OPRT Policy on Bycatch Issues

1. Background

It is well-known that long line fishing methods catch sharks either intentionally or incidentally¹ as well as sea turtles and seabirds incidentally. Sharks are often retained even when they are caught incidentally while sea turtles and seabirds are usually discarded.

While the stock status of some shark species such as blue shark is good and those species can be utilized, many species of sharks are vulnerable to fishing pressure due to the low productivity.

There is a concern about the stock status of many sea turtles and seabird species. Although fishery operation may not be the main reason for it, incidental catch of such species should be minimized. Even when there is no concern on the status, incidental catch should be reduced as they are not utilized.

To address the concern on conservation of sharks as well as incidental catch of sea turtles and seabirds, FAO established in 1999 the International Plan of Action for the Conservation and Management of Sharks and the International Plan of Action for Reducing Incidental Catch of Seabirds in Long Line Fisheries. FAO also produced the Guidelines to Reduce Sea Turtle Mortality in Fishing Operations in 2009. Regional fisheries management organizations (RFMOs) took measures to conserve or protect several species of sharks as well as to reduce incidental mortalities of sea turtles and seabirds in fishing operations.

2. OPRT general policy on bycatch issues

(1) Long line fishing vessels registered at the OPRT (hereinafter called "the OPRT vessels") will fully implement binding bycatch-related measures taken by tuna RFMOs (IATTC, IOTC, ICCAT and WCPFC) whenever they operate in the respective Convention area where such measures are applicable. When the OPRT vessels fish for southern bluefin tuna, they will fully implement applicable bycatch-related binding measures of the RFMOs, depending on where they operate. Those binding measures are yellow-highlighted in Attachment².

^{1 &}quot;The term "incidental catch" is used in this document as a synonym to "bycatch."

² Attachment does not contain reporting obligations to make it concise.

(2) The OPRT vessels will collect and submit data on sharks, sea turtles and seabirds in accordance with applicable requirements of each tuna RFMO.

(3) In addition, the OPRT vessels are strongly encouraged to implement non-binding bycatch-related measures taken by those tuna RFMOs whenever they operate in the respective Convention area where such measures are applicable. Such non-binding measures are blue-highlighted in Attachment.

(4) In the case that some tuna RFMOs have already taken more stringent measures than other tuna RFMOs, the OPRT vessels will consider implementing such measures in the other tuna RFMOs on a voluntary basis.

3. Species-specific points

Sharks and rays

(1) Full utilization

Finning³ has been prohibited for many years by all the tuna RFMOs. It is a pity that some long line fishing vessels were still alleged to have conducted finning even in recent years. The OPRT Members recognize that finning will undermine the entire tuna long line industry.

To prevent finning, IATTC and ICCAT use "5% rule" while IOTC made one step further (prohibition of separating fins from bodies for shark landed fresh) and WCPFC prohibited such separation for both fresh and frozen sharks with several alternative measures. It should be recognized that although prohibition of such separation has no conservation merits if sharks caught are to be utilized, it may become necessary if finning continues to take place.

(2) Prohibition of certain gears

IATTC and WCPFC prohibit either shark lines or wire trace. WCPFC made a further step in 2022 to prohibit both gears in the area between 20N and 20S, starting on January 1, 2024 to protect oceanic whitetip shark and silky shark. This is because these species are already subject to prohibition of retention but are not recovering, and the majority of the bycatches takes place in that area.

³ Practice of retaining only fins and discarding bodies

⁴ The weight of the fins must be no more than 5% of the sharks on board up to the first point of landing.

Prohibition of both shark lines and wire trace mean that all the shark species should be protected regardless of the stock status and negate the sustainable utilization of sharks such as blue shark whose stock status has no concern. As in the case of the WCPFC, however, if there are scientific needs for such prohibition, which does not impact the catches of other shark species whose stock status is good, this could be considered.

(3) Oceanic whitetip shark

All the RFMOs prohibit retention of oceanic whitetip shark on board fishing vessels.

(4) Hammerhead sharks

ICCAT prohibits retention of hammerhead sharks on board fishing vessels. It should be noted that scalloped hammerhead and smooth hammerhead are least vulnerable based on the 2012 ICCAT ecological risk assessment (ERA). If prohibition of retention of hammerhead sharks is proposed by other tuna RFMOs, its scientific justification should be closely checked.

(5) Thresher sharks

ICCAT prohibits retention of bigeye thresher shark on board fishing vessels while IOTC prohibits retention of three species of thresher sharks (bigeye thresher, common thresher and pelagic thresher) on board fishing vessels. It should be noted that bigeye thresher shark was ranked most vulnerable in the 2012 ICCAT ERA. WCPFC has no management advice for this species while indicating that some of the median F exceed some of the reference points (WCPFC Stock status and management advice for Pacific bigeye thresher shark). In the 2019 IATTC ERA, bigeye thresher and pelagic thresher were categorized as most vulnerable.

(6) Silky shark

IATTC, ICCAT and WCPFC prohibit retention of silky shark on board fishing vessels. IOTC has no measure on this species due to considerable uncertainty, but silky shark is ranked second most vulnerable for long line fishing gear in the 2018 IOTC ERA (<u>IOTC Status Summary for silky shark</u>).

(7) Porbeagle shark

ICCAT prohibits retention of porbeagle shark on board fishing vessels. This species is found in the north Atlantic and high latitude areas of the southern hemisphere. There is a very low risk for Pacific southern hemisphere stock (<u>WCPFC assessment</u>). The <u>2019 IATTC ERA</u> indicated that this species is least vulnerable.

(8) Blue shark

ICCAT introduced TAC and allocations for north Atlantic blue shark and TAC for south Atlantic blue shark. Other tuna RFMOs have no measure. The WCPFC Stock status and management advice for both <u>north Pacific stock</u> and <u>south Pacific stock</u> indicates that the stocks are not overfished and overfishing is not occurring. The <u>2019 IATTC ERA</u> indicated that this species is most vulnerable, but the indication of WCPFC based on stock assessment should be respected. IOTC also confirms that the stock is not overfished and no overfishing is occurring (<u>IOTC Status Summary for blue shark</u>). Although the stock status of blue shark is good in the Indian Ocean and Pacific Ocean, introduction of TACs and allocations could be easier when the stock status is good than otherwise. OPRT Members should avoid the situation that they will be forced to accept conservation measures after the stock has declined.

