ADI snapper-grouper data collection (Update December 2025)

1. Species composition (based on processing unit record)

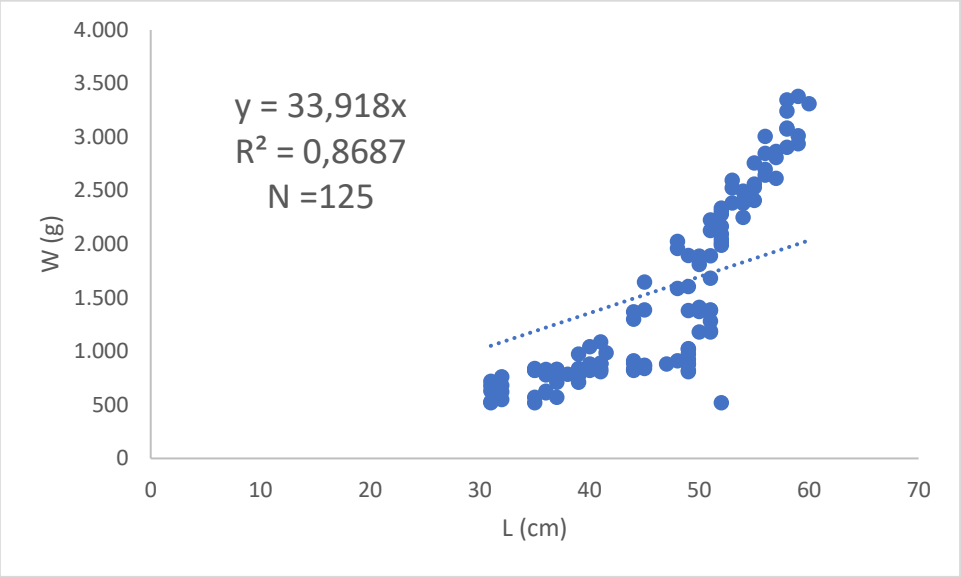
Table 1. Snapper-Grouper composition by FMAs

Group	Species	FMA 712		FMA 713		FMA 718		FMA 573		TOTAL	
		No.	%	No.	%	No.	%	No.	%	No.	%
SNAPPER	*Lethrinus* spp.	19	0,35							19	0,16
	Lutjanus erythropterus	103	1,87	201	6,21	8	0,23	4	30,77	316	2,58
	Lutjanus johnii	171	3,11							171	1,40
	Lutjanus malabaricus	**4847**	**88,06**	**3000**	**92,71**	**3465**	**99,65**	**2**	**15,38**	**11314**	**92,51**
	Lutjanus sebae	95	1,73	35	**1,08**	4	0,12	7	53,85	141	1,15
	Lutjanus spp.	63	1,14							63	0,52
	Pinjalo pinjalo	9	0,16							9	0,07
	Pristipomoides multidens	197	3,58							197	1,61
		5504	100	3236	100	3477	100	13	100	12230	100
GROUPER	*Cephalopholus sonnerati*			**966**	**37,13**					**966**	**33,36**
	Epinephelus bleekeri			1	0,04					1	0,03
	Epinephelus coioides			**1546**	**59,42**	53	57,61			**1599**	**55,21**
	Epinephelus latifasciatus			1	0,04					1	0,03
	Epinepleus malabaricus			30	1,15	1	1,09			31	1,07
	Epinephelus multinotatus			1	0,04					1	0,03
	Epinephelus spp.	202	100,00	57	2,19	38	41,30			297	10,26
		202	100	2602	100	92	100	0	0	2896	100
	TOTAL									15126	
	Snaper species (%)									80,85	
	Grouper species (%)									19,15	

2. Length-Weight Relationship Snapper-Grouper in FMA 712

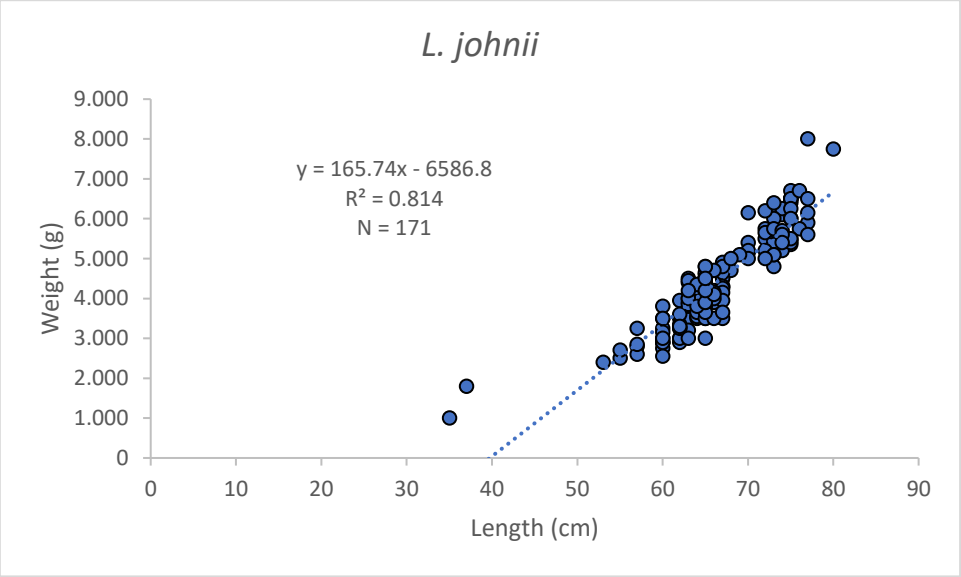
2.1. Snapper

Crimson snapper, *Lutjanus erythropterus* Bloch, 1790



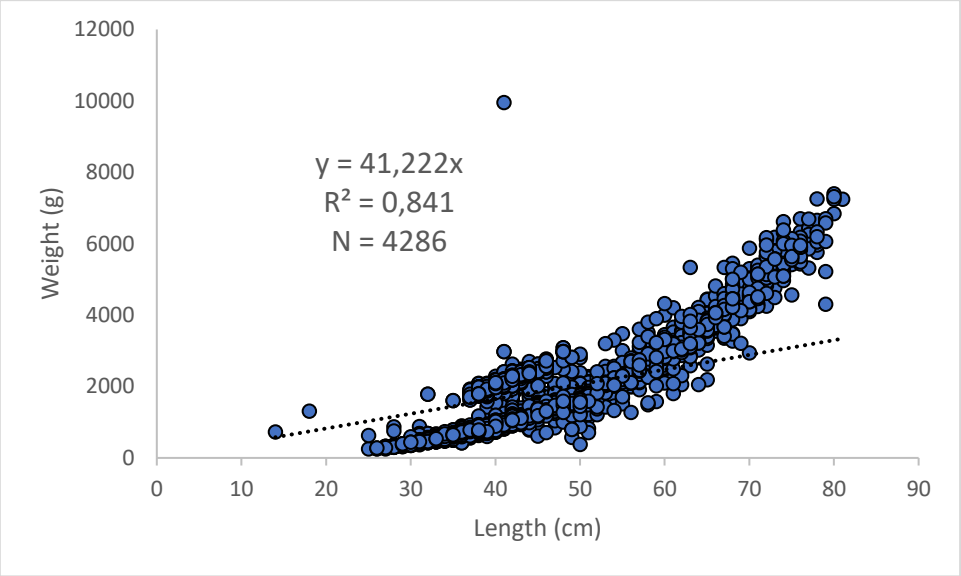
Note: Latest updated data 2025

John's snapper, *Lutjanus johnii* (Bloch, 1792)



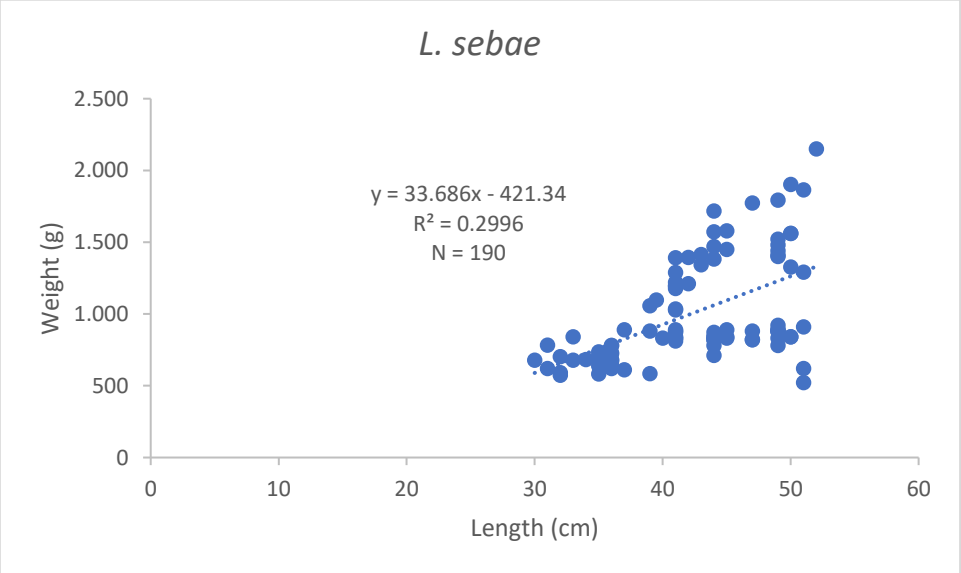
Note: The amount of data has not increased since August 2024

