



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

Bgy. Sta. Monica, Puerto Princesa City, Palawan

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DENR MIMAROPA RECORDS SECTION
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10 OCT 2022
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DATE NO.

October 04, 2022

MEMORANDUM

FOR : The Regional Executive Director
DENR MIMAROPA
1515 L&S Bldg., Roxas Blvd.
Ermita, Manila

THRU : The OIC, ARD for Technical Services

FROM : The Provincial Environment and
Natural Resources Officer

SUBJECT : **2nd SEMESTER REPORT ON BIODIVERSITY MONITORING
SYSTEM (BMS) OF RASA ISLAND WILDLIFE SANCTUARY
(RIWS), NARRA, PALAWAN**

Forwarded is the memorandum dated September 23, 2022 of CENRO Quezon along with the 2nd Semester report on Biodiversity Monitoring System (BMS) of Rasa Island Wildlife Sanctuary (RIWS) in Narra, Palawan that serves as **Means of Verification (MOV)** to the target activity under 001 Protected Area Management and Development activity for CY 2022 of RIWS – Biodiversity Monitoring System.

As per report, the transect walk monitoring was conducted in the 2km permanent terrestrial station within Rasa Island Wildlife Sanctuary (RIWS). The transect swim on the other hand was conducted in the marine ecosystems of said protected area particularly in the seagrass beds and coral reef station.

The photo documentation was taken and conducted within the 2km permanent terrestrial monitoring station in RIWS. Likewise, field diary data were gathered through the regular conduct of patrolling and wildlife monitoring activities. A Focus Group Discussion (FGD) meeting was conducted in the coastal barangays adjacent to the said protected area particularly in Sitio Borbon, Barangay Panacan, Barangay Panacan I, Barangay Panacan II, Barangay Antipuluan, and Barangay Caguisan, Narra, Palawan.

Furthermore, the result of BMS will be presented to the upcoming PAMB meeting tentatively on the 1st week of November.

For information and record.



DENR-PALAWAN
PENRO-RECORDS
RELEASED
By phea
Date: 05 OCT 2022 CN 2022-2600

EELIZARDO 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
Email: cenroquezon@denr.gov.ph

September 23, 2022


MEMORANDUM

FOR : The Provincial Environment and
Natural Resources Officer
Sta. Monica, Puerto Princesa City, Palawan

FROM : The Community Environment and
Natural Resources Officer

SUBJECT : **2nd SEMESTER REPORT ON BIODIVERSITY
MONITORING SYSTEM (BMS) OF RASA ISLAND
WILDLIFE SANCTUARY (RIWS), NARRA, PALAWAN**

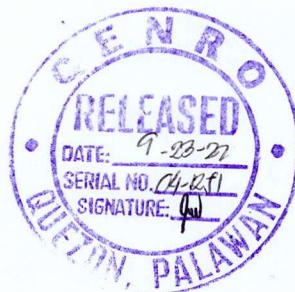
DENR PENRO
PALAWAN RECORDS
RECEIVED

BY: 
DATE: 09-28-2022 22-8843

Respectfully forwarded is the Memorandum dated September 20, 2022 of Assistant Protected Area Superintendent of Rasa Island Wildlife Sanctuary regarding the above mentioned subject with attachment.

Please be informed that the staff of PAMO RIWS conducted BMS for the 2nd Semester of FY 2022 from July to September 2022. Further, this Office recommends to conduct regular monitoring, patrolling, and continuous Information and Education (IEC) campaign for the awareness of the local communities nearby the protected area.

For your information and record.




LEONARD T. CALUYA



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

September 20, 2022

MEMORANDUM

FOR : The Community Environment and
Natural Resources Officer
Quezon, Palawan

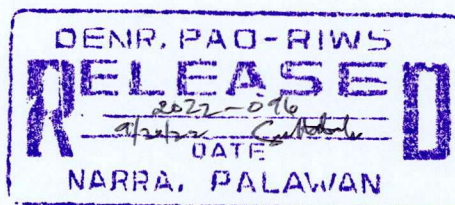
FROM : The Protected Area Superintendent
Rasa Island Wildlife Sanctuary

SUBJECT : **2ND SEMESTER BIODIVERSITY MONITORING SYSTEM
(BMS) REPORT OF RASA ISLAND WILDLIFE
SANCTUARY, NARRA, PALAWAN**

Respectfully submitted is the 2nd Semester Biodiversity Monitoring System (BMS) report of Rasa Island Wildlife Sanctuary with its enclosure.

For your information, reference, and further instruction.

