

Republic of the Philippines Department of Environment and Natural Resources

Provincial Environment and Natural Resources Office MIMAROPA Region

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2 7 JUL 2022

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DOUTGOING

July 12, 2022

MEMORANDUM

FOR

The Regional Executive Director

DENR MIMAROPA

1515 L&S Bldg., Roxas Blvd.

Ermita, Manila

FROM

The Provincial Environment and

Natural Resources Officer

SUBJECT

1ST SEMESTER REPORT ON BIODIVERSITY MONITORING

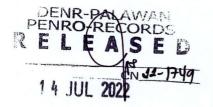
SYSTEM (BMS) FROM JANUARY TO JUNE FY 2022 OF RASA ISLAND WILDLIFE SANCTUARY (RIWS), NARRA PALAWAN

Forwarded is the memorandum dated June 28, 2022 from CENRO Quezon along with the 1st Semester Report on Biodiversity Monitoring System (BMS) of Rasa Island Wildlife Sanctuary (RIWS) for CY 2022.

For information and record.

FELIZARDO B. CAYATOC







Republic of the Philippines Department of Environment and Natural Resources MIMAROPA Region

COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE

National Highway, Bgy. Alfonso XIII, Quezon, Palawan Contact No.: 0997-982- 3016 Email: cenroquezon@denr.gov.ph

June 28, 2022

DENR PENERO

MEMORANDUM

FOR

The Provincial Environment and

Natural Resources Officer

Sta. Monica, Puerto Princesa City, Palawan

FROM

The Community Environment and

Natural Resources Officer

SUBJECT

1st SEMESTER REPORT ON BIODIVERSITY MONITORING

SYSTEM (BMS) FROM JANUARY TO JUNE FY 2022 OF RASA ISLAND WILDLIFE SANCTUARY (RIWS), NARRA,

PALAWAN

Respectfully forwarded is the Memorandum dated June 15, 2022 of Protected Area Superintendent of Rasa Island Wildlife Sanctuary regarding the above mentioned subject with attachment.

Please be informed that this Office recommends to conduct regular monitoring, patrolling, and continuous Information and Eductaion (IEC) campaign for the awareness of the local communities nearby the protected area.

6-30-29

SERIAL NO. 04-9

For your information and record.

LEONARD T. CAL



Republic of the Philippines Department of Environment and Natural Resources MIMAROPA Region

COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE PROTECTED AREA MANAGEMENT OFFICE – RASA ISLAND WILDLIFE SANCTUARY

National Highway, Antipuluan, Narra, Palawan Telephone No.: 048 - 716 - 1224

Email: rasaislandwildlifesanctuary@gmail.com

June 15, 2022

MEMORANDUM

FOR

: The Community Environment and

Natural Resources Officer

Quezon, Palawan

FROM

: The Protected Area Superintendent

Rasa Island Wildlife Sanctuary

SUBJECT

: 1st SEMESTER REPORT OF BIODIVERSITY

MONITORING SYSTEM FROM JANUARY

TO JUNE FY 2022

Respectfully forwarded herewith the 1^{ST} Semester report of Biodiversity Monitoring System Activity from January to June FY 2022.

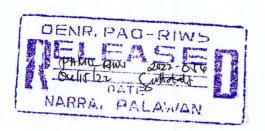
For your information, record and reference.

MA. TERESA V. AYSON

14.

DATE:

SIGNATURE:





Republic of the Philippines Department of Environment and Natural Resources MIMAROPA Region

COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE PROTECTED AREA MANAGEMENT OFFICE – RASA ISLAND WILDLIFE SANCTUARY

National Highway, Antipuluan, Narra, Palawan Telephone No.: 048 - 716 - 1224 Email: rasaislandwildlifesanctuary@gmail.com

RASA ISLAND WILDLIFE SANCTUARY

Biodiversity Monitoring System Report 1st Semester FY 2022

By:

PROTECTED AREA MANAGEMENT OFFICE RASA ISLAND WILDLIFE SANCTUARY

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INTRODUCTION

Rasa Island is a small, flat coral island situated in the Sulu Sea and located within the municipal waters of Narra, Palawan, Philippines. It has a total area of 1,983 has. and is within geographic coordinates of 9°13′25″ N and latitude 118°26′35″ E longitude. Declared Protected Area as a Wildlife Sanctuary thru Presidential Proclamation No. 1000 dated February 15, 2006.