Malabar blood snapper, *Lutjanus malabaricus* (Bloch & Schneider, 1801)



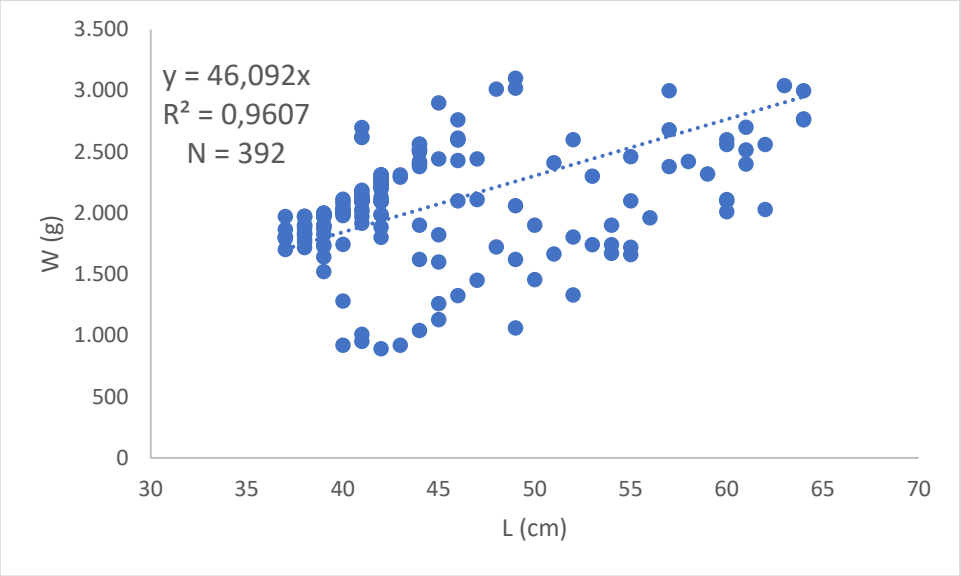
Note: Until the latest data in 2025

Emperor red snapper, *Lutjanus sebae* (Cuvier, 1816)



Note: The amount of data has not increased since August 2022

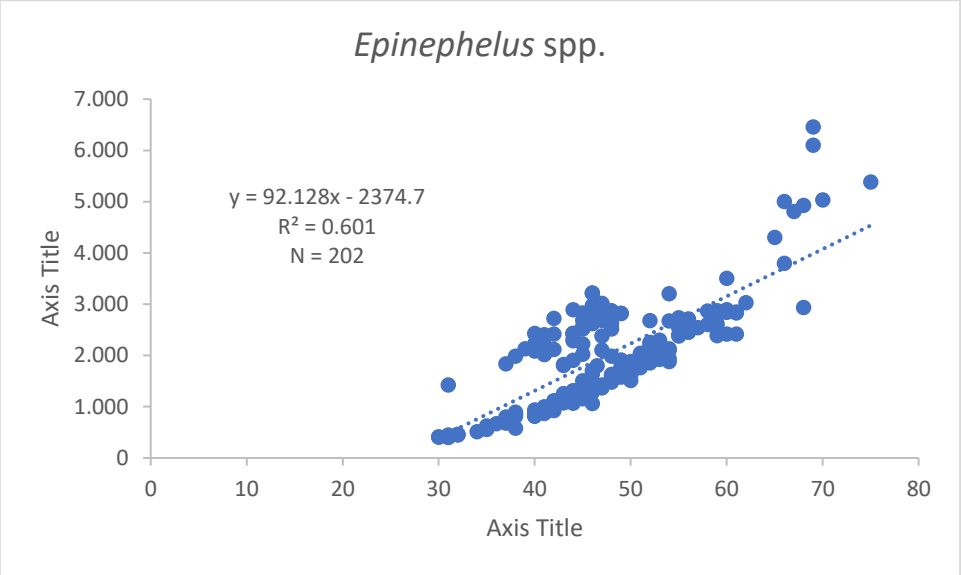
Goldbanded fish, *Pristipomoides multidens* (Day, 1871)



Note: Latest updated data November (2025)

2.2.Grouper

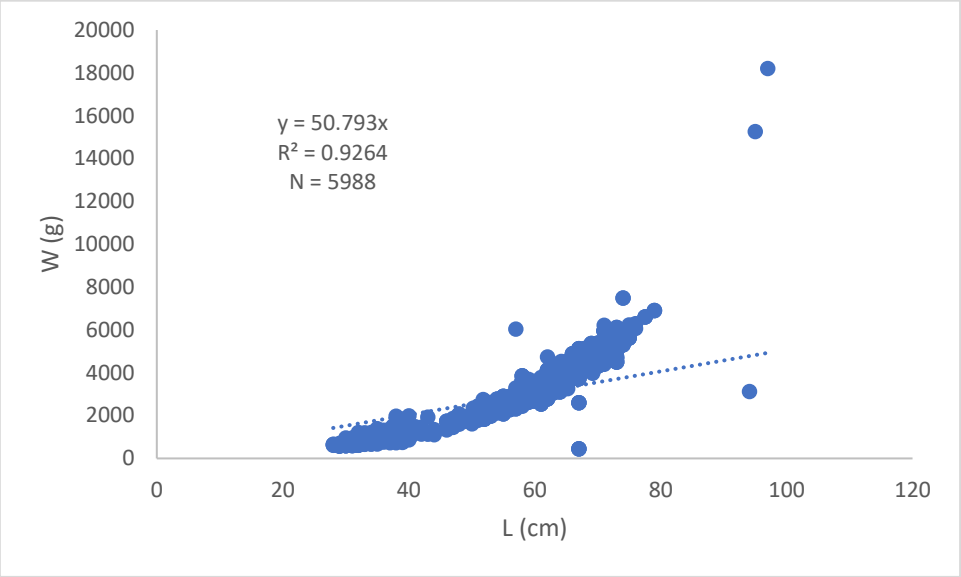
Epinephelus spp.



3. Length-Weight Relationship Snapper-Grouper in FMA 713

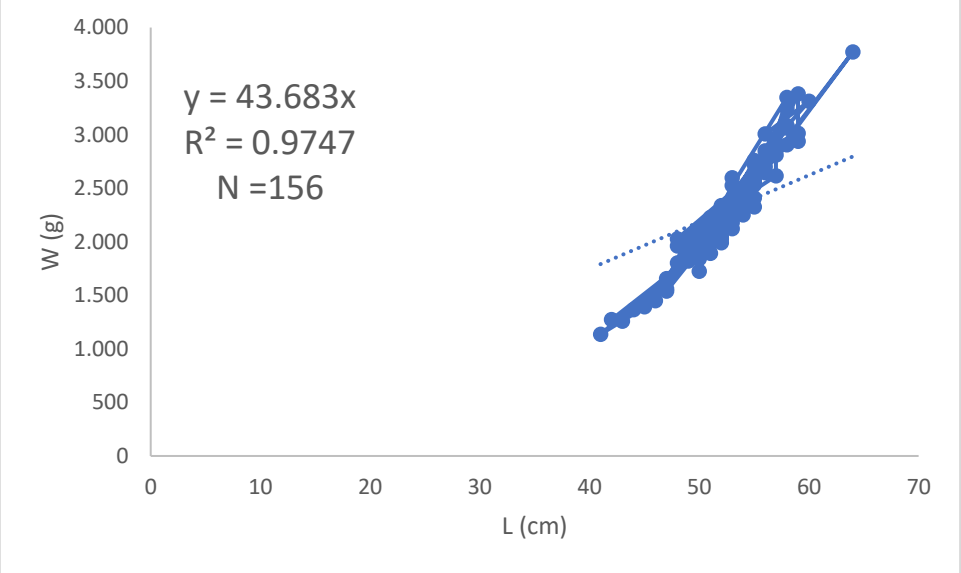
3.1. Snapper

Malabar blood snapper, *Lutjanus malabaricus* (Bloch & Schneider, 1801)



