

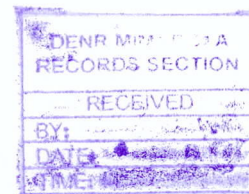


Republic of the Philippines
Department of Environment and Natural Resources
Provincial Environment and Natural Resources Office
MIMAROPA Region

Bgy. Sta. Monica, Puerto Princesa City, Palawan

E-mail: penropalawan@denr.gov.ph

Telfax No. (048) 433-5638 / (048) 433-5638



April 12, 2023

MEMORANDUM

FOR : The Regional Executive Director
DENR MIMAROPA
1515 DENR By the Bay Bldg., Roxas Boulevard,
Barangay 668, Ermita, Manila

THRU : The OIC, ARD for Technical Services

FROM : The Provincial Environment and
Natural Resources Officer

SUBJECT : **1ST QUARTER REPORT ON MANGROVE ASSESSMENT
UNDER MARINE PROTECTED AREA STRENGTHENING
AND NETWORKING OF ENMRPA FOR CY 2023**

Respectfully forwarded is the memorandum dated March 30, 2023 of CENRO Taytay, Palawan along with the report on mangrove monitoring within El Nido Managed Resource Protected Area (ENMRPA).

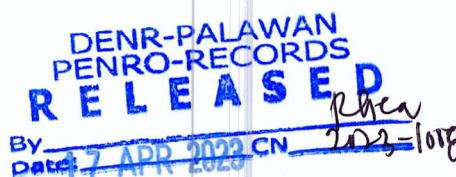
Please be informed that the monitoring of mangroves was conducted by the ENTMRPA-PAMO together with Municipal Environment and Natural Resources Office (MENRO), El Nido, Palawan last February 9, 2023 at Bgy. Manlag, El Nido, Palawan covering 76.37-hectare sampling area. Further, there were mangrove cuttings and existing fishpond observed. Therefore, regular monitoring was recommended to avoid further anthropological disturbances.

This serves as **Means of Verification (MoV)** for target activities for CY 2023.

For information and record.



HELIZARDO B. CAYATOC





March 30, 2023

MEMORANDUM

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

FROM : The Community Environment and Natural Resources Officer
Taytay, Palawan

SUBJECT : **ACCOMPLISHMENT REPORT ON ACTIVITY PER WFP
El Nido Managed Resource Protected Area (ENMRPA)**

DENR PENRO
PALAWAN RECORDS
RECEIVED

BY: *[Signature]*
DATE: 04/11/2023 CN 23-3220

Activity	Monitoring of Corals, Mangroves, and Seagrass			
Performance Indicator	Hectarage of habitats per PA monitored (Mangroves)			
Frequency of submission	Quarterly Report			
Current Submission	Memo report of PASu Mildred A. Suza dated March 23, 2023 (CN 2023 in the eDATS) submitting the 1st quarter report on assessment of Mangroves for Protected Area Management Office of El Nido Managed Resource Protected Area (ENMRPA). Attachment: 1. Memo report of CMEMP E.O. Mariel M. Paladan dated March 22, 2023. Based on the report, a total of 76.37 hectares of mangroves were assessed at Barangay Manlag, El Nido, Palawan (Site 2). 2. Photo documentation 3. Map 4. Raw data on Relative Density of mangrove species per transect 5. Raw data on Relative Frequency of mangrove species per transect 6. Raw data on Relative Dominance of mangrove species per transect 7. Raw data on Importance Value (IV) of mangrove species per transect 8. Raw data on Shannon-Weiner diversity index of mangrove species per transect 9. Data Sheet for mangrove assessment (21 pages)			
Gender and Development (GaD) data	Male=7	Female=1	LGBTQ+=0	Prefer not to say =1
Age Grouping	60 and above	18-59	17 and below	TOTAL
	0	9	0	9
Environmental Management System (EMS) compliance	✓ Compliant to 5S organization techniques (SORT-keep only necessary items, SET IN ORDER-arrange items to promote efficient workflow, SHINE-clean the work area so it is neat and tidy, STANDARDIZE set standards for a consistently organized workplace and SUSTAIN-maintain and review standard). ✓ Organized travel to maximize conveyance and observance of Speed limit during the activity were practiced to minimize fuel consumption. ✓ Carpooling ✓ No single use plastic was used during the activity ✓ PENRO Memo No. 2023-001 dated February 21, 2023			

Explanation: Accordingly in the cascading of targets under CDS in PENRO, the activity for mangrove monitoring was changed to mangrove assessment.

This is our progress report on the activity. Please confirm your receipt hereof. Thank you.

Copy furnished:
PAMO-ENTMRPA

DENR CENRO
TAYTAY, PALAWAN
RELEASED

BY: *[Signature]*
DATE: MAR 30 2023 1268

CONRADO M. CORPUZ



Republic of Philippines
Department of Environment and Natural Resources
MIMAROPA Region
COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE
Taytay, Palawan

DOCUMENT ACTION INFORMATION FORM

Doc. Ref. No.: **2023-2023**

Date and Time received

03/24/2023 09:47:52 AM

From: Mildred A. Suza

Document Type: Memorandums

ENMRPA-PAMO, El Nido, Pal.

Subject: Memo/Re: Report on Mangrove Assesment under Marine Protected Area Strengthening and Networking of ENMRPA.
(CN 23-0284)

Attachment(s): No attachment(s)

Earmarked As :

Date:	3/23/23	From:	CSM	To:	CHS
Action Recommended/Required:		Processing Time:		Remarks:	
☐ For Action		☐ Urgent (w/in the day)		Pls forward copy to Mr. & Mrs. IV & Planning office	
☐ For Approval		☐ Priority (w/in 3 days)			
☐ For Disbursement/ Payment		☐ Complex			
☐ For Information, Record and File		___ w/in 7 days			
☐ For Indorsement to concerned Party(ies)		___ w/in 20 days or shorter			
☐ For Official Release		W/in ___ days or shorter		Signature:	
☐ For Review/Recommendation					
☐ For Signature					
☐ Return to Payee/Sender					
☐ Others					
Date:	3-29-23	From:	CHS	To:	Mr. & Mrs. IV
Action Recommended/Required:		Processing Time:		Remarks:	
☐ For Action		☐ Urgent (w/in the day)		Kindly draft/prepare memorandum, furnish copy to DDO & Planning as per J. TX	
☐ For Approval		☐ Priority (w/in 3 days)			
☐ For Disbursement/ Payment		☐ Complex			
☐ For Information, Record and File		___ w/in 7 days			
☐ For Indorsement to concerned Party(ies)		___ w/in 20 days or shorter			
☐ For Official Release		W/in ___ days or shorter		Signature: RA	
☐ For Review/Recommendation					
☐ For Signature					
☐ Return to Payee/Sender					
☐ Others					
Date:		From:		To:	
Action Recommended/Required:		Processing Time:		Remarks:	
☐ For Action		☐ Urgent (w/in the day)			
☐ For Approval		☐ Priority (w/in 3 days)			
☐ For Disbursement/ Payment		☐ Complex			
☐ For Information, Record and File		___ w/in 7 days			
☐ For Indorsement to concerned Party(ies)		___ w/in 20 days or shorter			
☐ For Official Release		W/in ___ days or shorter		Signature:	
☐ For Review/Recommendation					
☐ For Signature					
☐ Return to Payee/Sender					
☐ Others					

