

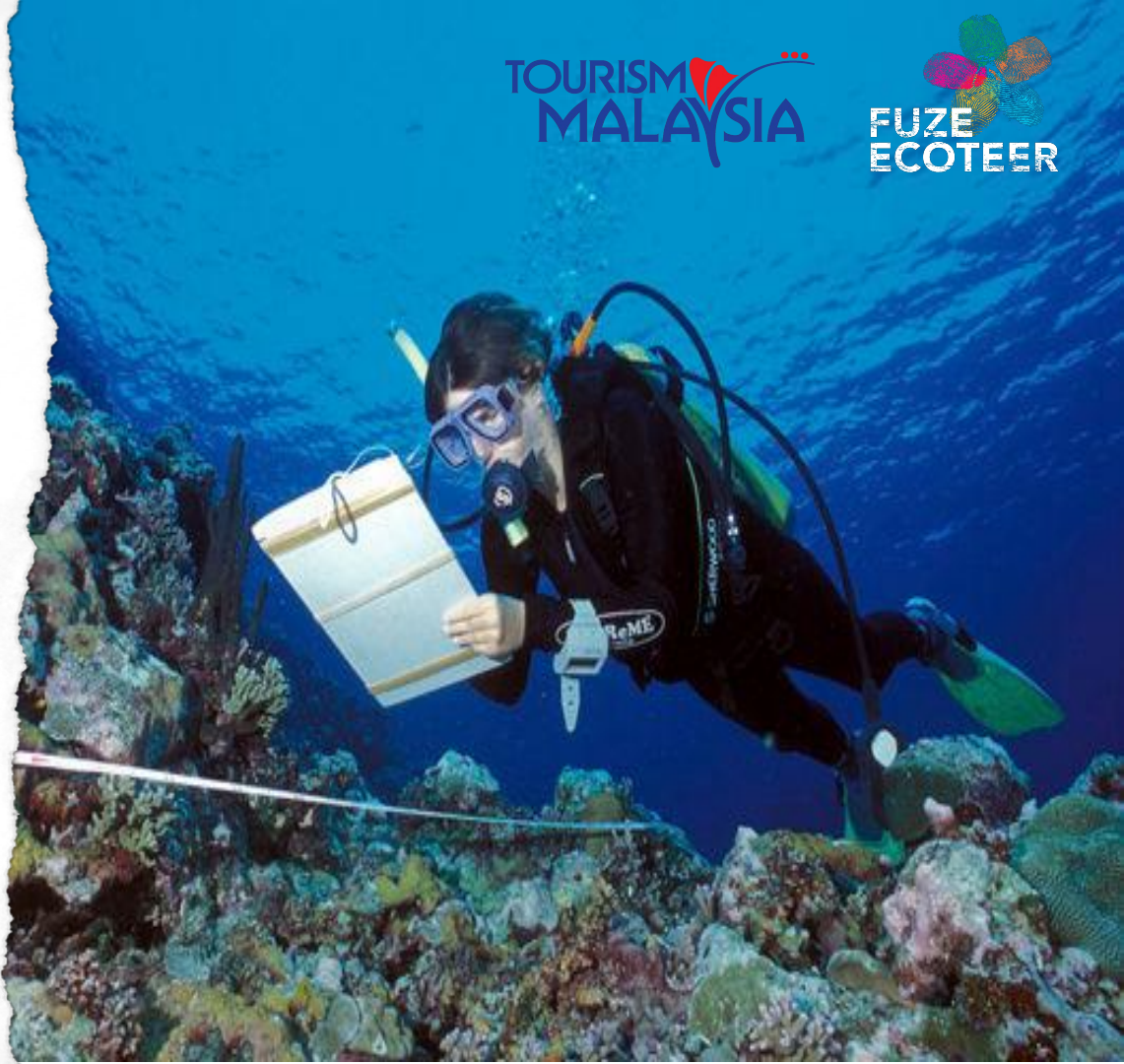
2022

PMRS ANNUAL  
REPORT



**PMRS**  
PERHENTIAN  
MARINE RESEARCH  
STATION

TOURISM  
MALAYSIA



# OVERVIEW

## Who We Are



**PMRS**  
PERHENTIAN  
MARINE RESEARCH  
STATION

**FUZE  
ECOTEER**  
CONNECTING PEOPLE  
WITH NATURE

- PMRS has been officially operating since February 2017
- The station aims to **better understand the reef ecosystems & to improve resource management** in Perhentian Islands,.
- Throughout the establishment, PMRS has mapped marine habitats in the Marine Park to assessment the health of coral reefs and actively doing stakeholder engagement.
- In 2019, PMRS embarked our first artificial reefs and monitoring programme to study the restoration process of the reef. The project has been continuously monitored until now
- In 2022, PMRS has able to operate in full capacity to execute the conservation strategies for marine conservation as a whole.



# OVERVIEW

## Aims and Objectives



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WE **ENRICH** THROUGH CONSERVATION

WE **EXPLORE** THE MARINE ECOSYSTEM CONSCIOUSLY

WE **EMPOWER** THE COASTAL COMMUNITY

