



Republic of the Philippines
Department of Environment and Natural Resources
MIMAROPA Region
Provincial Environment and Natural Resources Office
Bgy. Sta. Monica, Puerto Princesa City, Palawan
E-mail: penropalawan@denr.gov.ph
Telfax No. (048) 433-5638

DENR MIMAROPA RECORDS SECTION
RECEIVED
21 NOV 2022
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IV. _____ DATE NO. _____
TIME: _____

November 14, 2022

MEMORANDUM

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

THRU : The OIC- Assistant Regional Director for Technical Services
MIMAROPA Region

FROM : The Provincial Environment and
Natural Resources Officer

SUBJECT : MONITORING OF DUGONG IN SAN VICENTE, PALAWAN

Forwarded is the memorandum of the Officer In Charge of CENRO Roxas, LMO III Ronnie P. Lilang dated November 02, 2022 along with the Technical Report prepared and submitted by the staff of Conservation and Development Section of the said CENRO.

This serves as Means of Verification (MOV) for the target activity on Population and Habitat Monitoring of Dugong for CY 2022.

For information and record.


FELIZARDO B. CAYATOC



DENR-PALAWAN
PENRO-RECORDS
RELEASED
By [signature] Date: 15 NOV 2022 22-3044



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

COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE

Barangay III (Poblacion), Roxas, Palawan
Contact No. 09171606578 / 09175028647
Email address: cenroroxaspalawan@denr.gov.ph

November 02, 2022

MEMORANDUM

FOR : The Regional Executive Director
DENR MIMAROPA

THRU : The Provincial Environment and Natural Resources Officer
Puerto Princesa City

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

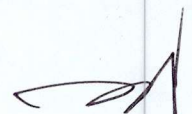
SUBJECT : **MONITORING OF DUGONG IN SAN VICENTE, PALAWAN**

Respectfully forwarded is the memorandum dated November 02, 2022 of the Conservation and Development Section of this office. The personnel conducted Dugong monitoring in San Vicente, Palawan.

This serves as a Means of Verification (MOV) for the target activity on Population and Habitat Monitoring of Dugong CY 2022

**DENR PENRO
PALAWAN RECORDS
RECEIVED**

BY: 
DATE: 11-09-2022 CN 22-10285


RONNIE P. LILANG
Chief, Regulations and Permitting/
Office-in-Charge

**DENR-CENRO ROXAS
RELEASED**

DATE: NOV 02 2022
BY: 
REG. NO. 022-11-1680



TECHNICAL REPORT
DUGONG MONITORING
SAN VICENTE, PALAWAN



OCTOBER 2022

TECHNICAL REPORT

DUGONG MONITORING

SAN VICENTE, PALAWAN

OCTOBER 2022

TECHNICAL REPORT ON DUGONG MONITORING AT SAN VICENTE, PALAWAN

Introduction

The Province of Palawan is known as the last frontier of the Philippines. It is also a hotspot for many unique flora and fauna and one of these is the Dugong (*Dugong dugon*). The Dugong is classified as Critically Endangered (CN) in the Philippines and one of the most protected species in the country. CENRO-Roxas, Palawan monitor this species in the four municipalities within its jurisdiction, namely, Araceli, Dumarán, Roxas and San Vicente.

