



Republic of the Philippines  
**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**  
*Provincial Environment and Natural Resources Office*  
Region IX, Zamboanga Peninsula  
Ipil, Zamboanga Sibugay  
☎ 955-2507 ✉ penrozambosibugay@denr.gov.ph

Technical Services Division

**ENDORSEMENT**

**FOR :** THE IN-CHARGE, OFFICE OF THE  
REGIONAL EXECUTIVE DIRECTOR AND  
CONCURRENT ARO FOR TECHNICAL SERVICES  
DENR-R9, Pres. Corazon C. Aquino Regional Gov't. Center  
Balintawak, Pagadian City

**FROM :** THE PENR OFFICER  
DENR, PENRO, Ipil, Zamboanga Sibugay

**SUBJECT :** CONSOLIDATED REPORT ON THE CY 2022 3<sup>RD</sup>  
QUARTER POPULATION SURVEY/MONITORING FOR  
BATS

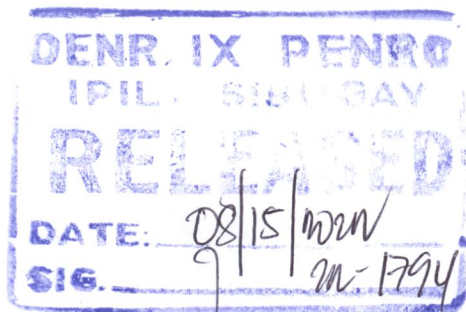
**DATE :** AUGUST 11, 2022

Respectfully submitting to your end is the consolidated report on the population survey/monitoring of Flying foxes for the 3<sup>rd</sup> Quarter of CY 2022 under CENROs Zamboanga City, Imelda, and Kabasalan.

1. CENRO- Zamboanga City – has a bat exit count total of 1,623 individuals and 548 bat roost count
2. CENRO- Imelda – has recorded 40, 165 individuals on bat exit count
3. CENRO- Kabasalan – has documented a total of 449, 877 bats

Please refer to the attached matrix for your reference.

For information and record.



*Edgardo P. Montojo*  
EDGARDO P. MONTOJO

Threatened Species Conservation and Management Report


REGION: Zamboanga Peninsula

Period covered: 3rd Quarter, CY 2022

Instruction: The threatened species report matrix presents the consolidated and summary of field activity reports of CENROs and PENROs, including activity reports of partners organizations, on threatened species included in the Department's annual operational planning guidelines. The summary report matrix should be submitted on a quarterly basis and should be substantiated by narrative report, including the prescribed data sheets (e.g. prescribed for certain species of field offices.

Priority Threatened Species for monitoring (refer to the National Expenditure Guidelines for threatened species applicable to your region)	Population verification survey/monitoring		Habitat management		Rescue and release		Other Activities		Conclusions and recommendations (e.g. findings, issues and concerns arising from the analysis of the consolidated data, and corresponding recommendations on follow up actions to address threats/issues or improved conservation effort)
		No. of individuals sighted or population count/ estimate per site	Habitat managed inside/outside PAs	Threats observed/ documented ( incidence of habitat destruction, illegal hunting, illegal trade, strandings,	No. of individuals rescued/ rehabilitated	No. of individuals released	Communication, Education, Participation, and Awareness (CEPA)	Partnership with other organizations	
1. Flying Fox	1. Lubb, Sibuy, Zamboanga Sibugay (7° 44' 17.1" N 122° 48' 7.099" E)	Four hundred forty-nine thousand eight hundred seventy-one (449, 871) individuals of Pteropus vampyrus and Acerodon jubatus	Kabug Mangrove Park and Wetlands	None	None	None	None	None	Findings: The team positioned themselves in different monitoring stations particularly in the established platform of LGU-Sibuy floating cottage, river junction, and back portion of the said area to record all the exiting bats. The team recorded a total of 449, 871 individuals the exiting bats. The team recorded a total of 449, 871 individuals (Pteropus vampyrus), and golden-crowned flying fox (Acerodon jubatus). The team will continue to monitor the bats of flying fox together with the assistance of LGU and BLDU on the identified roosting sites in support of the CDS PENRO Zamboanga Sibugay personnel since the monitoring is attached to NAGAO funded project in the monitoring of Sibugay Coastal Wetlands.
	2. Cabugan Island, Oluanga Island (7° 23' 30" N 122° 47' 13" E)	Seven hundred six (706) of flying foxes	None	None	None	None	None	None	Findings: -During the team's monitoring, the population count of flying foxes at Cabugan Island, Oluanga was 706 where majority of the population flew towards east and north east directions. -Compared to the previous report in which the team accounted a total of Twenty-nine thousand one hundred thirty-six (29, 136) Large flying fox, there is a significant decrease in the population of Ninety-seven point six percent (97.6%) who believed to have migrated to other roosting sites nearer to their feeding areas.
	3. Lipacan Island, Malabang, ZSP (7° 36' 51" N 123° 2' 6" E)	Thirty-nine thousand four hundred fifty-nine (39, 459) of Large flying fox (Pteropus vampyrus)	None	None	None	None	None	None	Findings: - In Lipacan, Malabang, Zamboanga Sibugay there were 39, 459 large flying fox (Pteropus vampyrus) recorded during the bat monitoring in the site and most of the bats flew towards northeast and southeast directions. Nevertheless, no threats has been observed during the conduct of monitoring. -Compared to the previous report that has 11,359 Large flying fox, it has a significant increase of 71%.

	4. Itcupul, Zamboanga City (N 7° 23' 7" E 122° 19' 22")	Five hundred forty-eight (548) roost count of Large flying fox ( <i>Pteropus vampyrus</i> ) and Small flying fox ( <i>Pteropus hypomelanus</i> ) and exit count record of Two Hundred Ninety-Eight (298) of Large flying fox ( <i>Pteropus vampyrus</i> ) and Small flying fox ( <i>Pteropus hypomelanus</i> )	None	None	None	None	None	None	None	Findings: During the monitoring in Itcupul, Zamboanga the team recorded a population estimate through roost count and resulted to a total of Five hundred forty-eight (548) bats of mixed Large flying fox ( <i>Pteropus vampyrus</i> ) and Small flying fox ( <i>Pteropus hypomelanus</i> ). The total number comprises are estimate of 75% <i>P. hypomelanus</i> and 75% <i>P. vampyrus</i> . The team also conducted bat exit count with an estimated population of Two hundred ninety-eight (298) bats heading towards Barangay Vital.
	5. Great Sta. Cruz, Island, Zamboanga City (6° 51' 59" N 122° 4' 9" E)	One thousand three hundred twenty-five (1,325) of Large flying foxes ( <i>Pteropus vampyrus</i> ) and Small flying foxes ( <i>Pteropus hypomelanus</i> )	None	None	None	None	None	None	None	Findings: The team was able to record an estimated roost count/population of One thousand three hundred twenty-five (1,325) heads consisting of mixed Large flying fox ( <i>Pteropus vampyrus</i> ) and Small flying fox ( <i>Pteropus hypomelanus</i> ). Per observation, the dominant species is the Large flying fox comprising 80% of the total population counted. Unfortunately, during the exit count monitoring in RT Lim Boulevard, there were no sightings of bats due to the unfavorable weather condition.
	6. Tigburay, Tungawan, Zamboanga Sibugay (51° N 43° 51' 9" E 83° 33' 34")	Six (6) individuals of Large flying fox ( <i>Pteropus vampyrus</i> )	None	None	None	None	None	None	None	Findings: -The team was divided into 4 groups/stations and recorded only six (6) individuals of Large flying fox ( <i>Pteropus vampyrus</i> ). -It is assumed by the team, that the flying foxes in Tungawan, ZSP moved to Lahit, Sibay, ZSP due to the increase in numbers of this 3rd quarter monitoring as per the result mentioned. -Despite the result, the team will continue to monitor the Bats or flying foxes together with the assistance of LGU and BIRGU on the identified roosting sites in support of the CPS PEWING Zamboanga Sibugay personnel since the monitoring is attached to NAGAAD funded project in the monitoring of Sibugay Coastal Wetlands.

