

The two predominantly used vessels in the small-scale fishery within the Bijagós Archipelago, the dug-out canoe (A; approximately 5 to 8 meters in length) and the larger pirogue (B; ~15 meters in length). Whereas the dug-out canoes are mostly solely human-powered, the pirogues are mostly used by one or multiple outboard engines.

**Appendix 4.2** Interview questionnaire (translated from Portuguese).

<b>A. General information</b>			
Date:		Interviewers:	
Start time:		Notetaker:	
End time:		Location:	
Notes/comments:			
<b>B. Demography</b>			
B1.a	From which Island are you?		
B1.b	Have you always fished on this island or have you ever moved?		
B1.c	Since how long have you been fishing?		
B1.d	Are you still active/when did you stop?		
<b>C. Technical information</b>			
<b>C1. Vessel specifications</b>			
C1.a	What type of boat do you use (e.g. pirogue, canoe, metal boat)?		
C1.b	What is the power of the boat engine (horsepower, sails)?		
C1.c	How long is the boat (in meters)?		
C1.d	Approximately how many boats are operational on your island?		

<b>C2. Specifications of fishing material; <i>Starting with the fishing gear you use most, on an average fishing trip, what types of fishing gear do you use?</i></b>				
#	Type of fishing gear		In the year past	When started fishing
C2.a (5x to C2.e)		How many sets of this fishing gear do you have on your boat?		
		Can you tell me how many hooks, the mesh size, the net size, the height of the net, etc.?		
		What material is it made of?		
		What do you use this fishing material for (which species)?		
		On an average fishing trip, how long do you leave your fishing gear in the water?		

**C3. Specifications of the fishing area;** *Starting with the area you go to the most, can you show me where you fish on the map? And what are the names of these areas?*

#	Fishing area	For each fishing area, indicate:	In the year past	When started fishing
C3.a (7x to C3.g)		Why are you going to this area? (or why not anymore?)		
		What months of the year do you go here?		
		On average, how many hours do you fish per week here?		
		Approximately how many fishers fish in this area?		

**C4. Species- specific information.**

#	Teleost species		In the year past	When started fishing
C4.a (4x to C4.d for each teleost group)	Group 1 (photo 63, 67, 64, 78, 65, 61) Group 2 (photo 69, 82, 50, 72) Group 3 (photo 53, 52) Group 4 (photo 55, 56) Group 5 (photo 79, 75, 77)	How many do you catch per trip (individuals)?		
		How many kilograms of this species group in total per trip?		
		What is their average length (in cm)?		
		Where do you catch these species?		
		Which gear do you use to catch this species?		
		In which months do you catch this species?		
		In which months do you not catch this species?		

#	Elasmobranch species		In the year past	When started fishing
C4.f (5x to C4.j for each group)	Group 6 (photo 12, 2) Group 7 (photo 9, 13, 8, 11) Group 8 (photo 19) Group 9 (photo 9) Group 10 (photo 26, 27, 90)	How many do you catch per trip (individuals)?		
		How many kilograms of this species group in total per trip?		
		What is their average length (in cm)?		
		Do you process the fish in any way (e.g., cleaning)? How do you sell them (e.g., whole, without tail, in parts)?		

What is or was the price per kilo? And who do you sell it to?	Whole body: Meat: Cartilage: Fins: Liver: Skin:	Whole body: Meat: Cartilage: Fins: Liver: Skin:
Why do you catch this species?		
Where do you catch these species?		
Which gear do you use to catch this species?		
In which months do you catch this species?		
In which months do you not catch this species?		