(9) Shortfin mako

ICCAT introduced measures for shortfin mako. Other tuna RFMOs have no measure. The WCPFC Stock status and management advice for <u>north Pacific stock</u> indicates that the stock is not overfished and overfishing is not occurring. The <u>2019 IATTC ERA</u> indicated that this species is most vulnerable, but the indication of WCPFC based on stock assessment should be respected. In the IOTC area, the stock status is unknown due to considerable uncertainty, but shortfin mako shark is ranked first most vulnerable for long line fishing gear in the 2018 IOTC ERA (IOTC Status Summary for shortfin mako shark).

(10) Mobuild rays

IATTC, IOTC and WCPFC introduced measures for Mobuild rays, including prohibition of retention. No information on mobuild rays is available in ICCAT.

Sea turtles

All the tuna RFMOs have measures for sea turtle bycatch mitigation, and require long liners using shallow-set to use either circle hooks or finfish baits except IOTC where the use of whole finfish bait is encouraged.

Seabirds

IATTC requires the use of one measure from Column A and another from Column B. ICCAT and IOTC changed this practice to the use of two measures out of three measures: tori line, night setting and weighted branch lines. WCPFC applies different measures in different areas, depending on the risk level of bycatching sea birds in each area. In addition, WCPFC lists up hook shielding device as a stand-alone measure. The OPRT vessels should consider aligning the IATTC measures with the WCPFC measures or at least those of ICCAT and IOTC.

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
Shark:	Res. C-05-03	Rec. 04-10	Res. 17-05	<u>CMM2022-04</u>
full utilization				
	3. CPCs shall take the measures	2. CPCs shall take the necessary	2. CPCs shall take the necessary	7. CCMs shall take measures necessary to
	necessary to require that their	measures to require that their fishermen	measures to require that their	require that all sharks retained on board
	fishers fully utilize any retained	fully utilize their entire catches of	fishermen fully utilise their entire	their vessels are fully utilized. CCMs shall
	catches of sharks. Full utilization	sharks. Full utilization is defined as	catches of sharks, with the exception	ensure that the practice of finning is
	is defined as retention by the	retention by the fishing vessel of all	of species prohibited by the IOTC.	prohibited.
	fishing vessel of all parts of the	parts of the shark excepting head, guts	Full utilisation is defined as retention	
	shark excepting head, guts, and	and skins, to the point of first landing.	by the fishing vessel of all parts of the	8. In order to implement the obligation in
	skins, to the point of first landing.		shark excepting head, guts and skins,	paragraph 7, in 2022, 2023 and 2024,
			to the point of first landing.	CCMs shall require their vessels to land
				sharks with fins naturally attached to the
			3. a) Sharks landed fresh: CPCs shall	carcass.
			prohibit the removal of shark fins on	
			board vessels. CPCs shall prohibit the	9. Notwithstanding paragraph 8, in 2022,
			landing, retention on-board,	2023 and 2024, CCMs may take
			transhipment and carrying of shark	alternative measures as listed below to
			fins which are not naturally attached	ensure that individual shark carcasses and
			to the shark carcass until the first point	their corresponding fins can be easily
			of landing.	identified on board the vessel at any time:
		3. CPCs shall require their vessels to	b) Sharks landed frozen: CPCs that do	(1) Each individual shark carcass and its
	4. CPCs shall require their vessels	not have onboard fins that total more	not apply sub-paragraph 3 a) for all	corresponding fins are stored in the same
	to have onboard fins that total no	than 5% of the weight of sharks	sharks shall require their vessels to not	bag, preferably biodegradable one;
	more than 5% of the weight of	onboard, up to the first point of landing.	have on board fins that total more than	
	sharks onboard, up to the first	CPCs that currently do not require fins	5% of the weight of sharks on board,	(2) Each individual shark carcass is bound
	point of landing. CPCs that	and carcasses to be offloaded together	up to the first point of landing. CPCs	to the corresponding fins using rope or
	currently do not require fins and	at the point of first landing shall take	that currently do not require fins and	wire;

SPECIES	IATTC	ICCAT	IOTC	WCPFC
	carcasses to be offloaded together	the necessary measures to ensure	carcasses to be offloaded together at	
	at the point of first landing shall	compliance with the 5% ratio through	the point of first landing shall take the	(3) Identical and uniquely numbered tags
	take the necessary measures to	certification, monitoring by an	necessary measures to ensure	are attached to each shark carcass and its
	ensure compliance with the 5%	observer, or other appropriate	compliance with the 5 % ratio through	corresponding fins in a manner that
	ratio through certification,	measures.	certification, monitoring by an	inspectors can easily identify the
	monitoring by an observer, or		observer, or other appropriate	matching of the carcass and fins at any
	other appropriate measures.	4. The ratio of fin-to-body weight of	measures.	time. Both the carcasses and fins shall be
		sharks described in paragraph 3 shall be		stored on board in the same hold.
	5. The ratio of fin-to-body weight	reviewed by the SCRS and reported	5. Without prejudice to paragraph 3, in	Notwithstanding this requirement, a CCM
	of sharks described in paragraph 4	back to the Commission in 2005 for	order to facilitate on-board storage,	may allow its fishing vessels to store the
	shall be reviewed by the Working	revision, if necessary.	shark fins may be partially sliced	carcasses and corresponding fins in
	Group on Stock Assessment and		through and folded against the shark	different holds if the fishing vessel
	reported back to the Commission		carcass, but shall not be removed from	maintains a record or logbook that shows
	in 2006 for revision, if necessary.		the carcass until the first point of	where the tagged fins and
			landing.	correspondingly tagged carcasses are
				stored, in a manner that they are easily
				identified by inspectors.
	6. Fishing vessels are prohibited	5. Fishing vessels are prohibited from	7. CPCs shall prohibit the purchase,	12. CCMs shall take measures necessary
	from retaining on board,	retaining on board, transshipping or	offer for sale and sale of shark fins	to prevent their fishing vessels from
	transshipping, landing or trading in	landing any fins harvested in	which have been removed on-board,	retaining on board (including for crew
	any fins harvested in contravention	contravention of this	retained on-board, transhipped or	consumption), transshipping, and landing
	of this Resolution.	Recommendation.	landed, in contravention to this	any fins harvested in contravention of this
			Resolution.	CMM.
				13. CCMs shall take measures necessary
				to ensure that both carcasses and their