Printed on 03/24/2023 9:47:59AM Received at: OFFICE OF THE CENR Received by: ALLADO, JEANETTE



MAR 23 2023

MEMORANDUM

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

FROM : The Protected Area Superintendent
El Nido Managed Resource Protected Area

SUBJECT : REPORT ON MANGROVE ASSESSMENT UNDER MARINE PROTECTED AREA STRENGTHENING AND NETWORKING OF ENMRPA

**DENR CENRO
TAYTAY, PALAWAN
RECEIVED**
BY: *[Signature]*
DATE: 3-24-23 CN 2023

Activity	Monitoring of mangrove per PA under MPA Management, Strengthening, and Networking			
Performance Indicator	Hectarage of habitats per PA monitored			
Frequency of Submission	1 st to 4 th quarter			
Current Submission	Memo report of CMEMP Extension Officer dated March 22, 2023 covering 1 st quarter of CY 2023			
Gender and Development (GaD) data	Male= 7	Female = 1	LGBTQ+=0	Prefer not to say = 1
Age Grouping	60 and above =0	18-59 = 9	17 and below	TOTAL = 9
Environmental Management System (EMS) compliance	✓ Compliant to 5S organization techniques (SORT – keep only necessary items, SET IN ORDER – arrange items to promote efficiency workflow, SHINE – clean the work area so it is neat and tidy, STANDARDIZE set standards for a consistently organized workplace and SUSTAIN – maintain and review standard). ✓ No Single Use plastic was used during the activity.			

This serves as our Means of Verification (MOV) of the target.

For information and record.

**DENR - PAO
ENTMRPA,
El Nido, Palawan**
RELEASED
By: *[Signature]*
Date: 03-23-2023
C.N.: 0284

[Signature]
MILDRED A. SUZA



March 22, 2023

MEMORANDUM

FOR : The Protected Area Superintendent
El Nido- Taytay Managed Resource Protected Area

FROM : CMEMP Extension Officer
El Nido- Taytay Managed Resource Protected Area

SUBJECT : REPORT ON MANGROVE ASSESSMENT UNDER MARINE PROTECTED AREA STRENGTHENING AND NETWORKING OF ENTMRPA



This pertains to the target activity 001 Monitoring of Mangroves per PA under Marine Protected Area Strengthening and Networking of El Nido Managed Resource Protected Area (ENMRPA) – Protected Area Management Office (PAMO).

Please be informed that the undersigned, together with ENTMRPA-PAMO staff Reina Rose Abordo, Steven John Andao, Bret Hart Sanogal, Ryan Cacacha, John Everette Pable, John Vincenth Cuyo, and Municipal Environment and Natural Resources Office (MENRO) staff, conducted mangrove assessment at Barangay Manlag, El Nido, Palawan (Site 2), covering a 76.37-hectare sampling area with three (3) transect lines perpendicular to the shore, seventeen (17) 10m by 10m quadrats and 2m by 2m quadrats within the 10m by 10m quadrat representing the whole mangrove extent.

Table 1 List of mangrove species recorded and observed within sampling plots

Common Name	Scientific Name	IUCN Classification
Lagiwliw	<i>Acanthus ebracteatus</i>	Least Concern
Lagiwliw	<i>Acanthus ilicifolius</i>	Least Concern
Apiapi	<i>Avicennia marina</i>	Least Concern
Palaypay	<i>Acrostichum speciosum</i>	Least Concern
Pototan	<i>Bruguiera cylindrica</i>	Least Concern
Pototan	<i>Bruguiera gymnorrhiza</i>	Least Concern
Saging-saging	<i>Aegiceras floridum</i>	Near Threatened
Baras-baras	<i>Camptostemon philippinensis</i>	Endangered
Nipa	<i>Nypa fruticans</i>	Least Concern
Bakhaw lalake	<i>Rhizophora apiculata</i>	Least Concern
Bakhaw babae	<i>Rhizophora mucronata</i>	Least Concern
Pagatpat	<i>Sonneratia ovata</i>	Least Concern
Tabigi	<i>Xylocarpus granatum</i>	Least Concern

A total of thirteen (13) species of mangroves were identified and recorded within the assessed sampling site. The species found in each plot were identified and classified taxonomically using field guide of J.H. Primavera, Ph. D., (2009). Of the thirteen (13) species, one (1) classified as endangered the *Camptostemon philippinensis* and one (1) near threatened, *Aegiceras floridum* according to IUCN red list.