Prepared by:  
  
 THERESIA N. ROMERA  
 COS Staff

Reviewed by:  
  
 GEOMIL L. FERNANDEZ  
 Chief Conservation and Development Section





Republic of the Philippines  
**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**  
*Community Environment & Natural Resources Office*  
Region IX, Zamboanga Peninsula  
Poblacion, Imelda, Zamboanga Sibugay  
Email Address: cenroimelda.gov.ph  
☎ (062-955-3078)

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**MEMORANDUM**

**FOR : The In-Charge, Office of the RED and OIC, ARD for Technical Services**  
DENR R-IX, PCCA Regional Center, Balintawak, Pagadian City

**THRU : The PENR Officer**  
DENR, PENRO Ipil, Zamboanga Sibugay

**FROM : The CENR Officer**  
DENR, R-9, Imelda, Zamboanga Sibugay

**SUBJECT: QUARTERLY REPORT ON THE CONDUCT OF MONITORING  
OF ROOSTING SITES OF BATS/POPULATION SURVEY.**


**DATE : July 18, 2022**

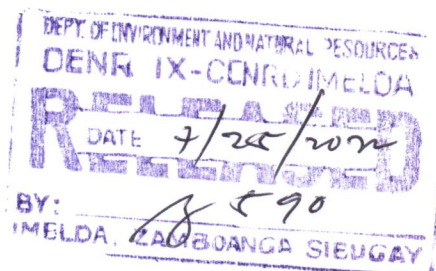
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Respectfully forwarded herewith the 3rd quarter accomplishment report of this office on the conduct of bats monitoring on the two identified roosting sites, wherein populations count of large flying fox ( *Pteropus vampyrus* ) at Lipacan, Malangas was thirty-nine thousand four hundred fifty-nine (39,459) with significant increase of seventy-one (71%) percent from the previous count of eleven thousand three hundred fifty-nine (11,359) while in Cabugan Island, Olutanga only seven hundred six (706) flying foxes were counted with significant decrease in population of ninety-seven point six percent (97.6%) which is believed to have migrated to other roosting sites nearer to their feeding areas.

Please see attached bats monitoring sheets and geo-tagged photo documentation.

For information and record.

  
**PILARITO B. MONTERON**







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**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**  
*Community Environment & Natural Resources Office*  
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Email Address: cenroimelda.gov.ph  
☎ (062-955-3078)

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**MEMORANDUM**

**FOR : The CENR Officer**  
DENR IX, Imelda, Zamboanga Sibugay

**FROM : The Chief, Coastal Resource Management Unit (CRMU)**  
DENR, RIX, Imelda, Zamboanga Sibugay

**SUBJECT : QUARTERLY REPORT ON THE CONDUCT OF MONITORING  
OF ROOSTING SITES OF BATS.**

**DATE : July 18, 2022**

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Respectfully submitted herewith the 3rd quarter accomplishment report of the Coastal Resource Management Unit (CRMU) of this office relative to the above subject in the two identified roosting sites of bats conducted by the technical personnel together with the On the Job Training (OJT) students from the College of Forestry of Mindanao State University-Buug Campus on July 12 and 13, 2022 at Lipacan, Malangas and Cabugan Island, Calais, Olutanga respectively, both under the Province of Zamboanga Sibugay.

The monitoring activity at Lipacan, Malangas, Zamboanga Sibugay was conducted in partnership with Lipacan Fisherfolks Association and Barangay Local Government Unit (BLGU) represented by Hon. Principe Diokno where the team accounted thirty-nine thousand four hundred fifty-nine (39,459) large flying fox (*Pteropus vampyrus*) species during exit counting majority of the population flew towards east and north east directions and this population count increased about seventy-one percent (71%) as compared to the previous population count which was eleven thousand three hundred fifty-nine (11,359).

While in Cabugan Island, Calais, Olutanga, Zamboanga Sibugay, the activity was conducted in partnership with Barangay Local Government Unit of (BLGU) Calais through its representative Hon. Junis Perialde, Environment Committee Head and Civilian Volunteer Officers (CVO) members wherein population count was very far from the previous count with only seven hundred six (706) flying towards northeast and southeast directions. The population count is only about two point four percent (2.4%) of the previous quarter's count which was twenty-nine thousand one hundred thirty-six (29,136) maybe due to migration to other roosting sites nearer to other bats feeding area.

Please see attached bat monitoring sheets and geo-tagged photo documentation.

For information and record.

  
CLIFF R. DE LEON

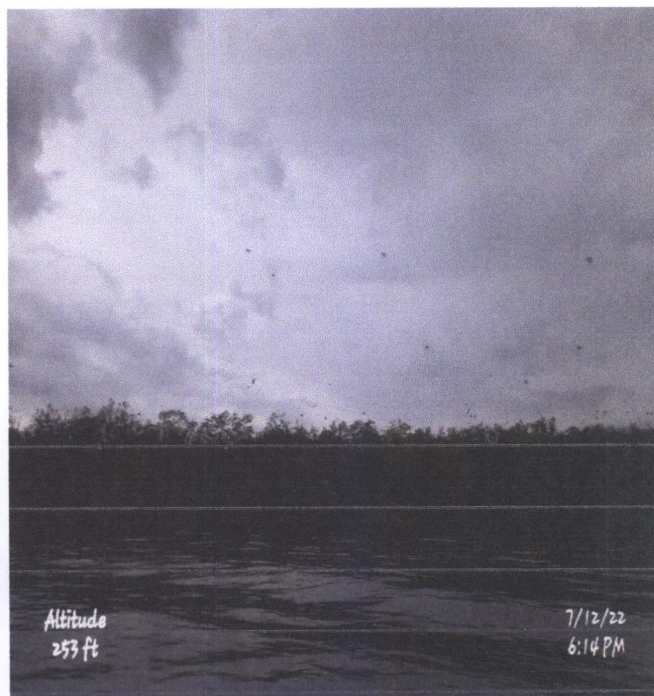
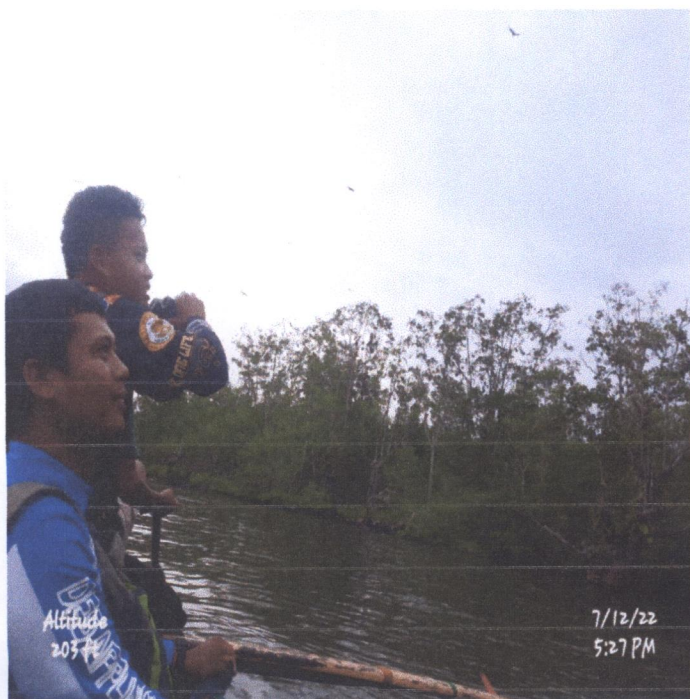