**C5. Species that disappeared**

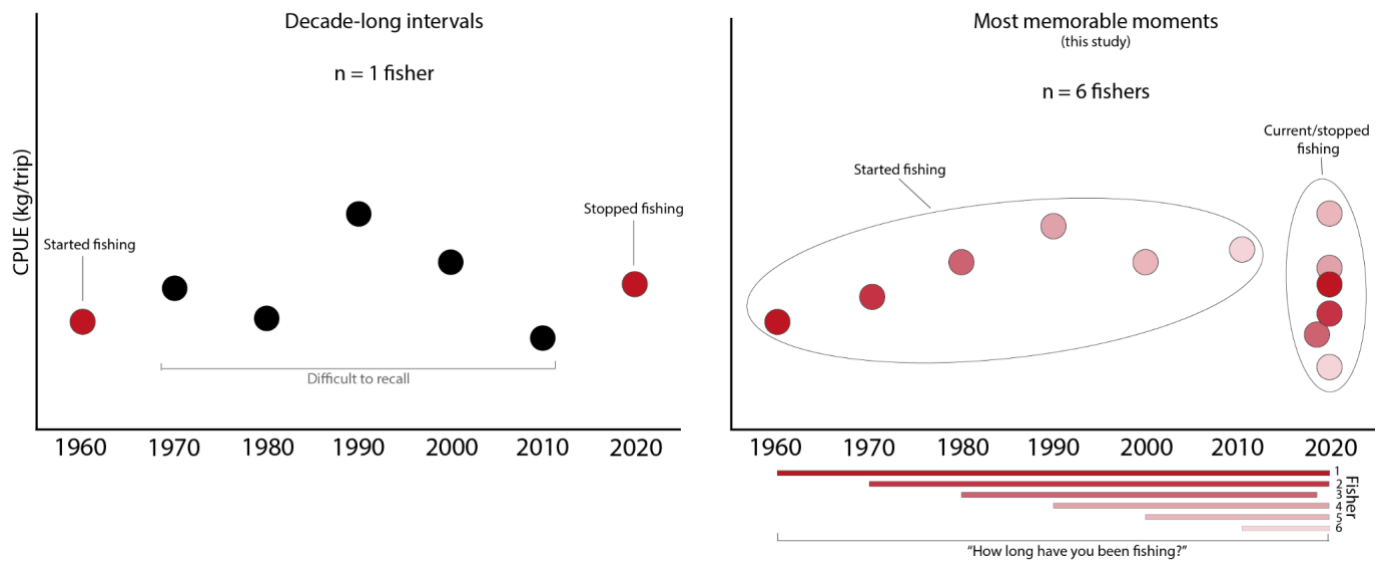
#	Did you ever catch or still catch this species?	Why do you think this species is no longer caught?	When was the last time you caught this species?	Where was this?
C5.a Photo 43				
C5.b Photo 31				
C5.c Photo 18				
C5.d Photo 17				

**D. Additional questions**

D1. Open questions

D1.a	What are the biggest challenges in your daily life as fisher?	
D1.b	Is there anything else you want to share with us?	

### Appendix 4.3



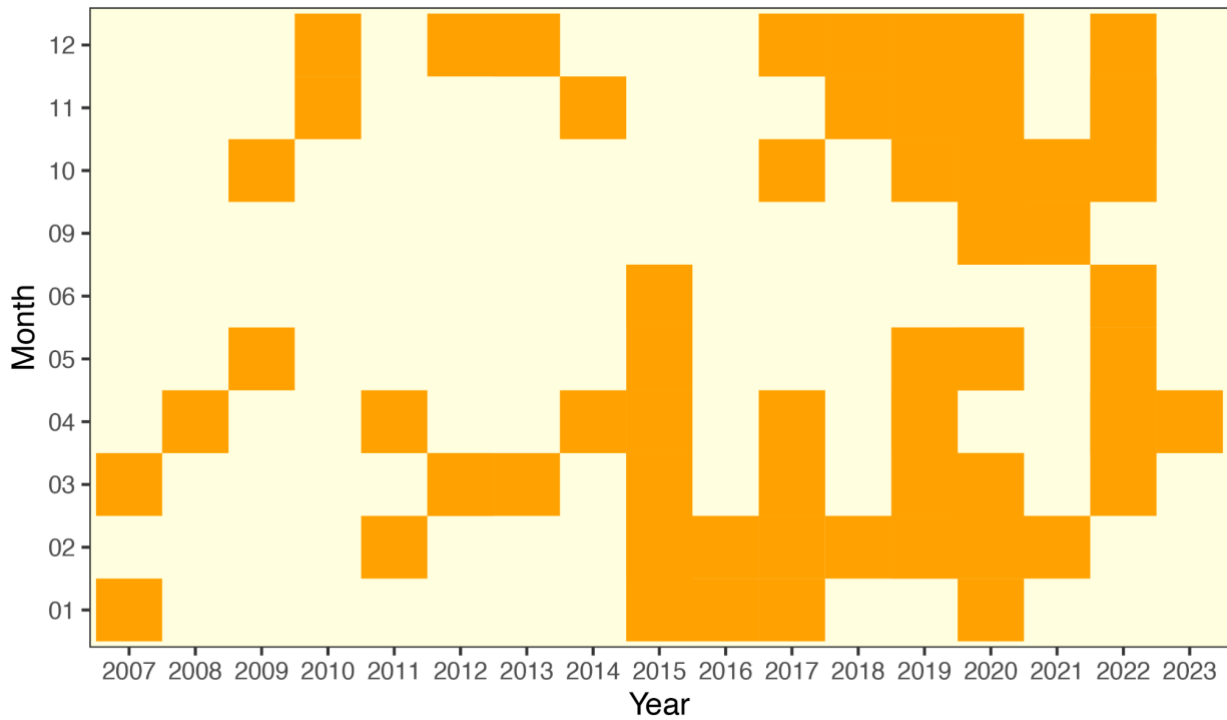
Conceptual comparison of traditional interview methods to elucidate fisher ecological knowledge (left), compared to the method we describe addressing only the most memorable moments in the fisher’s career (right), when one started fishing and the current situation (or the year one stopped).