IMPORTANCE VALUE

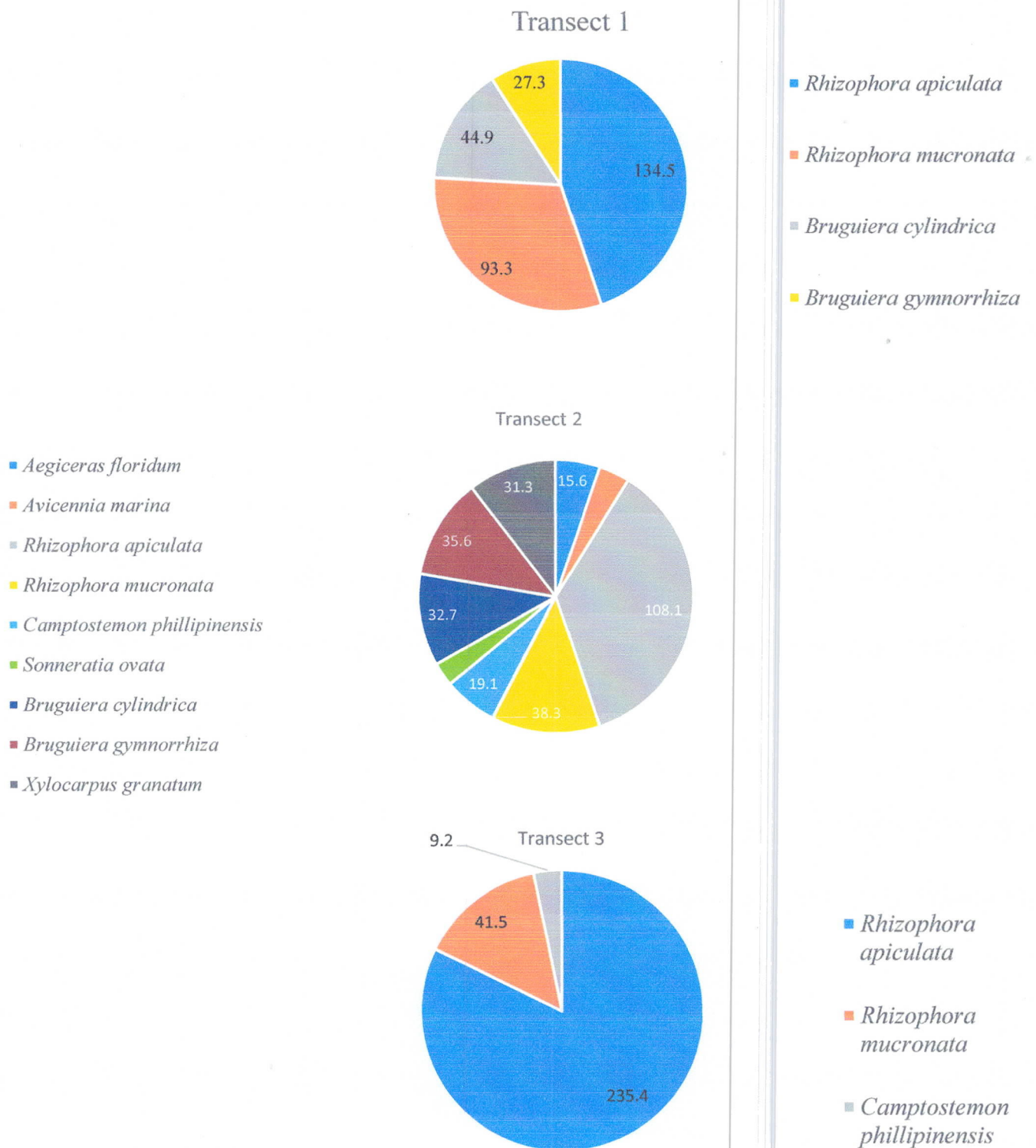


Figure 1 Result on the computed importance value per transects

Among the species recorded and identified *Rhizophora apiculata* is the most dominant species with the highest importance value in all transect (as seen in Figure 1). Further the

The condition of mangroves is classified in four categories which namely excellent, good, fair, and poor in terms of their percent crown cover, average height and regeneration per square meter. In percent crown cover transect 1 and 2 an excellent condition, while transect 3 is in poor condition. In terms of average height of mangroves all transects are in excellent condition. However, the regeneration per square meter of mangroves transect 1 is in fair condition, while transect 2 and r are in excellent condition.

Table 2 Mangrove condition per transect

Transect	CONDITION		
	PERCENT CROWN COVER	AVERAGE HEIGHT	REGENERATION PER SQ.M
Transect 1	EXCELLENT	EXCELLENT	FAIR
Transect 2	EXCELLENT	EXCELLENT	EXCELLENT
Transect 3	POOR	EXCELLENT	EXCELLENT

As reflected in table 3, the result of Shannon-Weiner diversity index of all transects are falls under very low diversity based in the classification scheme given by Fernando et al. 1998.

Table 3 Result of Shannon-Weiner Diversity Index in every transect

TRANSECT	SHANNON-WEINER INDEX (H')	RELATIVE VALUES
Transect 1	0.70	Very Low
Transect 2	1.05	Very Low
Transect 3	0.71	Very Low

Furthermore, there were mangrove cuttings and fishpond observed. It is recommended to conduct regular monitoring in all mangrove forest within of ENTMRPA in order to protect the mangrove forest from anthropological disturbances.

Attached are the photo documentation, raw data and maps of the said activity.

This serves as Means of Verification (MOV).

For information and record.



MARIEL M. PALADAN

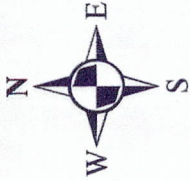
PHOTO DOCUMENTATION



CERTIFICATION

This is to certify that the above photos are true and correct and taken during the mangrove monitoring at Bgy. Manlag, El Nido, Palawan


MARIEL M. PALADAN
CMEMP Extension Officer



MAP

SHOWING THE SITE 2 MANGROVE AREA
ASSESSED IN BGY. MANLAG, EL NIDO,
PALAWAN

Area : 76.37 Hectares

SCALE : 1:9,992



LEGEND

Mangrove

Political Boundary

Fishpond

PA Boundary

Transect Line

Quadrat

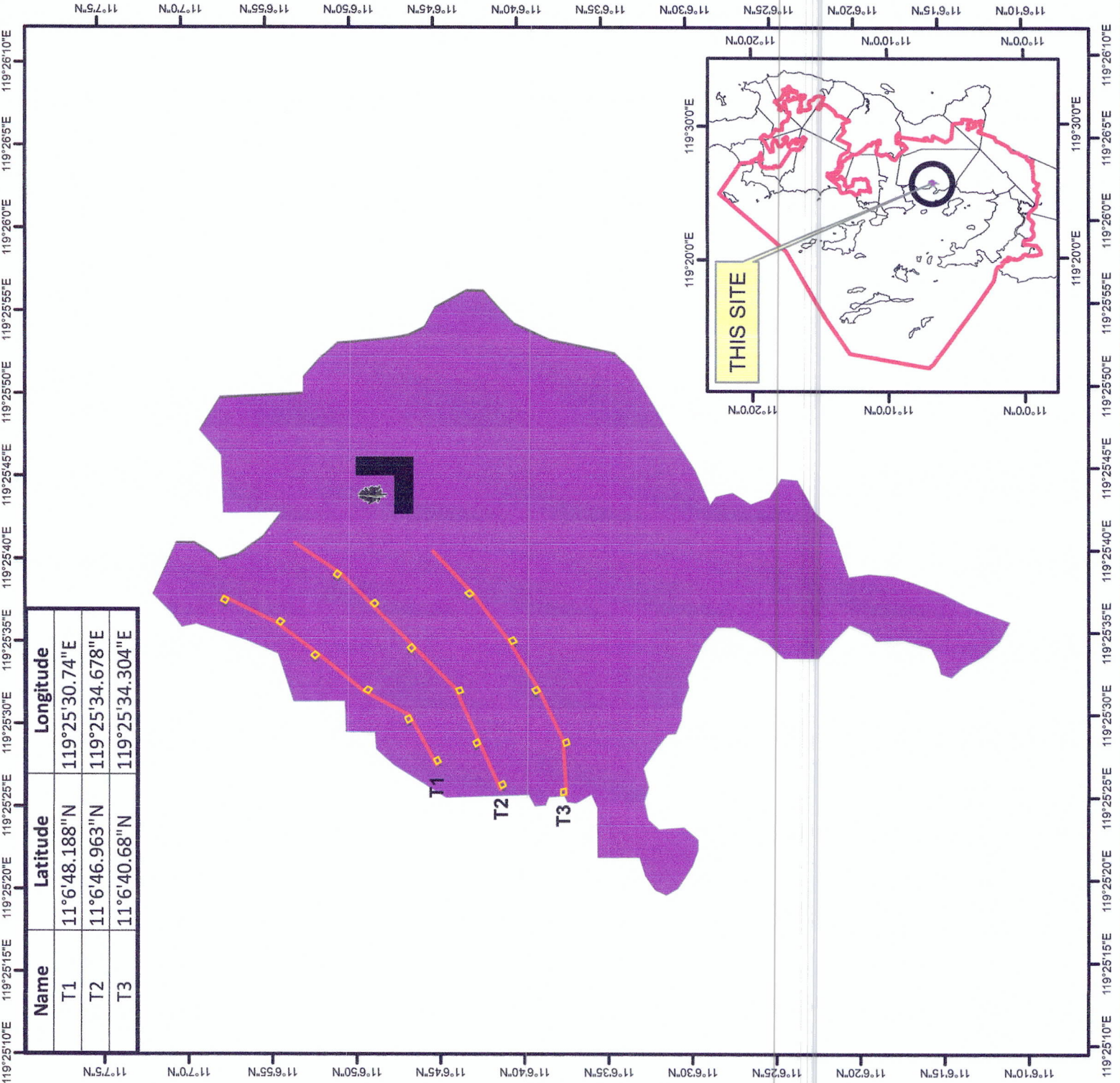
Projection : Universal Transverse Mercator Z50N
Datum : World Geodetic System 1984