# Photo Documentation

Bats Monitoring

July 12, 2022

Lipacan, Malangas, Zamboanga Sibugay



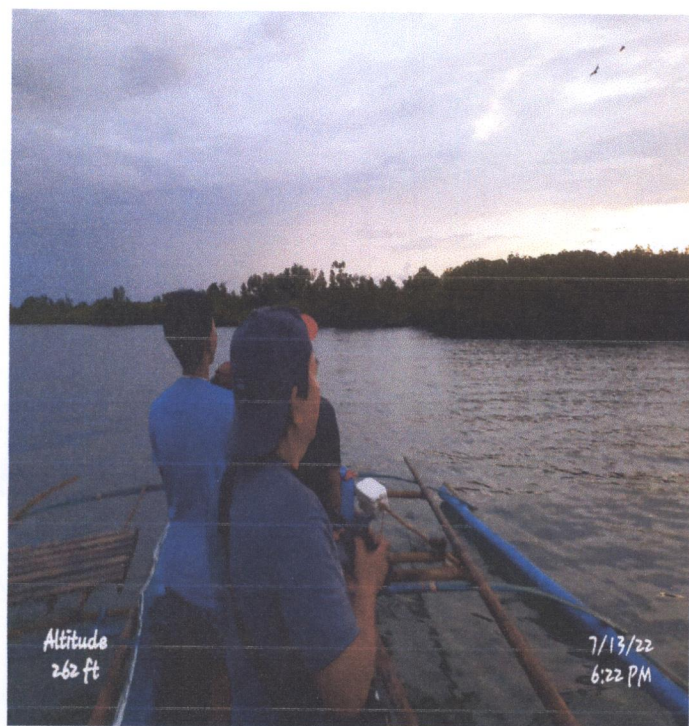
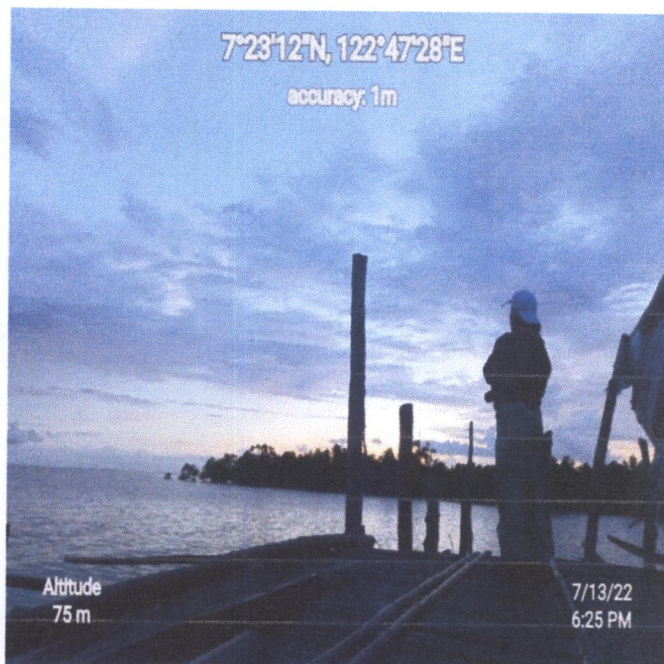


# Photo Documentation

Bats Monitoring

July 13, 2022

Cabugan island, Barangay Calais, Olutanga, Zamboanga Sibugay







EXIT COUNT – COLONY SIZE DATA SHEET

Counter's name: <b>For. William G. Pallsoc</b> <b>Marvin E. Sayson</b> <b>Jefferson I. Bataban</b>		Date of count: <b>July 12, 2022</b>		Location (general area, province/ municipality) <b>Lipacan, Malangas, Zamboanga Sibugay</b>	
Species in roost: <b><i>Pteropus vampyrus</i></b>		Counter location (description, landmarks) AND lat/long with direction of counting:  <b>At Lipacan /On boat Counter 1-3 : 7 ° 36' 39"N/123° 1' 57"E</b> <b>At Lipacan /On boat Counter 4-6 : 7 ° 36' 51"N/123° 2' 6"E</b>		Other counters counting the SAME part of the sky as you:  <b>None</b>	
Start time (first bat flying): <b>Counters 1-3- 5:59 P.M</b>	Stop time: <b>Counter s 1-3- 6:36 P.M</b>	Reason for stopping (e.g. too dark, no more bats):  <b>Too dark to count and raining.</b>		Flow of bats at stopping point (e.g. light, medium, heavy)  <b>Counters 1-3      Heavy</b> <b>Counter 4        Medium</b> <b>Counter 5        Light</b> <b>Counter 6        Light</b>	Number of bats counted in the last minute of the count period:  <b>Counter 1-51</b> <b>Counter 2- 42</b> <b>Counter 3- 48</b> <b>Counter 4- 28</b> <b>Counter 5-17</b> <b>Counter 6-3</b>
Counters 4-6- 6:03 P.M  <b>Counters 4-6- 6:35 P.M</b>					
Number on your counter at end of count:  <b>Counter 1 (William) =176</b> <b>Counter 2 ( Marvin ) = 65</b> <b>Counter 3 ( Jeffrey) =69</b> <b>Counter 4- ( Jamal) =39</b> <b>Counter 5- ( Divina) =212</b> <b>Counter 6- ( Daryl) =133</b>		Counting interval (s) (e.g. by 1, 10, 50):  <b>Counter 1 (William) by 100</b> <b>Counter 2 ( Marvin ) by 100</b> <b>Counter 3 ( Jeffrey) by 100</b> <b>Counter 4- ( Jamal) by 100</b> <b>Counter 5- ( Divina) by 20</b> <b>Counter 6- ( Daryl) by 1</b>		Total number of bats counted (please show math):  <b>Counter 1 (William) = (176 x 100 ) + 51      =17, 651</b> <b>Counter 2 ( Marvin ) = ( 65 x 100 ) + 42      = 6, 542</b> <b>Counter 3 ( Jefferson) = ( 69 x 100 ) + 48      = 6,948</b> <b>Counter 4- ( Jamal) = ( 39 x 100 ) +28      = 3,928</b> <b>Counter 5- ( Divina) = ( 212 x 20 ) + 17      = 4,257</b> <b>Counter 6- ( Daryl) = 133 x 1                      = 133</b> <b>Total    39,459</b>	
Reliability of estimate (i.e., problems encountered):  <b>Weather condition.</b>		Describe exit pattern (e.g. dispersed, in a tight column):  <b>Counters 1-4: Tight</b>  <b>Counters 5-6 : Dispersed</b>		Direction bats were flying (using compass bearing, describing landmarks, etc.):  <b>➤ Northeast direction</b>  <b>➤ Southeast direction</b>	