Specification of species groups and the species included in each, with their respective scientific, Creole, Bijagó, and English names.

Species group	Scientific name	Creole name	Bijagó name	English name
Benthic rays	<i>Hypanus spp.</i> <i>Dasyatis spp.</i> <i>Fontitrygon spp.</i> <i>Gymnura spp.</i>	Pis reia Pis reia Pis reia Pis reia	Ebala Ebala Ebala Ebala ebenten	Stingrays Stingrays Whiprays Butterfly rays
Benthopelagic rays	<i>Aetomylaeus bovinus</i> <i>Rhinoptera marginata</i>	Pis manjoty Pis pumba	Ebala-ecota	Bull ray Lusitanian cownose ray
Guitarfishes	<i>Rhinobatos spp.</i> <i>Glaucostegus cemiculus</i>	Kasapai Kasapai	Esapai Esapai	Guitarfishes Blackchin guitarfish
Requiem sharks	<i>Carcharhinus spp.</i> <i>Rhizoprionodon acutus</i>	Caudo Caudo	Narangui Narangui	Requiem sharks Milk shark
Hammerhead sharks	<i>Sphyrna spp.</i>	Pis berga		Hammerhead sharks
Small benthic teleosts	<i>Eucinostomus melanopterus</i> <i>Pomadasys jubelini</i> <i>Pomadasys rogerii</i> <i>Lethrinus atlanticus</i> <i>Mugil spp.</i> <i>Galeoides decadactylus</i> <i>Pagrus caeruleostictus</i>	Pis prata Corcor Corcor Simpoti Tainha Barbinhu Sinapa	Nikindima Ecoli Ecoli Umsinpoti Cacandja Edohc Xinapa	Flagfin mojarra Sompat grunt Pignout grun Atlantic emperor Mullet Lesser African threadfin Bluespotted seabream
Large benthic teleosts	<i>Arius spp./Calarius spp.</i> <i>Epinephelus aeneus</i> <i>Psettodes belcheri</i> <i>Lobotes surinamensis</i>	Bagre Garoupa Pis bande Bentana de mar fora		Sea catfishes White grouper Spottail spiny turbot Tripletail
Benthopelagic teleosts	<i>Alectis alexandrina</i> <i>Caranx spp.</i>	Prato de aluminio Sereia	Caicu Edene	Alexandria pompano Jacks
Small pelagic teleosts	<i>Ethmalosa fimbriata</i> <i>Sardinella spp.</i>	Djafal Yaiboi	Calapad Calapad	Bonga shad Sardinella
Large pelagic teleosts	<i>Pseudolithus elongatus</i> <i>Scomberomorus tritor</i> <i>Sphyraena spp.</i>	Djoto Cachureta Bicuda	Exaló Caxuleta Cató	Bobo croaker West African Spanish mackerel Barracuda

## Appendix 4.5

For each year, multiple satellite images were available for multiple months (orange). Only for the year 2008 and 2023 images from one month were available. As for 2023 new images were not available at time of data analysis, we excluded this year from the analysis.