MA. TERESA V. AYSON
PASu, RIWS





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

September 19, 2022

MEMORANDUM

FOR : The Protected Area Superintendent
Rasa Island Wildlife Sanctuary

FROM : Coastal Extension Officer
Rasa Island Wildlife Sanctuary

SUBJECT : **REPORT ON THE CONDUCT OF BIODIVERSITY MONITORING SYSTEM (BMS) IN RASA ISLAND WILDLIFE SANCTUARY FOR THE 2ND SEMESTER OF FY 2022**



This pertains to the target BMS Activity under Protected Area Habitat Protection for FY 2022.

Please be informed that the undersigned together with the Rasa Island Wildlife Sanctuary's Protected Area personnel conducted Biodiversity Monitoring System (BMS) for the 2nd semester of FY 2022 from July to September 2022 using four (4) different methods: (1) Focus Group Discussion (FGD), (2) Field Diary, (3) Photo documentation and (4) Transect walk/Transect swim methods.

The transect walk monitoring was conducted in the 2km permanent terrestrial station in the coastal forest of Rasa Island Wildlife Sanctuary (RIWS). The transect swim on the other hand, was conducted in the marine ecosystems of RIWS particularly in the seagrass beds station and coral reef station.

Photo documentation was taken and conducted within the 2km permanent terrestrial monitoring station in RIWS. Likewise, field diary data were gathered through the regular conduct of patrolling and wildlife monitoring activities.

The Focus Group Discussion (FGD) Activity were conducted in the coastal barangays adjacent to RIWS. The following community monitoring groups are to wit: Sitio Borbon, Bgy. Panacan I, Bgy. Panacan I, Bgy. Panacan II, Bgy. Antipuluan, and Bgy. Caguisan, Narra, Palawan.

Thus, continuous regular monitoring and patrolling, continuous conduct of 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 a must.

For information and record.

RASA ISLAND WILDLIFE SANCTUARY (RIWS)

Date Conducted: July 2022 to September 2022

Coverage of BMS: 2nd Semester of Year 2022

1. Introduction

The Biodiversity Monitoring System (BMS) aims to improve the information available for decision-makers in protected areas through regular collection of data on natural biological resources and their utilization. The focus is on *identifying trends* in biodiversity and its use so as to guide action in PA management. In addition, the BMS is intended to improve the participation of protected area communities in PA management.

The BMS includes four methods:

1. 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.

2. Field Diary

Field diaries are used by PAMO-RIWS staff during regular patrols and other field activities in the protected area. This method comprises standardize recording of routine observations on resource use and wildlife in a simple pocketbook or data sheet. Information may be own observation's or second-hand information.

3. Photo documentation

This method is done at Rasa Island Wildlife Sanctuary's permanent points by taking photos of the landscape from the same place every semester. The new photos are compared with older ones to detect changes in the forest cover.

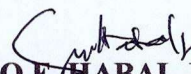
4. Transect Walk/Transect Swim

This method are somewhat similar to routine patrolling using field diary. However, transect are permanent demarcated routes where there are precise recommendations on where to walk (sail or swim), when to do it, and what to note. Transects are undertaken along 2km permanent transect routes in terrestrial and two permanent transect station in Marine ecosystems (seagrass & corals).

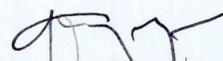
Date: **September 19, 2022**

Prepared by:


NINA LIZA B. NAVANES
Coastal Extension Officer


SATURNINO E. HABAL JR.
Technical Support Specialist

Noted by:


JERRY P. BAUTISTA
FR/APASu, RIWS

2. 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.

Issue 1: **Alleged illegal fishing** (Compressor, tubli, dynamite, cyanide, lagtang fishing)

Municipality: Narra, Palawan

Recommended PAMB Action:

- Institute legal action once the responsible person/group were identified

Supportive BMS Information:

- Data Gathering from FGD

Action Taken:

- Continuous conduct of Patrolling and recommended monitoring during nighttime in collaboration with other enforcement team (ex. PNP, PCG, and Bantay Dagat)

Issue 1: **Decrease in the amount of community catch** (marine resources: tulingan, Burao, Tursilyo, Bisugo, Sapsap, etc.)

Municipality: Narra, Palawan

Recommended PAMB Action:

- Strict implementation of policies and regulations and establishment of markers or buoys in the PA boundaries.

Supportive BMS Information:

- Data gathered from transect swim and FGD Activity

Action Taken:

- Continuous conduct of patrolling and monitoring

For the issues presented above, 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.