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
				corresponding fins are landed or
				transshipped together, in a manner that
				allows inspectors to verify the
				correspondence between an individual
				carcass and its fins when they are landed
				or transshipped.
	7. In fisheries for tunas and tuna-	6 In fisheries that are not directed at	4. In fisheries in which sharks are	20. CCMs shall ensure that sharks that are
	like species that are not directed at	sharks, CPCs shall encourage the	unwanted species, CPCs shall, to the	caught and are not to be retained, are
	sharks, CPCs shall encourage the	release of live sharks, especially	extent possible, encourage the release	hauled alongside the vessel before being
	release of live sharks, especially	juveniles, to the extent possible, that	of live sharks, especially juveniles and	cut free in order to facilitate a species
	juveniles, to the extent practicable,	are caught incidentally and are not used	pregnant sharks that are caught	identification. This requirement shall only
	that are caught incidentally and are	for food and/or subsistence.	incidentally and are not used for food	apply when an observer or electronic
	not used for food and/or		and/or subsistence. CPCs shall require	monitoring camera is present, and should
	subsistence.		that fishers are aware of and use	only be implemented taking into
			identification guides (e.g. IOTC Shark	consideration the safety of the crew and
			and Ray Identification in Indian	observer.
			Ocean Fisheries) and handling	
			practices.	21. Beginning on January 1, 2024, for
				sharks that are caught by longline vessels
				and are not retained, CCMs shall require
				their fishing vessels to release these
				sharks as soon as possible, taking into
				consideration the safety of the crew and
				observer, using the following guidelines:
				(1) Leave the shark in the water, where
				possible; and
				(2) use a line cutter to cut the branchline
				as close to the hook as possible.

SPECIES	IATTC	ICCAT	IOTC	WCPFC
Shark:	Res. C-16-05			
prohibition of				
certain gears	4. CPCs shall prohibit longline			14. For longline fisheries targeting tuna
	vessels flying their flag and			and billfish, CCMs shall ensure that their
	targeting tuna or swordfish in the			vessels comply with at least one of the
	Convention Area from using			following options:
	"shark lines" (individual lines			(1) do not use or carry wire trace as branch
	attached to the floatline or to the			lines or leaders; or
	floats directly, and used to target			
	sharks; Figure 1).			(2) do not use branch lines running
				directly off the longline floats or drop
				lines, known as shark lines. See Annex 1
				for a schematic diagram of a shark line.
				15. The implementation of the measures
				contained in paragraph 14 above shall be
				on a vessel by vessel or CCM basis. Each
				CCM shall notify the Commission of its
				implementation of paragraph 14 by March
				31, 2021 and thereafter whenever the
				selected option is changed.
				16. Starting on January 1, 2024, between
				20 N and 20 S, CCMs shall ensure that
				their longline vessels targeting tuna and
				billfish do not use, or if carrying, must
				stow wire trace as branch lines or leaders
				and do not use shark lines or branch lines

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
				running directly off of the longline floats
				or drop lines (see Annex 1 for schematic
				diagram of a shark line).
Oceanic	Res. C-11-10	Rec. 10-07	Res. 13-06	
whitetip shark				
	1. Members and Cooperating non-	1. Contracting Parties, and Cooperating	3. Notwithstanding paragraphs 1 and	23. Oceanic whitetip shark and silky shark
	Members (CPCs) shall prohibit	non-Contracting Parties, Entities or	2, CPCs shall prohibit, as an interim	
	retaining onboard, transhipping,	Fishing Entities (hereafter referred to	pilot measure, all fishing vessels	(1) CCMs shall prohibit vessels flying
	landing, storing, selling, or	as CPCs) shall prohibit retaining	flying their flag and on the IOTC	their flag and vessels under charter
	offering for sale any part or whole	onboard, transshipping, landing,	Record of Authorised Vessels, or	arrangements to the CCM from retaining
	carcass of oceanic whitetip sharks	storing, selling, or offering for sale any	authorised to fish for tuna or tuna-like	on board, transshipping, storing on a
	in the fisheries covered by the	part or whole carcass of oceanic	species managed by the IOTC on the	fishing vessel or landing any oceanic
	Antigua Convention.	whitetip sharks in any fishery.	high seas to retain onboard, tranship,	whitetip shark, or silky shark, in whole or
			land or store any part or whole carcass	in part, in the fisheries
			of oceanic whitetip sharks with the	covered by the Convention.
			exception of paragraph 7 (Note:	
			sampling by observers). The	
			provisions of this measure do not	
			apply to artisanal fisheries operating	
			exclusively in their respective	
			Exclusive Economic Zone (EEZ) for	
			the purpose of local consumption.	

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
				(2) CCMs shall require all vessels flying
	2. CPCs shall require vessels		4. CPCs shall require fishing vessels	their flag and vessels under charter
	flying their flag to promptly		flying their flag and on the IOTC	arrangements to the CCM to release any
	release unharmed, to the extent		Record of Authorised Vessels or	oceanic whitetip shark or silky shark that
	practicable, whitetip sharks		authorised to fish for tuna and tuna-	is caught as soon as possible after the
	when brought alongside the		like species managed by the IOTC on	shark is brought alongside the vessel, and
	vessel.		the high seas to promptly release	to do so in a manner that results in as little
			unharmed, to the extent practicable, of	harm to the shark as possible, following
			oceanic whitetip sharks when brought	any applicable safe release guidelines for
			alongside for taking onboard the	these species.
			vessel. However, CPCs should	
			encourage their fishers to release this	
			species if recognised on the line	
			before bringing them onboard the	
			vessels.	
Hammerhead		<u>Rec. 10-08</u>		
sharks				
		1. Contracting Parties, and Cooperating		
		non-Contracting Parties, Entities or		
		Fishing Entities (hereafter referred to		
		as CPCs) shall prohibit retaining		
		onboard, transshipping, landing,		
		storing, selling, or offering for sale any		
		part or whole carcass of hammerhead		
		sharks of the family <i>Sphyrnidae</i>		
		(except for the Sphyrna tiburo), taken		