Republic of the Philippines
Department of Environment and Natural Resources
Region IV - MIMAROPA
Community Environment and Natural Resources Office
Taytay 5312, Palawan

PREPARED BY :

THE PROTECTED AREA MANAGEMENT
OFFICE - EL NIDO-TAYTAY MANAGED
RESOURCE PROTECTED AREA
(PAMO-ENTMRPA)



Name	Latitude	Longitude
T1	11°6'48.188"N	119°25'30.74"E
T2	11°6'46.963"N	119°25'34.678"E
T3	11°6'40.68"N	119°25'34.304"E

Appendix 1. Raw data on Relative Density of mangrove species per transect

TRANSECT 1

Local Name	Scientific Name	n	Den	R Den
		total no. of species	no. of individual species/area sampled	(No.of Individual Species/ Sum of the densities of all species sampled) x 100 (%)
Bakawan lalaki	<i>Rhizophora apiculata</i>	67	0.11	54.47
Bakawan babae	<i>Rhizophora mucronata</i>	41	0.07	33.33
Pototan	<i>Bruguiera cylindrica</i>	6	0.01	4.88
Pototan	<i>Bruguiera gymnorrhiza</i>	9	0.02	7.32
	TOTAL	123	0.21	100

TRANSECT 2

Local Name	Scientific Name	n	Den	R Den
		total no. of species	no. of individual species/area sampled	(No.of Individual Species/ Sum of the densities of all species sampled) x 100 (%)
Saging-saging	<i>Aegiceras floridum</i>	2	0.003	1.190
Apiapi	<i>Avicennia marina</i>	1	0.002	0.595
Bakawan lalaki	<i>Rhizophora apiculata</i>	122	0.203	72.619
Bakawan babae	<i>Rhizophora mucronata</i>	19	0.032	11.310
Gapas gapas	<i>Camptostemon phillipinensis</i>	3	0.005	1.786
Pedada	<i>Sonneratia ovata</i>	1	0.002	0.595
Pototan	<i>Bruguiera cylindrica</i>	16	0.027	9.524
Pototan	<i>Bruguiera gymnorrhiza</i>	2	0.003	1.190
Tabigi	<i>Xylocarpus granatum</i>	2	0.003	1.190
	TOTAL	168	0.280	100.000

TRANSECT 3

Local Name	Scientific Name	n	Den	R Den
		total no. of species	no. of individual species/area sampled	(No.of Individual Species/ Sum of the densities of all species sampled) x 100 (%)
Bakawan lalaki	<i>Rhizophora apiculata</i>	51	0.102	78.462
Bakawan babae	<i>Rhizophora mucronata</i>	9	0.018	13.846
Gapas gapas	<i>Camptostemon phillipinensis</i>	2	0.004	3.077
Tabigi	<i>Xylocarpus granatum</i>	3	0.006	4.615
	TOTAL	65	0.130	100.000

Appendix 2. Raw data on Relative Frequency of mangrove species per transect

TRANSECT 1

Local Name	Scientific Name	no. of segments occurred	Frequency	Rf
		No. of quadrats spp found	Total no. of segments in which Species occurs/Total no. of segments sampled	(f value of Species occurs/Total f value of species) * 100 (%)
Bakawan lalaki	<i>Rhizophora apiculata</i>	4	0.667	40.000
Bakawan babae	<i>Rhizophora mucronata</i>	3	0.500	30.000
Pototan	<i>Bruguiera cylindrica</i>	2	0.333	20.000
Pototan	<i>Bruguiera gymnorrhiza</i>	1	0.167	10.000
	TOTAL	6	2	100.000

TRANSECT 2

Local Name	Scientific Name	no. of segments occurred	Frequency	Rf
		No. of quadrats spp found	Total no. of segments in which Species occurs/Total no. of segments sampled	(f value of Species occurs/Total f value of species) * 100 (%)
Saging-saging	<i>Aegiceras floridum</i>	1	0.167	5.263
Apiapi	<i>Avicennia marina</i>	1	0.167	5.263
Bakawan lalaki	<i>Rhizophora apiculata</i>	5	0.833	26.316
Bakawan babae	<i>Rhizophora mucronata</i>	4	0.667	21.053
Gapas gapas	<i>Camptostemon phillipinensis</i>	2	0.333	10.526
Pedada	<i>Sonneratia ovata</i>	1	0.167	5.263
Pototan	<i>Bruguiera cylindrica</i>	3	0.500	15.789
Pototan	<i>Bruguiera gymnorrhiza</i>	1	0.167	5.263
Tabigi	<i>Xylocarpus granatum</i>	1	0.167	5.263
	TOTAL	6	3.167	100.000

TRANSECT 2

Local Name	Scientific Name	no. of segments occurred	Frequency	Rf
		No. of quadrats spp found	Total no. of segments in which Species occurs/Total no. of segments sampled	(f value of Species occurs/Total f value of species) * 100 (%)
Bakawan lalaki	<i>Rhizophora apiculata</i>	5	1.000	45.455
Bakawan babae	<i>Rhizophora mucronata</i>	3	0.600	27.273
Gapas gapas	<i>Camptostemon phillipinensis</i>	1	0.200	9.091
Tabigi	<i>Xylocarpus granatum</i>	2	0.400	18.182
	TOTAL	5	2.200	100

Appendix 3. Raw data on Relative Dominance of mangrove species per transect

TRANSECT 1				
Local Name	Scientific Name	BA	Dom	R Dom
		Mean Total BA of individual species (m2)	Total BA of individual species/area sampled	(Total Basal Area (BA) of Species A/ total Dom of all species) x 100 (%)
Bakawan lalaki	<i>Rhizophora apiculata</i>	755.30	1.259	21.68
Bakawan babae	<i>Rhizophora mucronata</i>	3.98	0.007	0.11
Pototan	<i>Bruguiera cylindrica</i>	1300.00	2.167	37.31
Pototan	<i>Bruguiera gymnorrhiza</i>	1425.00	2.375	40.90
TOTAL		3484.28	5.81	100.00