- ❑ To preserve the reefs & marine life from tourism impacts, & create awareness to the community & stakeholders so we can eventually become obsolete.
- ❑ To create a baseline of data to continue to monitor the environmental impacts surrounding the islands.
- ❑ to integrate marine conservation into socio-economic of island community.



# PMRS crew: House of 2022



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- ❑ Crew capacity: 2 staff and 6 interns.
- ❑ PMRS 2022 operation was supported by interns who has given a significant contribution to ensure PMRS run smoothly.



**HIDAYAH  
HALID**  
STATION MANAGER



**NAQUIB  
FADZIL**  
DIVE MASTER

## HOUSE OF 2022



**IMRAN MUNIEM**  
MARINE RESEARCH  
COORDINATOR



**YUKI LIM**  
VOLUNTEER  
COORDINATOR



**EMIR BUSTAMI**  
MARINE SCHOLAR 2022



**MATTHEW VERGARA**  
SOCIAL MEDIA  
MANAGER



**HARITH FAHMAN**  
RESOURCE MANAGEMENT  
COORDINATOR



**MUHI BUDDIN YUSOFF**  
VOLUNTEER  
COORDINATOR

# Sustainability Impact

## Financial



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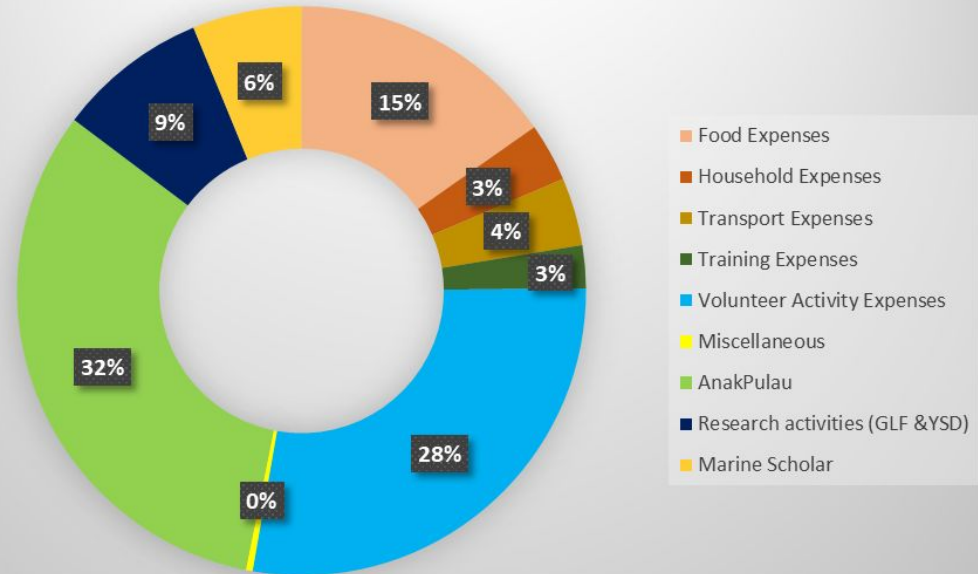


- ❑ The graph shows the breakdown of PMRS overall expenses for 2022.

