobula alfredi</i>	Alfred manta	1							1
<i>Narcine entemedor</i>	Giant electric ray	1							1
<i>Tetronarce tremens</i>	Chilean torpedo				1				1

# Developing a draft list of ray species

- 17 'impacted' species classified by:
  - Ecological traits (horizontal and vertical distribution, endemism)

Family	Species	Geographical distribution	Habitat	Endemic to EPO
Aetobatidae	<i>Aetobatus narinari</i>	Neritic	Benthopelagic	No
Arhynchobatidae	<i>Bathyraja violacea</i>	Neritic	Demersal	No
Dasyatidae	<i>Dasyatis brevis</i>	Neritic	Demersal	Yes
Dasyatidae	<i>Hypanus longus</i>	Neritic	Demersal	Yes
Dasyatidae	<i>Pteroplatytrygon violacea</i>	Oceanic	Pelagic	No
Mobulidae	<i>Mobula alfredi</i>	Neritic/Oceanic	Pelagic	No
Mobulidae	<i>Mobula birostris</i>	Neritic/Oceanic	Pelagic	No
Mobulidae	<i>Mobula mobular</i>	Oceanic	Pelagic	No
Mobulidae	<i>Mobula munkiana</i>	Oceanic	Pelagic	Yes
Mobulidae	<i>Mobula tarapacana</i>	Neritic/Oceanic	Pelagic	No
Mobulidae	<i>Mobula thurstoni</i>	Oceanic	Pelagic	No
Narcinidae	<i>Narcine entemedor</i>	Neritic	Demersal	Yes
Potamotrygonidae	<i>Styracura pacifica</i>	Neritic	Demersal	Yes
Rhinobatidae	<i>Pseudobatos glaucostigma</i>	Neritic	Demersal	Yes
Rhinobatidae	<i>Pseudobatos leucorhynchus</i>	Neritic	Demersal	Yes
Rhinopteridae	<i>Rhinoptera steindachneri</i>	Neritic	Benthopelagic	Yes
Torpedinidae	<i>Tetronarce tremens</i>	Neritic	Demersal	Yes

# Developing a draft list of species

- 17 'impacted' species classified by:
  - Ecological traits (horizontal and vertical distribution, endemism)
  - Active IATTC Resolution(s)

Family	Species	Geographical distribution	Habitat	Endemic to EPO	Current IATTC Resolution
Aetobatidae	<i>Aetobatus narinari</i>	Neritic	Benthopelagic	No	No
Arhynchobatidae	<i>Bathyraja violacea</i>	Neritic	Demersal	No	No
Dasyatidae	<i>Dasyatis brevis</i>	Neritic	Demersal	Yes	No
Dasyatidae	<i>Hypanus longus</i>	Neritic	Demersal	Yes	No
Dasyatidae	<i>Pteroplatytrygon violacea</i>	Oceanic	Pelagic	No	No
Mobulidae	<i>Mobula alfredi</i>	Neritic/Oceanic	Pelagic	No	Yes
Mobulidae	<i>Mobula birostris</i>	Neritic/Oceanic	Pelagic	No	Yes
Mobulidae	<i>Mobula mobular</i>	Oceanic	Pelagic	No	Yes
Mobulidae	<i>Mobula munkiana</i>	Oceanic	Pelagic	Yes	Yes
Mobulidae	<i>Mobula tarapacana</i>	Neritic/Oceanic	Pelagic	No	Yes
Mobulidae	<i>Mobula thurstoni</i>	Oceanic	Pelagic	No	Yes
Narcinidae	<i>Narcine entemedor</i>	Neritic	Demersal	Yes	No
Potamotrygonidae	<i>Styracura pacifica</i>	Neritic	Demersal	Yes	No
Rhinobatidae	<i>Pseudobatos glaucostigma</i>	Neritic	Demersal	Yes	No
Rhinobatidae	<i>Pseudobatos leucorhynchus</i>	Neritic	Demersal	Yes	No
Rhinopteridae	<i>Rhinoptera steindachneri</i>	Neritic	Benthopelagic	Yes	No
Torpedinidae	<i>Tetronarce tremens</i>	Neritic	Demersal	Yes	No

# Developing a draft list of species

- 17 ‘impacted’ species classified by:
  - Ecological traits (horizontal and vertical distribution, endemism)
  - Active IATTC Resolution(s)
  - Included in lists for IATTC catch reporting or considered a migratory species (UNCLOS; Annex 1)