Rasa Island, locally known to be the only area with a viable cockatoo population is a potential area to conserve the species. It is the natural habitat of the critical endangered bird species, the Philippine Cockatoo (*Cacatua haematorupygia*) locally known as "Katala".

Biodiversity in the area is monitored thru Biodiversity Monitoring System (BMS). A method of collecting field data and to monitor the flora and fauna inhabiting the protected area which aims to provide information available for decision-makers in PA through the regular collection of data on natural biological resources and utilization. The focus is on identifying trends in biodiversity and its use to guide action in PA management. Further, the conduct of BMS also intends to improve the participation of PA communities in its management.

The implementation of Biodiversity Monitoring System (BMS) is under the direct supervision of the PASu-RIWS with collaboration from the offices of the MENRO-LGU, Narra, PCCP/KFI and the staff of the Conservation Development Section of CENRO-Quezon.

Threats of illegal activities in the adjacent marine areas of Rasa Island Wildlife Sanctuary that could possibly happen in the PA are proactively prevented by strict implementation of environmental policies, Information and Educational campaigns, regular monitoring of activities within the PA and law enforcement with the active participation of different stakeholders.

METHODOLOGY

The Protected Area Management Office (PAMO) of Rasa Island Wildlife Sanctuary is mandated to conduct BMS activity in the PA twice a year. For the 1st semester, the activity was initiated by PAMO-RIWS personnel with the engagement of KFI Park wardens. Levelling and tasking for the team composition was conducted prior to the actual BMS activities to ensure that the rules and policies are religiously followed and or observed, thus, significant observation and results are to be achieve.

Terrestrial Fauna Monitoring

The PAMO Staff together with the deputized wardens are conducting periodic monitoring in the established 2-km transect in coastal forest by foot. With the use of binoculars, DSLR Camera and cellular phone for recording, all wildlife observed were through visual or heard during the monitoring were noted. All the traces and tracks of the wildlife (if available) were photographed. "Digital/Recorded Philippine Call of Birds" were used as the reference for the recorded bird calls. Geotagged photos were taken every station to record the changes in the forest cover.

Terrestrial Flora Monitoring

Patrolling and monitoring in the coastal forest were done by walking and traversing the 2-km permanent vegetation transect. All destructive anthropogenic activities (if any) and sudden changes in the forest formation are being recorded. Every station was photodocumented and geotagged to monitor and/or record the changes in the forest formation and cover.

Marine Ecosystem Monitoring

Patrolling and wildlife monitoring in the marine area of RIWS were conducted by the boat. Coral and Seagrass were assessed using transect-quadrant assessment method is based on DENR Administrative Order No. 2016-06. Benthic life form, fishes and other marine organisms associated in the coral reef were also recorded.

Fauna Monitoring

Avifauna and other wildlife monitoring were done using line transect on foot at the established 2-km transect in coastal forest and line transect were done by boat around Rasa Island Wildlife Sanctuary to record coastal birds. A duration of 5 minutes stop in every station with 250-m interval, all the birds, turtles and other wildlife observed through visual and heard were recorded. In addition, all bird contacts within 50m transect segments were also recorded.

Focus Group Discussion

Focus Group Discussion (FGD) are held semi-annually in the adjacent barangays of Rasa Island Wildlife Sanctuary. This method generates information regarding trends in use of resources, trends in status of selected resources. The information is mainly based on local communities own perception of trends. Data gathered continuously from a number of representative communities can provide a valid picture of general trends.

PROPOSED MANAGEMENT INTERVENTIONS

Based on the focus group discussion, wildlife monitoring and patrolling activities conducted this semester, the following management interventions are being proposed to be addressed by the Protected Area Management Board.