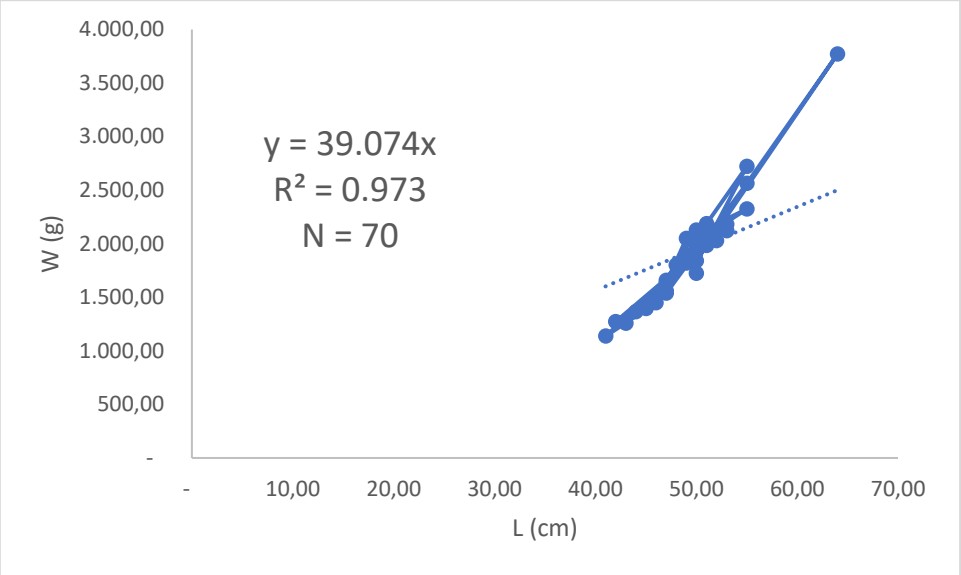
Last updated: Year 2025

Crimson snapper, *Lutjanus eryhtrophterus* Bloch, 1790



Latest Updated: Year 2025

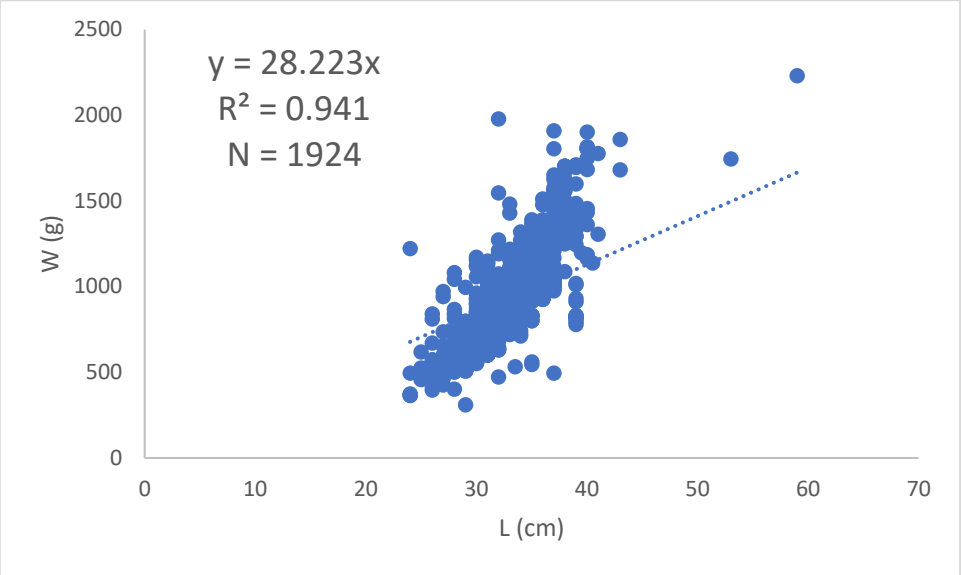
Emperor red snapper, *Lutjanus sebae* (Cuvier, 1816)



Latest Update: Year 2025

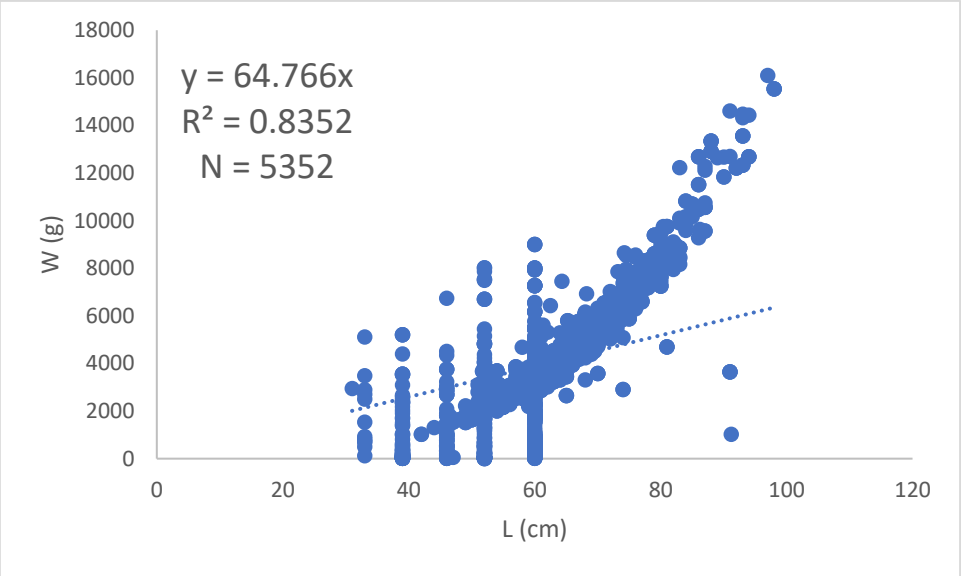
3.2. Grouper

Tomato hind, *Cephalopholis sonnerati* (Valenciennes, 1828)



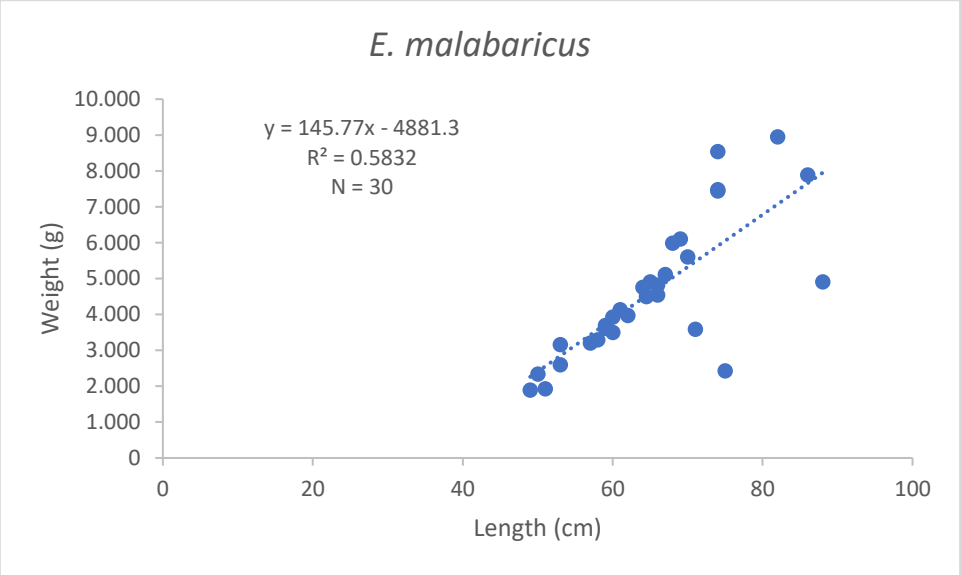
Last updated 2023

Orange-spotted grouper, *Epinephelus coioides* (Hamilton, 1822)



Last Updated: 2024

Malabar grouper, *Epinephelus malabaricus* (Bloch & Schneider, 1801)

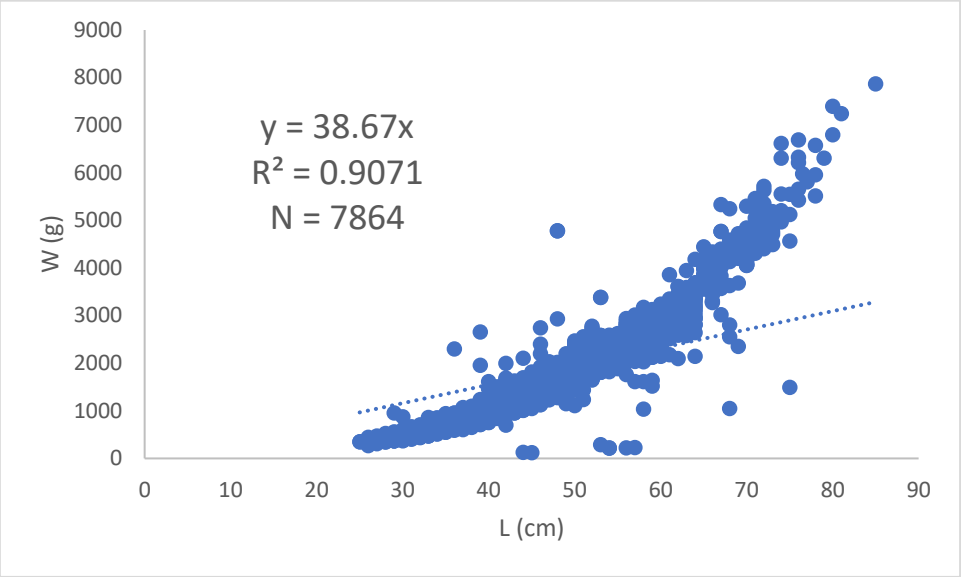


Last updated: 2022

4. Length-Weight Relationship Snapper-Grouper in FMA 718

4.1. Snapper

Malabar blood snapper, *Lutjanus malabaricus* (Bloch & Schneider, 1801)