TRANSECT 2				
Local Name	Scientific Name	BA	Dom	R Dom
		Mean Total BA of individual species (m2)	Total BA of individual species/area sampled	(Total Basal Area (BA) of Species A/ total Dom of all species) x 100 (%)
Saging-saging	<i>Aegiceras floridum</i>	450	0.750	9.14
Apiapi	<i>Avicennia marina</i>	250	0.417	5.08
Bakawan lalaki	<i>Rhizophora apiculata</i>	450	0.750	9.14
Bakawan babae	<i>Rhizophora mucronata</i>	290.38	0.484	5.90
Gapas gapas	<i>Camptostemon phillipinensis</i>	333.33	0.556	6.77
Pedada	<i>Sonneratia ovata</i>	125	0.208	2.54
Pototan	<i>Bruguiera cylindrica</i>	364.06	0.607	7.39
Pototan	<i>Bruguiera gymnorrhiza</i>	1437.5	2.396	29.19
Tabigi	<i>Xylocarpus granatum</i>	1225	2.042	24.87
TOTAL		4925.28	8.20880	100

TRANSECT 3				
Local Name	Scientific Name	BA	Dom	R Dom
		Mean Total BA of individual species (m2)	Total BA of individual species/area sampled	(Total Basal Area (BA) of Species A/ total Dom of all species) x 100 (%)
Bakawan lalaki	<i>Rhizophora apiculata</i>	424	0.707	21.09
Bakawan babae	<i>Rhizophora mucronata</i>	328	0.546	16.31
Gapas gapas	<i>Camptostemon phillipinensis</i>	183	0.306	9.12
Tabigi	<i>Xylocarpus granatum</i>	1075.00	1.792	53.48
TOTAL		2010.11	3.35019	100

Appendix 4. Raw data on Importance Value (IV) of mangrove species per transect

TRANSECT 1

Local Name	Scientific Name	IV
		Rf + Rden + Rdom (%)
Bakawan lalaki	<i>Rhizophora apiculata</i>	134.47
Bakawan babae	<i>Rhizophora mucronata</i>	93.33333333
Pototan	<i>Bruguiera cylindrica</i>	44.87804878
Pototan	<i>Bruguiera gymnorhiza</i>	27.31707317
TOTAL		300.00

TRANSECT 2

Local Name	Scientific Name	IV
		Rf + Rden + Rdom (%)
Saging-saging	<i>Aegiceras floridum</i>	15.590
Apiapi	<i>Avicennia marina</i>	10.934
Bakawan lalaki	<i>Rhizophora apiculata</i>	108.071
Bakawan babae	<i>Rhizophora mucronata</i>	38.258
Gapas gapas	<i>Camptostemon phillipinensis</i>	19.080
Pedada	<i>Sonneratia ovata</i>	8.396
Pototan	<i>Bruguiera cylindrica</i>	32.705
Pototan	<i>Bruguiera gymnorhiza</i>	35.640
Tabigi	<i>Xylocarpus granatum</i>	31.325
TOTAL		300.00

TRANSECT 3

Local Name	Scientific Name	IV
		Rf + Rden + Rdom (%)
Bakawan lalaki	<i>Rhizophora apiculata</i>	235.3846154
Bakawan babae	<i>Rhizophora mucronata</i>	41.53846154
Gapas gapas	<i>Camptostemon phillipinensis</i>	9.230769231
Tabigi	<i>Xylocarpus granatum</i>	13.84615385
TOTAL		300.00

Appendix 5. Raw data on Shannon-Weiner diversity index of mangrove species per transect

Transect 1				
Species	n	pi = ni/n	lnpi = LN (pi)	pi*lnpi
<i>Rhizophora apiculata</i>	67	0.544715	-0.60749174	-0.33091
<i>Rhizophora mucronata</i>	41	0.333333	-1.09861229	-0.3662
<i>Bruguiera cylindrica</i>	6	0.04878	-3.02042489	-0.14734
<i>Bruguiera gymnorrhiza</i>	9	0.073171	-2.61495978	-0.19134
TOTAL	123	0.878049	-1.70610402	-0.69711

Transect 2				
Species	n	pi = ni/n	lnpi = LN (pi)	pi*lnpi
<i>Aegiceras floridum</i>	2	0.011905	-4.4308168	-0.05275
<i>Avicennia marina</i>	1	0.005952	-5.12396398	-0.0305
<i>Rhizophora apiculata</i>	122	0.72619	-0.31994293	-0.23234
<i>Rhizophora mucronata</i>	19	0.113095	-2.179525	-0.24649
<i>Camptostemon phillipinensis</i>	3	0.017857	-4.02535169	-0.07188
<i>Sonneratia ovata</i>	1	0.005952	-5.12396398	-0.0305
<i>Bruguiera cylindrica</i>	16	0.095238	-2.35137526	-0.22394
<i>Bruguiera gymnorrhiza</i>	2	0.011905	-4.4308168	-0.05275
<i>Xylocarpus granatum</i>	2	0.030769	-3.48124009	-0.10712
TOTAL	168	1.018864	-31.4669965	-1.04827

Transect 3				
Species	n	pi = ni/n	lnpi = LN (pi)	pi*lnpi
<i>Rhizophora apiculata</i>	51	0.784615	-0.24256164	-0.19032
<i>Rhizophora mucronata</i>	9	0.138462	-1.97716269	-0.27376
<i>Camptostemon phillipinensis</i>	2	0.030769	-3.48124009	-0.10712
<i>Xylocarpus granatum</i>	3	0.046154	-3.07577498	-0.14196
TOTAL	65	1	-8.7767394	-0.71315

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan
Plot No. 2 Quadrat No. 1
Transect No. 1

Coordinates : Date: November 9, 2022
Observer(s): Mariel Paladan and MENRO

GPS unit: Locus Map Vegetation type:
Weather: Sunny

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	54	16	4	10	8	
2	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	27	5	2	2	2	
3	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	81	18	4	4	3	
4	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	40	18	2	3	2	
5	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	54	20	5	4	2	
6	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	27	6	1	3	2	
7	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	62	17	5	3	2	
8	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	31	7	4	5	4	
9	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	52	19	4	2	1	
10	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	34	16	3	2	1	
11	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	27	14	3	2.5	2	
12	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	29	4	2	2.5	2	
13	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	73	22	6	5	3	
14	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	49	18	2	3	2	
15	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	71	7	2	6	4	
16	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	40	6	2	4	5	
17	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	34	6	2	5	4	
18	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	56	17	9	3	2	

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan
Plot No. 2 Quadrat No. 1
Transect No. 2