ROOST CHARACTERISTICS DATA SHEET

Date: July 12, 2022

Scribe: July 18, 2022

Roost location (general area): <b>Lipacan, Malangas, Zamboanga Sibugay</b>		Species in roost: <b><i>Pteropus vampyrus</i></b>	Lat/Long of roost: <b>7° 36' 51"N/123° 2' 6" E</b>
			Elevation of roost: <b>75 M</b>
How close can the roost be approached:	Estimate percentage of roost perimeter which can be accessed: <b>60%</b>	Describe bats' reaction to approach of researchers: <b>Bats became noisy and flying above their roost trees.</b>	
About 1 kilometer from the Municipal Port Describe roosting pattern (clumped/with satellites?):  <b>Clumped with satellites</b>	Describe roost trees/vegetation (type, condition, species roosting differences):  <b>Pagatpat species, some trees have dead branches and others are still in good stand.</b>	Describe signs of human access (e.g. trails, garbage, hunting information):  <b>The roosting site is very accessible through pump-boat ride from Poblacion, Malangas, Zamboanga Sibugay.</b>	
# trees within roosting area above 5 meters tall: <b>72</b>	# dead trees above 5 m: <b>None</b>	# trees with roosting bats: <b>48</b>	
Estimate area containing roosting bats:  <b>About 1 hectare</b>	Topography (e.g. ridge, upper slope, orientation of slope, valley bottom):  <b>Flat</b>	Nearness to river and description (e.g. width, gradient):  <b>About 300 meters to Lipacan river.</b>	
Distance to ocean:  <b>undetermined</b>	Human settlements (how close, how many):  <b>About 1-2 kilometers to human settlements with the following population: Brgy Lipacan: 356 Hhs or 1,600 persons (about 1.4 Km to roost area) Brgy. Taling: 162 Hhs or 936 persons Brgy. Pobalcion: 2,120 Hhs or 8,769 persons</b>	Roost permanent or changing? Temporal pattern of change? Location of alternative roost sites?  <b>Permanent</b>	
Travel directions and transit time:  <b>From east to west direction and about ten minutes' pump- boat ride.</b>		Contacts:  CLIFF R. DE LEON      CP # 0929-106-1819/0905-395-6899 WILLIAM G. PALISOC      CP # 0926-2931-690	







ROOST CHARACTERISTICS DATA SHEET

Date: July 13, 2022

Scribe: July 18, 2022

Roost location (general area): <b>Cabugan Island, Calais, Olutanga, Zamboanga Sibugay</b>		Species in roost: <b><i>Pteropus vampyrus</i></b>		Lat/Long of roost: <b>7° 23 '10"N/122° 47' 13"E</b>	
How close can the roost be approached? <b>About 10 meters</b>		Estimate percentage of roost perimeter which can be accessed: <b>1 hectare</b>		Elevation of roost: <b>57 M</b>	
Describe roosting pattern (clumped/with satellites?): <b>clumped with satellites</b>		Describe roost trees/vegetation (type, condition, species roosting differences): <b>Pagatpat species estimated 40 cm diameter, 15 meters in height and healthy condition</b>		Describe signs of human access (e.g. trails, garbage, hunting information): <b>The island is very accessible through pump-boat ride adjacent to agar-agar plantation and shells collection.</b>	
# trees within roosting area above 5 meters tall: <b>150</b>		# dead trees above 5 m: <b>3</b>		# trees with roosting bats: <b>14</b>	
Estimate area containing roosting bats: <b>1 hectare</b>		Topography (e.g. ridge, upper slope, orientation of slope, valley bottom): <b>Flat</b>		Nearness to river and description (e.g. width, gradient): <b>2 kilometers</b>	
Distance to ocean: <b>Undetermined</b>		Human settlements (how close, how many): <b>About 2 kilometers from Brgy Calais with a population of 456 Households or 2,850 people</b>		Roost permanent or changing? Temporal pattern of change? Location of alternative roost sites? <b>Permanent</b>	
Travel directions and transit time: <b>East to west direction and around ten (10) minutes pump-boat ride.</b>		Contacts: <b>Cliff R. De Leon William G. Palisoc</b>		<b>Mobile # 0929-106-1819/0905-395-6899 Mobile # 0926-2931-690</b>	



Republic of the Philippines  
Department of Environment and Natural Resources  
*Community Environment and Natural Resources Office*  
*2<sup>nd</sup> Congressional District*  
DENR, R9, Simbol, Kabasalan, Zamboanga Sibugay

July 18, 2022

MEMORANDUM

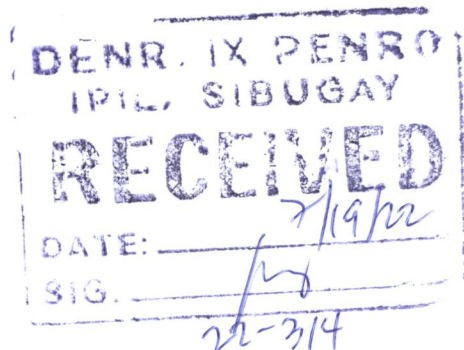
**FOR :** The Regional Executive Director  
DENR, R9, PCCA Complex, Regional Government Center  
Balintawak, Pagadian City

**ATTENTION :** Chief, PAMBC Section

**THRU :** The OIC-PENR Officer  
DENR, R9, PENRO-Zamboanga Sibugay,  
Ipil, Zamboanga Sibugay

**FROM :** The OIC-CENR Officer  
DENR, R9, CENRO-Kabasalan,  
Simbol, Kabasalan, Zamboanga Sibugay

**SUBJECT :** REPORT FOR CY 2022 3<sup>RD</sup> QUARTER POPULATION AND  
HABITAT MONITORING AND PROTECTION OF PRIORITY  
THREATENED SPECIES (BATS) IN BARANGAY LAIH , SIAY  
AND TUNGAWAN, ZAMBOANGA SIBUGAY UNDER DENR,  
CENRO-KABASALAN.




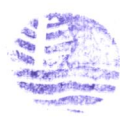
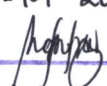
Respectfully submitting the herewith attached report on monitoring of Bats at Kabug Wetland and Mangrove Park in Barangay Laih, Siay and Tungawan, Zamboanga Sibugay, to wit;

ACTIVITY	SUMMARY OF ACCOMPLISHMENTS
POPULATION AND HABITAT MONITORING AND PROTECTION OF PRIORITY THREATENED SPECIES (BATS)	<p>Please be informed that on July 15, 2022 personnel and staff of the Conservation and Development Section (CDS) of this office with representative from PENRO-Zamboanga Sibugay conducted population and habitat monitoring and protection of Bats in Barangay Laih in Siay and Logpond in Tungawan, Zamboanga Sibugay.</p> <p>Please be informed that a total of 449,,871 bats were counted upon exit from the roosting site in the said location. But in Tungawan, Zamboanga Sibugay the team conducted the monitoring in Barangay Logpond instead in the regular monitoring site considering that the said bats transferred to other location.</p>

Please see attached location map, filled-up exit count-colony size data sheet and geotagged photos taken during the conduct of monitoring.

For information and record.

  
DENNIS CATALAN

 RELEASED  
DENNIS CATALAN, Z.S.  
DATE 7-19-2022 TIME 2:44 PM  
BY  #788





Republic of the Philippines  
Department of Environment and Natural Resources  
*Community Environment and Natural Resources Office*  
*2<sup>nd</sup> Congressional District*  
DENR, R9, Simbol, Kabasalan, Zamboanga Sibugay

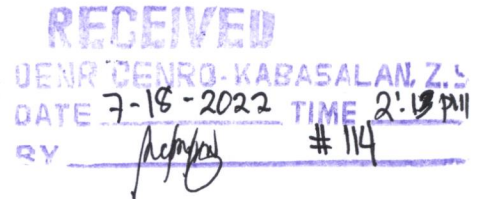
July 18, 2022

MEMORANDUM

**FOR :** The OIC-CENR Officer  
DENR, CENRO-Kabasalan, Simbol,  
Kabasalan, Zamboanga Sibugay

**FROM :** REYNALDO C. CUARESMA ET AL  
Conservation and Development Section  
This Office

**SUBJECT :** REPORT FOR CY 2022 3<sup>RD</sup> QUARTER POPULATION AND  
HABITAT MONITORING AND PROTECTION OF PRIORITY  
THREATENED SPECIES (BATS) IN BARANGAY LAIH , SIAY  
AND TUNGAWAN, ZAMBOANGA SIBUGAY UNDER DENR,  
CENRO-KABASALAN.