Table 1. Proposed Management Intervention for the 1st semester BMS 2022

ISSUES	RECOMMENDED PAMB ACTION	SUPPORTIVE BMS INFORMATION
Alleged Taklobo meat collection.	The issue was discussed with LGU-Narra thru Municipal Mayor as initial action taken. The PAMB enforcement committee together with the multi-sectoral team to conduct strict monitoring and acted inspection on the said issue.	Strict implementation of laws and regulation. Continuous
Alleged illegal fishing (Compressor, tubli, dynamite, cyanide, lagtang fishing)	Institute legal action once the responsible person/group were identified	Conduct of Patrolling and monitoring during nighttime in collaboration with other enforcement team (ex. PNP, PCG, and Bantay Dagat)
Decrease in the amount of community catch (marine resourcers: tulingan, Burao, Tursilyo, Bisugo, Sapsap, etc.)	Strict implementation of policies and regulations and establishment of markers or buoys in the PA boundaries.	Continuous Patrolling and monitoring

For the issues presented above (Table 1), the PAMO personnel of RIWS gave their valuable information and possible solutions as perceived by the people in the community, which have to be discussed, resolved and supported by the PAMB.

IMPORTANT OBSERVATIONS

Table 2. Observations during the conduct of Biodiversity Monitoring System for 1st quarter 2022.

Activities	SPECIES/ RESOURCE USE	OBSERVATION AND CAUSAL FACTOR	PROPOSED ACTION/ RECOMMENDATION
Focus Group Discussion	Marine Resources (Tulingan, Burao, Tursilyo, Bisugo, and Sapsap)	Lobster fry collection generates fast and high earnings to the fisher folks. But they rely mostly on pamanti/lambat, pangangawil/kitang, and pamumugita.	IEC, Consultation, and identification of alternative livelihood program.
Field Diary	Faunal Species	Some faunal species were not observed because some species are migratory. Season birds are not around during the monitoring period.	Regular wildlife monitoring and patrolling
Terrestrial Transect Walk	Tree saplings and ground cover plant/species under canopy	Ground cover during the visit were full of leaf litters, however, some species are starting to regenerates new leaves. This are because of the dry season.	Continuous monitoring and observation within terrestrial ecosystem
Marine Transect	Seagrass	Species cover varies because of seasonal variation (Northeast and Southwest Monsoon) Changes in cover due to climate change. Wilting and siltation was also observed.	Continuous assessment and monitoring
	Corals	No anthropogenic destruction was observed. However high algal assemblage was noted which implies that ecological factors deteriorating the	Continuous assessment and monitoring

Community of coral reefs	
could be present.	

Field Diary

A total of 17 species of fauna were recorded through visual and heard during the monitoring and patrolling activity conducted by the Monitoring Team in Rasa Island Wildlife Sanctuary and its adjacent barangays from January to March 2022. Of these species, 15 are birds, 1 mammals and 1 marine reptile. It is noteworthy that 7 of these species are considered as the priority species. These are the Katala, White-bellied sea eagle, Philippine megapode/Tabon Scrubfowl, Grey imperial pigeon, Nicobar pigeon, Hawksbill turtle, and Large flying fox. (Table3).

Table 3. Summary of field diary data from January to March 2022

SPECIES	PLACE	Number	How observe	Date	Name of observer	Remarks
Hawksbill Turtle	RIWS	2	Seen	March 5, 2022	Monitoring Team	Juvenile
Philippine cockatoo	Panacan I	10	Seen	January 7, 2022	Monitoring Team	Flying
Philippine cockatoo	RIWS	10	Seen	February 19, 2021	Monitoring Team	Flying
White-bellied sea eagle	RIWS	1	Seen	February 17, 2022	Monitoring Team	Flying near the seagrass station
Green imperial pigeon	RIWS	6	Seen	February 19, 2021	Monitoring Team	Flying
Grey imperial pigeon	RIWS	2	Seen	February 19, 2022	Monitoring Team	Flying
Philippine cockatoo	RIWS	22	Seen and heard	January 28, 2022	Monitoring Team	Flying