3. Important Observations

Activities	Species/Resources Use	Observation and casual factor	Proposed action/recommendation
Focus Group Discussion	Marine Resources (<i>Tulingan, Burao, Tursilyo, Bisugo, and Sapsap</i>)	Lobster fry collection generates fast and high earnings to the fisher folks. But they rely mostly on <i>pamanti/lambat, pangangawil/kitang, and pamumugita</i> .	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 under plant/species canopy	Rasa Island has green vegetation in July 2022. Leaf litters are less dense.	Continuous monitoring and observation within terrestrial ecosystem
Transect swim/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.	Continuous assessment and monitoring

Field Diary

A total of 27 species of fauna were recorded through visual and heard during the monitoring and patrolling activity conducted by the Monitoring Team and wardens in Rasa Island Wildlife Sanctuary and its adjacent barangays from July to September 2022. Of these species, 25 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).

4. Summary of Field Diary 3rd Quarter of Year 2022

Species	Place	Number	How observe	Date	Name of observer	Remarks
Philippine cockatoo	Borbon	27	Seen	July 2022	Monitoring Team	Flying
Philippine cockatoo	RIWS	30	Seen	July 2022	Monitoring Team	Flying
White-bellied sea eagle	RIWS	2	Seen	August 2022	Monitoring Team	Flying near the seagrass station
Green imperial pigeon	RIWS	6	Seen	August 2022	Monitoring Team	Flying
Hawks Bill turtle	RIWS	2	Seen	August 2022	Monitoring Team	Flying
Philippine cockatoo	RIWS	22	Seen and heard	August 2022	Monitoring Team	Flying
Common koel	RIWS	3	Heard	August 2022	Monitoring Team	Flying
Common iora	RIWS	6	Heard	August 2022	Monitoring Team	Flying
Asian fairy-bluebird	RIWS	1	Heard	August 2022	Monitoring Team	Flying

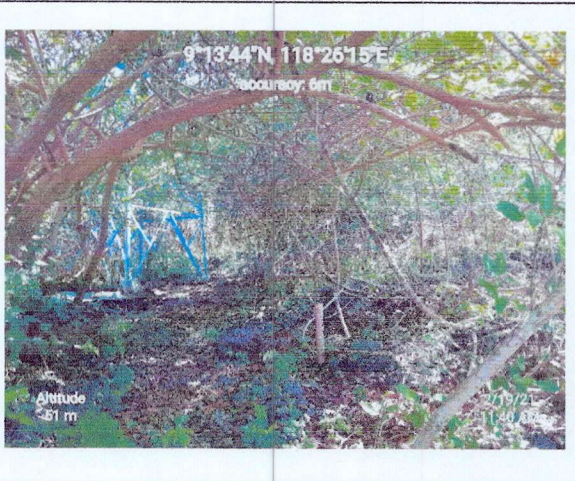
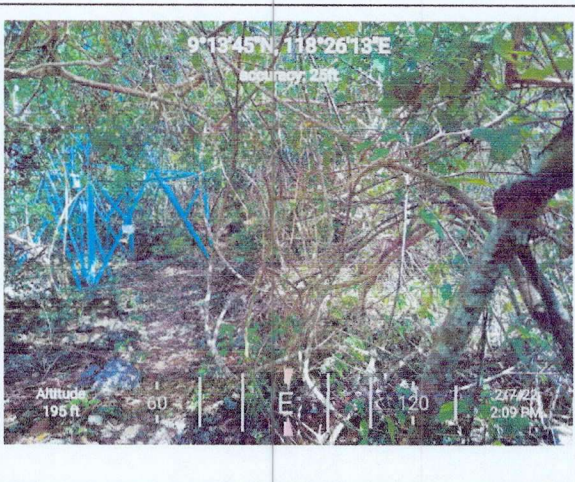

Slender-billed crow	RIWS	21	Heard	August 2022	Monitoring Team	Flying
Sunbird sp.	RIWS	5	Heard	August 2022	Monitoring Team	Flying
Great Coucal	RIWS	3	Heard	August 2022	Monitoring Team	Flying
Pipit sp.	RIWS	2	Heard	September 2022	Monitoring Team	Flying
Philippine megapode/Tabon Scrubfowl	RIWS	4	Heard	September 2022	Monitoring Team	Flying
Philippine megapode/Tabon Scrubfowl	RIWS	2	Seen	September 2022	Monitoring Team	Foraging
Blue paradise fly catcher	RIWS	4	Heard	September 2022	Monitoring Team	Flying
Blue-naped Monarch	RIWS	1	Heard	September 2022	Monitoring Team	Flying
Great-billed heron	RIWS	2	Seen	September 2022	Monitoring Team	Looking for food
Large Flying Fox	Panacan	500-3000	Seen	September 2022	Jeter Manliguz	Flying from RIWS to mainland
Great-billed heron	RIWS	1	Seen	September 2022	Monitoring Team	Looking for food
Large Flying Fox	RIWS	6,000 – 8,000	Seen	August 2022	Monitoring Team	Flying Outside RIWS

