



**9<sup>th</sup> Annual Meeting of the Scientific Committee (SC9)**

*Bangkok, Thailand, 18–27 March 2024*

**SC-09-INFO-12-Rev1**

# SIOFA definitions of primary and secondary species

The SIOFA Scientific Committee

<b>Document type</b>	working paper <input type="checkbox"/> information paper <input checked="" type="checkbox"/>
<b>Distribution</b>	Public <input checked="" type="checkbox"/> Restricted <sup>1</sup> <input type="checkbox"/> Closed session document <sup>2</sup> <input type="checkbox"/>
<b>Abstract</b>	<p>This paper recalls the recommendations on SIOFA primary and secondary species formulated by SC8 and endorsed by MOP10. It further summarizes the definitions discussed during SC8, including a proposed item to be included in the workplan, and ANNEX I of the <a href="#">SC8 report</a>, which details the interim species designation table defining primary and secondary species in SIOFA fisheries.</p>

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<sup>2</sup> Documents available only to members invited to closed sessions.

## 1. Definition of bycatch

The discussions and recommendations from SC8 are given in the [SC8 report](#) (paragraphs 204-209). At MoP10, the Meeting of the Parties endorsed the SC recommendations ([MoP10 report](#), paragraphs 129-132). The discussion and recommendations from SC8 are listed below:

### Agenda item 7 – Bycatch

#### Agenda item 7.1. Definition of bycatch

204. The SC reviewed and proposed refinements to the interim definitions of primary, secondary and endangered, threatened and protected (ETP) species that it previously developed to prioritise species for work.
205. The SC recalled that, for the purposes of this work, according to the SC7 report paragraph 176, SC8 was requested to distinguish between fishery resources, not bycatch more broadly (e.g. incidental catch of ETP and VME species). SC8 was tasked with defining fish resource groups as target and bycatch and consider the interim definitions developed at SC7 of ETP, primary and secondary species for the purpose of prioritising work. The SC noted that this would not preclude the SC undertaking work on species that do not fall into the categories primary and secondary should that be necessary.
206. The SC recommended that the MoP adopt the revised interim definitions as follows:
  - a) *Primary species: Species for which management tools and measures should be in place and the achievement of stock management objectives is expected.* These species-gear encounters tend to encompass a high proportion of the fished area for that fishery. The Scientific Committee would be expected to undertake relevant biological studies and periodic stock assessments (quantitative, semi-quantitative or qualitative whichever is appropriate) for these species. These species should have SIOFA species specific fisheries summary reports compiled annually in years when no assessment is being undertaken.
  - b) *Secondary species: All other species that comprise 5 per cent or more of the total catch (determined using a 3-5 year average) or, for 'less resilient' species (most sharks etc., based on ERA), 2 per cent or more of the total catch, or otherwise as designated by the Scientific Committee.* The Scientific Committee would be expected to undertake periodic evaluations, to assess trends in catch and effort, for these species. Information on trends for these species could be included in a future general fishery summary report.
  - c) *Endangered, Threatened or Protected (ETP species): All reptiles, birds, and mammals, as well as any species listed as endangered, threatened or protected by a CCP's national legislation, international agreements, or relevant international instruments (e.g., IUCN Red List as vulnerable, endangered or critically endangered) once designated by SIOFA.* The Scientific Committee would be expected to undertake catch and impact evaluations, on the incidental catch of these species from time to time or undertake risk-based analyses. Information on trends for these species should be included in general ETP species summary report.
207. The SC recommended that the MoP adopt the following definitions for SIOFA use for SC planning and prioritisation:
  - a) **Target:** Target species are declared by the skipper in logbook catch returns as required in Annex A of CMM 2022/02.