Common koel	RIWS	3	Heard	February 19, 2021	Monitoring Team	Flying
Common iora	RIWS	6	Heard	February 7, 2022	Monitoring Team	Flying
Asian fairy- bluebird	RIWS	1	Heard	February 7, 2022	Monitoring Team	Flying
Slender-billed crow	RIWS	21	Heard	February 7, 2022	Monitoring Team	Flying
Sunbird sp.	RIWS	5	Heard	February 7, 2022	Monitoring Team	Flying
Great Coucal	RIWS	3	Heard	February 7, 2022	Monitoring Team	Flying
Pipit sp.	RIWS	2	Heard	February 7, 2022	Monitoring Team	Flying
Philippine megapode/Tabon Scrubfowl	RIWS	4	Heard	February 7, 2022	Monitoring Team	Flying
Philippine megapode/Tabon Scrubfowl	RIWS	2	Seen	February 8, 2022	Monitoring Team	Foraging
Blue paradise fly catcher	RIWS	4	Heard	February 8, 2022	Monitoring Team	Flying
Blue-naped Monarch	RIWS	1	Heard	February 8, 2022	Monitoring Team	Flying
Great-billed heron	RIWS	2	Seen	February 11, 2022	Monitoring Team	Looking for food

Large Flying Fox	Panacan	500-3000	Seen	March 5, 2022	Jeter Manliguz	Flying from RIWS to mainland
Great-billed heron	RIWS	1	Seen	February 17, 2022	Monitoring Team	Looking for food
Philippine Cockatoo	PAMO	8	Seen	March 1, 2022	Monitoring Team	Foraging
Philippine cockatoo	Borbon, Panacan	10-25	Seen	March 5, 2022	Monitoring Team	Going back to RIWS

PHOTO DOCUMENTATION DATA

Majority of the ground from station 0-8 during the transect walk on February this year, are covered with dried leaf litters, however, some trees are undergoing wilting period particularly the *Taluto* trees. Flowering and fruiting trees was also noted. It is assumed that the causal factor is the seasonal variation. Dried leaves will eventually become humus favorable to the island's soil fertility. Some uprooted trees due to typhoon Odette was also observed but most of the coastal forest cover were not damaged.

TRANSECT DATA

Table 4 shows the summary of gathered data in transect method. There are two transect routes that were monitored and assessed. Seven species of seagrass were observed along the established transect in seagrass beds and in the adjoining seagrass beds of RIWS. On the other hand, all priority and concerned species were noted. See table 4.

Table 4. Summary of Transect Data from January to March 2022

Name of Transect route	Date Survey	No. of times surveyed since established	Priority Species and uses recorded	No. recorded this quarter
Terrestrial 2Km	February		Grey Imperial Pigeon (Balud)	3
transect	2022		Philippine megapode	
			Philippine cockatoo	
Marine Transect	February		Enhalus acoroides	7
	2022		Thalassia hemprichii	A A
			Cymodocea rotundata	
			Cymodocea serrulata	
			Halophila minor	
			Halodule uninervis	
			Syringodium isoetifolium	
	March		Erythmochelys imbricata	1
	2022		"Hawksbill turtle"	

Seagrass Assessment

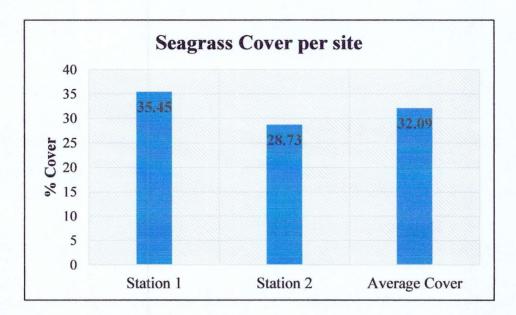


Figure 1. Seagrass Species Cover

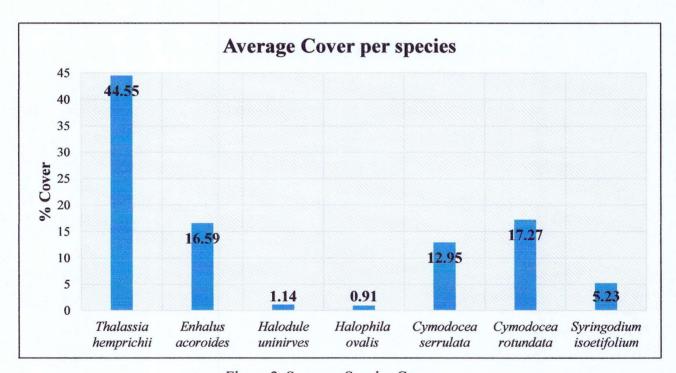


Figure 2. Seagrass Species Cover

Seagrass cover falls in fair cover condition with an average cover of 32.09% (Figure 1) consisting of seven species. *Thalassia hemprichii* is the dominant species with an average cover of 44.55% followed by *Cymodocea rotundata* with an average cover of 17.27%, *Enhalus acoroides* with an average cover of 16.59%, *Cymodocea serrulata* with an average cover of