<b>Food Expenses</b>	RM9,831.85
<b>Household Expenses</b>	RM2,137.39
<b>Transport Expenses</b>	RM2,490.00
<b>Training Expenses</b>	RM1,571.78
<b>Volunteer Activity Expenses</b>	RM17,985.60
<b>Miscellaneous</b>	RM250.00
<b>Anak Pulau Programme</b>	RM20,704.60
<b>Research activities (YSD, GLF)</b>	RM5,505.00
<b>Marine Scholar Programme</b>	RM4,000.00
<b>Total</b>	<b>RM73,740.82</b>

### PMRS Expenses in 2022

Total Expenses: RM73,740.82



# Volunteering program



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→ In 2022, PMRS has resumed its volunteering program and continue its community empowerment program of #AnakPulau. Throughout the 2022 season, PMRS has achieved the following:-

> 22 volunteers with 54 volunteering weeks and a total of 127 dives.

> 22 beach clean-ups with a total of 1027.72 kg of trash: 110.68 kg was recycled while the remaining 917.04kg was discarded

> 20 underwater clean-up with total of 223.94kg of marine debris removed from the seafloor.

→ **Volunteer Coordinator and Volunteering program guideline**

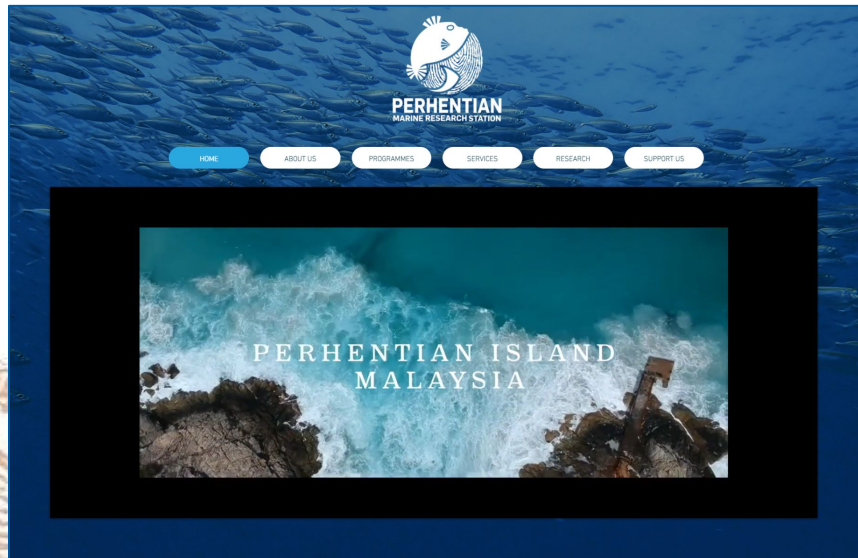


# PMRS Website & Social Media

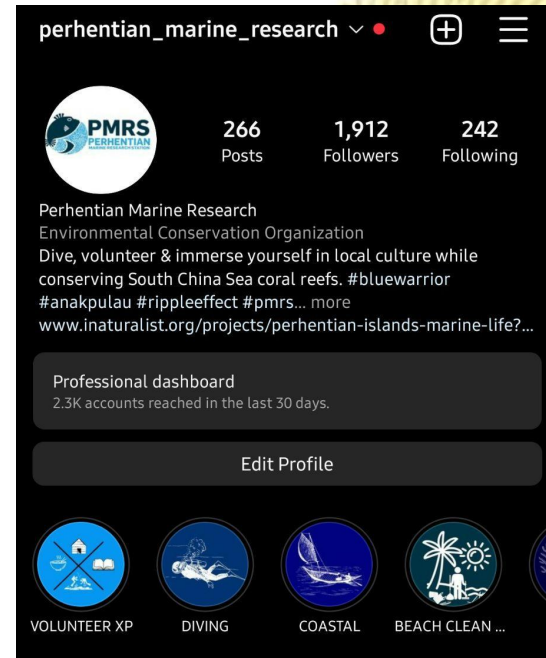


Through out 2022 PMRS has refined its website and strengthen social media presence to establish its portfolio as a marine conservation station.

## → Brand book & Social Media guideline



[www.marineresearchstation.org](http://www.marineresearchstation.org)

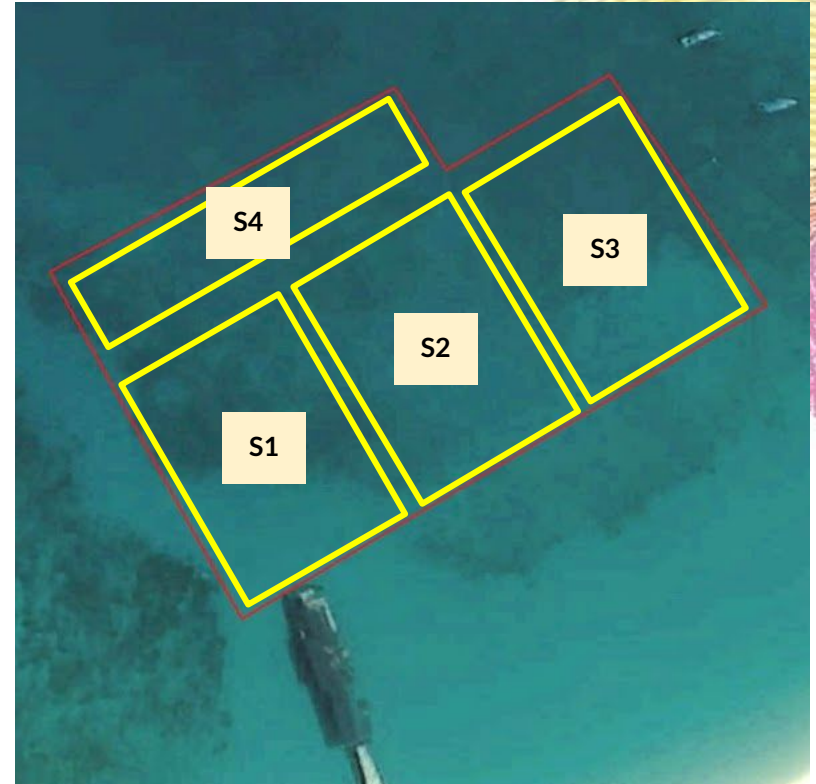
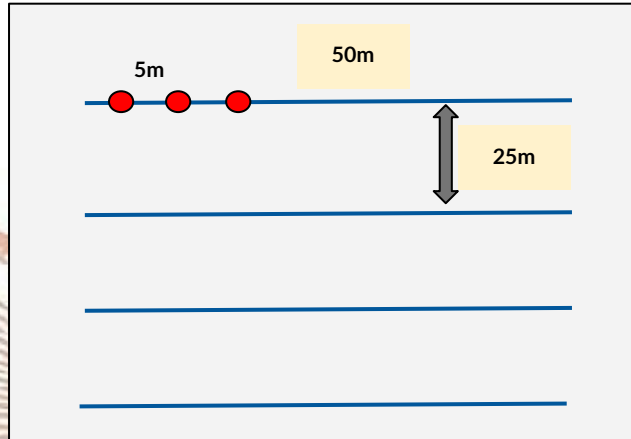