INTRODUCTION

Based on the Program/ Project/ Activity of the approved Work and Financial Plan for CY 2022, this office has a target for the quarterly monitoring and protection of priority threatened species particularly the Flying Foxes/ Bats. Per series of monitoring conducted with this mammal, it has been known that there were two (2) species roosting in the area. These are the Vampyrus (*Pteropus vampyrus*) which constitutes a larger in number and Jubatus (*Acerodon jubatus*) which has lesser in number. These bats rely heavily on flowering and fruit-producing plants and trees. They congregate and sleep in roosts, which are usually large trees. These bats are mostly restricted to forest habitats and prefer rainforest, mangroves, eucalyptus forest, orchards, coconut groves, and more. Different species have different preferred habitats. These bats are generalists that will eat a wide variety of foods. Most of their diet is made up of fruit, seeds, flowers, nectar, leaves, and more. This office identified two (2) monitoring sites in Barangay Laih in Siay and Tigbucay in Tungawan, Zamboanga Sibugay.

METHODOLOGY

The team scheduled to do the synchronized monitoring of flying foxes (Bats) on July 15, 2022 in Barangay Laih in Siay and Tigbucay in Tungawan, Zamboanga Sibugay. Divided into two (2) groups, members of the team went to Siay and the other in Tungawan, Zamboanga Sibugay.

The team assigned in Siay arrived in Barangay Laih at around 3:00 o'clock in the afternoon. From there, we travelled about 25 minutes with a motorized boat before reaching the periphery of the roosting site in Kabug Wetlands and Mangrove Park. While resting in the floating cottage, we group ourselves into four (4) to do monitoring in View Deck, junction between Laih, back portion of the Kabug Wetlands and Mangrove Park and in floating cottage. Each group were given hand held counters that will be used during counting. Due to showery weather condition, we decided to positioned ourselves as early as 5:00 o'clock in our assigned locations.



For the period, the monitoring team in Siay will be counting the flying foxes/ bats using the Fly Count method. Per group, we designated members to do the counting, recording and taking of geotagged photos. At around 5:57 o'clock in the evening, said mammal started to exit from their roosting site. Members of each group also started to do the counting and documentation of the same. Per observation, mostly of the bats flying in the Northeast direction with a minimum number going to other directions. At around 6:50 o'clock in the evening, the team decided to stop the counting for there were no bats observed flying but sounds may still be heard for those who remained in the roosting site. A total of 449,871 bats were accounted by the team composed of four (4) teams as mentioned above.

Personnel from PENRO-Zamboanga Sibugay together with personnel from this office with representatives from MENRO of Tungawan, Zamboanga Sibugay conducted regular monthly monitoring of Bats in Barangay Tigbucay last June 29, 2022 and only accounted a total of six (6) bats. The team decided conduct our quarterly monitoring in Barangay Logpond, Tungawan, ZSP due to the information gathered from the local informants that flying foxes could be observed from their locality. But after a more than an hour of waiting until 6:30 in the evening, only five (5) bats were accounted by the team and based on our interview from the locals said flying foxes were coming from Tigbucay area. Comparing the observations made by this office since 2021, it seems that that the roosting site in Tigbucay considered as satellite while in Laih, Siay, ZSP to be a permanent roosting site with a distance of 46 kilometers. It was also assumed that said mammals moved to Siay due to the increase in numbers of this third quarter monitoring as per result mentioned above. Despite of the result, this office will conduct a follow-up visit/ monitoring in Taglibas for validation.

## **THREATS AND RECOMMENDATION**

### Laih, Siay, Zamboanga Sibugay

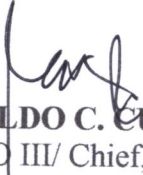
The team interviewed some local residents in the area particularly those who were hired by the Local Government Unit (LGU) of Siay as Bantay Dagat who were assigned in the area for the protection of our mangrove area as well as the Fauna found therein. It was disclosed that since we conducted the regular monitoring together with PENRO-Zamboanga Sibugay personnel last June of this year, there were no threats observed pertaining to the hunting / collection of said bats. The team acknowledged the effort of LGU-Siay through their hired Bantay Dagat for the continuous and effective protection of our mangrove resources.


### Tigbucay, Tungawan, Zamboanga Sibugay

Per interview conducted from the reliable sources and monitoring conducted in the area disclosed that Bats roosted in the Tigbucay, Tungawan, ZSP transferred to another location for unknown reason. The monitoring team will conduct follow up monitoring/ visit in the area for confirmation.

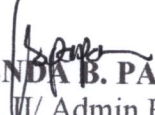
Please see attached location map, filled-up exit count-colony size data sheet and geotagged photos taken during the conduct of monitoring.


For information and record.