Coordinates : Date: November 9, 2022
Observer(s): Mariel Paladan and MENRO

GPS unit: Locus Map Vegetation type:
Weather: Sunny

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	36	3	3	2	1	
2	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	15	5	4	2	1	
3	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	31	5	4	2	1	
4	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	15	6	5	1	1	
5	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	16	6	1	2	1	
6	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	27	9	1	1	1	
7	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	16	5	3	2	1	
8	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	32	9	2	2	1	
9	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	62	12	2	5	3	
10	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	12	6	1	1	1	
11	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	13	5	2	1	1	
12	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	18	7	3	3	2	
13	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	11	4	2	1	1	
14	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	9	2	1	2	1	
15	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	9	3	2	2	1	
16	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	27	12	4	3	1	
17	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	14	6	2	3	2	
18	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	36	14	3	5	3	
19	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	15	7	2	2	2	
20	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	11	3	2	1	1	
21	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	18	12	3	3	2	
22	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	34	13	3	4	3	
23	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	20	14	5	3	3	
24	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	13	6	1	2	2	
25	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	28	13	3	4	3	

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

26	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	35	15	3	4	3	
27	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	11	4	2	1	1	
28	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	23	12	5	3	2	
29	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	33	13	4	3	2	
30	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	16	9	3	2	2	
31	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	13	7	2	2	2	
32	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	24	11	3	2	1	
33	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	29	12	5	3	2	
34	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	14	7	2	3	2	
35	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	15	9	2	3	2	
36	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	34	14	4	4	3	
37	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	4	1	1	2	
38	Muddy	Nipa	<i>Nypa fruticans</i>	Arecaceae						6

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan
Plot No. 2 Quadrat No. 1
Transect No. 3

Coordinates : Date: November 9, 2022
Observer(s): Mariel Paladan and MENRO

GPS unit: Locus Map Vegetation type:
Weather: Sunny

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	210	12	4	6	7	
2	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	70	14	6	5	3	
3	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	60	10	6	3	2	
4	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	90	14	7	4	2	
5	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	5	2	1	1	
6	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	7	5	2	1	1	
7	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	4	2	1	1	
8	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	4	2	1	1	
9	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	4	1	1	1	
10	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	9	4	1	2	1	
11	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	11	5	1	3	2	
12	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	4	2	1	1	
13	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	6	3	2	1	1	
14	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	7	4	2	1	1	
15	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	6	3	1	1	1	
16	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	6	12	4	1	1	
17	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	6	12	4	1	1	
18	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	9	5	2	1	1	
19	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	12	5	2	1	1	
20	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	7	3	1	1	1	
21	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	8	4	1	1	1	
22	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	6	5	2	1	1	

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan
Plot No. 2 Quadrat No. 5 Transect No. 1

Date: November 9, 2022
Observer(s): Mariel Paladan and MENRO

Coordinates :

Vegetation type:
Weather: Sunny

GPS unit: Locus Map

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	30	6	2	2	1	
2	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	29	6	2	2	2	
3	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	67	10	4	6	5	
4	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	9	4	1	1	1	
5	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	15	4	2	1	1	
6	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	9	5	3	1	1	
7	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	7	4	3	1	1	
8	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	6	4	2	1	1	
9	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	10	5	2	1	1	
10	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	20	6	2	1	2	
11	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	6	4	2	1	1	
12	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	13	4	2	1	1	
13	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	14	5	2	2	1	
14	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	7	4	2	1	1	
15	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	10	5	1	3	2	
16	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	8	4	1	1	1	
17	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	14	6	2	4	3	
18	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	9	5	2	2	1	
19	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	19	7	2	2	2	
20	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	28	7	3	5	4	
21	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	27	9	2	2	3	
22	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	25	9	2	3	2	
23	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	8	5	3	2	2	
24	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	25	9	3	5	4	
25	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	27	9	3	4	2	

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan
Plot No. 2 Quadrat No. 6
Transect No. 1

Date: November 9, 2022
Observer(s): Mariel Paladan and MIENRO

Vegetation type:
Weather: Sunny

GPS unit: Locus Map

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	94	10	4	5	4	
1	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	27	5	2	2	3	
1	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	55	6	3	3	2	
1	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	57	8	2	3	4	
1	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	20	6	3	2	2	
1	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	46	5	3	2	3	
1	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	103	10	4	4	4	
1	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	57	8	3	4	3	
1	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	96	7	3	4	2	
1	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	52	8	1	4	5	
1	Muddy	Lagiwliw	<i>Acanthus ebracteatus</i>	Pteridaceae						53
1	Muddy	Palaypay	<i>Arostichum speciosum</i>	Pteridaceae						23

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location:
Site

1

Bgy. Manlag, El Nido, Palawan

Coordinates :

Quadrat No. 1
Transect No. 2

Date:

November 9, 2022

Observer(s):

Vegetation type:

Weather:

GPS unit:

Locus Map

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	94	10	4	5	4	
2	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	27	5	2	2	3	
3	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	55	6	3	3	2	
4	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	57	8	2	3	4	
5	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	20	6	3	2	2	
6	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	46	5	3	2	3	
7	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	103	10	4	4	4	
8	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	57	8	3	4	3	
9	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	96	7	3	4	2	
10	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	52	8	1	4	5	
11	Muddy	Lagiwliw	<i>Acanthus ebracteatus</i>	Pteridaceae						
12	Muddy	Palaypay	<i>Arostichum speciosum</i>	Pteridaceae						

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location:
Site

1

Bgy. Manlag, El Nido, Palawan

Coordinates :

Quadrat No. 2

Transect No. 2

Date:

November 9, 2022

Observer(s):

Vegetation type:

Weather:

GPS unit:

Locus Map

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Bakhaw Babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	11	3	1	1	2	
2	Muddy	Bakhaw Babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	13	3	1	1	2	
3	Muddy	Bakhaw Babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	8	2	5	1	1	
4	Muddy	Bakhaw Babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	8	2	1	1	1	
5	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	10	2	1	1	2	
6	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	5	1	1	1	1	
7	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	7	1	1	1	1	
8	Muddy	Bakhaw babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	7	1	1	1	1	
9	Muddy	Bakhaw babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	9	2	1	1	1	
10	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	7	2	1	1	1	
11	Muddy	Gapas gapas	<i>Camptostemon philippinensis</i>	Bombacaceae	9	2	1	1	1	
12	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	5	1	1	1	1	
13	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	7	1	1	1	1	
14	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	9	3	1	1	1	
15	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	8	2	1	1	1	
16	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	9	2	1	1	1	
17	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	7	2	2	1	1	
18	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	6	2	1	1	1	
19	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	6	2	1	1	1	
20	Muddy	Pedada	<i>Sonneratia ovata</i>	Sonneratiaceae	9	2	1	1	1	
21	Muddy	Bakhaw babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	8	2	1	1	1	
22	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	8	2	1	1	1	
23	Muddy	Bakhaw babae	<i>Rhizophora mucronata</i>	Rhizoporaceae	5	2	1	1	1	
24	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizoporaceae	12	3	1	1	2	