[perhentian\\_marine\\_research](https://www.instagram.com/perhentian_marine_research)

# Station Research: Seagrass survey

Objective: To establish the methodology for seagrass survey and monitoring in Perhentian Island

- Total of **4 sections** and **14 transects**:  
**50m transect line** with **25m transect interval** and  
**5m data interval**.
- This study was done using modified methodologies and a datasheet from Seagrass Watch





# Station Research: Seagrass survey

2022 objective: to establish the methodology for seagrass survey and monitoring in Perhentian Island



- Two species of seagrass present, **Halophila ovalis (HO)** and **Halodule pinifolia (HP)**.
- HP species contribute higher percentage coverage compared to HO.
- Distribution of the two species are disperse at every sampled depth.

S1:Transect (T)	Coverage (%)	Species distribution (%)	
		HP	HO
1	22.5	46.07	53.93
2	23.52	95.82	4.18
3	5	100	0
4	4.89	100	0

S2:Transect (T)	Coverage (%)	Species distribution (%)	
		HP	HO
5	42.5	82.15	17.84
6	38.52	96.22	3.78
7	28.64	96.25	3.75
8	26.82	98.65	1.3

S3:Transect (T)	Coverage (%)	Species distribution (%)	
		HP	HO
9	33.18	65.58	34.42
10	44.09	87.83	12.17
11	46.82	82.9	17.04
12	33.18	77.56	22.44

S4:Transect (T)	Coverage (%)	Species distribution (%)	
		HP	HO
13	32.39	65.7	34.3
14	52.84	82.88	17.12

# Station Research: Seagrass survey

Objective: To establish the methodology for seagrass survey and monitoring in Perhentian Island

- Total of **6** transects lines:  
**100m** transect line with **5m** data interval at a **constant depth** of **8-10m**.
- The survey was conducted to determine the length of seagrass bed along Romantic beach coastline.
- The seagrass bed stretch out at **600m** along coastline with 2 seagrass species composition.

Transect (T)	Coverage (%)	Species distribution (%)	
		HP	HO
1	7.98	0	100
2	21.90	0	100
3	26.85	2.92	97.08
4	21.19	4.70	94.11
5			
6			



# Station Research: Divesites Assessment



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Objectives: To assess the health of reef area and to establish citizen science program through conservation dives

- The trend of live coral cover and nutrient indicator algae for the **12 dive sites** along with percentages of dead corals and rocks as they are substrates for the growth of algae and live corals.
- Based on the trend, **live coral cover is at a high percentage would has lower percentage of nutrient indicator algae.**
- The assessment also includes destructive impact at which **Batu Nisan** recorded **significant destructive impact** among all dive sites

Live Coral Cover and Nutrient Indicator Algae trend along with the substrate composition (%)