12.95% and *Halophila ovalis* is the least species with an average of 0.91%. On the other hand, *Syringodim isoetifolium* and *Halodule uninirves* with an average percent cover of 5.23 and 1.14 percent, respectively (Figure 2).

Coral Reef Assessment

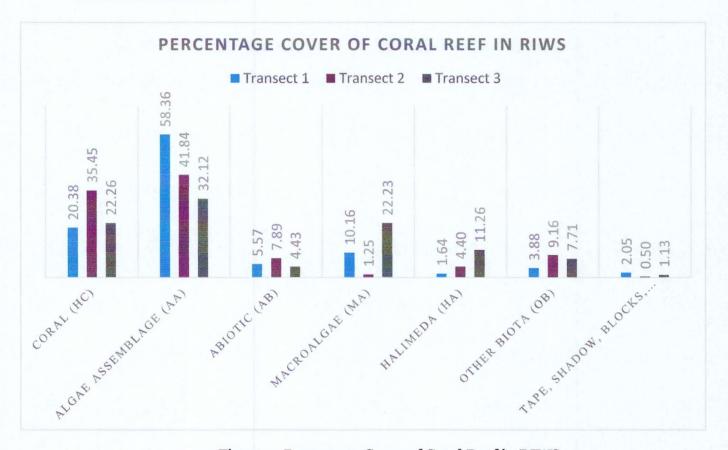


Figure 3. Percentage Cover of Coral Reef in RIWS

Figure 3. shows that Station 3 has the highest cover of live corals with 35.45% which falls in Hard Coral Cover Category B. Likewise, this station got the highest number of TAUs present in the transect.

A total mean of 26.03% was computed for hard live corals. Meanwhile, corals with algal assemblage turns to have a higher mean percentage (44.11%). This implies that ecological factors deteriorating the community of coral reefs could be present. However, there is a presence of macroalgae with 11% mean cover in which contributes to the mortality of corals. In average RIW Coral cover falls in HCC Category B and generic coral diversity of Category B. (Table 3).

Table 5. Major Categories with mean percentage of every transect

MAJOR CATEGORY (% of transect)	Transect 1	Transect 2	Transect 3	AVERAGE
CORALS (HC)	20.38	22.26	35.45	26.03
ALGAE ASSEMBLAGE (AA)	58.36	32.12	41.84	44.11
ABIOTIC (AB)	5.57	4.43	7.89	5.97
MACROALGAE (MA)	10.16	22.23	1.25	11.21
HALIMEDA (HA)	1.64	11.26	4.40	5.77
OTHER BIOTA (OB)	3.88	7.71	9.16	6.92
TAPE, SHADOW, BLOCKS, IND (TWB)	2.05	1.13	0.50	1.22
Sun (excluding tape + shadow + wand)	100	100	100	100

SUMMARY OF FOCUS GROUP DISCUSSION FOR 1st SEMESTERCY 2022

Focus Group Discussion was conducted in the coastal Barangays adjacent to the Protected Area particularly in Brgy. Antipuluan, Narra, Palawan. Informal dialogue was conducted among Barangay Officials, Fisher folks, and PA personnel regarding the management of Rasa Island Wildlife Sanctuary. Some information were ascertained, to wit:

Issues

There were issues raised by the fisher folks in Brgy. Antipuluan, Narra, Palawan during the focus group discussion activity. According to them, an alleged illegal fishing activity such as compressor, *tubli*, dynamite, cyanide and *lagtang* fishing were being made by some unknown individuals during night time. The community also assures that these individuals were not residents of Narra, Palawan. They also mentioned that there are also unknown individuals who are engage in *Taklobo* meat collection and trading. According to the BFARMC president in the community, the incident was already reported but the perpetrators are usually fast and can easily escape. The fisher folks community also raised that they have observed decrease in the amount of community catch (marine resources: *Tulingan*, *Burao*, *Tursilyo*, *Bisugo*, *Sapsap*, *etc.*).