**Appendix 4.6** Overview of the residence (island) and experience (in years) of interviewed fishers.

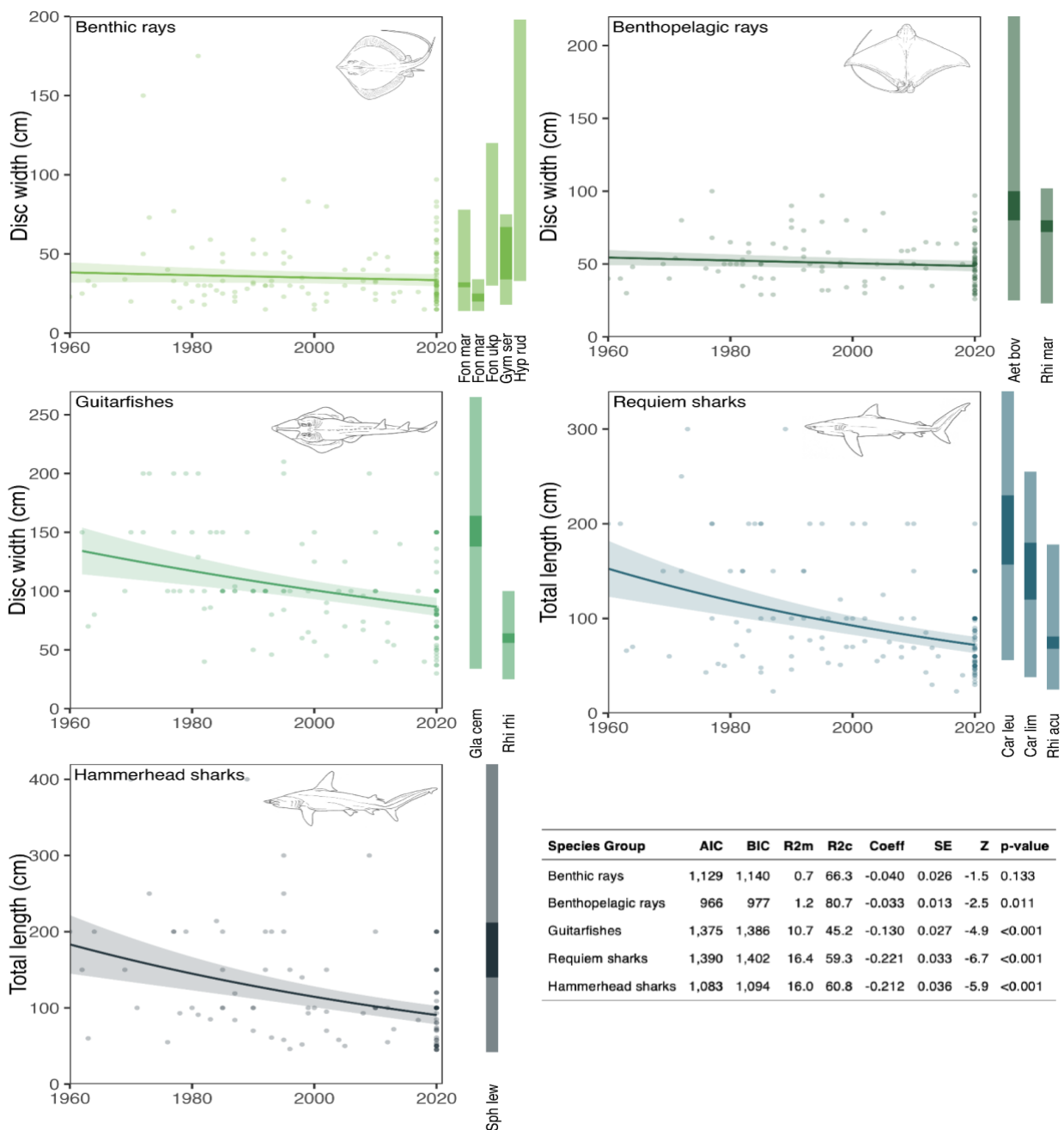
<b>Region</b>	<b>Interviews (N)</b>	<b>Fisher experience (years)</b>
Bolama	5	10 - 49 (28.8 ± 16.3)
Bubaque	4	30 - 47 (38.5 ± 7.5)
Canhabaque	7	25 - 56 (36.3 ± 11)
Caravela	5	10 - 35 (22.2 ± 11.3)
Galinhas	3	6 - 36 (20 ± 15.1)
João Vieira	0	-
Orango	1	31
Soga	2	21 - 38 (29.5 ± 12)
Uno	13	6 - 52 (29.9 ± 13)
Mainland	11	10 - 40 (23.9 ± 10.5)
Abroad	2	7
<b>Total</b>	<b>75</b>	<b>6 - 56 (29.3 ± 12.4)</b>