SPECIES	IATTC	ICCAT	IOTC	WCPFC
		in the Convention area in association		
		with ICCAT fisheries.		
		2. CPCs shall require vessels flying		
		their flag, to promptly release		
		unharmed, to the extent practicable,		
		hammerhead sharks when brought		
		alongside the vessel.		
Thresher		<u>Rec. 09-07</u>	<u>Res. 12-09</u>	
sharks				
		1.Contracting Parties, and Cooperating	2. Fishing Vessels flying the flag of an	
		non-Contracting Parties, Entities or	IOTC Member or Cooperating Non-	
		Fishing Entities (hereafter referred to	Contracting Party (CPCs) are	
		as CPCs) shall prohibit, retaining	prohibited from retaining on board,	
		onboard, transshipping, landing,	transhipping, landing, storing, selling	
		storing, selling, or offering for sale any	or offering for sale any part or whole	
		part or whole carcass of bigeye thresher	carcass of thresher sharks of all the	
		sharks (Alopias superciliosus) in any	species of the family Alopiidae, with	
		fishery with exception of a Mexican	the exception of paragraph 7 (Note:	
		small-scale coastal fishery with a catch	sampling by observer).	
		of less than 110 fish.		
		2. CPCs shall require vessels flying	3. CPCs shall require vessels flying	
		their flag to promptly release	their flag to promptly release	
		unharmed, to the extent practicable,	unharmed, to the extent practicable,	
		bigeye thresher sharks when brought	thresher sharks when brought along	
		along side for taking on board the	side for taking on board the vessel.	
		vessel.	side for taking on board the vessel.	
		100001.		

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
		3. CPCs should strongly endeavor to		
		ensure that vessels flying their flag do		
		not undertake a directed fishery for		
		species of thresher sharks of the genus		
		Alopias spp.		
				The measures for oceanic whitetip shark
Silky shark	Res. C-21-06	Rec. 11-08		shall be applied also to silky shark.
	3. CPCs shall require all longline	1. Contracting Parties, and Cooperating		
	vessels whose fishing licenses do	non-Contracting Parties, Entities or		
	not include sharks as a fishing	Fishing Entities (hereafter referred to		
	target but catch sharks	as CPCs) shall require fishing vessels		
	incidentally, to limit bycatch of	flying their flag and operating in		
	silky sharks to a maximum of 20%	ICCAT managed fisheries to release all		
	of the total catch by fishing trip in	silky sharks whether dead or alive, and		
	weight. The 20% limit is set as an	prohibit retaining on board,		
	interim limit in the absence of data	transshipping, or landing any part or		
	and scientific analysis on which to	whole carcass of silky shark.		
	base conservation and			
	management measures, and will be	2. CPCs shall require vessels flying		
	revised, based on	their flag to promptly release silky		
	recommendations by the scientific	sharks unharmed, at the latest before		
	staff, once improved species-level	putting the catch into the fish holds,		
	catch and composition data are	giving due consideration to the safety		
	available.	of crew members. Purse seine vessels		
		engaged in ICCAT fisheries shall		
		endeavor to take additional measures to		

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
		increase the survival rate of silky		
		sharks incidentally caught.		
Porbeagle		Rec. 15-06		
shark				
		1. Contracting Parties, and Cooperating		
		non-Contracting Parties, Entities or		
		Fishing Entities (hereafter referred to		
		as CPCs) shall require their vessels to		
		promptly release unharmed, to the		
		extent practicable, porbeagle sharks		
		caught in association with ICCAT		
		fisheries when brought alive alongside		
		for taking on board the vessel.		
Blue shark		Rec. 19-07 amended by Rec. 21-10		
		2. An annual TAC of 39,102 t for North		
		Atlantic blue shark is established. The		
		annual TAC may be revised subject to		
		a decision of the Commission based on		
		the updated advice of the SCRS in		
		2021, or at an earlier stage if enough		
		information is provided by the SCRS.		
		3. The following CPCs shall be subject		
		to the following catch limits:		
		EU 32,578 t		
		Japan 4,010 t		

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
		Morocco 1,644 t		
		*The European Union is authorised to		
		transfer 32.58 t from its catch limit in		
		2022 to the United Kingdom (Note:		
		This footnote was added by Rec. 21-		
		10.)		
		Rec. 19-08 amended by Rec. 21-11		
		2. An annual Total Allowable Catch		
		(TAC) of 28,923 t for South Atlantic		
		blue shark is established. The Annual		
		TAC may be revised subject to a		
		decision of the Commission based on		
		the updated advice of the SCRS in		
		2023, or at an earlier stage if enough		
		information is provided by the SCRS.		
		(Note: "2021" was replaced by "2023"		
		by Rec. 21-11.)		
Shortfin mako shark		See Appendix.		
				CMM 2019-05
Mobuild rays	Res. C-15-04		Res. 19-03	
				3. CCMs shall prohibit their vessels from
			2. CPCs shall prohibit all vessels from	targeted fishing or intentional setting on
			intentionally setting any gear type for	mobulid rays in the Convention Area.
			targeted fishing of mobulid rays in the	

	T			
SPECIES	IATTC	ICCAT	ЮТС	WCPFC
			IOTC Area of Competence, if the	
			animal is sighted prior to	
			commencement of the set.	
				4. CCMs shall prohibit their vessels from
	1. Members and Cooperating Non-		3. CPCs shall prohibit all vessels	retaining on board, transhipping, or
	Members (CPCs) shall prohibit		retaining onboard, transhipping,	landing any part or whole carcass of
	retaining onboard, transshipping,		landing, storing, any part or whole	mobulid rays caught in the Convention
	landing, storing, selling, or		carcass of mobulid rays caught in the	Area.
	offering for sale any part or whole		IOTC Area of Competence.	
	carcass of Mobulid rays (which			
	includes Manta rays and Mobula			
	rays) caught in the IATTC			
	Convention Area.			
				5. CCMs shall require their fishing vessels
	2. CPCs shall require their vessels		5. CPCs shall require all their fishing	to promptly release alive and unharmed,
	to release all Mobulid rays alive		vessels, other than those carrying out	to the extent practicable, mobulid rays as
	wherever possible.		subsistence fishery, to promptly	soon as possible, and to do so in a manner
			release alive and unharmed, to the	that will result in the least possible harm
	3. CPCs shall require vessels		extent practicable, mobulid rays as	to the individuals captured. CCMs should
	flying their flag to promptly		soon as they are seen in the net, on the	encourage their fishing vessels to
	release unharmed, to the extent		hook, or on the deck, and do it in a	implement the handling practices detailed
	practicable, Mobulid rays caught		manner that will result in the least	in Annex 1, while taking into
	in the IATTC Convention Area as		possible harm to the individuals	consideration the safety of the crew.
	soon as they are seen in the net, on		captured. The handling procedures	
	the hook, or on the deck, and do it		detailed in Annex I, while taking into	
	in a manner that will result in the		consideration the safety of the crew	
	least possible harm to the Mobulid		shall be implemented and followed.	
	rays captured without			
	compromising the safety of any			
	compromising the safety of any			