- b) Targeted species: the intended catch and other valuable species landed in sets aimed at the intended catch. These species usually consist of 50% or more of the species composition of the retained catch, but in some highly diverse fisheries (e.g., shallow water tropical fisheries) these may make up as little as 15% of the retained catch. Targeted species are usually landed in consecutive sets within a trip, where there may be more than one intended target, and as such are not limited to those listed on set and haul declarations. Targeted species that are damaged or of an undesirable size are, from time to time, discarded by some vessels.
  - c) Bycatch: Fishery resources that are not target nor targeted typically in the taxonomic classes Chondrichthyes and Actinopterygii and infraphylum Agnatha and class Cephalopoda and Crustacea, that are part of the catch which is not the target.
  - d) Retained bycatch: Species that are less valuable than the target species and often caught and retained, or retained often but in low proportions and have commercial value.
  - e) Discarded bycatch: Unwanted species that have little or no commercial value and are usually discarded. Species that are not allowed to be retained.
208. The SC noted that some species can be a target species in one fishery and discarded bycatch in another, and, as such, recommended that each fishery should be considered separately.
209. The SC grouped species as nominated by CCPs (at SC8) for their fisheries and included them in **Annex I**. The SC8 recommended that the MoP note that the species categorisations listed in **Annex I** are preliminary and are likely to be updated by SC as it prioritises its workplan. Species not nominated could be categorised using catch information at the set level, from the most recent three years data, using the following principles:
- a) Retained bycatch
  - b) Never more than 50% of retained catch in more than 50% of sets in a trip; and/or
  - c) Constitute 25% or less of the catch in 25% or less of sets by a vessel. But for highly diverse fisheries such as tropical shallow water trawl and line fisheries this level can be set at 5%.
  - d) Discarded bycatch
  - e) Discarded/released species of low economic value;
  - f) Can be caught often or infrequently but discarded more than 60% of the time when they are caught by most (60%+) vessels.
  - g) Discarded/released species which may or may not have economic value, but no targeting or retention is allowed (by SIOFA or CCP).

## 2. Potential project for consideration for inclusion in the SC9 workplan (from the bycatch technical workgroup)

### 1. **Bycatch definitions (Intersessional work/contracted project):**

**Objective:** To provide a scientifically based categorisation of the different species in the catch according to the degree to which they are targeted (as described in the definition above) by the fishery or fall into the categories retained discarded bycatch. This work should provide a mechanism which can be used to provide a quick categorisation of each species in each fishery.

**Tasks:**

1. Evaluate the definitions agreed by SC8 and endorsed by MoP10 on the primary and secondary species as well as target, retained and discarded bycatch.
2. Analyse the catch data in the SIOFA database (including observed and reported retained and discarded catch) using the available fine-scale data (i.e. haul by haul data) with these definitions and propose refinements, where required, to the definitions.
  - The analyses should consider the grouping of species based on their characteristics by fishery type as listed in Annex I of the SC8 report.
  - The analysis should give further consideration to the value of the retained catch and, where appropriate, provide recommendation on revisions to the definitions.
3. Provide a report and presentation to SC10 (or later) with recommendations and any revisions to the definitions for the consideration of SC10.

Budget: EUR 10,000

Once this work is completed an additional analysis could be considered that will evaluate the effect of established catch for target species on fishing mortalities of bycatch and give consideration to different management strategies to develop TACs for the target and bycatch species. Noting that some of this work could be encompassed into the harvest strategies for some species as they are developed.

### 3. Definition of primary and secondary species (reproduced from Annex I of the SC8 report)

**Table 1 (Annex I of the SIOFA [SC8 report](#)): Interim species designation table showing the target and bycatch species by fishery. Cell colours represent primary species (yellow) and secondary species (blue) for evaluation and reporting purposes. Note the table is dynamic and species can change designation and new species can be added as needed. Note some species appear in multiple columns for a single fishery as retention practices may differ between fleets. Note this list was derived from CCP nominations.**