Last updated: 2025

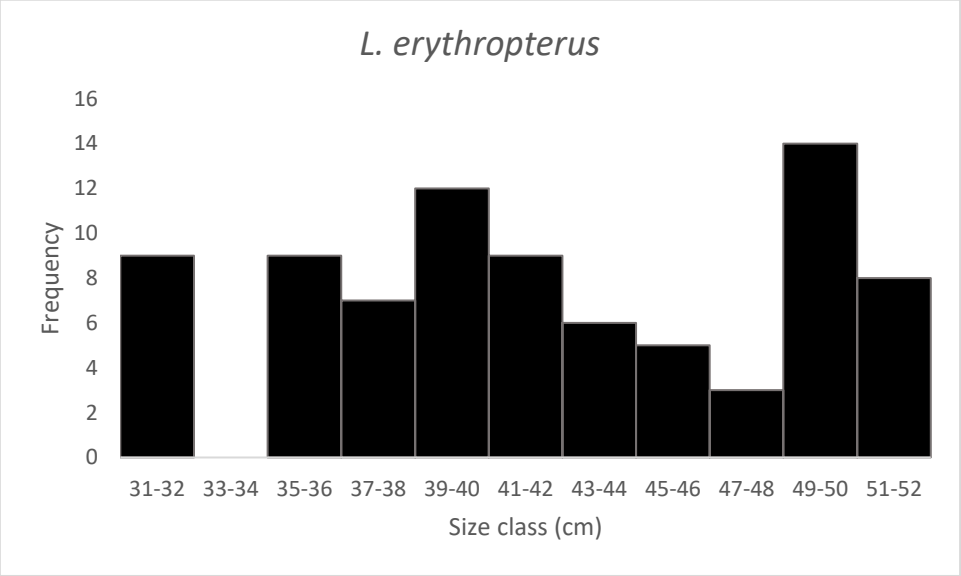
4.2. Grouper

N/A

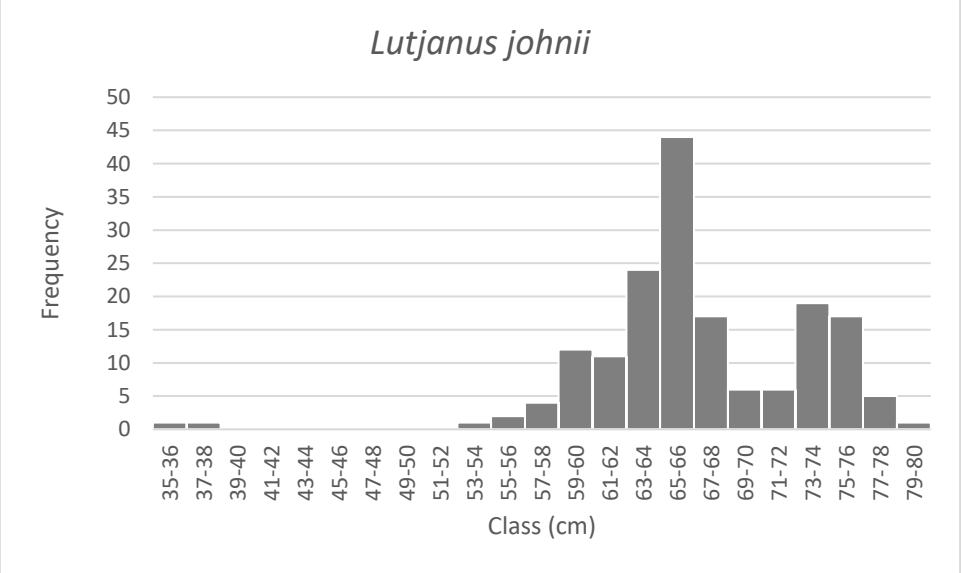
5. Length Frequency Distribution FMA 712

5.1. Snapper

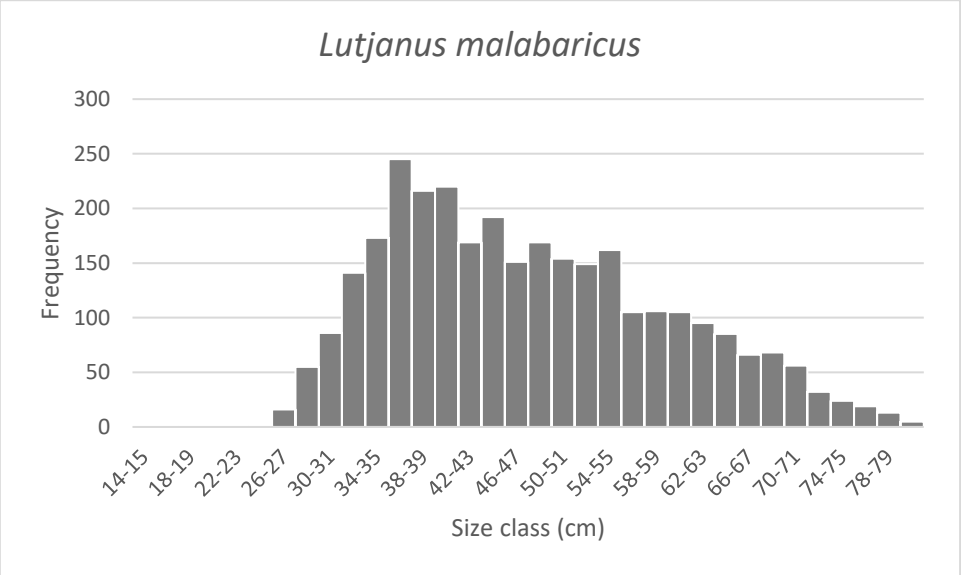
Crimson snapper, *Lutjanus erythropterus* Bloch, 1790



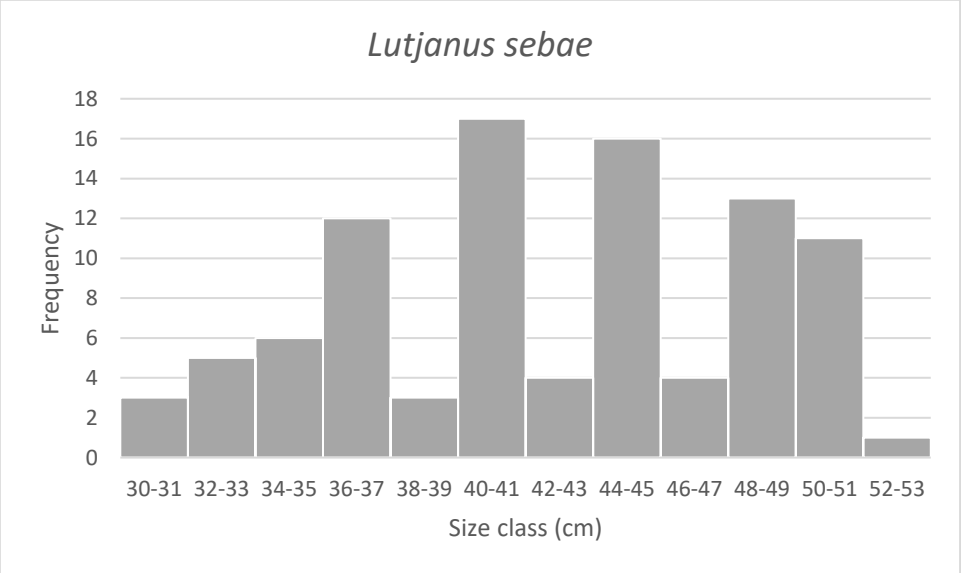
John's snapper, *Lutjanus johnii* (Bloch, 1872)



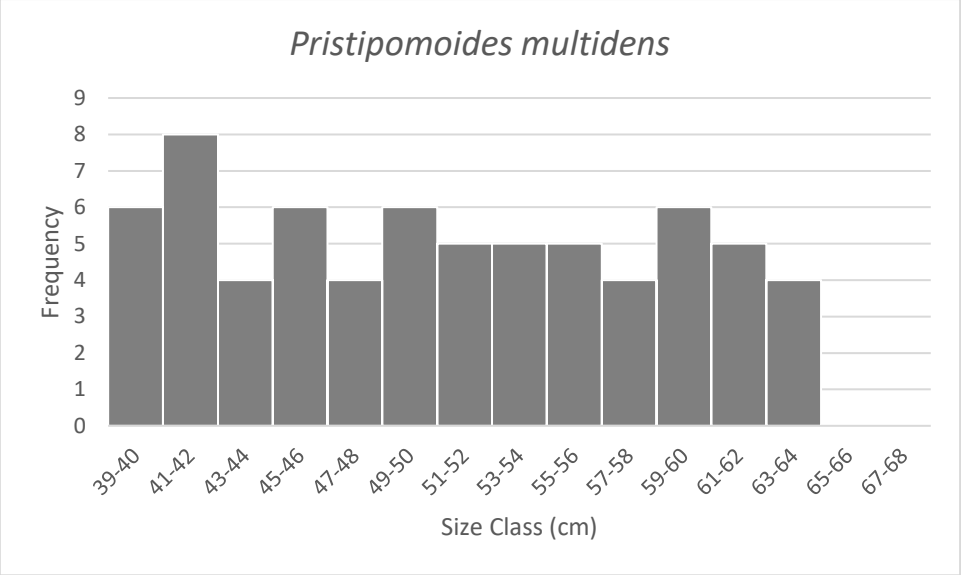
Malabar blood snapper, *Lutjanus malabaricus* (Bloch & Schneider, 1801)