Philippine cockatoo	Borbon, Panacan	112	Seen	September 2022	Monitoring Team	Roosting
Red-headed Flameback/Woodpecker	RIWS	2	Heard	July 2022	Wardens	Flying
Nicobar Pigeon	RIWS	1	Heard	July 2022	Wardens	Flying
Egret sp.	RIWS	3	Seen	July 2022	Wardens	Foraging
Mantani Scops-owl	RIWS	1	Heard	July 2022	Wardens	Roosting
Philippine Cokatoo	RIWS	56	Seen	July 2022	Wardens	Roosting
Spotted Wood-owl	RIWS	2	Heard	July 2022	Wardens	Roosting
Stork-billed kingfisher	RIWS	1	Seen	July 2022	Wardens	Flying
Large Flying Fox	Antipuluan	50	Seen	September 2022	Monitoring Team	Foraging
Great-billed Heron	RIWS	2	Seen	July 2022	Monitoring Team	Foraging
Emerald Dove	RIWS	1	Seen	July 2022	Monitoring Team	Flying
White-bellied sea eagle	RIWS	2	Seen	September 2022	Monitoring Team	Flying
Dollar bird	RIWS	3	Seen	July 2022	Wardens	Flying
Zebra Dove	RIWS	1	Heard	July 2022	Wardens	Flying
Reef Egret	RIWS	2	Seen	July 2022	Wardens	Foraging
Asian Glossy Starling	RIWS	1	Heard	July 2022	Wardens	Foraging

Photo documentation data

Rasa Island has green vegetation in July 2022. Leaf litters are less dense. Fruiting trees and vines are Ginlaid (dominant fruiting species), Pagatpat, Siar, Balindadagat, Kalampinay, Balete, Gatasan, Magtalisay, Lomo-lomo, Sapi-sapinet, vine sp., Gubaay, Piagaw, Banaro, Tangal, *Rhizophora sp.*, and other mangrove species while flowering trees and vines are Ginlaid, Barenben, Tapo-hamog, albotra (vine), Tangal, *Rhizophora sp.* and other mangrove species.

4.1 Photo documentation Data

<p>Terrestrial BMS Station 1. Taken last February 19, 2021 during 1st Semester of FY 2021</p>	
<p>Terrestrial BMS Station 1. Taken last February 7, 2022 during 1st Semester of FY 2022</p>	
<p>Terrestrial BMS Station 1. Taken this September, 2022 for the 2nd Semester of FY 2022</p>	

Transect Data

The table below shows the summary of gathered data in transect method. There are two transect routes that were monitored and assessed. Five (5) 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 below.

4.2 Summary of Transect Data from July to September 2022

Name of Transect route	Date Survey	No. of times surveyed since established	Priority Species and uses recorded	No. of species recorded this quarter
Terrestrial 2Km transect	July to September 2022		Philippine cockatoo	25 Avifaunal Species
			White-bellied sea eagle	
			Green Imperial pigeon	
			Grey Imperial pigeon	
			Common Koel	
			Common Iora	
			Asian Fairy Bluebird	
			Slender-bill crow	
			Sunbird sp.	
			Great Coucal	
			Pipit sp.	
			Philippine Scrubfowl	
			Megapode/Tabon	
			Blue Paradise flycatcher	
			Blue-naped monarch	
			Greta-billed heron	
			Red-headed Flameback/Woodpecker	
			Nicobar pigeon	
			Egret sp.	
			Mantani Scops-owl	
			Spotted Wood-owl	
			Stork King-fisher	
			Emerald Dove	
			Dollar Bird	
			Zebra Dove	
			Reef egret	
			Asian Glossy Starling	
Marine Transect	July to September 2022		<i>Enhalus acoroides</i>	5 seagrass species
			<i>Thalassia hemprichii</i>	
			<i>Cymodocea rotundata</i>	
			<i>Cymodocea serrulata</i>	
			<i>Halophila ovalis</i>	
	July to September 2022		<i>Erythmochelys imbricata</i> "Hawksbill turtle"	1 reptile species

Graph showing trends of seagrass % cover in Rasa Island Wildlife Sanctuary from 1st Semester of Year 2021, 1st Semester of Year 2022, and 2nd Semester of Year 2022