  
**REYNALDO C. CUARESMA**  
DMO III/ Chief, CDS

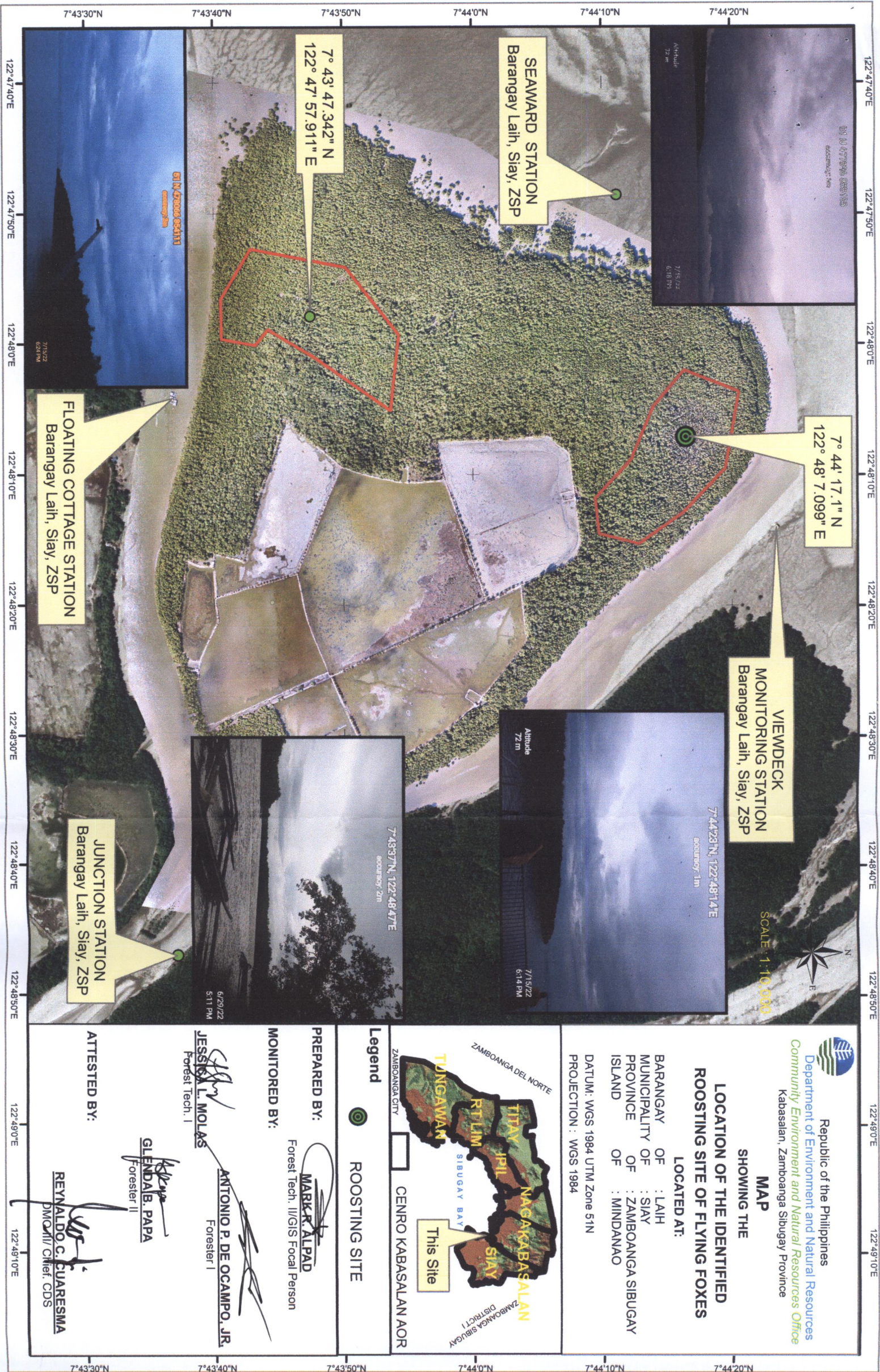
  
**MARK R. ALPAD**  
FT II/ CDS Staff


  
**ANTONIO P. DE OCAMPO, JR.**  
FT II/ ENGP Focal

  
**GLENDIA B. PAPA**  
For. VI/ Admin Focal

  
**JESSICA L. MOLAS**  
FT I/ CDS Staff

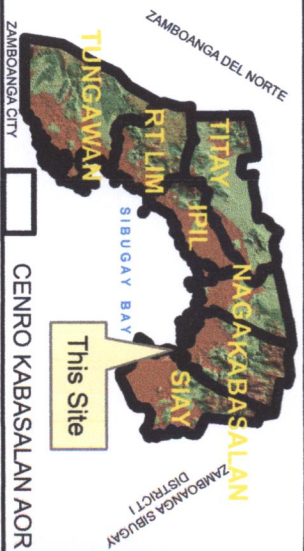




  
Republic of the Philippines  
Department of Environment and Natural Resources  
Community Environment and Natural Resources Office  
Kabasalan, Zamboanga Sibugay Province


SHOWING THE  
MAP  
LOCATION OF THE IDENTIFIED  
ROOSTING SITE OF FLYING FOXES

LOCATED AT:  
BARANGAY OF : LAIH  
MUNICIPALITY OF : SLAY  
PROVINCE OF : ZAMBOANGA SIBUGAY  
ISLAND OF : MINDANAO  
DATUM: WGS 1984 UTM Zone 51N  
PROJECTION : WGS 1984



**Legend**  
 ROOSTING SITE

**PREPARED BY:**  
  
**MARK R. ALPAD**  
Forest Tech. III/GIS Focal Person

**MONITORED BY:**  
  
**ANTONIO P. DE OCAMPO, JR.**  
Forester I

  
**GLEENDA B. PAPA**  
Forester II

**ATTESTED BY:**  
  
**REYNALDO C. CUARESMA**  
DMO III/Chief, CDS





EXIT COUNT – COLONY SIZE DATA SHEET

Counter's name: <b>CENRO KAB. TEAM      PENRO -IPIL ZS. STAFF</b> <i>Reynaldo C. Cuaresma      Minda G. Barrola</i> <i>Glenda B. Papa      Queenie N. Gomez</i> <i>Mark R. Alpad      Therence N. Gomera</i> <i>Antonio R. De Ocampo Jr.      Jino O. Salvador</i> <i>Jessica L. Molas</i> <i>Jelly C. Sumile</i>		Date of count: <b>July 15, 2022</b>	Weather: <b>Showering</b>	Location (general area, province/ municipality) <b>Laih, Siay, Zamboanga Sibugay</b> <b>Within the CBFM Area of Gagmay'ng</b> <b>Mangisida sa Batu (GMB) The Roosting site</b> <b>Occupying an area of more or less 3.5 hectares</b>
Species in roost: <b><i>Pteropus vampyrus</i></b> <b><i>Acerodon jubatus</i></b>	Counter location (description, landmarks) and lat/long with direction of counting: <b>Station 1. Viewdeck</b> <b>Station 2. Junction (Laih-Monhing)</b> <b>Station 3. Floating cottage</b> <b>Station 4. Seaward portion of</b> <b>Kabug Island</b>  <b>- 181,633 (7°44'23" N, 122°48'14" E)</b> <b>- 1,798 (7°43'23" N, 122°48'14" E)</b> <b>- 40,790 (7°43'36.82" N, 122°48'3.93" E)</b> <b>- 225,650 (7°44'11.11" N, 122°47'48.47" E)</b>  <b>Total: 449,871</b>			Other counters counting the Same part of the sky as you: <b>DENR- PENRO, Zamboanga</b> <b>Sibugay Staff</b>
Start time (first bat flying): <b>5:57 PM</b>	Stop time: <b>6:50 PM</b>	Reason for stopping (e.g. too dark, no more bats): <b>No more Bats Exiting from the roosting site</b>	Flow of bats at stopping point (e.g. light, medium, heavy): <b>Light- Heavy</b>	Number of bats counted in the last minute of the count period: <b>Station 1. View deck- 3</b> <b>Station 2. Junction-2</b> <b>Station 3. Floating Cottage-3</b> <b>Station 4.Seaward portion of</b> <b>kabug Island - 4</b>
Number on your counter at end of count: <b>449,871</b>		Counting interval (s) (e.g. by 1, 10, 50): <b>10-20-50</b>		Total number of bats counted (please show math): <b>449,871 Bats (Flying foxes)</b>
Reliability of estimate (i.e., problems encountered): <b>No problem encountered so far.</b>		Describe exit pattern (e.g. dispersed, in a tight column): <b>Dispersed</b>		Direction bats were flying (using compass bearing, describing landmarks, etc.): <b>Most of the bats were flying towards the Northeast direction.</b>