Species Description

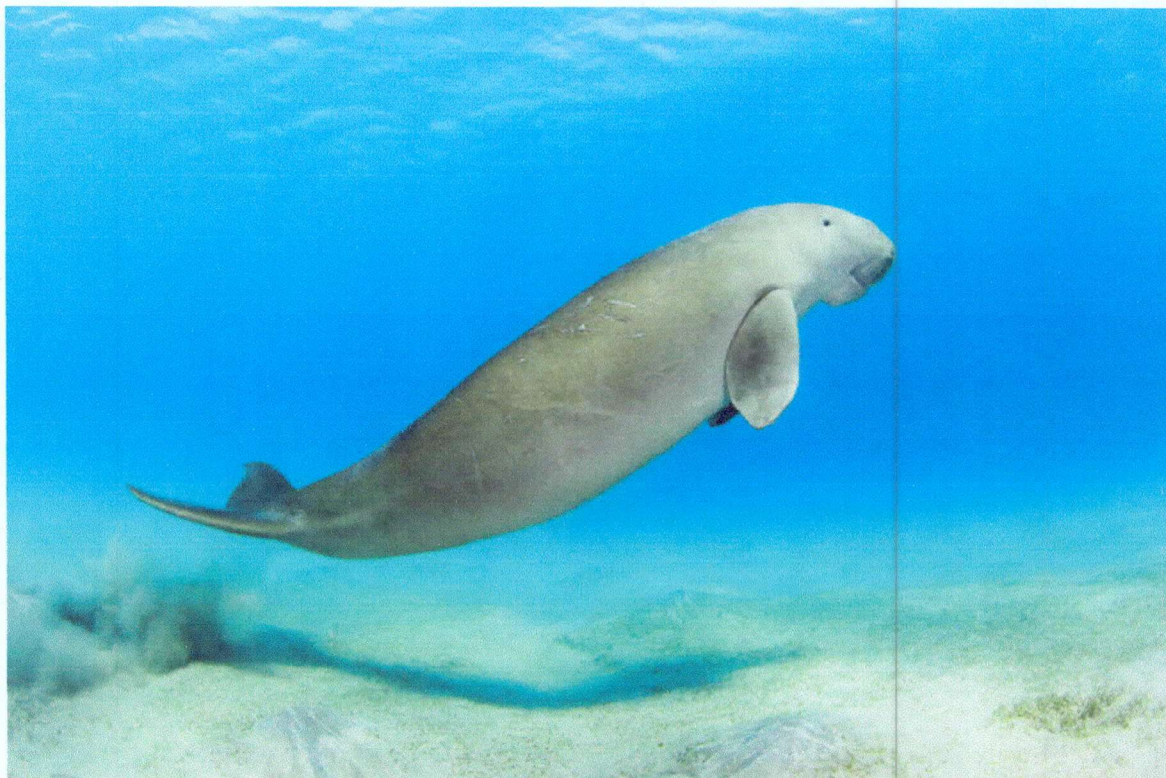


Photo credit to: <https://bestdivingphilippines.com/diving/dugongs-in-coron/>

Dugongs are mammals just like dolphins and whales. They belong to the Order Sirenia and Family Dugongidae. They have a length of 1 meter at birth and can grow up to 3 meters when fully adult and weighs up to 400 kilos. Neonate and juvenile dugongs have brown color

and turn into dark gray to paler when adult. They can swim with the speed of 5 kilometers per hour and need to intake air every 1 to 2 minutes. Their main diet is seagrass and they can consume up to 25 to 30 kilograms in one day. Dugongs can live up to 70 years. Female dugongs need to be 9 years old to be sexually mature and wait 13 months to give birth to one calf after mating which can only be followed once every 3 to 7 years.

Based on DENR Administrative Order No. 2004-15 May 22, 2004, Dugong (*Dugong dugon*) is categorized as a Critically Endangered Species. In addition, based on DENR Administrative Order No. 55 series of 1991, the Dugong (*Dugong dugon*) is declared as a protected marine mammal of the Philippines.

Habitat

Dugongs can be found in shallow water up to 10 meters deep with abundant seagrasses and sheltered from strong waves.

Methods

Because dugongs are very elusive, the data were gathered through interviews with barangay officials, fishermen, and residents in the area and through on-site monitoring.

Results and Discussion

The staff of the Conservation and Development Section of this Office conducted monitoring of dugong in Sitio Panindigan on June 09, 2022 and between Boayan Island and Niaporay Island on October 20, 2022, both in Barangay Poblacion, San Vicente, Palawan. This Section also responded to a dead Dugong stranding in Sitio Barombong, Barangay Port Barton, San Vicente, Palawan on October 24, 2022.

According to seaweed farmers in Sitio Panindigan, they see Dugong in seagrass areas where they grow seaweeds and see one to two dugongs feeding on seaweeds that fall from the seaweed lines. Furthermore, there were no sightings of dugong in that area before, but, it was observed that dugong started to be seen in the area when seaweed farming began. This may be attributed to the established seaweed line where fishermen cannot cast their nets anymore and these somehow protect the seagrass beds in the area. The seaweed lines cover about fifty (50) hectares. Another seaweed farmer was interviewed and stated that he often sees four (4) Dugongs during the months of April and May when the waters are calm between 8:00 to 9:00 in the morning and around 5:00 in the afternoon. The dugongs are seen near Double Island in front of Sitio Panindigan.