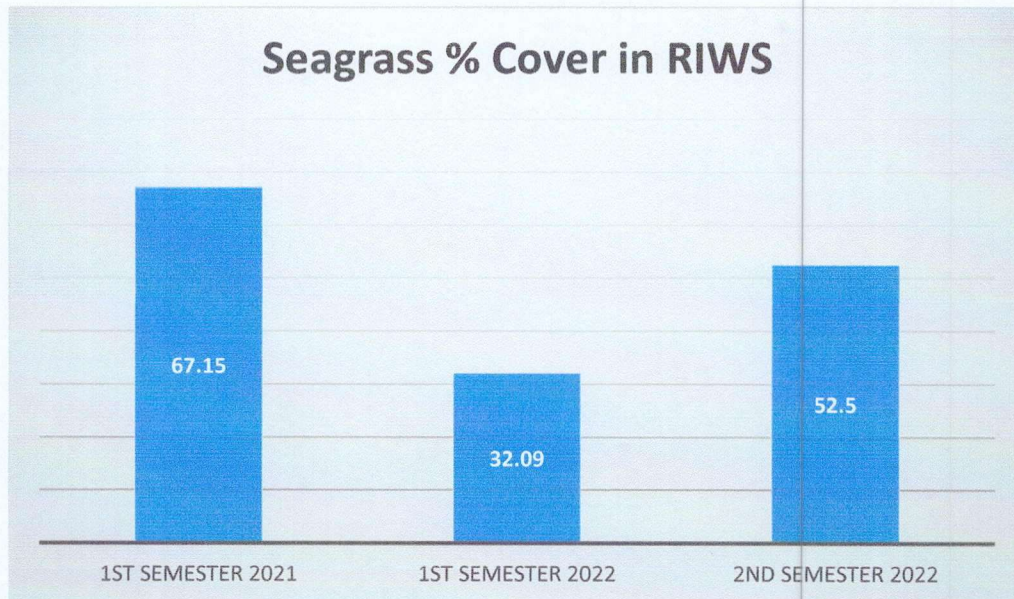


Figure 1. Seagrass Species Cover from 1st Semester 2021 to 2nd Semester 2022

Seagrass cover this semester falls into good condition with an average cover of 52.5%. It was also noted that there is a significant changes in the seagrass cover from the 1st semester of 2021 to the 2nd semester of 2022. Decrease in the seagrass cover during the 1st semester of 2022 might be caused by the typhoon Odette, climate change and other affecting factors (Figure 1).

Graph showing trends of hard coral cover% cover in Rasa Island Wildlife Sanctuary from 1st Semester of Year 2021, 1st Semester of Year 2022, and 2nd Semester of Year 2022

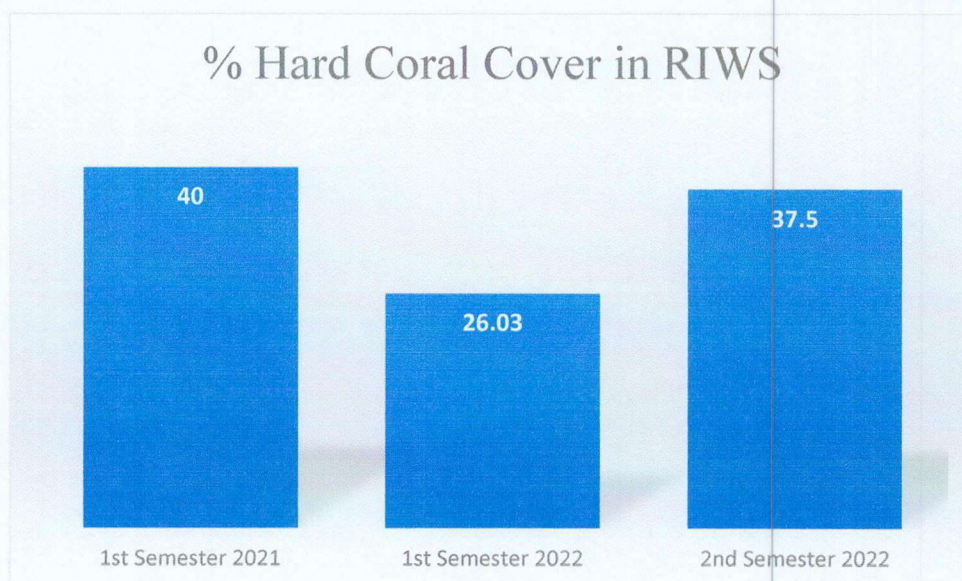


Figure 1. Hard Coral Cover from 1st Semester 2021 to 2nd Semester 2022

Figure 2. Shows the Hard coral cover in Rasa Island Wildlife Sanctuary from 1st Semester of FY 2021 to 2nd semester of 2022. A total mean of 37.5% was computed for the hard live corals cover during this semester. Significant change in the hard coral cover might be caused by natural phenomena.