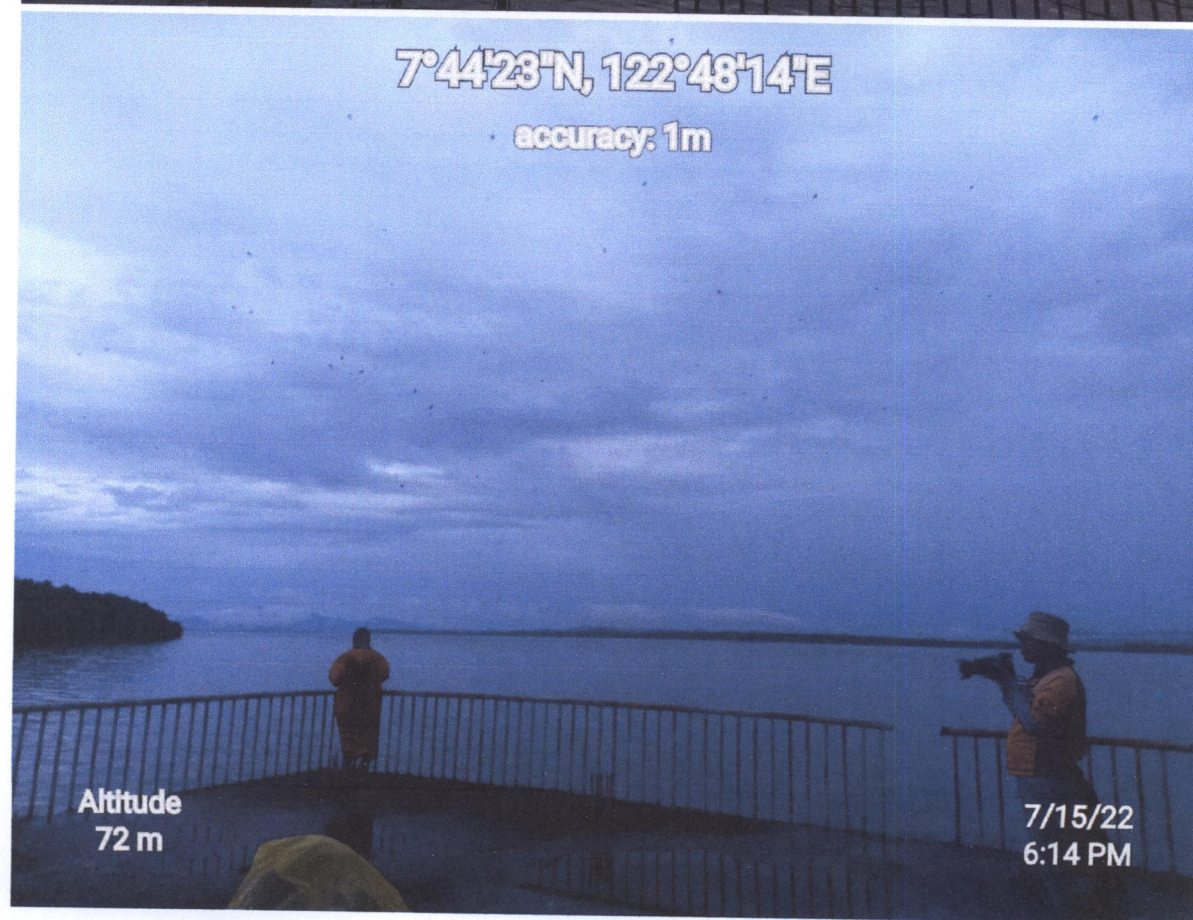
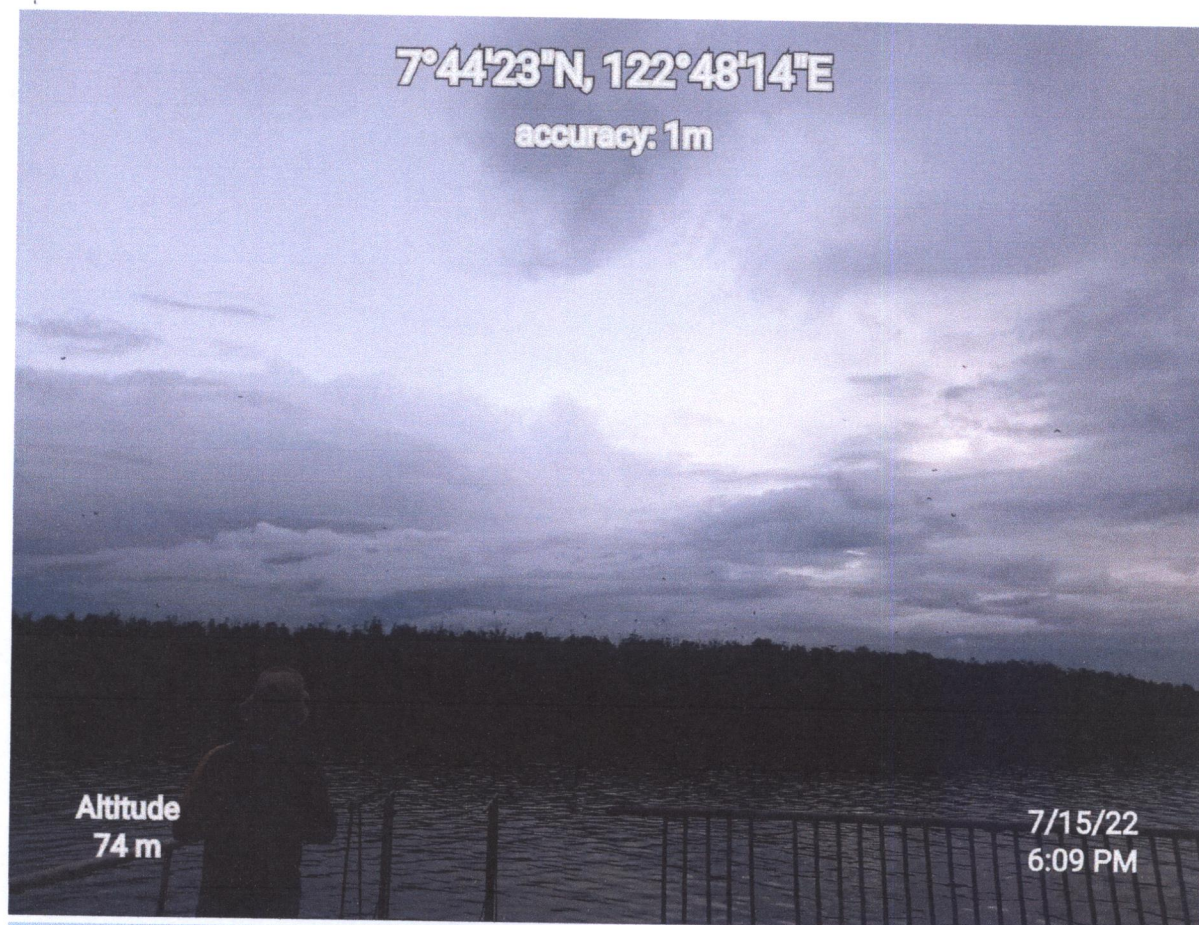


EXIT COUNT – COLONY SIZE DATA SHEET

Counter's name: <b>PENRO - IPL, ZS STAFF</b>  <b>GEORGINA L. FERNANDEZ</b>  <b>MENRO, TUNGAWAN TEAM</b> <b>BERNIE T. CAPUTOL</b> <b>RODEL P. CATUBAY</b> <b>KADAFI A. KARIL</b>		Date of count:  <b>JULY 15, 2022</b>	Weather:  <b>Mild rain</b>	Location (general area, province/ municipality)  <b>Tigbucay, Tungawan, Zamboanga Sibugay</b>	
Species in roost:  <b><i>Pteropus vampyrus</i></b>		Counter location (description, landmarks) and lat/long with direction of counting: <b>(7°32'18" N, 122°24'55" E)</b> <b>Station 1- 5</b>  <b>Total: 5</b>		Other counters counting the Same part of the sky as you:  <b>MENRO, Tungawan staff</b>	
Start time (first bat flying):  <b>5:42 PM</b>	Stop time:  <b>6:40 PM</b>	Reason for stopping (e.g. too dark, no more bats):  <b>No more Bats Exiting from the roosting site</b>		Flow of bats at stopping point (e.g. light, medium, heavy):  <b>Light- Heavy</b>	Number of bats counted in the last minute of the count period: <b>0 <i>Pteropus vampyrus</i></b>
Number on your counter at end of count:  <b>5</b>		Counting interval (s) (e.g. by 1, 10, 50):  <b>1 individual per second</b>		Total number of bats counted (please show math): <b>5 Bats (Flying foxes)</b>	
Reliability of estimate (i.e., problems encountered):		Describe exit pattern (e.g. dispersed, in a tight column):  <b>Dispersed</b>		Direction bats were flying (using compass bearing, describing landmarks, etc.):  <b>Southwest and Southeast direction.</b>	