Fishery	Target/Targeted	Bycatch	
		Retained	Discarded
Deepwater bottom trawl (CK, AU)	BYS-Splendid alfonsino	<del>OE</del> ORD-Oreos nei.	All elasmobranchs
	ORY-Orange roughy	BOE-Black oreo	HYD-Ratfishes nei.
	SSO-Smooth oreo dory	BOR-Boarfishes nei.	ONV-Spiky oreo
	EPI-Black cardinal fish	BEO-Crested sculpin	SQU-Squid
	EDR-Pelagic armourhead		
Deep mid-water trawl (CK)	BYS-Splendid alfonsino	<del>OE</del> ORD-Oreos nei	All elasmobranchs
	ORY-Orange roughy	BOE- Black oreo	OIL-Oilfish
	CDL-Cardinal fishes	BNS-Smallfin lanternfish	ONV-Spiky oreo
	BWA-Bluenose warehou	BOR- Boarfishes nei.	HYD-Ratfishes
	EPI-Black cardinal fish	EMM-Cape bonnetmouth	SQU-Squid
	EDR-Pelagic armourhead	BBY-White-ribbed toadfish	
	SEY-Violet warehou	WHA-Hapuku wreckfish	
Mid-water trawl (JP,)	BYS-Splendid alfonsino	WHA-Hapuku wreckfish	CDL-Cardinal fishes
	SEY-Violet warehou	EDR-Pelagic armourhead	EMM-Cape bonnetmouth
		BWA-Bluenose warehou	RGY-Narrowbanded sole
		BXD-alfonsino	
		EPI-Black cardinal fish	
		ONV-Spiky oreo	
		SEY-Violet warehou	
		WRF-Wreckfish	
		PRP-Roudi escolar	
	SFS-Silver scabbardfish		
Shallow bottom trawl (TH)	LIB-Brushtooth lizardfish	SUN-Angel shark	SCO-Scorpion fish
	RUS-Indian scad	SDV-Mustelus species	FIP-Red cornetfish
	KZJ-Thredfin bream	CWZ-Carcharhinus sharks nei.	CRS-Swimming crabs?
	UPM-Goldfin goatfish		
	DCC-Shortfin scad		
	LTQ-Sky emperor		
	BIS-Bigeye scad		
YBS-bigeye barracuda			

Fishery	Target/Targeted	Bycatch	
		Retained	Discarded
Bottom longline (AU, EU, FR-OT)	TOP-Toothfish	CYO-Portuguese dogfish	CYO-Portuguese dogfish
	WHA-Hapuku wreckfish	ANT-Violet cod	ANT-Violet cod
	RIB-Common mora	GRV-macrourids	SKX-skates
		WHA-Hapuku wreckfish	BYR-Sandpaper skate
		RFA-Whiteleg skate	RFA-Whiteleg skate
			COX-Congor eels
			BSF- Black scabbard fish
Surface longline (TW)	OIL-oilfish	BIL- Billfish*	GES-Snake mackerel
	LEC-Escolar	TUN-Tuna *	CUT-Scabbard fishes
		BSH-blue shark	ALV-Common thresher shark
		FAL-Silky shark	PTH-Pelagic thresher
		MAK-Mako sharks	BTH-Bigeye thresher
		DOL-Mahi mahi	THR-Thresher sharks
		WAH-Wahoo	RMB-Giant manta
		COM-Spanish mackerel	RMV- <i>Mobula</i> spp.
		BAC-Pickhandle barracuda	OCS-Oceanic whitetip shark
	LAG-Opah		
Handline shallow water (MR)	LTQ-Sky emperor	ARV-Green jobfish	
	LHN-Spangled emperor		
	LHB-Spotcheak emperor		
Lines (Mechanised) deep water (MR)	ETC-Deepwater red snapper	PLM-Spotted coral grouper	
	ETA-Deepwater longtail red snapper	VRL-Yellow edged lyretail	
	LWA-Goldflag jobfish	ARV-Green jobfish	
	PFM-Crimson jobfish		
	OXR-Frenchman seabream		
	EEP-Comet grouper		
Handline (TH, MR)	NGU-Yellow spotted trevally	CCF-Pigeye shark	YFT-yellowfin tuna
	NGY-Bludger		MTM-Eagle ray
	NGX- <i>Carangoides</i> species		KAW-Kawakawa
	EMN-Marbled coral groper		
	LTQ-Sky emperor		
	LUB-Emperor red snapper		
	LJB-Two-spot red snapper		

\* These species are managed by, and reported at the species level to, IOTC.