Another monitoring was conducted between Boayan Island and Niaporay Island where frequent sightings of Dugongs occur. However, no Dugong was seen during the conduct of monitoring. Most sightings were witnessed by fishermen and inhabitants of Boayan Island traveling to and from mainland Poblacion. Furthermore, CDS staff conducted response to dead dugong stranding in Sitio Barombong on October 24, 2022 thru the information given by the Barangay Port Barton officials that there was a dead Dugong stranded in the abovementioned area on October 23, 2022. Upon inspection, it was determined that the dugong was male. It neither had visible ligature marks nor net markings from fishing gears. There were lacerations on the body but these were not deep. This may possibly be because the Dugong was retrieved from the rocky part of the beach. The cause of death of the Dugong is undetermined. The Dugong had a length of 278 centimeter; Girth maximum of 70 centimeter; and Fluke width of 80m centimeter. The carcass was then buried since it was already in the decomposition stage.

Recommendation

Dugongs has a vital part in maintaining Coastal Marine Ecosystem, thus, protecting it is a must. Therefore, we recommend that continuous monitoring and Communication, Education and Public Awareness is implemented.

Furthermore, technical team of this office should have proper training on dugong monitoring. Procurement of monitoring equipment such as binoculars, GPS and DSLR are likewise seen necessary.

Reference:

Wildlife Resource Division–Biodiversity Management Bureau – Ang Dugong

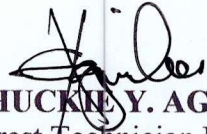
Shaw, L., Ramilo, R., Community Centered Conservation (C3)-Philippines, The Bookmark, Inc. – Diwa the Dugong

<https://intl.denr.gov.ph/images/FileUploads/DAO%201991-55.pdf>


<http://philchm.ph/wp-content/uploads/DAO-2004-15.pdf>

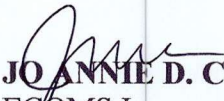
https://www.denr.gov.ph/images/DENR_NEWS_ALERTS_2022/DENR_News_Alerts_24_April_2022_Sunday_opt.pdf

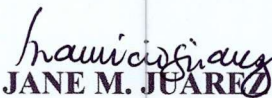
Prepared by:


CHUCK Y. AGUILOS
Forest Technician I


RINALES L. JUSOS
Forest Technician I


KARL ARIES H. SUMANDAL
Forest Technician II


JO ANNE D. CORVERA
ECOMS I


JANE M. JUAREZ
ECOMS I

Noted by:


RENSY L. MAGDAYAO
CDS In-Charge

PHOTO DOCUMENTATION



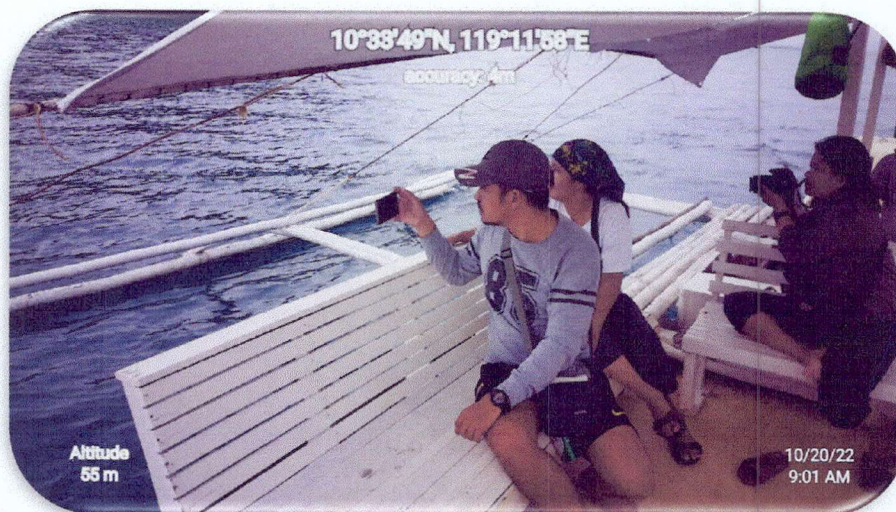
The team coordinate with Punong Barangay Cesar Sales & Kagawad Ismael Turla re: Dugong sightings in Poblacion, San Vicente, Palawan



Interview with Mr. Jame Rey Calosor, fisherman and seaweed farmer.