Family	Species	Geographical distribution	Habitat	Endemic to EPO	Current IATTC Resolution	UNCLOS Annex I	IATTC Memo	IATTC SAC-16 INF-O
Aetobatidae	<i>Aetobatus narinari</i>	Neritic	Benthopelagic	No	No	No	No	No
Arhynchobatidae	<i>Bathyraja violacea</i>	Neritic	Demersal	No	No	No	No	No
Dasyatidae	<i>Dasyatis brevis</i>	Neritic	Demersal	Yes	No	No	Yes	Yes
Dasyatidae	<i>Hypanus longus</i>	Neritic	Demersal	Yes	No	No	Yes	Yes
Dasyatidae	<i>Pteroplatytrygon violacea</i>	Oceanic	Pelagic	No	No	No	Yes	Yes
Mobulidae	<i>Mobula alfredi</i>	Neritic/Oceanic	Pelagic	No	Yes	No	Yes	Yes
Mobulidae	<i>Mobula birostris</i>	Neritic/Oceanic	Pelagic	No	Yes	No	Yes	Yes
Mobulidae	<i>Mobula mobular</i>	Oceanic	Pelagic	No	Yes	No	Yes	Yes
Mobulidae	<i>Mobula munkiana</i>	Oceanic	Pelagic	Yes	Yes	No	Yes	Yes
Mobulidae	<i>Mobula tarapacana</i>	Neritic/Oceanic	Pelagic	No	Yes	No	Yes	Yes
Mobulidae	<i>Mobula thurstoni</i>	Oceanic	Pelagic	No	Yes	No	Yes	Yes
Narcinidae	<i>Narcine entemedor</i>	Neritic	Demersal	Yes	No	No	No	No
Potamotrygonidae	<i>Styracura pacifica</i>	Neritic	Demersal	Yes	No	No	No	No
Rhinobatidae	<i>Pseudobatos glaucostigma</i>	Neritic	Demersal	Yes	No	No	No	No
Rhinobatidae	<i>Pseudobatos leucorhynchus</i>	Neritic	Demersal	Yes	No	No	No	No
Rhinopteridae	<i>Rhinoptera steindachneri</i>	Neritic	Benthopelagic	Yes	No	No	No	No
Torpedinidae	<i>Tetronarce tremens</i>	Neritic	Demersal	Yes	No	No	No	No

# Potential species lists

**“List A”** (17 Species)

All species interacting with all EPO pelagic fisheries



# Potential species lists

**“List A”** (17 Species)

All species interacting with all EPO pelagic fisheries

Includes many neritic and/or demersal species rarely caught by tuna fleets

# Potential species lists

**“List A”** (17 Species)

All species interacting with all EPO pelagic fisheries



**“List B”** (7 Species)

Species with an oceanic and epipelagic distribution, or IATTC resolution

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**“List A”** (17 Species)

All species interacting with all EPO pelagic fisheries



**“List B”** (7 Species)

Species with an oceanic and epipelagic distribution, or IATTC resolution

Excludes species with existing monitoring requirements or possibly considered by UNCLOS as “highly migratory”

# Comparisons with existing lists

Species	Common name	List A	List B	UNCLOS Annex I
<i>Aetobatus narinari</i>	Spotted eagle ray			
<i>Bathyraja violacea</i>	Okhotsk skate			
<i>Dasyatis brevis</i>	Whiptail stingray			
<i>Hypanus longus</i>	Longtail stingray			
<i>Pteroplatytrygon violacea</i>	Pelagic stingray			
<i>Mobula alfredi</i>	Alfred manta			
<i>Mobula birostris</i>	Giant manta			
<i>Mobula mobular</i>	Spinetail manta			
<i>Mobula munkiana</i>	Munk's devil ray			
<i>Mobula tarapacana</i>	Chilean devil ray			
<i>Mobula thurstoni</i>	Smoothtail manta			
<i>Narcine entemedor</i>	Giant electric ray			
<i>Styracura pacifica</i>	Pacific whiptail stingray			
<i>Pseudobatos glaucostigma</i>	Speckled guitarfish			
<i>Pseudobatos leucorhynchus</i>	Whitesnout guitarfish			
<i>Rhinoptera steindachneri</i>	Pacific cownose ray			
<i>Tetronarce tremens</i>	Chilean torpedo			
Number of species		17	7	0

- UNCLOS Annex 1 in Preamble of Antigua Convention
- Unlike sharks, no ray species included