Resources used

The resources used by the community who are engage in fishing are the marine resources of the municipal waters of Narra, Palawan. Some of their fishing activities are pamanti/lambat, pangangawil/kitang, and pamumugita. The fisher folks are fishing in deep areas and far from the boundary of PA but they are aware that they are also benefiting from the MPAs because of continuous implementation of Information Education Campaign (IEC) and Communication, Education and Public Awareness (CEPA) activities. The daily fishing activity usually starts at early in the morning and their usual fish catch are *Tulingan*, *Burao*, *Tursilyo*, *Bisugo*, and *Sapsap*. They also engage in fishing from nearby municipalities like in Aborlan, Palawan. According to them, an average of 8-10 kilos of fish are catch per day depending on weather condition.

Wildlife

Large numbers of Katala birds visited and fly around their community foraging/looking for food. They eat the fruit of their planted malunggay. There were no recorded poaching of birds because of the IEC and awareness program conducted regularly by our office and by the members of PAMB-RIWS (e.g. KFI, LGUs). Large Flying Fox during dawn evening was also observed traveling from the Island going to mainland during 6:00 in the afternoon onwards. Presence of Hawksbill turtle (*Pawikan*) and Sea cow (*Dugong*) are also observed by the fisher folks. According to them, *pawikan* and *dugong* are usually found and observed nearby the *tandol* area in Bgy. Antipulan, Narra, Palwan seaside.

Livelihood

- Pamanti/lambat or gill net fishing and pangangawil/kitang are the main livelihood of the community. They rely on fishing for their daily needs and income. They also engage in fishing from nearby municipalities.
- Fisher folks are also engage in Lobster hatchlings collection because of fast, easy
 and high earnings. But most of them do not rely on this because lobster
 hatchling collection is only seasonal and not continuous. Improvised trapped
 housing materials made of cement are precisely found along the seashore area
 all over the municipality from the month of November to April.

Conclusion and Recommendations

Seagrass is in fair condition, this implies that there are less destructive activities within the PA, however, this result also implies that there are changes observed in the condition of seagrass since during the previous conduct of assessment on the last semester of CY 2021, drastic wilting and siltation was also observed. This phenomena was the main cause of the current condition of seagrass in RIWS. Accordingly, siltation and wilting in seagrass beds are due to agricultural runoff, unregulated destructive fishing and boat activities and also the climate change as a natural phenomenon. High algal assemblage in coral reef was also observed which implies that ecological factors deteriorating the community of coral reefs could be present.

Leaf litters that cover on the ground helps in the fertility of the soil and in the regeneration and growth of trees and its wildlings.

Most of the species recorded shows association to the environment and that disturbance or destruction in the Protected Area will cause their extinction. A lot of species observed were biological indicator species and plays an important role in our ecosystem.

Thus, regular monitoring and patrolling, continuous Information Education and Communication (IEC) campaign to the community about ecological importance is highly recommended to ensure a sustained biodiversity conservation. Likewise, active and continuous support and participation of the local communities with close coordination and collaboration with the LGUs and the RIWS-PAMB in designing strong and science-based framework for a long-term species conservation. Moreover, strict implementation of policies and relevant laws over RIWS is also recommended.

Prepared by:

NIÑA LIZA B. NAVANES Coastal Extension Officer

SATURNINO B HABAL JR.
Research Aide

Reviewed by:

JERRY P. BAUVISTA FR/ARASu) RIWS

Attested by:

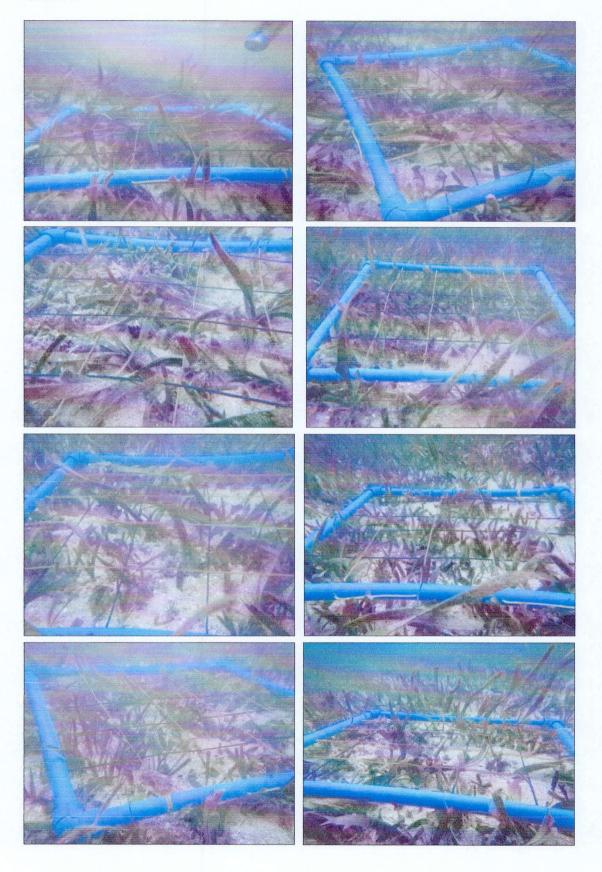
MA. TERESA V. AYSON OIC PASU, RIWS

ANNEXES

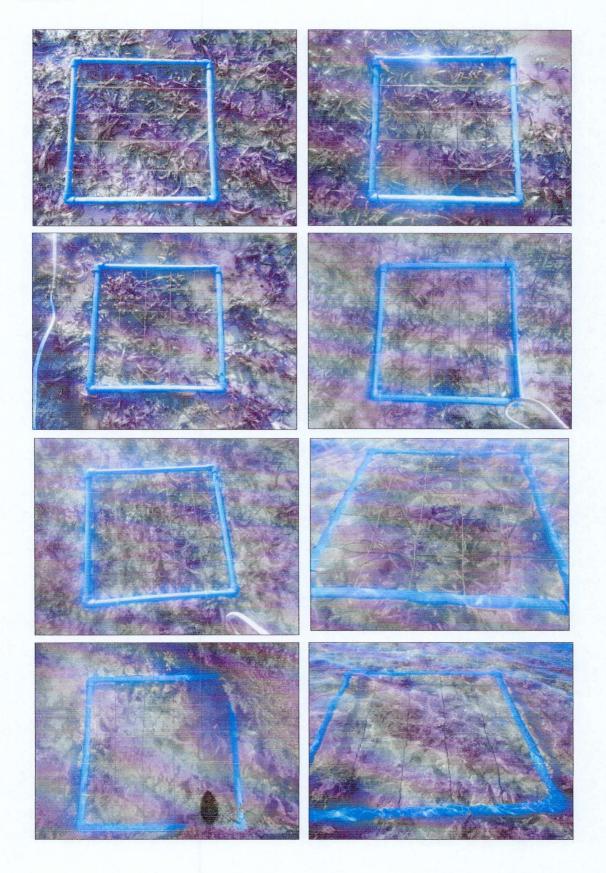
Annex A. Photo-documentation during the conduct of transect swim activity (seagrass assessment/monitoring).



Annex A1. Photo-documentation of seagrass quadrats (seagrass assessment/monitoring) in station 1.