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
	persons, following the guidance in			
	the 2014 and 2015			
	recommendations of the IATTC			
	scientific staff at all times, as			
	detailed in Annex 1 to this			
	Resolution.			<u>CMM 2018-04</u>
Sea turtles	Res. C-19-04	Rec. 2022-12	<u>Res. 12-04</u>	4. CCMs shall require fishermen on
				vessels targeting species covered by the
	1. IATTC Members and	1. In order to reduce bycatch and	6. CPCs shall require fishermen on	Convention to bring aboard, if
	Cooperating Non-Members	increase post-release survival of	vessels targeting species covered by	practicable, any captured hard-shell sea
	("CPCs") shall require	threatened and endangered sea turtle	the IOTC Agreement to bring aboard,	turtle that is comatose or inactive as soon
	owners/operators/vessel crew on	populations within the Convention	if practicable, any captured marine	as possible and foster its recovery,
	vessels targeting species covered	area:	turtle that is comatose or inactive as	including giving it resuscitation, before
	by the Convention to promptly		soon as possible and foster its	returning it to the water. CCMs shall
	release, in a manner that causes the	a) CPCs with longline vessels that fish	recovery, including aiding in its	ensure that fishermen are aware of and use
	least harm to the extent	in a shallow-set manner (Note:	resuscitation, before safely returning	proper mitigation and handling
	practicable, all sea turtles, without	Shallow-set fisheries are generally to	it to the water. CPCs shall ensure that	techniques, as described in WCPFC
	compromising the safety of any	be considered those in which the	fishermen are aware of and use proper	guidelines.
	persons.	majority of hooks fish at depth	mitigation, identification, handling	
		shallower than 100 meters, as	and de-hooking techniques and keep	6. CCMs with longline vessels that fish
	3. CPCs with longline vessels	determined by the SCRS.) shall, while	on board all necessary equipment for	for species covered by the Convention
	fishing for species covered by the	operating ICCAT fisheries, employ or	the release of marine turtles, in	shall ensure that the operators of all such
	IATTC in the Convention Area	implement at least one of the following	accordance with handling guidelines	longline vessels carry and use line cutters
	shall:	methods:	in the IOTC Marine Turtle	and de-hookers to handle and promptly
			Identification Cards.	release sea turtles caught or entangled,
	a. Require owners/operators of	i. Use of only large circle hooks (Note:		and that they do so in accordance with
	longline vessels to carry on board,	Circle hooks are defined as a hook with		WCPFC guidelines. CCMs shall also
	and employ when appropriate,	the point turned perpendicularly back		ensure that operators of such vessels are,

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
	safe-handling tools for the safe	to the shank to form a generally circular	8. CPCs with longline vessels that fish	where appropriate, required to carry and
	release of sea turtles (e.g. de-	or oval shape. CPCs should adopt the	for species covered by the IOTC	use dip-nets in accordance with these
	hookers, line cutters, and dip nets).	use of circle hooks with an offset of no	Agreement shall:	WCPFC guidelines.
		more than 10 degrees.); or		
	b. Require that		a) Ensure that the operators of all	7. CCMs with longline vessels that fish in
	owners/operators/vessel crew of	ii. Use of only finfish bait; or	longline vessels carry line cutters and	a shallow-set manner (Note: "Shallow-
	longline vessels take all reasonable		de-hookers in order to facilitate the	set" fisheries are generally to be
	steps, as appropriate, to ensure the	iii. Use of [an] other measure[s] or	appropriate handling and prompt	considered those in which the majority of
	safe release of any incidentally-	approach[es]—that [has] have been	release of marine turtles caught or	hooks fish at depth shallower than 100
	caught sea turtles by following	reviewed and considered effective by	entangled, and that they do so in	meters; however pursuant to paragraph
	handling and release guidelines in	the SCRS and approved by the	accordance with IOTC Guidelines.	7(c) CCMs are to establish and enforce
	the Appendix, and consistent with	Commission to be capable of reducing	CPCs shall also ensure that operators	their own operational definitions) shall:
	the FAO "Best practices for sea	the interaction rate of sea turtles in	of such vessels follow the handling	
	turtle handling and release."	shallow set longline fisheries.	guidelines in the IOTC Marine Turtle	a. Ensure that the operators of such
			Identification Cards;	vessels, while in the Convention Area, are
	d. Require owners/operators of	b) Any CPC that achieves and		required to employ or implement at least
	longline vessels fishing in a	maintains 10% scientific observer	b) Where appropriate, encourage the	one of the following three methods to
	shallow-set manner (Note:	coverage and complies with the data	use of whole finfish bait;	mitigate the capture of sea turtles:
	shallow-set manner, including	reporting requirements of Recs. 11-10,		
	surface longlines, means the	16-14, and paragraph 6 below, may		i. Use only large circle hooks, which are
	majority of hooks fish at depths	request from Paragraph 1 a) an		fishing hooks that are generally circular or
	shallower than 100 meters) to	exemption for one or more of its		oval in shape and originally designed and
	employ at least one of the	ICCAT fisheries above		manufactured so that the point is turned
	following mitigation measures:	by submitting relevant scientific		perpendicularly back to the shank. These
		information to the SCRS. The SCRS		hooks shall have an offset not to exceed
	i. Use only large circle hooks	will evaluate that information and		10 degrees.
	(Note: Large circle hooks are	advise the Commission on sea turtle		
	defined as a hook with the point	interactions and mortality. The		ii. Use only finfish for bait.
	turned perpendicularly back to the	Commission shall make decisions on		