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

25	Muddy	Bakhaw babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	5	2	1	1	1
26	Muddy	Bakhaw babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	9	2.5	1	1	1
27	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	2	1	1	2
28	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	11	2	1	1	2
29	Muddy	Bakhaw babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	6	1.5	1	0.5	1
30	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	8	2	0.5	1	1
31	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	11	5	2	1.5	2
32	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	6	3.5	1	1	1
33	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	8	4	1	1	1
34	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	9	6	1	2	1
35	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	11	6	1	1	1
36	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	8	4.5	1	1	1
37	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	7	4	2	1	1
38	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	8	5	2	1	1
39	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	7	2	2	1
40	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	20	10	4	3	2
41	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	22	11	2	2	3
42	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	17	13	2	3	2
43	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	9	8	2	2	1
44	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	9	4	1	2	1
45	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	7	3	2	1	1
46	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	9	6	2	1	1
47	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	15	6	2	3	2
48	Muddy	Bakhaw lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	30	8	1	3	2
49	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	9	4	1	1	1
50	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	20	5	1	4	2
51	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	15	6	2	2	1
52	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	4	2	2	1
53	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	13	6	2	2	2

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan
Site 1 Quadrat No. 3
Transect No. 2

Coordinates : Date: August 4, 2022
Observer(s):

GPS unit: Locus Map Vegetation type:
Weather: Sunny

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Tabigi	<i>Xylocarpus granatum</i>	Meliaceae	63	9	1	5	5	
2	Muddy	Tabigi	<i>Xylocarpus granatum</i>	Meliaceae	35	3	1	1	2	
3	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	61	10	4	8	6	
4	Muddy	bakhaw babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	13	1	1	1	1	
5	Muddy	Saging-saging	<i>Aegiceras floridum</i>	Saging-saging	21	3	1	3	2	
6	Muddy	Saging-saging	<i>Aegiceras floridum</i>	Saging-saging	15	2.5	0.5	2.5	2	
7	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	19	3	1	1	2	
8	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	97	14	5	10	9	
9	Muddy	Gapas gapas	<i>Camptostemon philippinensis</i>	Gapas-gapas	8	2	1	1	1	
10	Muddy	Gapas gapas	<i>Camptostemon philippinensis</i>	Gapas-gapas	14	2	1	1	1	
11	Muddy	Bakhaw babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	9	2	1	1	1	
12	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	2	1	1	1	
13	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	9	2	1	1	1	
14	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	7	2	1	1	1	
15	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	2	1	1	1	
16	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	9	2	1	1	1	
17	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	3	1	1	1	
18	Muddy	Nipa	<i>Nypa fruticans</i>	Arecaceae						
19	Muddy	Palaypay	<i>Acrostichum specoism</i>	Pteridaceae						

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan

Site 2

Coordinates : 4 2

Date: February 9, 2023

Observer(s):Steven John Andao and MENRO

Vegetation type:

Weather: Sunny

GPS unit: Locus Map

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	30	15	8	4	6	
2	Muddy	Bakawan lalaki	Pototan	Rhizophoraceae	25	10	7	6	3	
3	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	5	2	1	1	1	
4	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	5	1.5	1	1	1	
5	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	8	7	5	2	2	
6	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	5	5	3	2	1.5	
7	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	7	5	2	2	1.5	
8	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	4	5	3	2	2	
9	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	5	5	3	2	2	
10	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	10	5	3	1.5	1.5	
11	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	12	5	2	2	2	
12	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	16	5	3	2	2	
13	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	10	5	3	1.5	2	
14	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	12	5	3	2	1.5	
15	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	11	5	2	2	2	
16	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	10	5	3	2	2.5	
17	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	11	5	3	2	1.5	
18	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	10	5	3	1	2	
19	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	18	5	2	1	1	
20	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	8	5	3	1	2	
21	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	6	5	3	1	1	
22	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	6	5	3	1	2	
23	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	6	5	3	2	2	
24	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	5	5	3	2	2	
25	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	5	5	3	2	2	
26	Muddy	Bakawan lalaki	Bakhawan lalaki	Rhizophoraceae	10	5	3	2	2	

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
27	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	5	3	1.5	1	
28	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	6	5	3	1	1	
29	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	5	3	1	1	
30	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	6	5	3	1	1	
31	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	5	3	1	1	
32	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	5	3	1	1	
33	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	5	3	1	1	
34	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	6	5	3	1	1	
35	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	6	5	3	1	1	
36	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	6	5	3	1.2	1.5	
37	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	5	3	1.5	2	
38	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	5	5	3	1.8	1	
39	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	5	3	2	1	
40	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	5	5	3	1.5	1	
41	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	18	6	3.5	1.5	1	
42	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	18	6	3.5	1.5	1	
43	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	10	6	3	1	1	
44	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	8	6	3	1	1	
45	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	18	6	3	1	1	
46	Muddy	Lagiwliw	<i>Acanthus ebracteatus</i>	Acanthaceae						53

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location:

Site

Bgy. Manlag, El Nido, Palawan

2

Coordinates :

Quadrat No. 5

Transect No. 2

Date: February 9, 2023

Observer(s):Steven John Andao and MENRO

Vegetation type:

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	55	18	12	8	5	Mangrove cuttings
2	Muddy	Pototan	<i>Bruguiera gymnorrhiza</i>	Rhizophoraceae	60	18	10	7	5	
3	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	8	8	5	4	4	
4	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	15	8	5	5	
5	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	10	5	3	3	
6	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	10	5	3	4	
7	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	14	8	5	4	
8	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	12	5	3	3	
9	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	12	6	3	3	
10	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	10	5	3	3	
11	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	10	5	3	3	
12	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	10	5	3	3	
13	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	9	15	8	3	5	
14	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	9	18	8	3	5	
15	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	18	8	5	5	
16	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	11	12	6	5	4	
17	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	13	6	5	2	
18	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	14	8	4	5	
19	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	18	6	3	5	
20	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	15	8	4.5	5	
21	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	15	8	5	5	
22	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	10	5	5	4	
23	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	15	8	5	5	
24	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	10	6	3	4	
25	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	12	8	3	5	
26	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	12	8	3	3	
27	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	10	5	3	3	

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

28	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	10	6	3	3
29	Muddy	Bakhawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	10	6	3	3

Location: Bgy. Manlag, El Nido, Palawan

Site 2

Coordinates :

Quadrat No. 6

Transect No. 2

Date: February 9, 2023

Observer(s): Steven John Andao and MENRO

Vegetation type:

Weather: Sunny

GPS unit: Locus Map

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
1	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	18	10	8	W1	W2	
2	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	14	10	6	2	2	
3	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	12	10	7	2	3	
4	Muddy	Pototan	<i>Bruguiera cylindrica</i>	Rhizophoraceae	10	7	5	2	2	
5	Muddy	Apiapi	<i>Avicenia marina</i>	Rhizophoraceae	10	7	5	2	2	
6	Muddy	Lagiwiliw	<i>Acanthus ilicifolius</i>	Acanthaceae						20

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan

Site 2 Quadrat

Quadrat No.	<u>1</u>
Transect No.	<u>3</u>

Date: November 9, 2022
Observer(s): Mariel M. Paladan and MENRO

Coordinates :