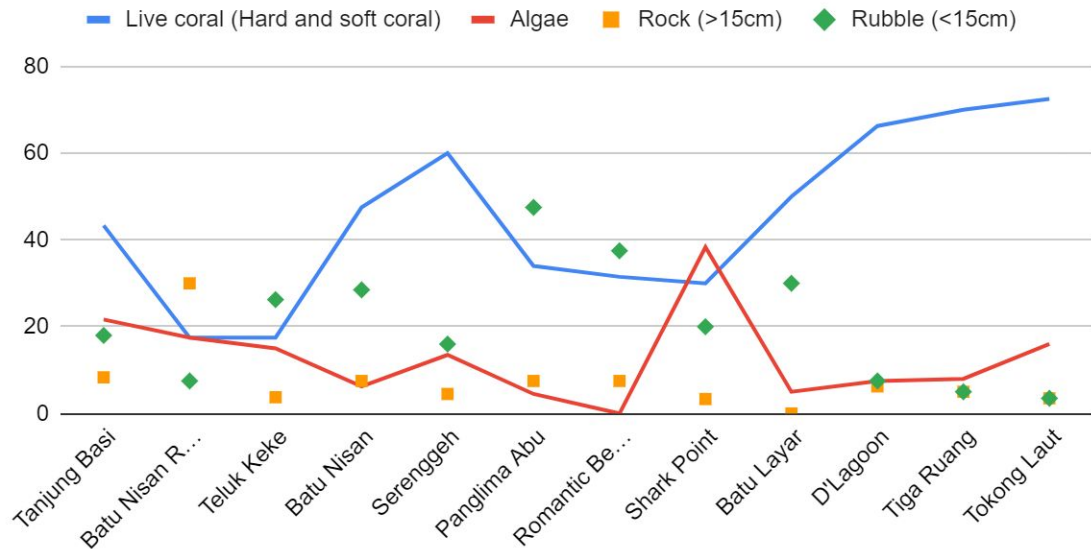


Figure 14. Chart of the Live Coral Cover and Nutrient Indicator Algae trend along with the substrates on the different dive sites

# Station Research: Anemone survey

## OBJECTIVES

- To document the species of anemone and anemonefish that are present in Perhentian waters
- To record the pairings of anemonefish and their hosting anemone species

## FINDINGS

- 7 hosting sea anemone species
- 5 anemonefish species that can be found in Perhentian water.



Figure 1. Map of the Perhentian archipelago and the dive sites involved in this study

# Station Research: Anemone survey

Sample number (n):

## FINDINGS

- The total of 13 different pairing from 7 hosting anemone species and 5 anemonefish species.
- Highest pairing percentage is between Magnificent anemone + False Clownfish.

## Summary of the pairings recorded in every survey locations

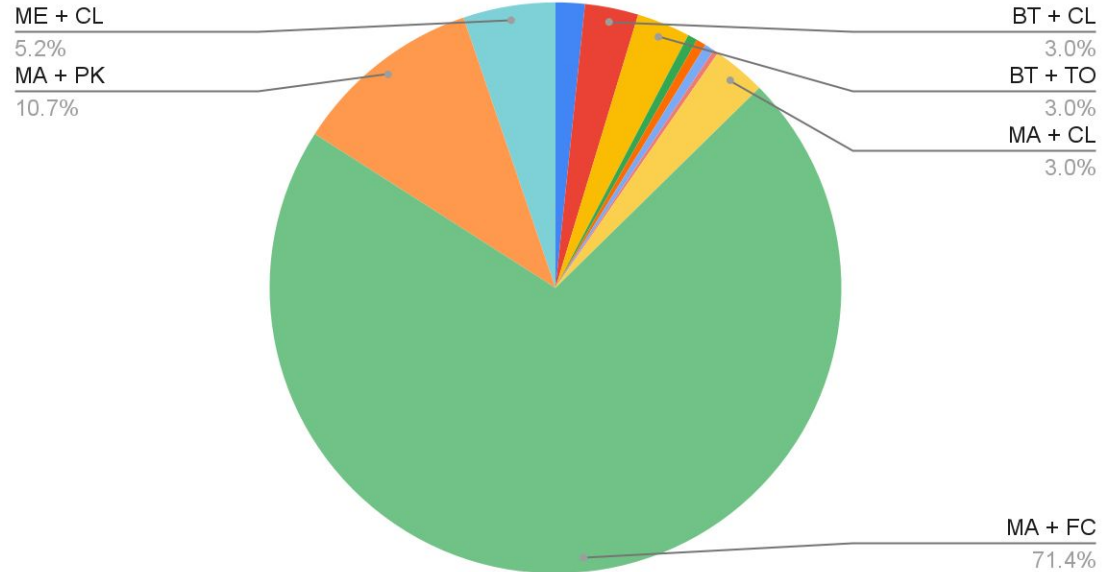


Figure 1. Pairings of sea anemone with their anemonefish in the respective dive site