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
	shank to form a generally circular	any requested exemption in light of the		iii. Use any other measure, mitigation
	or oval shape, and the point of the	SCRS advice.		plan2 or activity that has been reviewed
	hook not offset more than 10			by the Scientific Committee (SC) and the
	degrees),	2. CPCs, while operating ICCAT		Technical and Compliance Committee
		fisheries, shall:		(TCC) and approved by the Commission
	ii. Use only finfish for bait, OR			to be capable of reducing the interaction
		a) reduce and eliminate, to the extent		rate (observed numbers per hooks fished)
	iii. Another mitigation measure to	practicable, interactions with sea turtles		of turtles in shallow-set longline fisheries.
	reduce sea turtle bycatch that has	in ICCAT fisheries where encounters		
	<mark>been approved by the</mark>	with sea turtles have been documented		b. The requirements of paragraph 7(a)
	Commission. A proposal for such	and reported to the SCRS, through the		need not be applied to those shallow-set
	a measure shall be submitted to the	use or continued use of at least one of		longline fisheries determined by the SC,
	Bycatch Working Group at its	the following bycatch mitigation		based on information provided by the
	meeting in the year prior to desired	measures:		relevant CCM, to have minimal observed
	implementation, for review and			interaction rates of sea turtles over a three-
	potential recommendation to the	i. alternative or new gear types and gear		year period and a level of observer
	Scientific Advisory Committee	modifications;		coverage of at least 10% during each of
	(SAC) and approval of the			those three years.
	Commission.	ii. time-area fishing restrictions and		
		closures based on advice from the		c. For the purpose of implementing this
		SCRS, as appropriate, in instances		paragraph (7), establish and enforce their
		where there is a higher risk of		own operational definitions of shallow-set
		interaction with sea turtles;		longline fisheries, large circle hooks, and
				any measures under 7(a)(iii) or adopted
		iii. effective static net gears' marking		by the Commission under paragraph 12,
		allowing their detection by sea turtles		ensuring that they are as enforceable as
		(such as the use of net colours, light		possible, and report these definitions to
		passive reflectors, thicker twine		the Commission in Part 2 of their annual
				report.

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
		diameter, corks or other materials		
		within the net); or		
		iv. modifications in fishing behaviour		
		and strategy (e.g., reduced soaking		
		time, etc.).		
		c) take all reasonable steps to ensure		
		the safe release of sea turtles in a		
		manner that maximizes the likelihood		
		of their survival by requiring that:		
		i. their purse seine and longline vessels,		
		and other types of vessels that use gear		
		that may entangle sea turtles, carry on		
		board de-hookers, line-cutters and		
		basket lifts or dip nets, as appropriate		
		for each gear type and consistent with		
		the "Best practices for sea turtle		
		handling and release" of the FAO		
		Guidelines to reduce sea turtle		
		mortality in fishing operations (2009)		
		('the FAO guidelines');		
		ii. the owners, operators, and crew of		
		such vessels, as well as any on-board		
		observers, use such equipment in line		
		with the safe handling and release		
		practices in the Appendix, and		

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
		consistent with the FAO Guidelines. In		
		addition, owners, operators and crew		
		should be encouraged to have training		
		in the use of such equipment.		
		d) require their fishermen on vessels		
		targeting species covered by the		
		Convention to bring aboard,		
		if practicable, any captured sea turtle		
		that is comatose or inactive as soon as		
		possible and foster its recovery,		
		including giving it resuscitation in		
		accordance with the Appendix,		
		before returning it to the water;		<u>CMM 2018-03</u>
Sea birds	Res. C-11-02	<u>Rec. 11-09</u>	<u>Res. 23-07</u>	South of 30° South
				1. CCMs shall require their longline
	2. CPCs shall require their longline	3. In the area south of 25 degrees South	5. In the area south of 25 degrees	vessels fishing south of 30°S, to use either
	vessels of more than 20 meters	latitude, CPCs shall ensure that all	South latitude, CPCs shall ensure that	
	length overall that use hydraulic,	longline vessels use at least two of the	all longline vessels use at least two of	a) at least two of these three measures:
	mechanical, or electrical systems	mitigation measures in Table 1 (Note:	the three mitigation measures in Table	
	and that fish for species covered by	Night setting with minimum deck	1 (Note: Night setting with minimum	i). weighted branch lines;
	the IATTC in the EPO north of	lighting; Bird-scaring lines (Tori lines);	deck lighting; Bird-scaring lines (Tori	ii). night setting;
	23°N (except in Mexican waters as	and Line weighting). These measures	lines); or Line weighting) or,	iii). tori lines; or
	described in the minutes of the	should also be considered for	alternatively, use hook-shielding	
	81st meeting of the IATTC and as	implementation in other areas, as	devices as a stand-alone measure.	b) hook-shielding devices.
	shown on the map in Annex 1) and	appropriate, consistent with scientific	These measures should also be	
	south of 30°S, plus the area	advice.	considered for implementation in	See Annex 1 for specifications of these
	bounded by the coastline at 2°N,			measures.

SPECIES	IATTC	ICCAT	ЮТС	WCPFC
	west to 2°N-95°W, south to 15°S-	5. Mitigation measures used pursuant	other areas, as appropriate, consistent	
	95°W, east to 15°S-85°W, and	to paragraph 3 shall conform to the	with scientific advice.	25° South -30° South
	south to 30°S (see Annex 1) to use	minimum technical standards for the		2. CCMs shall require their longline
	at least two of the mitigation	measures as shown in Table 1.	6. Mitigation measures used pursuant	vessels fishing in the area 25°S-30°S to
	measures in Table 1 (see next		to paragraph 5 shall conform to the	use one of the following mitigation
	page), including at least one from	6. The design and deployment for bird	minimum technical standards for	measures:
	Column A. Vessels shall not use	scaring lines should also meet the	these measures, as shown in Table 1.	
	the same measure from Column A	additional specifications provided in		i) weighted branch lines;
	and Column B.	Annex 1.	7. The design and deployment for bird	ii) tori lines; or
			scaring lines should also meet the	iii) hook-shielding devices.
	3. CPCs with longline vessels		additional specifications provided in	
	fishing in the EPO other than the		Annex I.	North of 23° North
	area mentioned in paragraph 2, are			6. CCMs shall require their large-scale
	encouraged to voluntarily employ			longline vessels of 24 meters or more in
	at least one of the mitigation			overall length fishing north of 23°N, to
	measures included in Table 1.			use at least two of the mitigation measures
				in Table 1, including at least one from
				Column A. CCMs also shall require their
				small-scale longline vessels less than 24
				meters in overall length fishing north of
				23°N, to use at least one of the mitigation
				measures from Column A in Table 1 (see
				below). See Annex 1 for specifications of
				these measures.
				Other Areas
				7. In other areas (between 25°S and
				23°N), where necessary, CCMs are
				encouraged to have their longline vessels