4.3 Summary of Focus Group Discussion data 3rd Quarter of year 2022

PA Name: Rasa Island Wildlife Sanctuary (RIWS)

Total No. of Sites with Community Monitoring Groups: 5

Name of Bgy. and members of Community Monitoring Group	Date of CMG meeting this Quarter	Total no. of CMGs
Bgy. Pancan I, Narra, Palawan Lita V. Celino Erlinda Villacruz Caridad D. Dela Torre Fernalita P. Consensusino Lewilyn Loshiangco Alfredo Dela Torre Jr. Nelsa B. Serioza Lorenic S. Misa Lelita B. Dela Torre Lyn R. Duguran Don. M. Venerando Rigelio V. Mahinay Allan Malatambay Cyrill F. Villanueva Leo V. Villanueva Charlie E. Mahinay Lino B. Villanueva	September 2, 2022	1
Borbon, Panacan I, Narra, Palawan Efren Paragatos Alex Noquera Rosanne T. Sipat Helen Fernando Emelda V. Solano Eliberto Paragatos Hay Bacalla Maria Joy Bacalla Romelyn Moreno Rosilyn Paragatos Danilo Vergara Angelita P. Locsin Ma. Wilma Noquero	September 12, 2022	1

Rodger Pasaday Christina Balay Alfredo Pelayo Anotonio Noquera Jr. Jay Ar Arroyo			
Bgy. Panacan II, Narra, Palawan Jervie Godinez Agape Caballero Zebestru Rito Joan Antojado Ace Deguzman Arjay Mahinay Jover Fernandez Larry danao Leo Jiton Benidicto Simeon Benny Ibanez Miguel B. Alejandro Ramel Dicar Roderick Causing Joren MAngubat Joliar Fernandez	September 12, 2022	1	
Bgy. Antipuluan, Narra, Palawan Concepcion D. Baalan Zaldy I. Vargas Elvie O. Manolo Ulpiano Andas Mark D. Andas Maria Fe Sioco Melody A. Manolo Joel M. Andas Simeon P. Detablan Dommador Oyasan Jerick Caoli Michael John T. Dagunan Mary L. Manolo Jinky B. Detablan Liza M. Dela Torre Vicente Casidsid	September 9, 2022	1	
Bgy. Caguisan, Narra, Palawan	September 16, 2022	1	

Irenio Deig Wilfredo Batac Mario Batac Edwin Batac Amelia Deig Aguilardo Deig Nolita P. Alisto Pipina B. Batac Violeta E. Cahilo Charmelito P. Batac Teresita B. Espinosa Rosemarie Sequina Corcepio Beleg Bonifacio Basio Loreto Panaguiton Ronaldo Deig Elreno Deig'			
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Focus Group Discussion was conducted in the coastal Barangays adjacent to the Protected Area particularly in Sitio. Borbon, Bgy. Panacan I, Bgy. Panacan I, Bgy. Panacan II, Bgy. Antipuluan and Bgy. Caguisan, Narra, Palawan. Informal dialogue was conducted among Barangay Officials, Fisher folks, Barangay residents, 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. Panacan I, Panacan II and 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.

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.

While IPs communities from Bgy. Caguisan mainly depend on gleaning activity in the vicinity of Rasa Island Wildlife Sanctuary. IPs collects sea shells for consumption as well as seaweeds commonly known as "Lato".

Wildlife

Large numbers of Philippine Cockatoo locally known as “Katala” or “Abukay” visits and forage in the mainland particularly in the coastal barangays adjacent to Rasa Island Wildlife Sanctuary. 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) as well as warden scheme implementation of LGU in coordination with the KFI.