Emperor red snapper, *Lutjanus sebae* (Cuvier, 1816)

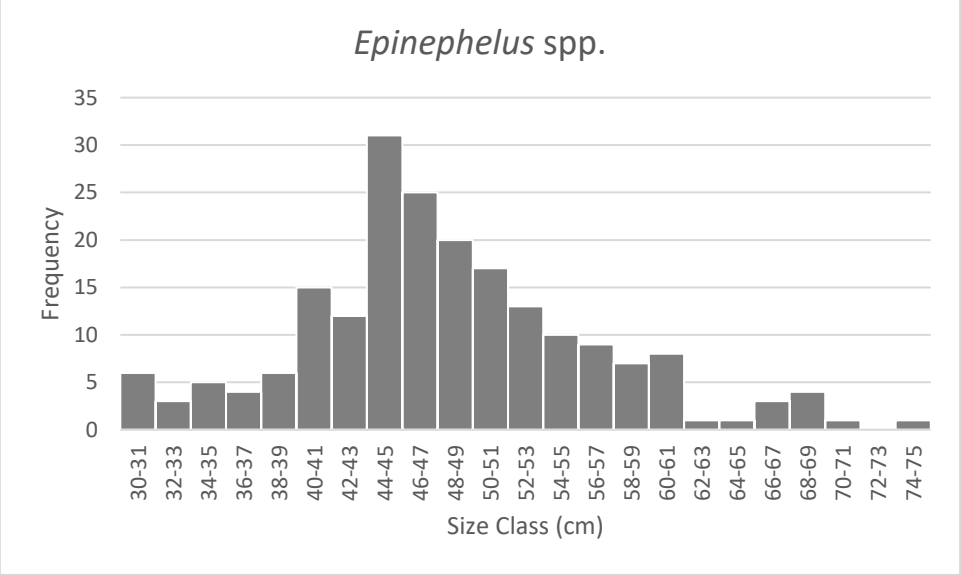


Goldbanded fish, *Pristipomoides multidens* (Day, 1871)



5.2. Grouper

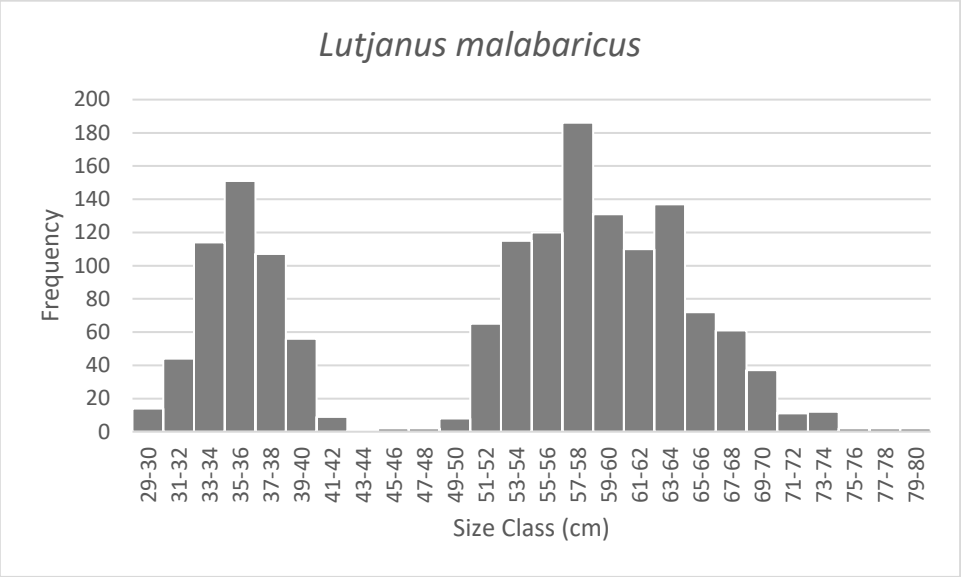
Epinephelus spp.



6. Length Frequency Distribution FMA 713

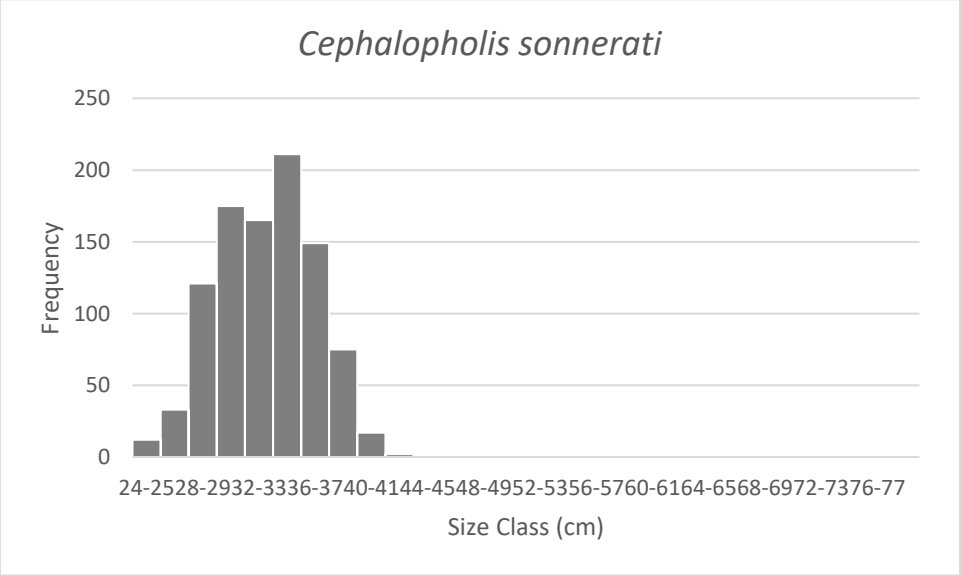
6.1. Snapper

Malabar blood snapper, *Lutjanus malabaricus* (Bloch & Schneider, 1801)

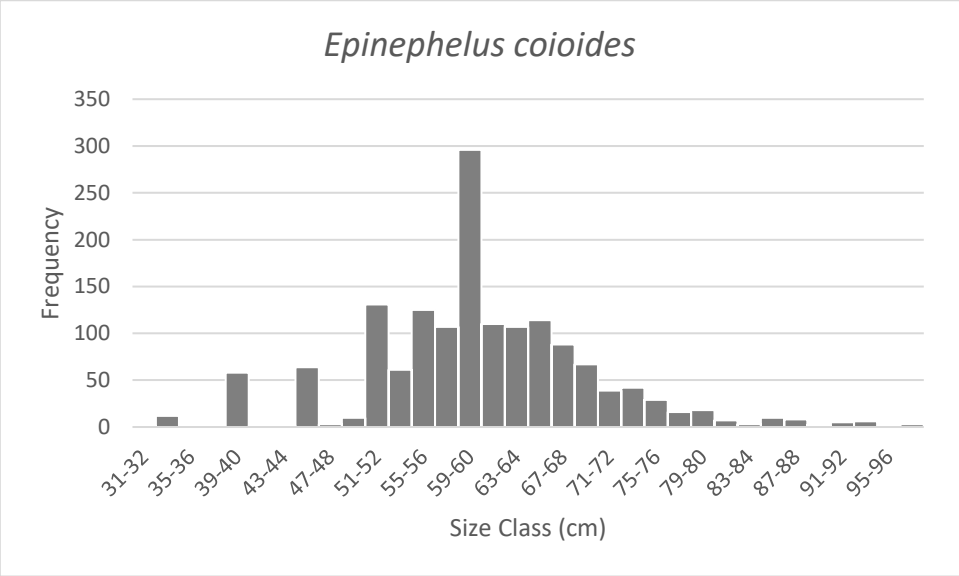


6.2. Grouper

Tomato hind, *Cephalopholis sonnerati* (Valenciennes, 1828)