The Seaweeds farm area in Sitio Panindigan, Poblacion, San Vicente, Palawan



Photos showing the CDS staff conducting Dugong monitoring between Boayan Island and Niaporay Island, Barangay Poblacion, San Vicente, Palawan



*Dead dugong found by the Sitio Tanods in Sitio Barombong,
Barangay Port Barton, San Vicente, Palawan*



Photos at the disposal site



The carcass is finally buried



*The response team comprising of Port Barton Barangay Council, Sitio Officers
and DENR-CENRO Roxas, Palawan*

ANNEXES

Annex 1

ANNEX 2 MM01 Marine Mammal Stranding Data Sheet

MM01 MARINE MAMMAL STRANDING DATA SHEET

DATE OF STRANDING OR CAPTURE Oct 23, 2022 TIME OF STRANDING OR CAPTURE 8:00 AM
 DATE OF EXAMINATION Oct 24, 2022 TIME OF EXAMINATION 11:30 AM
 DATA COLLECTOR JO ANNIE D. CORVERA
 DATA COLLECTOR'S TELEPHONE NUMBER 0920 740 6819 ADDRESS DENR CENRO Roxas
 SOURCE OF REPORT Kgd. Jomari Soria CONTACT DETAILS _____
 STRANDING LOCATION (Site, Barangay, Island, Municipality, Province) _____
Sitio Barombong, Brgy Port Barton, San Vicente, Palawan
 OTHER INFORMATION _____

ENVIRONMENTAL CONDITION (check appropriate box)				
Topography	Weather condition		Sea state	Tides
Sandy beach	Sunny	Rainy	Calm	High tide
Rocky beach	Overcast	Heavy rain	Rough	Low tide

GPS Coordinates

Latitude 10° 26' 2" N
 Longitude 119° 6' 18" E

STRANDING CODE (check appropriate box)	
Alive	CODE 1
Freshly dead	CODE 2
Decomposed, but organs are intact	CODE 3
Advance decomposition	CODE 4
Skeletal remains	CODE 5
Destroyed (burned or slaughtered)	CODE 6

ANIMAL INFORMATION (check appropriate box)	
Single animal	<input checked="" type="checkbox"/>
Mother and calf	<input type="checkbox"/>
Multiple stranding	<input type="checkbox"/>
Multiple species stranding	<input type="checkbox"/>
GENUS	<u>Dugong</u>
SPECIES	<u>dugong</u>

Sex: Male ☒ Female ☐ Not Determined ☐

All measurements should be done in a straight line, except for the girth.

FOR LIVE STRANDING CODE 1:

Total Length 278 cm Maximum girth 70 cm Flukes width 80 cm
 Dorsal fin base width _____ Dorsal fin height _____

VITAL SIGNS: Alert ☐ Weakly-responsive ☐ Non-responsive ☐

BODY CONDITION: Good ☒ Moderate ☐ Thin ☐

DNA tissue collection and preservative used: NONE

Physical Examination of the animal: Cause of death is undetermined, no ligature marks or net markings, lacerations possibly came from the rocks where the dead animal was found

Draw marks and lesions:

Annex 2

ANNEX 2 MM01 Marine Mammal Stranding Data Sheet

FOR CARCASS EXAMINATION CODES 2, 3, and 4:

MORPHOMETRICS (include unit of measurement)	
Total length	278 cm
Snout to dorsal fin tip length	
Snout to anterior dorsal fin length	
Dorsal fin height	
Dorsal fin base length	
Flukes width	80 cm
Girth axilla	
Girth maximum	70 cm
Girth anus	
Flipper length anterior	
Flipper length posterior	
Flipper width	

PHOTO DOCUMENTATION (check if images were taken)	
Body - Lateral view whole	Head - Lateral view
Body - Dorsal view whole	Head - Dorsal view
Body - Ventral view whole	Head - Beak or Snout
Fluke - Dorsal view whole	Fluke - Ventral view whole
Dorsal fin - Lateral view whole	

FOR TISSUE SAMPLING CODES 2 and 3:

TISSUE AND PARTS COLLECTED (to be done with necropsy form)			
Skin with blubber		Stomach with content	
Muscle		Bones	
Kidney		Teeth	
Liver		Blood sample (optional)	
		Uterus and Ovaries	
		Testis	
		Thyroid gland	
		Parasite	