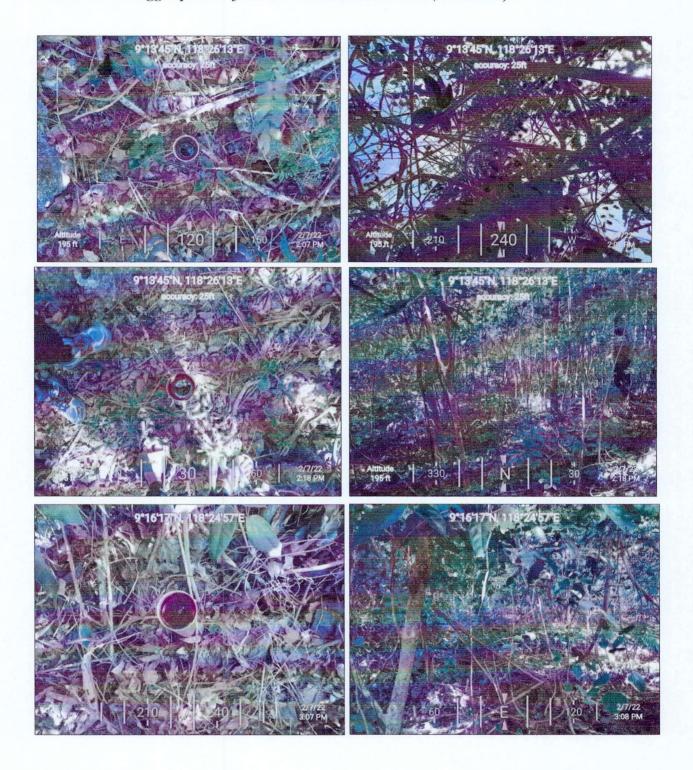
Annex A2. Photo-documentation of seagrass quadrats (seagrass assessment/monitoring) in station 2.



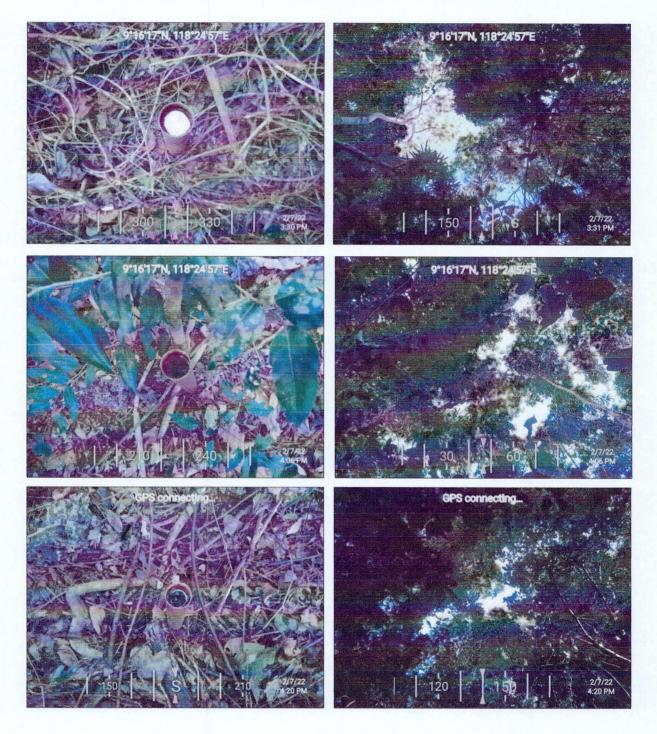
Annex B. Geotagged photos during the conduct of transect walk (monitoring in terrestrial ecosystem).



Annex B1. Geotagged photos of 2km terrestrial transect route (station 0-8).



Annex B2.. Geotagged photos of 2km terrestrial transect route (station 0-8).



Annex B3. Geotagged photos of 2km terrestrial transect route (Station 0-8).



Annex C. Geotagged photos during the conduct of transect swim activity (Coral Reef and Associated Reef Fish Assessment/Monitoring Activity).



Annex D. Geotagged photos during the conduct of Focus Group Discussion Activity





Annex D1. Photos of attendance during the conduct of Focus Group Discussion Activity



FOCUS GROUP DISCUSSION ACTIVITY Brgy. Antipuluan, Narra, Palawa May 27, 2022, Friday 9 oʻclock in the morning

ATTENDANCE SHEET

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Annex D2. Photos of attendance during the conduct of Focus Group Discussion Activity



FOCUS GROUP DISCUSSION ACTIVITY
Brgs. Antipuluan, Narra, Palawa
May 27, 2022, Friday 9 o'clock in the morning

ATTENDANCE SHEET

NAME	ORGANIZATION/ AGENCY	CONTACT NO./EMAIL ADD	GENDER	SIGNATURE
Ma Tareson V. Ayson	PAMO-RIWS		山	10.0
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References

Biodiversity Monitoring System Manual for Protected Areas

BMB Technical Bulletin No. 2019-04

BMB Technical Bulletin No. 2017-05

Philippine Birds Call recordings