SPECIES	IATTC	ICCAT	IOTC	WCPFC
				employ one or more of the seabird
				mitigation measures listed in Table 1.
Marine			Res. 23-06	
mammals			CPCs using other gear types fishing	
			for tuna and tuna-like species	
			associated with cetaceans shall report	
			all interactions with cetaceans to the	
			relevant authority of the flag State and	
			include all the information outlined in	
			paragraph 3b (i–vi).	
			i. the species (if known);	
			ii. the number of individuals;	
			iii. a short description of the	
			interaction, including details of how	
			and why the interaction occurred and	
			the gear type;	
			iv. the location of the encirclement or	
			entanglement (if occurred);	
			v. the steps taken to ensure safe	
			release (if encirclement or	
			entanglement occurred);	
			vi. an assessment of the life status of	
			the animal on release, including whether the cetacean was released	
			alive but subsequently died.	

IATTC Table 1	
Column A	Column B
Side-setting with bird curtains and	Tori line (*2)
weighted branch lines (*1)	
Night setting with minimum deck	Weighted branch lines
lighting	
Tori line	Blue-dyed bait
Weighted branch lines	Deep-setting line shooter
	Underwater setting chute
	Management of offal discharge

W	WCPFC Table 1			
	Column A	Column B		
	Side setting with a bird curtain and	Tori line (*2)		
	weighted branch lines (*1)			
	Night setting with minimum deck	Blue-dyed bait		
	lighting			
	Tori line	Deep setting line shooter		
	Weighted branch lines	Management of offal discharge		
	Hook-shielding devices (*3)			

- *1: This measure can only be applied in the area north of 23°N until research establishes the utility of this measure in waters south of 30°S. If using side setting with a bird curtain and weighted branch lines from column A this will be counted as two mitigation measures.
- *2: If tori line is selected from both Column A and Column B this equates to simultaneously using two (i.e. paired) tori lines.
- *1: If using side setting with a bird curtain and weighted branch lines from Column A, this will be counted as two mitigation measures.
- *2: If a tori line is selected from both Column A and Column B, this equates to simultaneously using two (i.e. paired) tori lines.
- *3: Hook-shielding devices can be used as a stand-alone measure.

Appendix

ICCAT measures on shortfin mako

North Atlantic (Rec. 21-09)	South Atlantic (Rec. 22-11)
1. The Contracting Parties and Cooperating non-Contracting Parties, Entities or Fishing	1. The Contracting Parties and Cooperating non-Contracting Parties, Entities or Fishing
Entities (hereinafter referred to as "CPCs"), shall implement a rebuilding programme	Entities (hereinafter referred to as "CPCs"), shall implement a fishery management plan
for North Atlantic shortfin make shark starting in 2022 to end overfishing immediately	for South Atlantic shortfin mako shark starting in 2023 to counteract overfishing

and gradually achieve biomass levels sufficient to support maximum sustainable yield (MSY) by 2070 with a probability of a range of between 60 and 70% at least.

- 2. Toward that end, the rules set out in this Recommendation shall be applied by CPCs with the aim to reduce total fishing mortality (the sum of any retention, dead discards, and post-release mortality of live discards), to maintain mortality at sustainable levels to rebuild the stock, and to establish a process to determine whether in any given year there is a possibility for retention.
- 3. CPCs shall implement a prohibition on retaining on board, transhipping and landing, whole or in part, North Atlantic shortfin make caught in association with ICCAT fisheries in 2022 and 2023 as a first step in rebuilding the stock.
- 4. The total fishing mortality tonnage associated with the probability level established in paragraph 1 shall be based on the most recent Kobe II strategy matrix provided by the SCRS for North Atlantic shortfin mako (the probability of both F < FMSY and SSF> SSFMSY). Following every stock assessment, the SCRS shall update the Kobe II strategy matrix consistent with the objectives established by paragraph 1 for endorsement by the Commission. a) Consistent with the objectives established under paragraph 1 and the 2019 SCRS Kobe II strategy matrix the total fishing mortality for North Atlantic shortfin mako shall be no more than 250 tonnes until new SCRS advice is provided to the Commission.

immediately and gradually achieve biomass levels sufficient to support Maximum Sustainable Yield (MSY). In 2024, following the results of the South Atlantic shortfin make stock assessment, and upon analysis of the Kobe II strategy matrix provided by the SCRS, CPCs shall agree on a catch level that ensures that the stock is in the green zone of the Kobe II strategy matrix with a probability of between 60 and 70% by 2070 (using catch increments of 100 t and time increments of 5 years).

2. Toward that end and pending the results of the 2024 assessment (including the Kobe II strategy matrix), the total fishing mortality (the sum of any retention, dead discards, and post-release mortality of live discards) for South Atlantic shortfin make shall be no more than the minimum reported annual catch in the last five years of the assessment (i.e., 2,001 t) as set out in the 2019 SCRS Report.