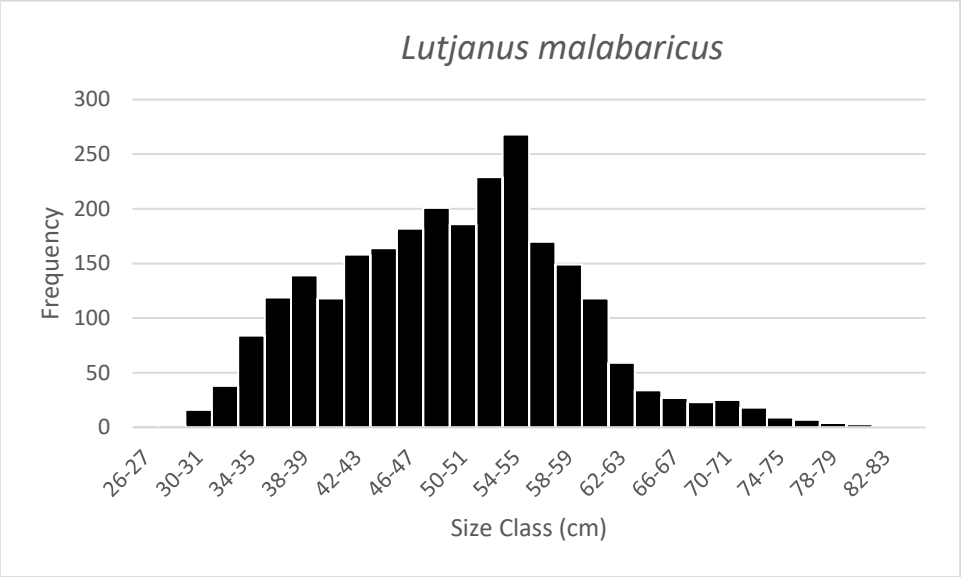
Orange-spotted grouper, *Epinephelus coioides* (Hamilton, 1822)



7. Length Frequency Distribution FMA 718

7.1. Snapper

Malabar blood snapper, *Lutjanus malabaricus* (Bloch & Schneider, 1801)

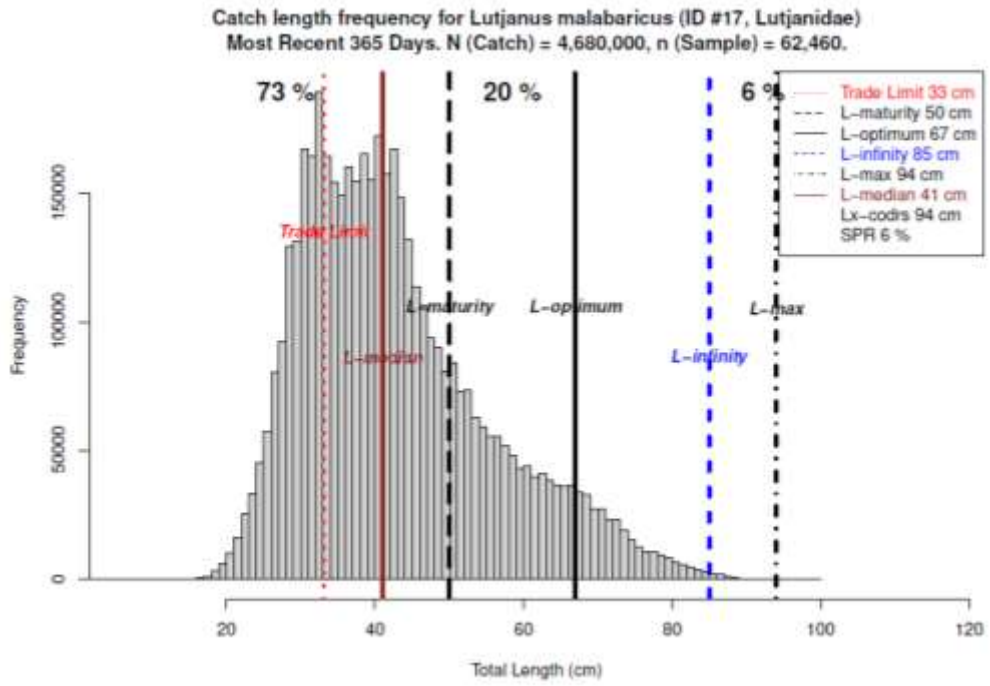


7.2. Grouper (N/A)

8. Benchmarking ADI Processing Unit Data to comprehensive research (TNC/YKAN 2022)

8.1. Fishery Management Area 712

SNAPPER: Malabar blood snapper, *Lutjanus malabaricus* (Bloch & Schneider, 1801)



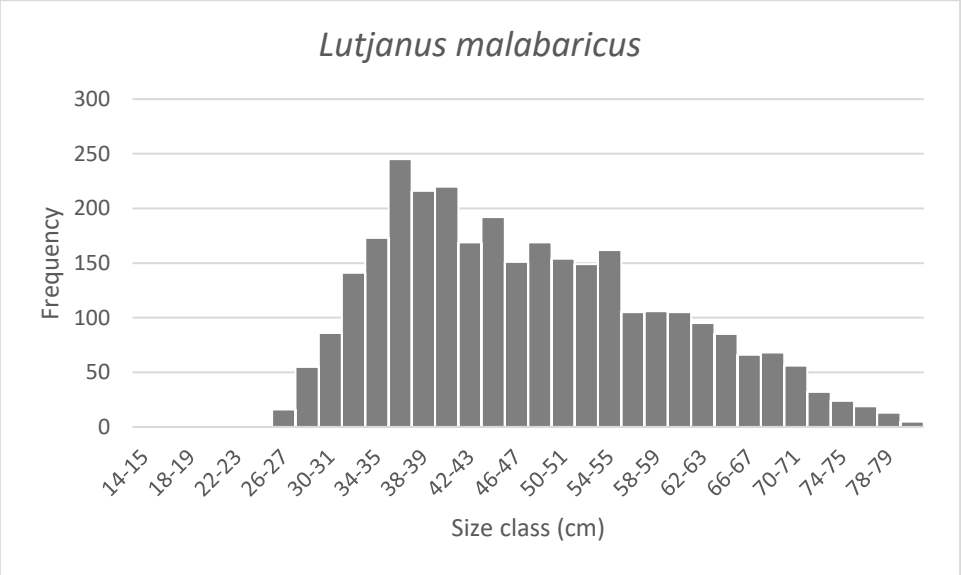
Source: Mous *et al*. (2021). Length-Based Stock Assessment of a Species Complex In Deepwater Demersal Fisheries Targeting Snappers In Indonesia Fishery Management Area WPP 712

Target Reference Point (TRP): The ideal healthy state, often around SPR 40%. Achieving this ensures a high likelihood of sustainable fishing and good stock productivity.

Limit Reference Point (LRP): A danger threshold, often set at SPR 30%. Falling below this indicates the stock is overexploited and requires urgent management intervention

SPR < 6%: This is **far below any sustainable benchmark**. There need to be more radical management actions, namely by controlling fishing efforts, regulating the selectivity of fishing gear, and fishing moratoriums if applicable (although it is hardly doable considering the socio-economic impacts).

Based data collected by ADI at the processing unit (Sample number = 4,827)



Number of fish length measured: 4827 individuals

Min size = 14 cm

Max size = 81 cm

Average size total sample = 45.25 cm

Median = 42 cm

Benchmark L_m = 50 cm (YKAN 2022)

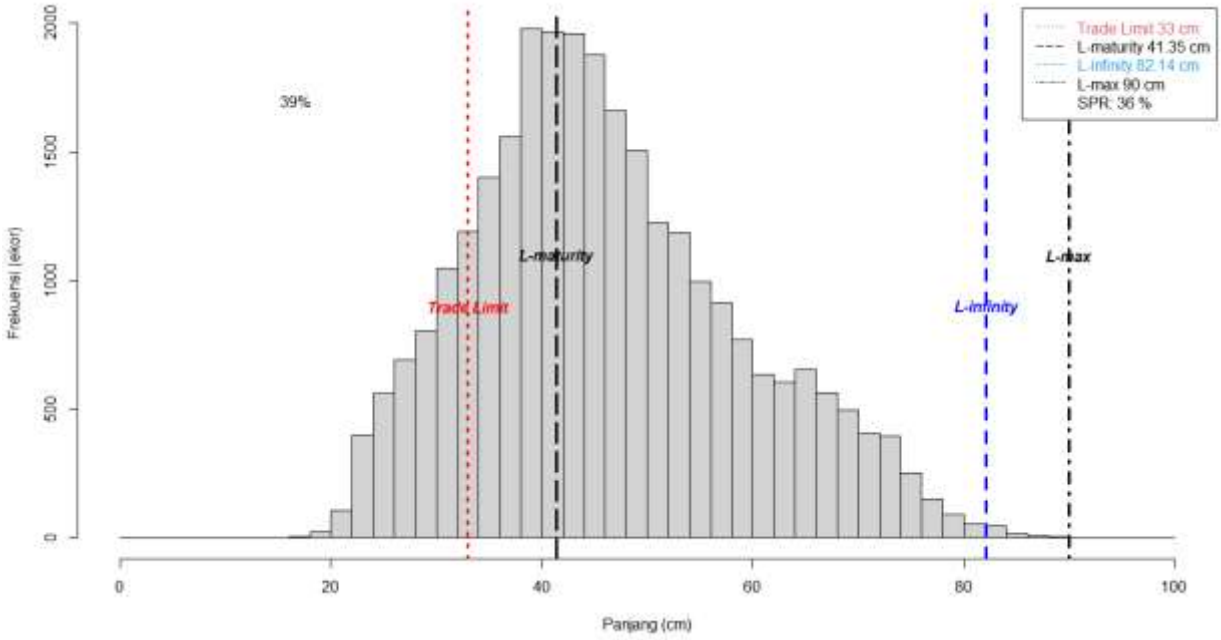
Number of individu with $L_c \geq L_m$ = 1,450 individuals (30.04 %)