Vegetation type: Sunny
Weather: Sunny

GPS unit: Locus Map

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	24	3	1	3	2	
2	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	28	2	1	2	1	
3	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	3	1	1	2	
4	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	11	5	1	2	1	
5	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	9	3	1	1	1	
6	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	21	8	2	2	1	
7	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	28	10	3	2	2	
8	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	26	9	4	5	3	
9	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	6	6	4	1	1	
10	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	5	5	3	1	1	

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan
Site 2
Quadrat No. 2
Transect No. 3

Coordinates :
Date: November 9, 2022
Observer(s): Mariel M. Paladan and MENRO

GPS unit: Locus Map
Vegetation type:
Weather: Sunny

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Tabigi	Xylocarpus granatum	Meliaceae	63	9	1	5	4	
2	Muddy	Tabigi	xylocarpus granatum	Meliaceae	35	3	1	1	1	
3	Muddy	Bakawan lalaki	Rhizophora apiculata	Rhizophoraceae	61	10	4	8	7	
4	Muddy	Bakawan babae	Rhizopora mucronata	Rhizophoraceae	3	1	1	1	1	
5	Muddy	Bakawan lalaki	Rhizophora apiculata	Rhizophoraceae	19	3	1	1	1	
6	Muddy	Bakawan lalaki	Rhizophora apiculata	Rhizophoraceae	97	14	5	10	8	
7	Muddy	Gapas gapas	Camptostemon philippinensis	Bombacaceae	8	2	1	1	1	
8	Muddy	Gapas gapas	Camptostemon philippinensis	Bombacaceae	14	2	1	1	1	
9	Muddy	Bakawan babae	Rhizopora mucronata	Rhizophoraceae	9	2	1	1	1	
10	Muddy	Bakawan lalaki	Rhizophora apiculata	Rhizophoraceae	8	2	1	1	1	
11	Muddy	Bakawan lalaki	Rhizophora apiculata	Rhizophoraceae	9	2	1	1	1	
12	Muddy	Bakawan lalaki	Rhizophora apiculata	Rhizophoraceae	7	2	1	1	1	
13	Muddy	Bakawan lalaki	Rhizophora apiculata	Rhizophoraceae	10	2	1	1	1	
14	Muddy	Bakawan lalaki	Rhizophora apiculata	Rhizophoraceae	9	2	1	1	1	
15	Muddy	Bakawan lalaki	Rhizophora apiculata	Rhizophoraceae	10	3	1	1	1	
16	Muddy	Nipa	Nypa fruiticans	Arecaceae						12
17	Muddy	Palaypay	Acrostichum speciosum	Arecaceae						30

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan
Site 2 Quadrat No. 3
Transect No. 3

Date: February 9, 2023
Observer(s): Mariel M. Paladan, John Everrette Pable,
Bret Hart Sanogal, and Ryan Cacacha
Vegetation type:
Weather: Sunny

Coordinates :

GPS unit: Locus Map

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	21	4	1	2	2	
2	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	6	2	1	0.5	0.5	
3	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	4	1	1	1	
4	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	3	1.5	1	1	
5	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	15	4	1	1	1	
6	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	4	4	1.5	2	2	
7	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	4	1	2	1.5	
8	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	9	4	1	1	1	
9	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	22	5	1	1	1	
10	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	18	4	1	1.5	1	

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan
Site 2 Quadrat No. 4
Transect No. 3

Date: February 9, 2023
Observer(s): Mariel M. Paladan, John Everrette Pable,
Bret Hart Sanogal, and Ryan Cacacha

Vegetation type:
Weather: Sunny

GPS unit: Locus Map

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Tabigi	<i>Xylocarpus granatum</i>	Meliaceae	31	8	1	3	2	
2	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	6	2	2	1	
3	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	13	6	1	1	2	
4	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	16	7	2	1	2	
5	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	30	7	2	1	2	
6	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	25	6	2	1	1	
7	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	7	2	1	1	
8	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	14	7	1	1	1	
9	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	10	5	1	1	1	
10	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	27	6	1	1	1	
11	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	24	6	1.5	1	1	
12	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	6	1	1	1	
13	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	11	5	1	1	1	
14	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	11	5	1	1	1	
15	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	6	1	1	1	

DATA SHEET FOR MANGROVE ASSESSMENT (For Matured Trees)
(Inside 10x10m plot)

Location: Bgy. Manlag, El Nido, Palawan
Site 2
Quadrat No. 5
Transect No. 3

Date: February 9, 2023
Observer(s): Mariel M. Paladan, John Everrette Pable,
Bret Hart Sanogal, and Ryan Cacacha

Vegetation type:
Weather: Sunny

GPS unit: Locus Map

Tree No.	Substrate	Species	Scientific Name	Family Name	DBH/Girth (cm)	TH (m)	MH (m)	Crown Diameter		Observations
								W1	W2	
1	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	12	6	0.5	1	1	
2	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	16	6	0.5	1	1	
3	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	14	7	0.5	1	1	
4	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	8	5	0.4	1	1	
5	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	17	7	0.5	2	1	
6	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	16	7	1	1	1	
7	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	14	7	1	2	1	
8	Muddy	Bakawan lalaki	<i>Rhizophora apiculata</i>	Rhizophoraceae	18	7	1	1	1	
9	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	8	4	0.5	1	1	
10	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	18	7	2	1	1	
11	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	16	7	3	1	2	
12	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	12	6	1.5	1	1	
13	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	14	7	2	1	1	
14	Muddy	Bakawan babae	<i>Rhizophora mucronata</i>	Rhizophoraceae	17	6	1	1	1	
15	Muddy	Palaypay	<i>Acrostichum speciosum</i>	Pteridaceae						58

DATA SHEET FOR MANGROVE ASSESSMENT (For Regenerants)
(Inside 2x2m plot)

Location: Bgy. Manlag, El Nido, Palawan

Plot No. 2

Quadrat No. _____

Transect No. 1

Date: February 9, 2023

Observer(s): Steven John Andao and MENRO

Coordinates :

GPS unit: Locus Map

Vegetation type:

Weather: Sunny

Transect 1

Quadrat No.	Substrate	Species	Sapling Count (<5 cm DBH)	Average Height	Seedling Count	Average Height	Remarks
5	Muddy	<i>Rhizophora apiculata</i>	4	1			

Transect 2

Quadrat No.	Substrate	Species	Sapling Count (<5 cm DBH)	Average Height	Seedling Count	Average Height	Remarks
3	Muddy	<i>Rhizophora apiculata</i>	38	1	10	5	
4	Muddy	<i>Bruigiera cylindrica</i>	3	1			
5	Muddy	<i>Rhizophora apiculata</i>	30	1.3			
6	Muddy	<i>Bruigiera cylindrica</i>	80	1.5	20	0.3	

Transect 3

Quadrat No.	Substrate	Species	Sapling Count (<5 cm DBH)	Average Height	Seedling Count	Average Height	Remarks
3	Muddy	<i>Rhizophora apiculata</i>	38	1			
4		<i>Rhizophora apiculata</i>	9	1			