Institute for sample analysis: _____

ANIMAL DISPOSITION (check or underline appropriate box)

RELEASED	FOR REHABILITATION	LEFT AT SITE	TOWED OUT TO SEA	<u>BURIED</u>	STORED IN FREEZER
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Disposal Site: Sitio Barombong, Bay, Port Barton, San Vicente, Palawan

Notes:

Photographs (attach):

(See report)

Annex 3

ANNEX 3 MM02 Marine Mammal Stranding Report Form

MM02 MARINE MAMMAL STRANDING REPORT FORM

DATE OF STRANDING OR CAPTURE Oct 23, 2022 TIME OF STRANDING OR CAPTURE 8:00 AM
 DATE OF EXAMINATION Oct 24, 2022 TIME OF EXAMINATION 11:30 AM
 STRANDING LOCATION (Sitio, Barangay, Island, Municipality, Province) Sitio Barombang
Barry Port Barton, San Vicente, Palawan

Brief and concise summary of the stranding (use additional sheet if needed)

(See attached report)

First Responder/s (locals)	Response Team
Roderico Festin	DENR CENRO Roxas
Roger Tismo	Barangay Council of Port Barton
Bobby Minero	Philippine Coast Guard
Elbert Olaje	
Reynaldo dela Peña	

Submitted to: PENRO, Regional Office 8 BMB

Prepared by: JO ANNIE D. CORVEA

Date Prepared: Oct 26, 2022

Address and contact details: DENR - CENRO Roxas, Palawan

Photographs taken (attach): (see attached report)


MM01/MM03 (attached):





Republic of the Philippines
Department of Environment and Natural Resources
MIMAROPA Region
COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE
Barangay III (Poblacion), Roost, Palawan
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MAP SHOWING THE FEEDING AREA OF DUGONGS IN SITIO PANINDIGAN, BARANGAY POBLACION, SAN VICENTE, PALAWAN