## ANNEX I. HIGHLY MIGRATORY SPECIES

1. Albacore tuna: *Thunnus alalunga*.
2. Bluefin tuna: *Thunnus thynnus*.
3. Bigeye tuna: *Thunnus obesus*.
4. Skipjack tuna: *Katsuwonus pelamis*.
5. Yellowfin tuna: *Thunnus albacares*.
6. Blackfin tuna: *Thunnus atlanticus*.
7. Little tuna: *Euthynnus alletteratus*; *Euthynnus affinis*.
8. Southern bluefin tuna: *Thunnus maccoyii*.
9. Frigate mackerel: *Auxis thazard*; *Auxis rochei*.
10. Pomfrets: Family Bramidae.
11. Marlins: *Tetrapturus angustirostris*; *Tetrapturus belone*; *Tetrapturus pfluegeri*; *Tetrapturus albidus*; *Tetrapturus audax*; *Tetrapturus georgei*; *Makaira mazara*; *Makaira indica*; *Makaira nigricans*.
12. Sail-fishes: *Istiophorus platypterus*; *istiophorus albicans*.
13. Swordfish: *Xiphias gladius*.
14. Sauries: *Scomberesox saurus*; *Cololabis saira*; *Cololabis adocetus*; *Scomberesox saurus scombroides*.
15. Dolphin: *Coryphaena hippurus*; *Coryphaena equiselis*.
16. Oceanic sharks: *Hexanchus griseus*; *Cetorhinus maximus*; Family Alopiidae; *Rhincodon typus*; Family Carcharhinidae; Family Sphyrnidae; Family Isurida.
17. Cetaceans: Family Physeteridae, Family Balaenopteridae; Family Balaenidae; Family Eschrichtiidae; Family Monodontidae; Family Ziphiidae; Family Delphinidae.

# Comparisons with existing lists

Species	Common name	List A	List B	UNCLOS Annex I	IATTC Memo	IATTC SAC-16 INF-Q
<i>Aetobatus narinari</i>	Spotted eagle ray					
<i>Bathyraja violacea</i>	Okhotsk skate					
<i>Dasyatis brevis</i>	Whiptail stingray					
<i>Hypanus longus</i>	Longtail stingray					
<i>Pteroplatytrygon violacea</i>	Pelagic stingray					
<i>Mobula alfredi</i>	Alfred manta					
<i>Mobula birostris</i>	Giant manta					
<i>Mobula mobular</i>	Spinetail manta					
<i>Mobula munkiana</i>	Munk's devil ray					
<i>Mobula tarapacana</i>	Chilean devil ray					
<i>Mobula thurstoni</i>	Smoothtail manta					
<i>Narcine entemedor</i>	Giant electric ray					
<i>Styracura pacifica</i>	Pacific whiptail stingray					
<i>Pseudobatos glaucostigma</i>	Speckled guitarfish					
<i>Pseudobatos leucorhynchus</i>	Whitesnout guitarfish					
<i>Rhinoptera steindachneri</i>	Pacific cownose ray					
<i>Tetronarce tremens</i>	Chilean torpedo					
Number of species		17	7	0	9	9

- IATTC Director's Memo
- IATTC LL updated data provision ([SAC-16 INF-O](#))



# Comparisons with existing lists

Species	Common name	List A	List B	UNCLOS Annex I	IATTC Memo	IATTC SAC-16 INF-Q
<i>Aetobatus narinari</i>	Spotted eagle ray					
<i>Bathvraia violacea</i>	Okhotsk skate					
<i>Dasyatis brevis</i>	Whiptail stingray					
<i>Hypanus longus</i>	Longtail stingray					
<i>Pteroplatytrygon violacea</i>	Pelagic stingray					
<i>Mobula alfredi</i>	Alfred manta					
<i>Mobula birostris</i>	Giant manta					
<i>Mobula mobular</i>	Spinetail manta					
<i>Mobula munkiana</i>	Munk's devil ray					
<i>Mobula tarapacana</i>	Chilean devil ray					
<i>Mobula thurstoni</i>	Smoothtail manta					
<i>Narcine entemedor</i>	Giant electric ray					
<i>Styracura pacifica</i>	Pacific whiptail stingray					
<i>Pseudobatos glaucostigma</i>	Speckled guitarfish					
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<i>Tetronarce tremens</i>	Chilean torpedo					
Number of species		17	7	0	9	9

- IATTC Director's Memo
- IATTC LL updated data provision ([SAC-16 INF-O](#))
- Includes “*Dasyatis* spp.” mainly for pelagic stingray

# Potential species lists

“List A” (17 Species)

All species interacting with all EPO pelagic fisheries



“List B” (7 Species)

Species with an oceanic and epipelagic distribution, or IATTC resolution



“List C” (9 Species)

Species in existing IATTC catch reporting lists or considered highly migratory

- However, the two additional species (*Dasyatis brevis* and *Hypanus longus*) are neritic and demersal species
- Included only due to IATTC reporting of Dasyatid species (mainly to include pelagic stingray)

# Conclusions

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- But we must consider **Article IV**. Application of the Precautionary Approach
  - 2. *“...The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.”*

# Conclusions

- In conclusion, the staff considers, at a minimum, **7 species in List B** (comprising industrial and small-scale coastal fleets) be adopted as an interim list of ray species
- But we must consider **Article IV**. Application of the Precautionary Approach
  - 2. “...*The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.*”
- Given no single organization responsible for rays in the EPO, the staff suggests the Commission note the ecological and conservation importance of the remaining 10 impacted species and be willing to cooperate in conservation efforts initiated by relevant organizations, if there is a clear role for IATTC to play.



# Preguntas – Questions?