Average size $L_c \geq L_m$ = 59.72 cm

Average size $L_c < L_m$ = 39.28 cm

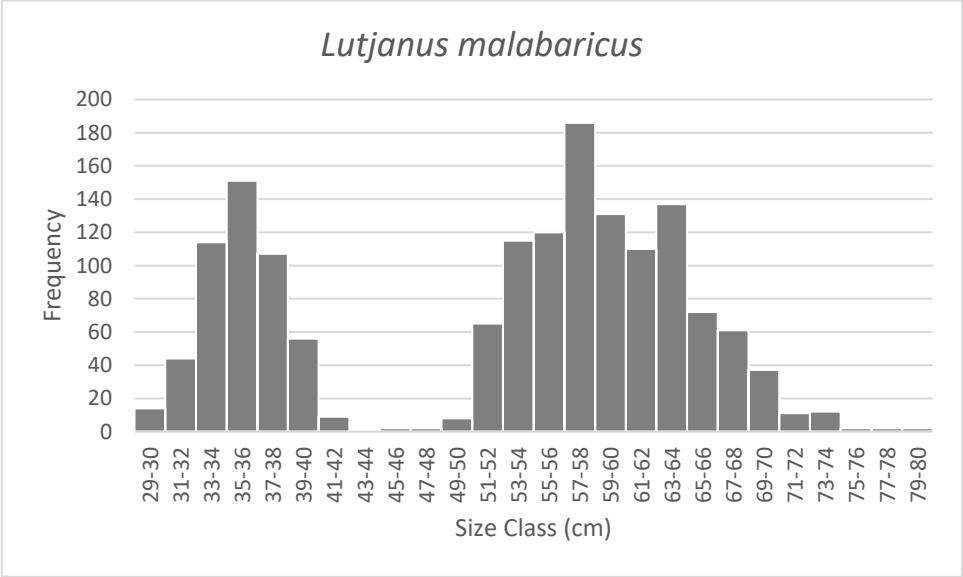
Fishery Management Area 713

SNAPPER: Malabar blood snapper, *Lutjanus malabaricus* (Bloch & Schneider, 1801)



MMAF (2020). Strategi Pemanfaatan Perikanan (Interim Harvest Strategy) Kerapu (Grouper) di Wilayah Pengelolaan Perikanan Negara Republik Indonesia WPPNRI) 713

Recorded data at ADI's processing unit (Sample number = 1,570)



Comments: There are two visible peaks of ADI data separating the length (age) of the two groups. Further examination is necessary to check whether the source was similar to deep waters or if there was the possibility of catch derived from shallower waters. Though the size >41.36 cm is in a higher portion, the number of caught fish with smaller size remains significant.

Recent estimation of SPR based on data collected by ADI was 17% indicated over-exploited (Hapsari et al. 2023). However the Figure above showed a higher percentage of SPR with 36%. The recommended management action is to shift the Trade limit value to the right to approach the mature size of the gonads or the mature size (Lm). The recovery strategy is as soon as possible to prevent a decline in stock.

Number of fish length measured: 4827 individuals

Min size = 14 cm

Max size = 81 cm

Average size total sample = 45.25 cm

Median = 42 cm

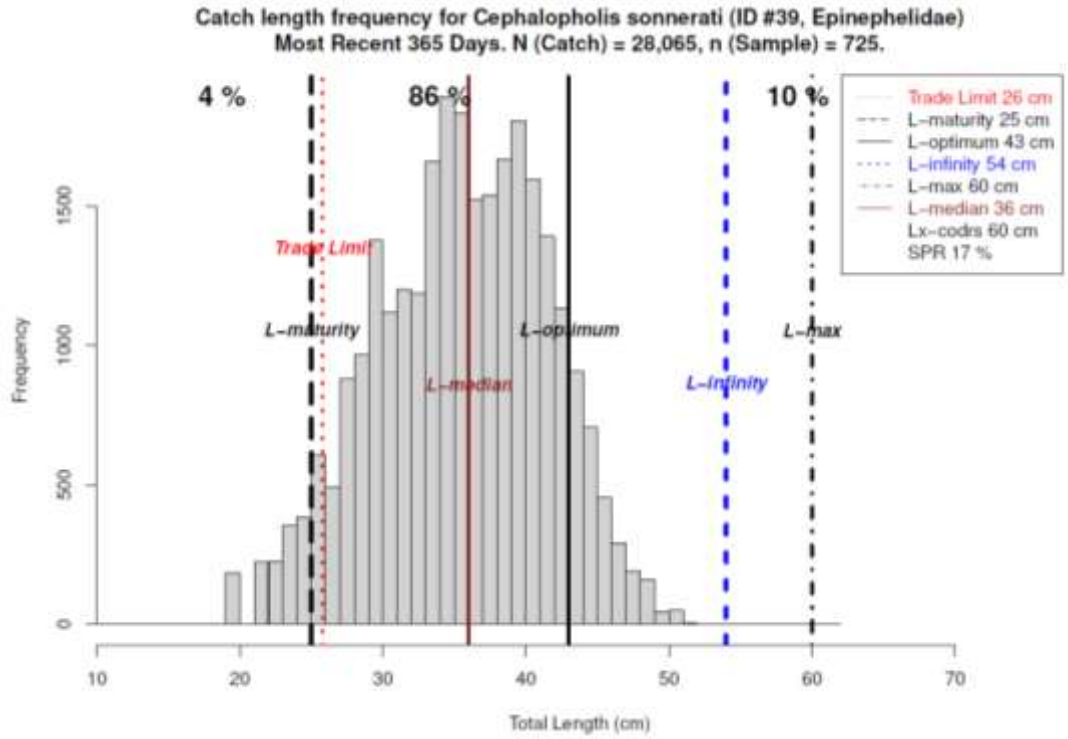
Benchmark L_m = 50 cm (YKAN 2022)

Number of individu with $L_c \geq L_m$ = 1,450 individuals (30.04 %)

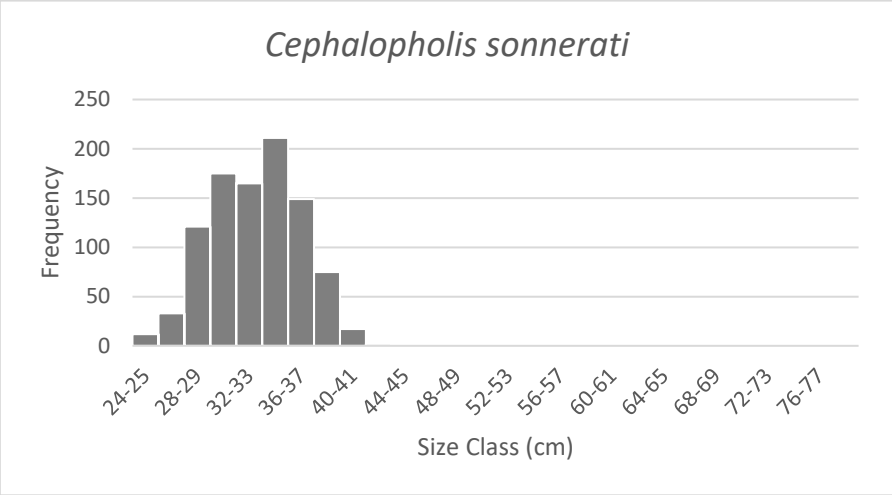
Average size $L_c \geq L_m$ = 59.72 cm

Average size $L_c < L_m$ = 39.28 cm

GROUPER: Tomato hind, *Cephalopholis sonnerati* (Valenciennes, 1828)