Legend

 DUGONG FEEDING AREA

 World Boundaries and Places

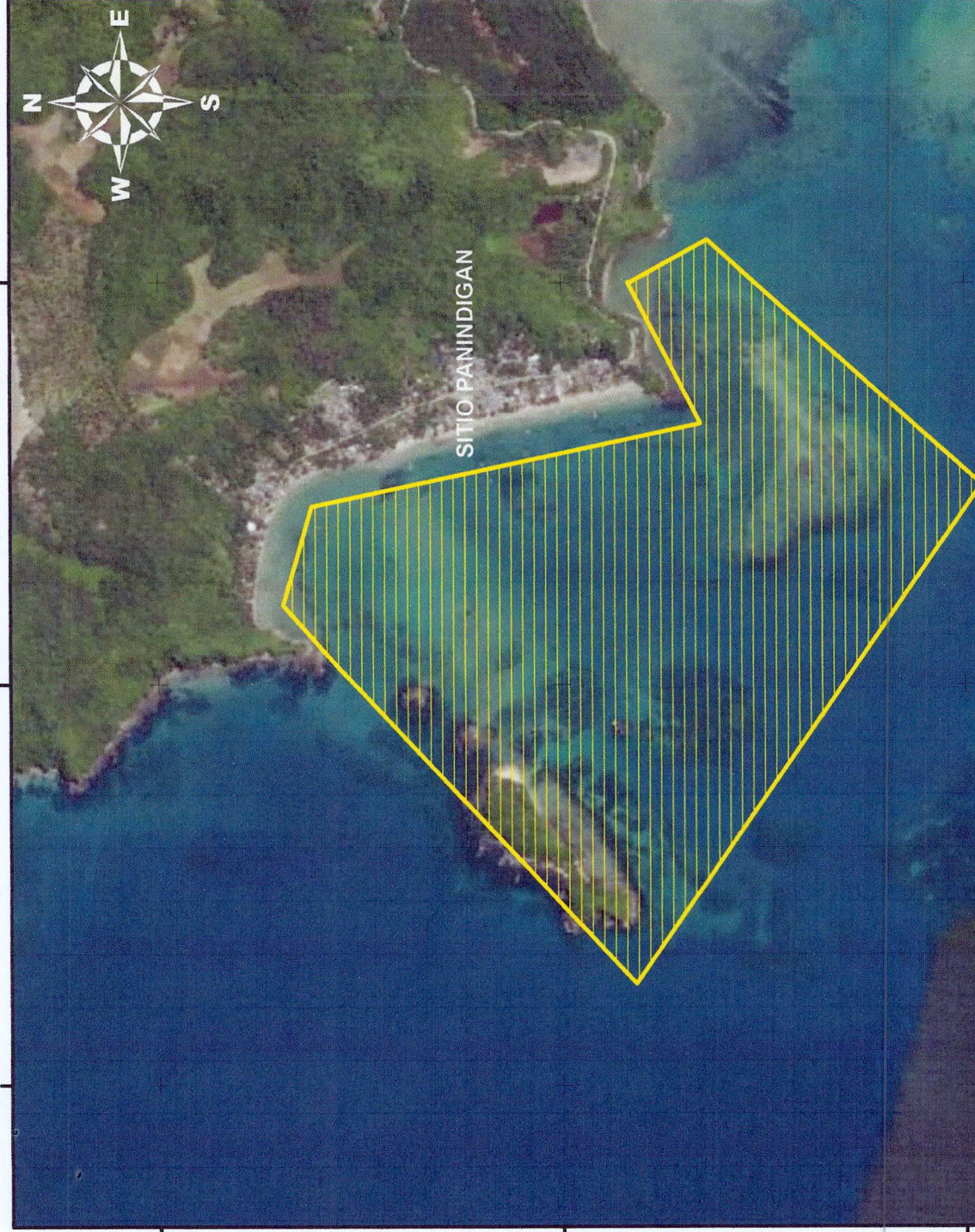
 World Imagery

Digitized by:


CHUCKLEY AGUILOS
Forestry Technician I

Noted by:


REMSY L. MAGDAYAO
CDS In-Charge



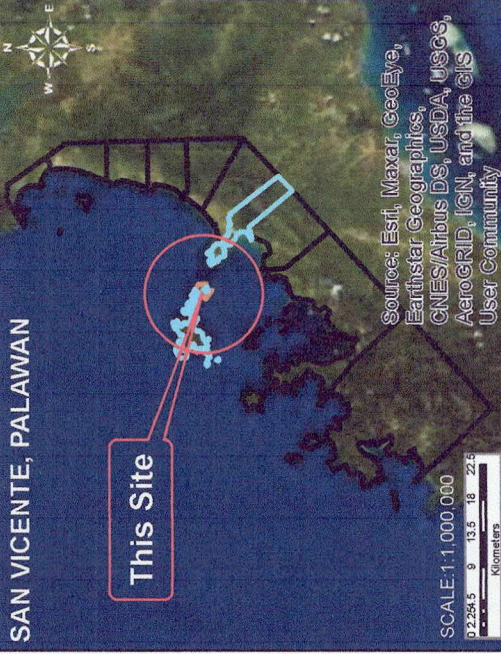
SCALE: 1:15,000



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree


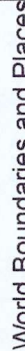

SAN VICENTE, PALAWAN



Republic of the Philippines
Department of Environment and Natural Resources
MIMAROPA Region
COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE
Barangay III (Poblacion), Ecos, Palawan
Contact No. 0917 666578 / 0917 666579
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MAP SHOWING THE AREA OF HIGH FREQUENCY SIGHTINGS OF DUGONG LOCATED BETWEEN BOAYAN ISLAND AND NIAPORAY ISLAND, BARANGAY POBLACION, SAN VICENTE, PALAWAN