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

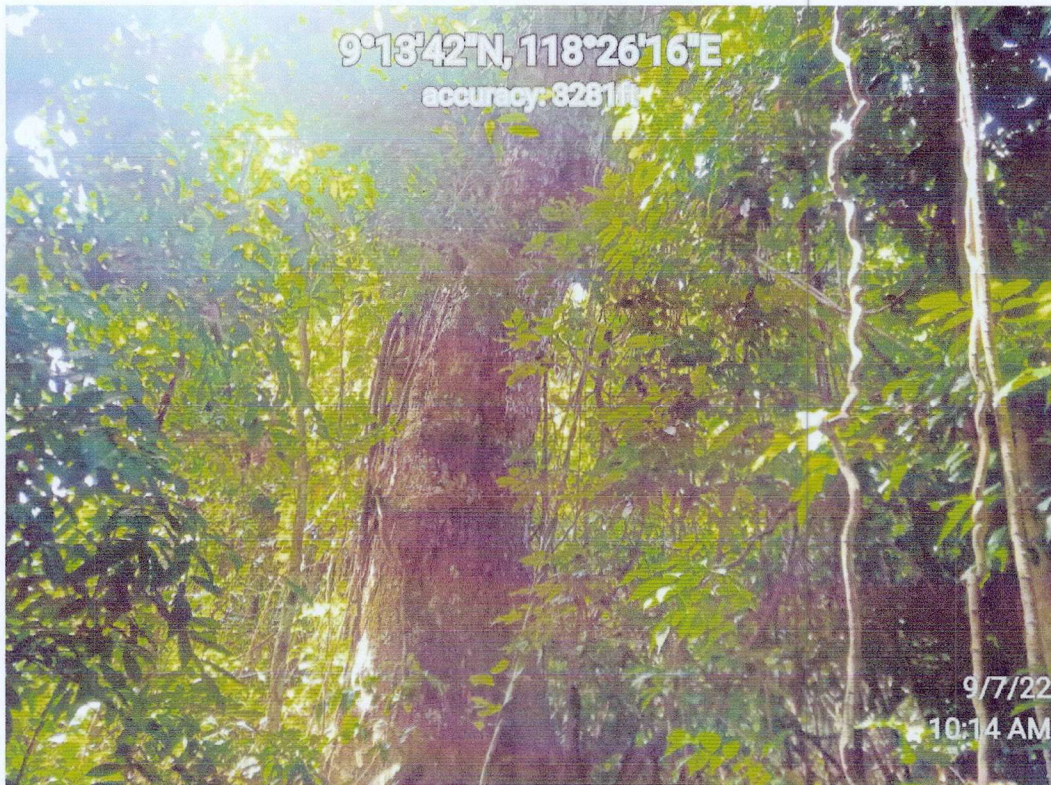
Rasa Island has green vegetation during this semester. Leaf litters are less dense. Seagrass is in good condition, which implies that there are less destructive activities within the PA, however, this result also implies that there are changes observed in the condition of seagrass as well as in the hard corals cover since during the previous conduct of assessment on the last semester of CY 2021. Natural phenomena was the main cause of the current condition of seagrass and corals 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.

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 both in flora and fauna were biological indicator species and plays an important role in our ecosystem.

Thus, continuous patrolling and wildlife monitoring, continuous conduct of Information Education and Communication (IEC) campaign to the community about ecological importance of Rasa Island Wildlife Sanctuary as a Protected Area 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, NGO, Acadme 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 a must.

ANNEXES

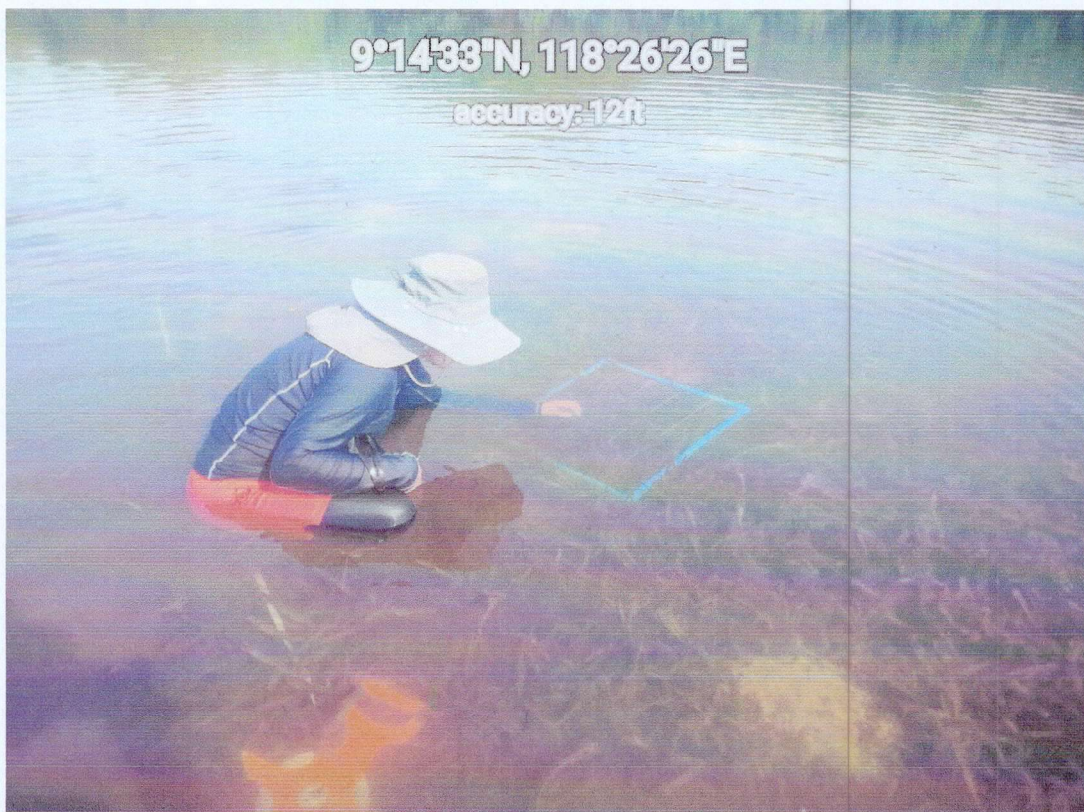
Annex A. Photo-documentation during the conduct of terrestrial transect walk in Rasa Island Wildlife Sanctuary (2km permanent transect station).