**Appendix 4.7** Species group model diagnostics.

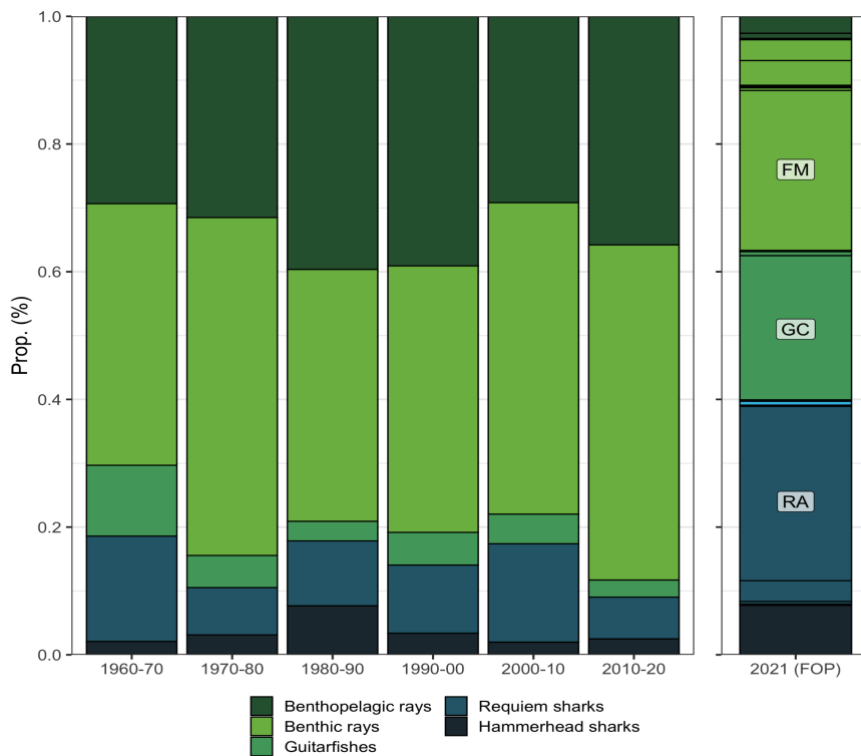
<b>Species Group</b>	<b>AIC</b>	<b>BIC</b>	<b>R<sub>2</sub></b>	<b>X<sup>2</sup></b>	<b>p</b>
Benthic rays	1,366	1,523	34.2	50.3	<0.001
Benthopelagic rays	1,146	1,320	73.7	55.7	<0.001
Guitarfishes	747	889	64.4	200.3	<0.001
Requiem sharks	949	1,115	58.8	147.0	<0.001
Hammerhead sharks	665	807	75.4	123.9	<0.001