3. CPCs shall implement a maximum retention allowance in 2023 and 2024 of 60% of their average annual catch, as reported to ICCAT between 2012 and 2021. CPCs with average annual catches of more than 500 t will implement a cap on landings of 40% of their average annual catch, as reported to ICCAT between 2012 and 2021. This is expected to allow for a total retention allowance of 1,295 t. The objective being that this retention allowance combined with the sum of estimated dead discards and post release mortality, results in a total mortality that is below the SCRS advice:

<u>CPC</u>	Mean catches 2012-2021 (t)	Retention allowance (t)
Angola	<mark>3</mark>	2
Belize	<mark>26</mark>	<mark>15</mark>
Brazil Brazil	347	<mark>208</mark>

China PR	<mark>4</mark>	<mark>2</mark>
Chinese Taipei	101	<mark>61</mark>
Côte d'Ivoire	<mark>29</mark>	18
<mark>Curaçao</mark>	0	0
El Salvador	<u>0</u>	<mark>0</mark>
European Union	1,258	503
Guatemala	0	0
<mark>Japan</mark>	103	<mark>62</mark>
Korea	<mark>6</mark>	4
Namibia	<mark>640</mark>	<mark>256</mark>
Panama	<u>0</u>	<mark>0</mark>
Senegal	<u>14</u>	8
South Africa	<mark>256</mark>	154
United Kingdom	<u>0</u>	<mark>0</mark>
Uruguay	4	<mark>2</mark>
TOTAL	2,791	1,295

- 5. Future permissible retention shall be pursuant to the following process:
- a) During 2022 and 2023 the SCRS and Panel 4 shall work together to test and confirm the appropriateness of the approach in **Annex 1**, or alternative approaches, for determining the amount of permissible retention of North Atlantic shortfin make in the future. Any alternative approaches shall take into consideration, among other factors, the relative contributions made by CPCs to conserve, manage, and rebuild the stock (including a CPC's performance in reducing its mortality in line with the objectives of previous ICCAT Recommendations 17-08 and 19-06) and other criteria as set out in Resolution 15-13, as well as the need to continue to incentivize individual CPC accountability to achieve fishing mortality reductions in line with the objectives of this rebuilding program. To assist with this work, the SCRS shall, as appropriate, provide to the Commission estimates of post release mortality and, where needed, estimates of
- 6. Permissible retention shall be pursuant to the following process:
- a) Following the stock assessment in 2024 the SCRS shall use the approach in **Annex 1**, or alternative approaches after having their appropriateness confirmed by the SCRS, for determining the amount of permissible retention of South Atlantic shortfin make in the future. To assist with this work, the SCRS shall, as appropriate, provide to the Commission estimates of post release mortality and, where needed, estimates of dead discards, taking into account data submitted by CPCs and other relevant information and analyses.

dead discards, taking into account data submitted by CPCs and other relevant information and analyses.

- b) Notwithstanding paragraph 3, in 2022, the SCRS will use **Annex 1** to calculate possible retention allowed in 2023 and provide the results to the Commission, which shall then validate the amount of any permissible retention in 2023.
- c) Starting in 2023 and annually thereafter, the SCRS will use **Annex 1**, unless an alternative approach to calculating future permissible retention is agreed (as per paragraph 5(a)), to calculate a possible level of retention, including eligible CPCs' individual retention allowances, allowed in the subsequent year, and provide the results to the Commission.
- d) Starting in 2023 and annually thereafter, the Commission shall validate the amount of permissible retention in the subsequent year, based on advice from the SCRS in accordance with paragraph 5(c).
- 6. CPCs whose fishing vessels retain North Atlantic shortfin make shall prohibit transshipping, whole or in part, North Atlantic shortfin make caught in association with ICCAT fisheries.
- 7. Any retention permissible in accordance with paragraph 5 shall be allowed only when the fish is dead on haulback and the vessel has an observer or a functioning electronic monitoring system (EMS) on board to verify the condition of the sharks.
- a) For vessels of 12 meters or less, no more than one specimen of North Atlantic shortfin make shall be retained by a vessel for any fishing trip.
- b) For the purposes of this paragraph, a fishing trip is defined as the time period that begins when a fishing vessel departs from a dock, berth, beach, seawall, ramp, or port

- b) Starting in 2024 and annually thereafter, the SCRS will use **Annex 1** to calculate a possible level of retention, including eligible CPCs' individual retention allowances, allowed in the subsequent year, and provide the results to the Commission.
- c) Starting in 2024 and annually thereafter, the Commission shall validate the amount of permissible retention in the subsequent year, based on advice from the SCRS in accordance with paragraph 6 b).
- 7. CPCs whose fishing vessels retain South Atlantic shortfin make shall prohibit transshipping, whole or in part, South Atlantic shortfin make caught in association with ICCAT fisheries.
- 8. From 1 January 2025, any retention permissible shall be allowed only when the fish is dead on haulback, and the vessel has an observer or a functioning electronic monitoring system (EMS) on board to verify the condition of the sharks.
- a) For vessels of 12 meters or less, no more than one specimen of South Atlantic shortfin make shall be retained by a vessel for any fishing trip.
- b) For the purposes of this paragraph, a fishing trip is defined as the time period that begins when a fishing vessel departs from a dock, berth, beach, seawall, ramp, or port to

to carry out fishing operations and that terminates with a return to a dock, berth, beach, seawall, ramp, or port.

9. Upon entry into force of this Recommendation, CPCs shall require vessels flying their flag to implement, while giving due consideration to the safety of the crew, the minimum standards for safe handling and release procedures of North Atlantic shortfin make shark, as provided under **Annex 2** of this Recommendation, in order to promptly release unharmed, to the extent practicable, and to improve survivability of live North Atlantic shortfin make shark when brought alongside the vessel. Revisions to **Annex 2** may be considered by the Commission as new information from the SCRS becomes available.

12. Any retention by a CPC in excess of its retention allowance calculated in paragraph 5 will result in a reduction of that CPC's allowance the following year by an amount equal to the excess. Retention by that CPC shall be prohibited until any overages are repaid in full.

carry out fishing operations and that terminates with a return to a dock, berth, beach, seawall, ramp, or port.

9. Upon entry into force of this Recommendation, CPCs shall require vessels flying their flag to implement, while giving due consideration to the safety of the crew, the minimum standards for safe handling and release procedures of South Atlantic shortfin make shark, as provided under **Annex 2** of this Recommendation, in order to promptly release unharmed, to the extent practicable, and to improve survivability of live South Atlantic shortfin make shark when brought alongside the vessel. Revisions to **Annex 2** may be considered by the Commission as new information from the SCRS becomes available.

12. Any retention by a CPC in excess of its retention allowance as established for 2023 and 2024, and for subsequent years, as calculated in paragraph 6, will result in a reduction of that CPC's allowance the following year by an amount equal to the excess. Retention by that CPC shall be prohibited until any overages are repaid in full. Transfers of underages by CPCs to future years shall not be permissible.