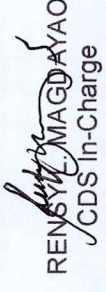
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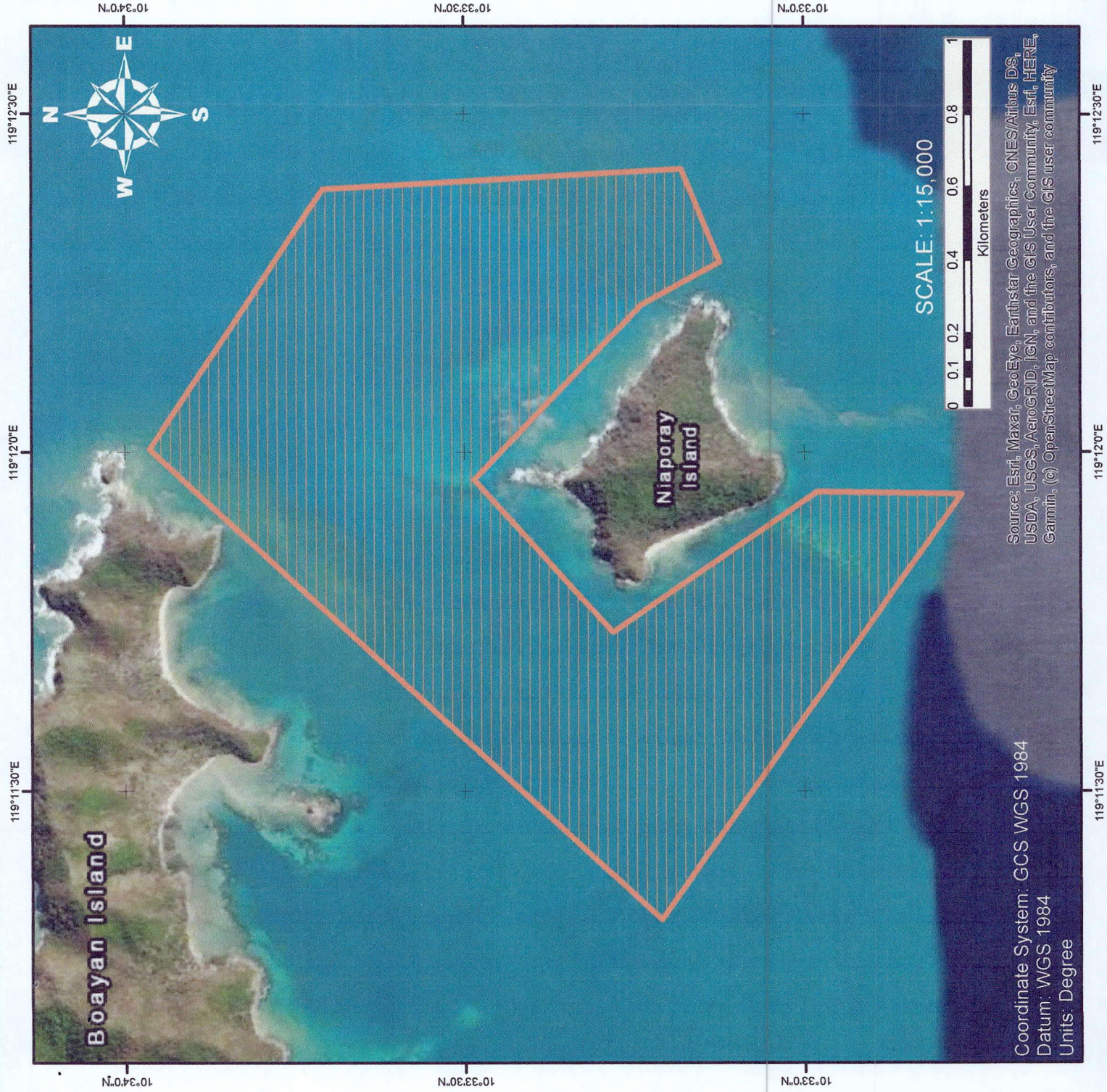
-  DUGONG SIGHTING AREA
-  World Boundaries and Places
-  World Imagery

Digitized by:


CHUCKIE AGUILOS
Forest Technician I

Noted by:

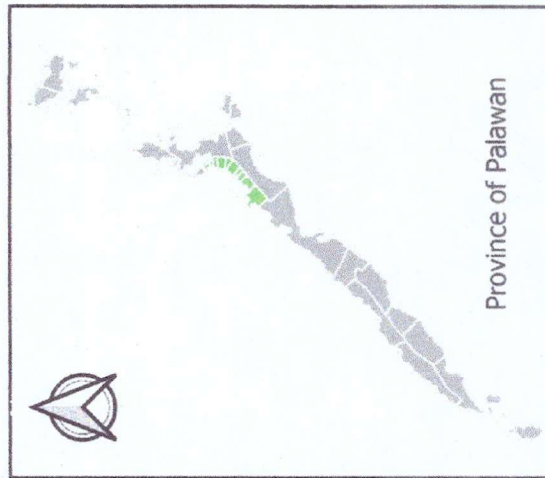
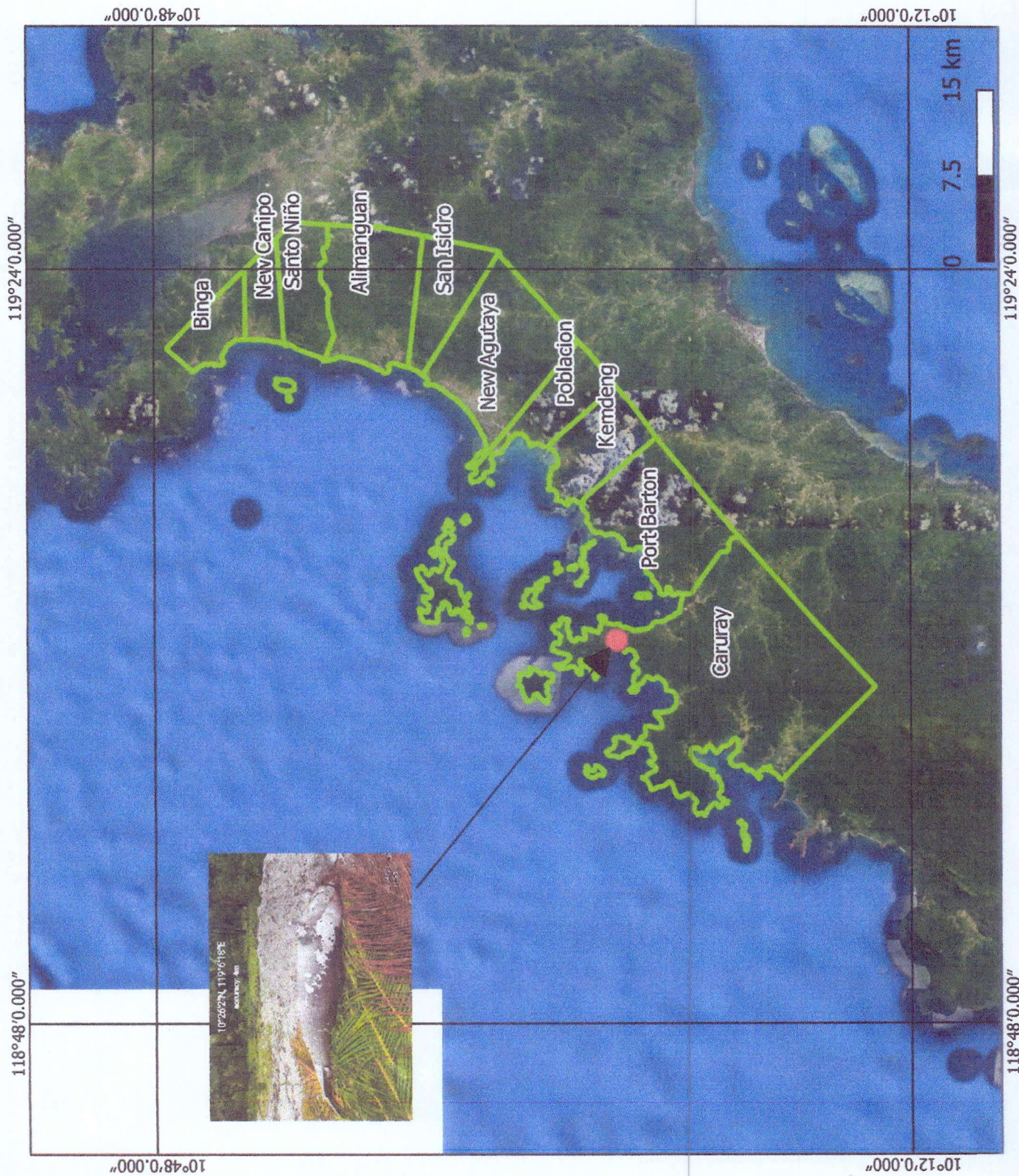

RENSY MAGDAYAO
CDS In-Charge



MAP SHOWING THE RETRIEVED DEAD DUGONG AT THE FINAL DISPOSAL SITE IN SITIO BAROMBONG, SAN VICENTE, PALAWAN



Department of Environment and Natural Resources
Community Environment and Natural Resources Office
Roxas, Palawan



Province of Palawan

Legend

● This site

□ Municipality of San Vicente

Google Satellite

Coordinate system: WGS 84
Scale: 433483

Digitized by:

JO ANNE D. CORVERA
ECOMS I