## Appendix 4.8



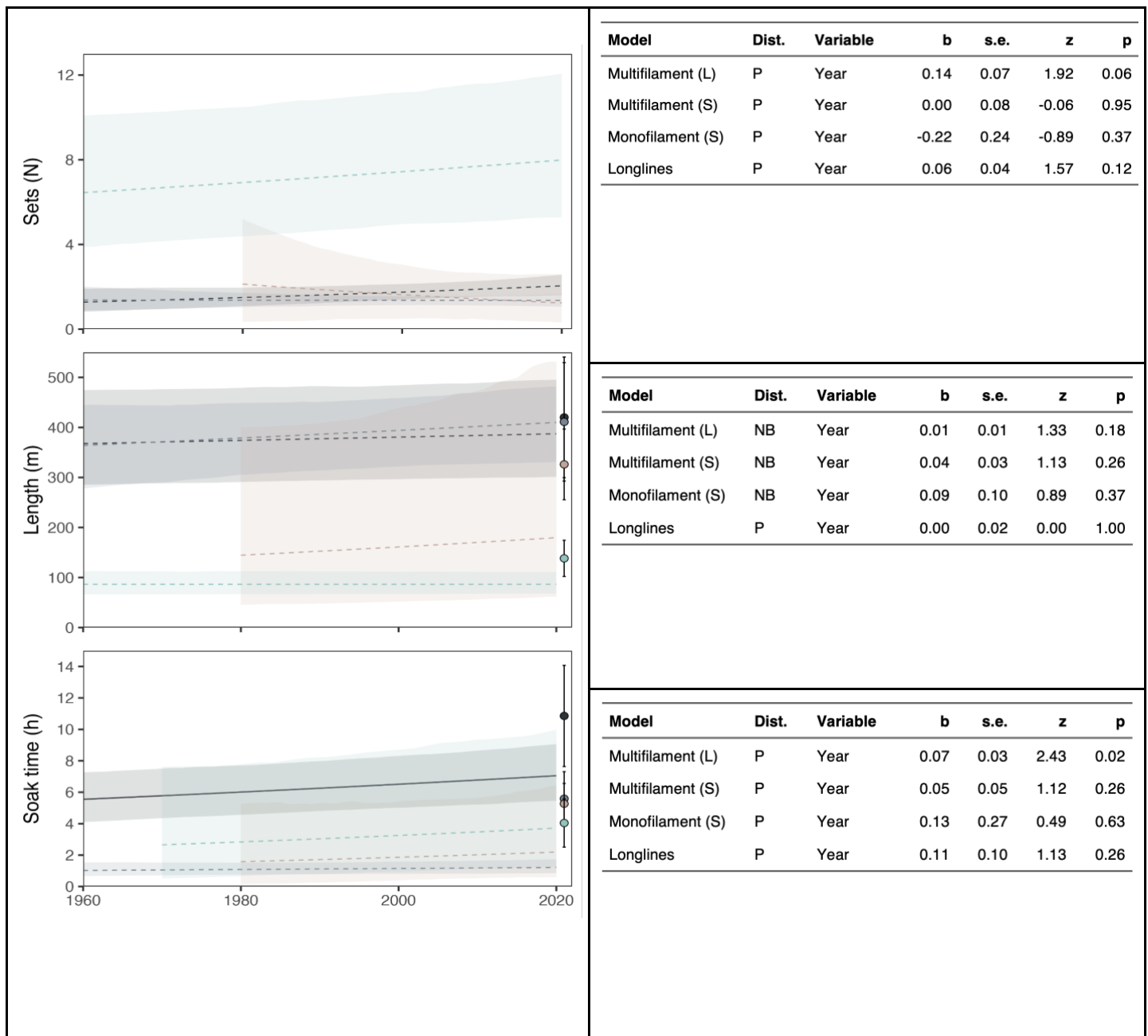
Changes in the estimated total length (sharks) and disc width (rays) for the five elasmobranch species groups (sharks in blue, rays in green). Bars indicate the size ranges (size and birth and maximum reported size) for the most common species in each species group for comparison, dark bars indicate the size at maturity range (male/female combined).

## Appendix 4.9



Changes in species composition with decade-long increments from 1960 to 2020 based on interview responses. Landing site survey (FOP) species composition is also provided, but is based on vessels only catching sharks and rays. Ray species groups are indicated in green, shark species groups in blue. The top three species in the FOP data are indicated: *Fontitrygon margarita/margaritella* (FM), *Glaucostegus cemiculus* (GC), and *Rhizoprionodon acutus* (RA).

## Appendix 4.10



Generalized linear mixed models to determine changes in the number of gear sets (top), gear length (middle), and gear soak time (bottom) for each gear type: large multifilament nets (dark gray), small multifilament nets (light gray), small monofilament nets (brown), and longlines (turquoise). Points with 95% confidence intervals indicate measurements taken during the landing site survey in 2021, which sampled only fishing vessels catching sharks and rays.