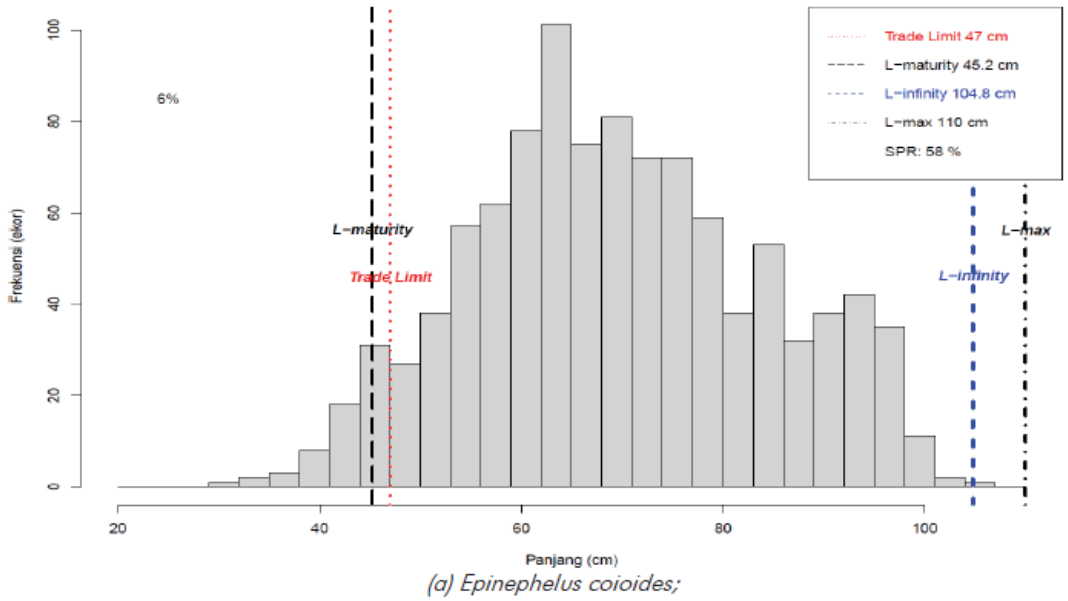
Source: Mous *et al*. (2021). Length-Based Stock Assessment of A Species Complex In Deepwater Demersal Fisheries Targeting Snappers In Indonesia Fishery Management Area WPP 713



Recorded data at ADI's processing unit (Sample number = 966)

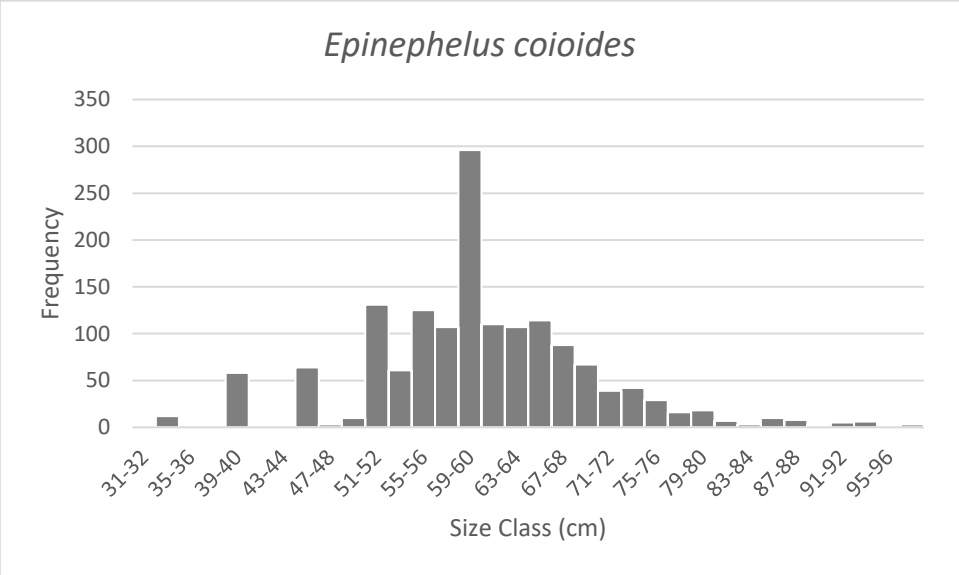
The L_m size shown by Mous et al. (2021) was approximately 25 cm in length, whereas this size in ADI's data similarly had a much lower percentage (<5 percent). However, the SPR value showed below 20 percent (SPR 17%, over exploited). The recovery strategy is designed to restore stocks quickly to reach biomass above the limit reference point in the harvest strategy. It is necessary to estimate SPR value based on ADI's data and make a comparison between the two. The management measures regulate the catch size and trip number, as well as optimize the function of protected areas.

GROUPER: Orange-spotted grouper, *Epinephelus coioides* (Hamilton, 1822)



(a) Epinephelus coioides;

Source: DJPT-KKP RI (2020). Strategi Pemanfaatan Perikanan (Interim Harvest Strategy) Kerapu (Grouper) di Wilayah Pengelolaan Perikanan Negara Republik Indonesia WPPNRI) 713

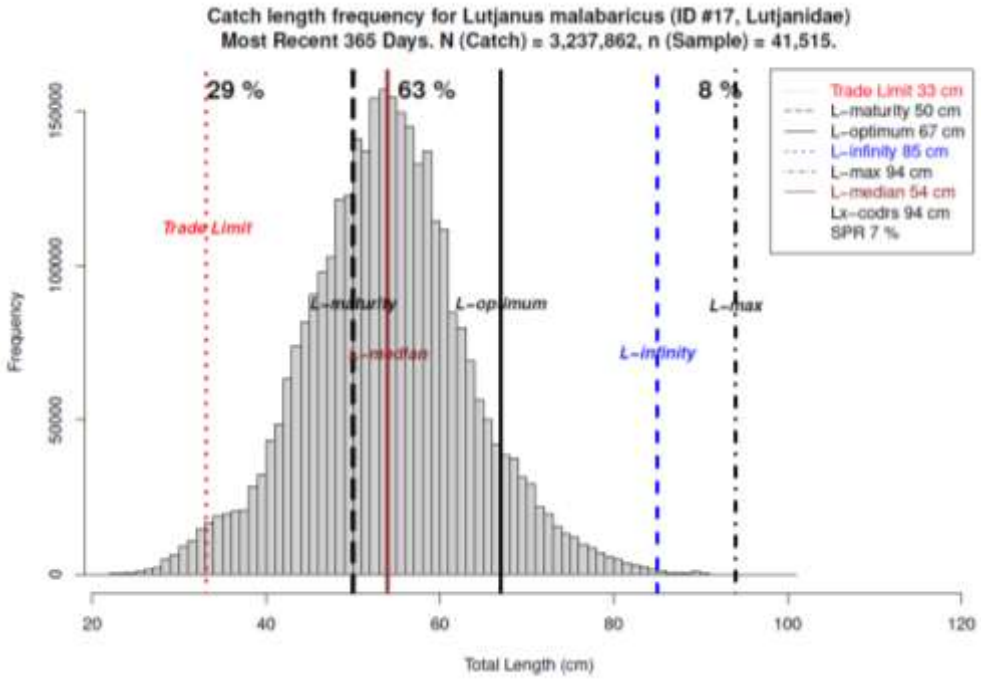


Recorded data at ADI's processing unit (Sample number = 1,544)

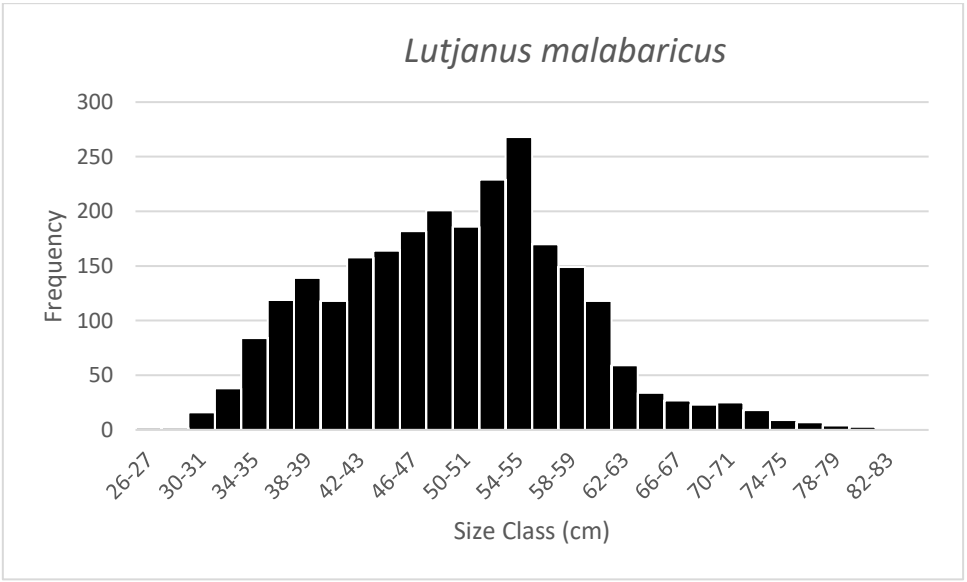
The catch data posture by comparing DGCF-MMAF data (2021) with data collected by ADI shows a good agreement. Recently, SPR was 27% (fully-moderately exploited) or SPR between 20 – 30 %. The recommended management action is to maintain a trade limit value greater than the size of the gonads or mature size (Lm).

8.2.Fishery Management Area 718

SNAPPER: Malabar blood snapper, *Lutjanus malabaricus* (Bloch & Schneider, 1801)



Source: Mous *et al*. (2021). Length-Based Stock Assessment of a Species Complex In Deepwater Demersal Fisheries Targeting Snappers In Indonesia Fishery Management Area WPP 718.



Recorded data at ADI's processing unit (Sample number = 2,553)

A low SPR value indicates an over-exploited condition of the Malabar blood snapper stock at FMA 718. ADI data confirm this. The mandatory actions are controlling efforts to

build fish stocks, including management of protected areas (closure system, rights-based management, fishing gear selectivity).