Annex B1. Photo-documentation during the conduct of transect swim in Rasa Island Wildlife Sanctuary's Marine Ecosystem (Coral Reef).



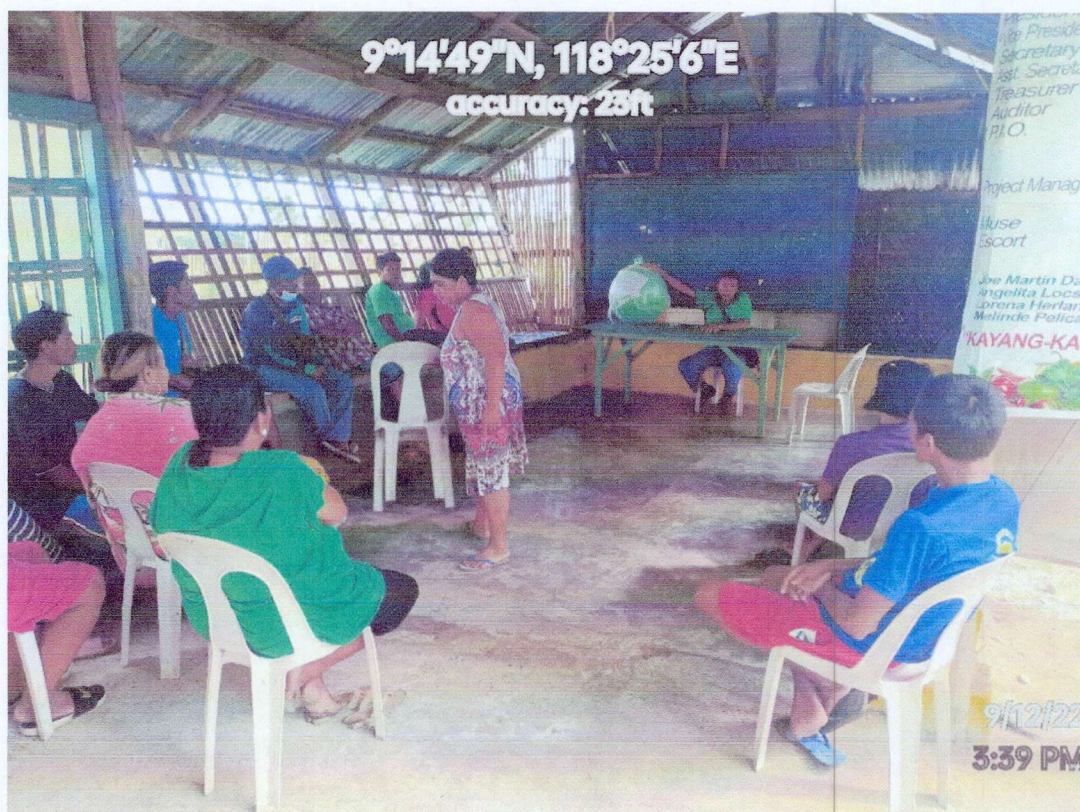
Annex B2. Photo-documentation during the conduct of transect swim in Rasa Island Wildlife Sanctuary's Marine Ecosystem (Seagrass Beds).



Annex C1. Geotagged photos during the conduct of Focus Group Discussion Activity



Annex C2. Geotagged photos during the conduct of Focus Group Discussion Activity



Annex C3. Geotagged photos during the conduct of Focus Group Discussion Activity



Annex C4. Geotagged photos during the conduct of Focus Group Discussion Activity



References

Biodiversity Monitoring System Manual for Protected Areas
BMB Technical Bulletin No. 2019-04
BMB Technical Bulletin No. 2017-05
Philippine Birds Call recordings
KFI Monthly Patrol Report