# Station Research: Monitoring Surveys

## Artificial Reef Blocks

- Total number of recruits: 57 coral baby (natural recruitment)
- Total number of coral blocks: 36 bottle blocks

No.	Genus	Notes	Number of recruits
1	<i>Acropora sp.</i>	Branching	5
2	<i>Porites sp.</i>	Encrusting	22
3	<i>Porites sp.</i>	Massive	1
4	<i>Pocillopora sp.</i>	Branching	18
5	<i>Favites sp.</i>	Massive	9
6	<i>Porites sp.</i>	Branching	2



*Porite sp.*



*Pocillopora sp.*

*Acropora sp.*

# Station Program: #ANAKPULAU

## Rapid Response Team (RRT)



**#ANAKPULAU** is an initiative dedicated to the youth of Perhentian Islands. The initiative was developed to provide a platform for the local youth to learn and engage in marine conservation activities. The members are equipped with diving qualifications and training to join conservation activities with PMRS

### Rapid Response Team

- 13 trained RRT members.
- 5 new recruit of RRT members - in training.

### Courses

- 5 PADI Open Water Diver course.
- 5 Reef Check Eco-Diver course.

### Activity & Training

- RRT Activities: 9 activities
  - 5 Ghostnet removal
  - 2 bouyline installation
  - 1 restoration dive
  - 1 ICC clean up
- 3 training dives
  - Coral ID
  - Fish ID
  - Underwater clean up

# Station Program: #ANAKPULAU

## Junior Diver

- Total of 4 Junior Diver from Eco-Club. The activities will be conducted during school holiday  
In 2022 Junior Diver program had progress on:
- ❑ 1 Junior Open Water Diver course + Assisting Junior Open Water Diver registration.
  - ❑ 1 Coral ID dive





# Conclusion

## What we learnt

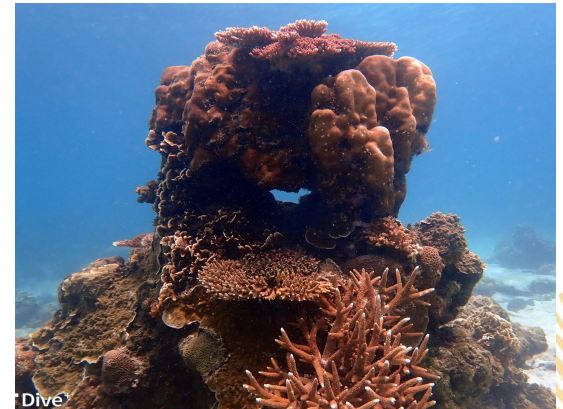


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In conclusion, lesson learnt from this 2022 season,

- ✓ PMRS are able to focus on the management of the station, strengthen the portfolio of the station and develop our local empowerment program #ANAKPULAU.
- ✓ PMRS has broaden its presence beyond Perhentian Island by more external collaboration with other organisations.



# Conclusion

## Next year and beyond



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- ❑ Collaborate with Perhentian Turtle Project seagrass beds surveys.
- ❑ Collaborate with Perhentian Eco-Education Project to certify more village kids to be scuba divers, & involve them in our underwater surveys
- ❑ Coordinate with stakeholders for waste management initiatives.
- ❑ Improve our outreach program on marine and environmental awareness within the islands and beyond Perhentian Islands.
- ❑ Strengthen our collaboration to external organisation for knowledge exchange and networking.



# A big THANK YOU to OUR FUNDERS in 2022



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A HUGE thank you goes to our funders in 2021, without you we wouldn't have been able to achieve anything, our thanks goes to:

- The Habitat Foundation for funding our Anak Pulau initiative
- The East - West Center for funding our marine scholar programme
- Reef Check Malaysia for funding the Reef Resilience training and surveys.



# THANK YOU



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 **Dive+**  
@reringgit