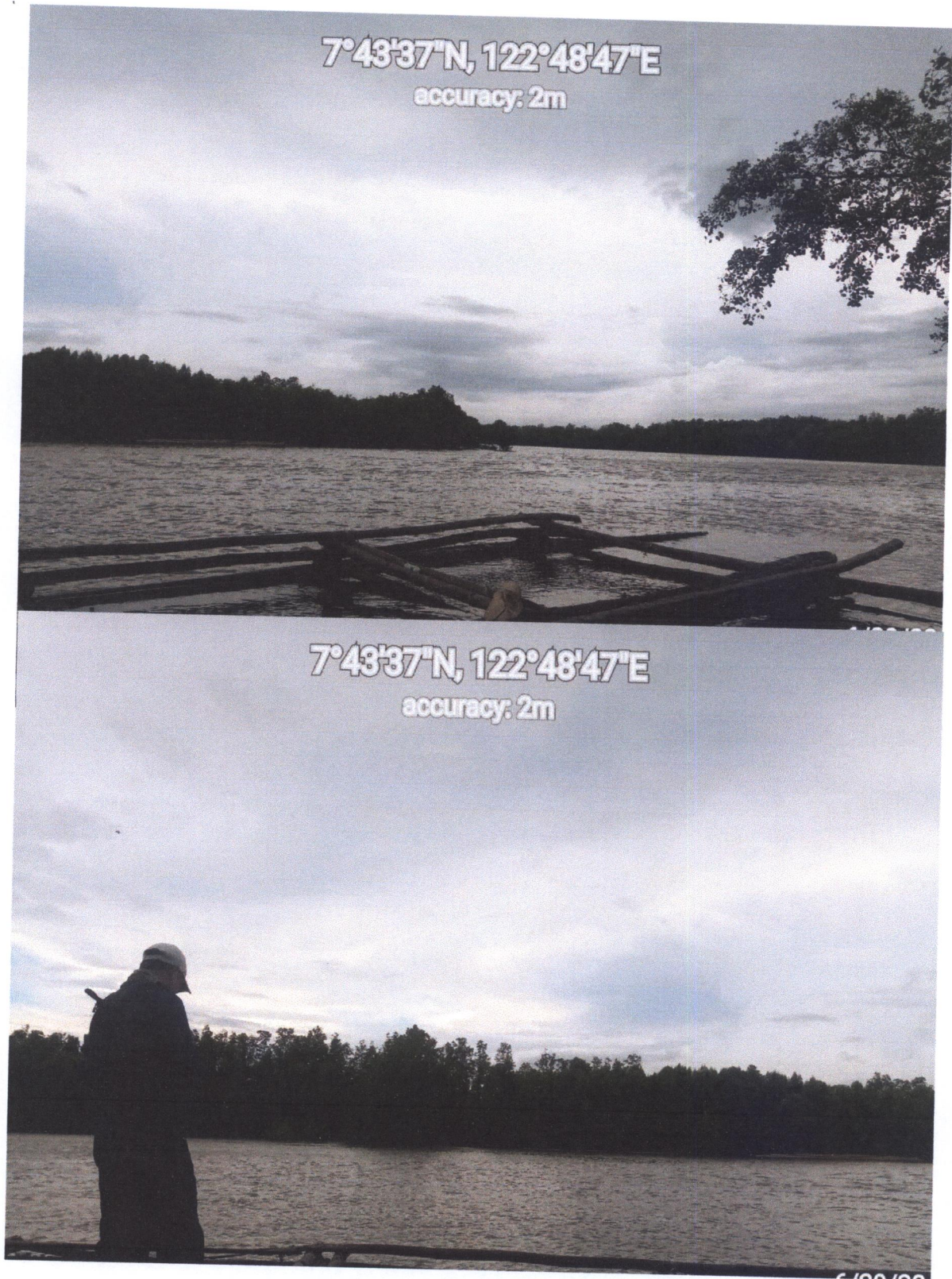


Pictures showing the bat exit count in Station I (Viewdeck) located at Kabug Island, Laih, Siay, ZSP



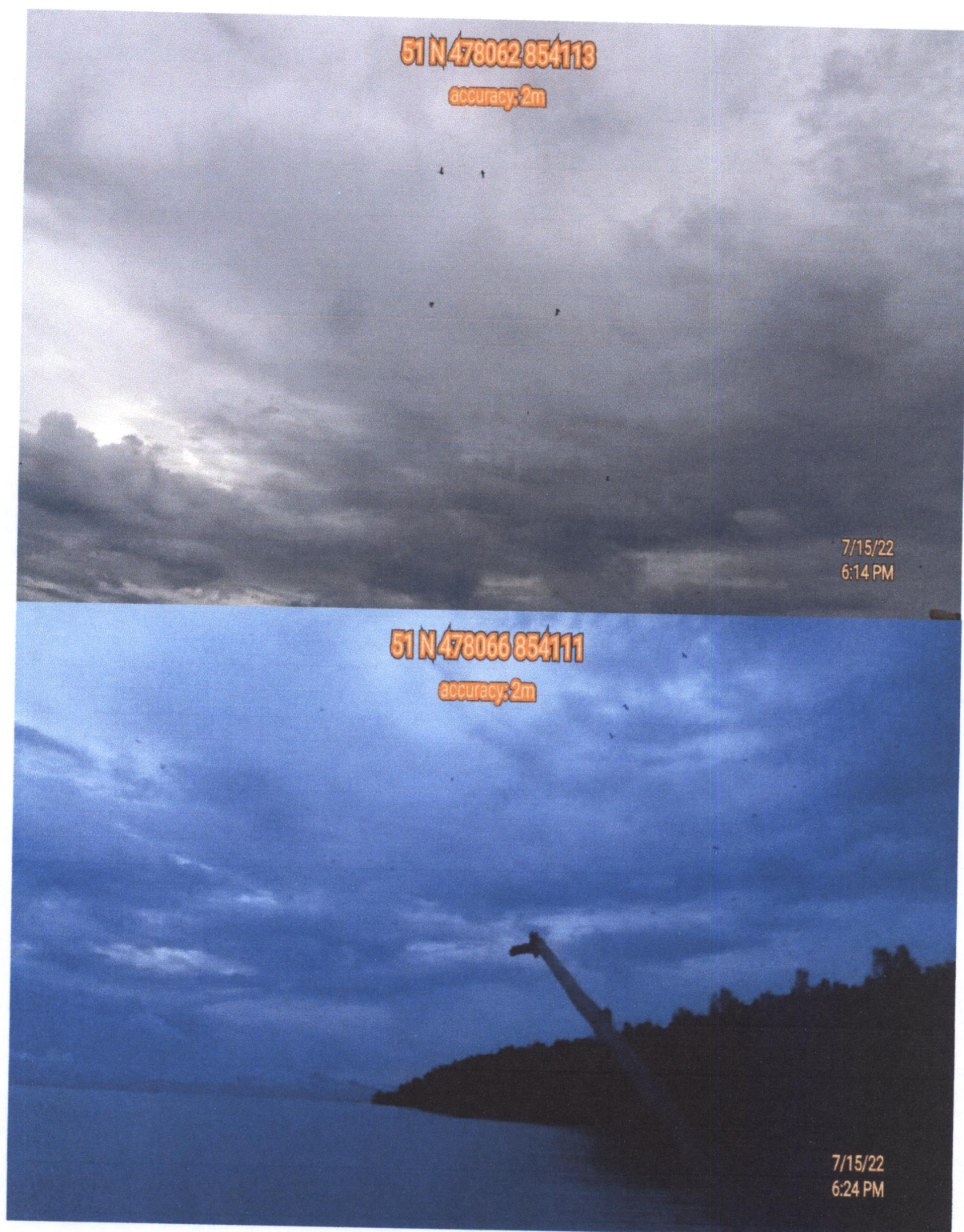


Pictures showing the bat exit count in Station 2 (Junction) located at Kabug Island, Laih, Siay, ZSP



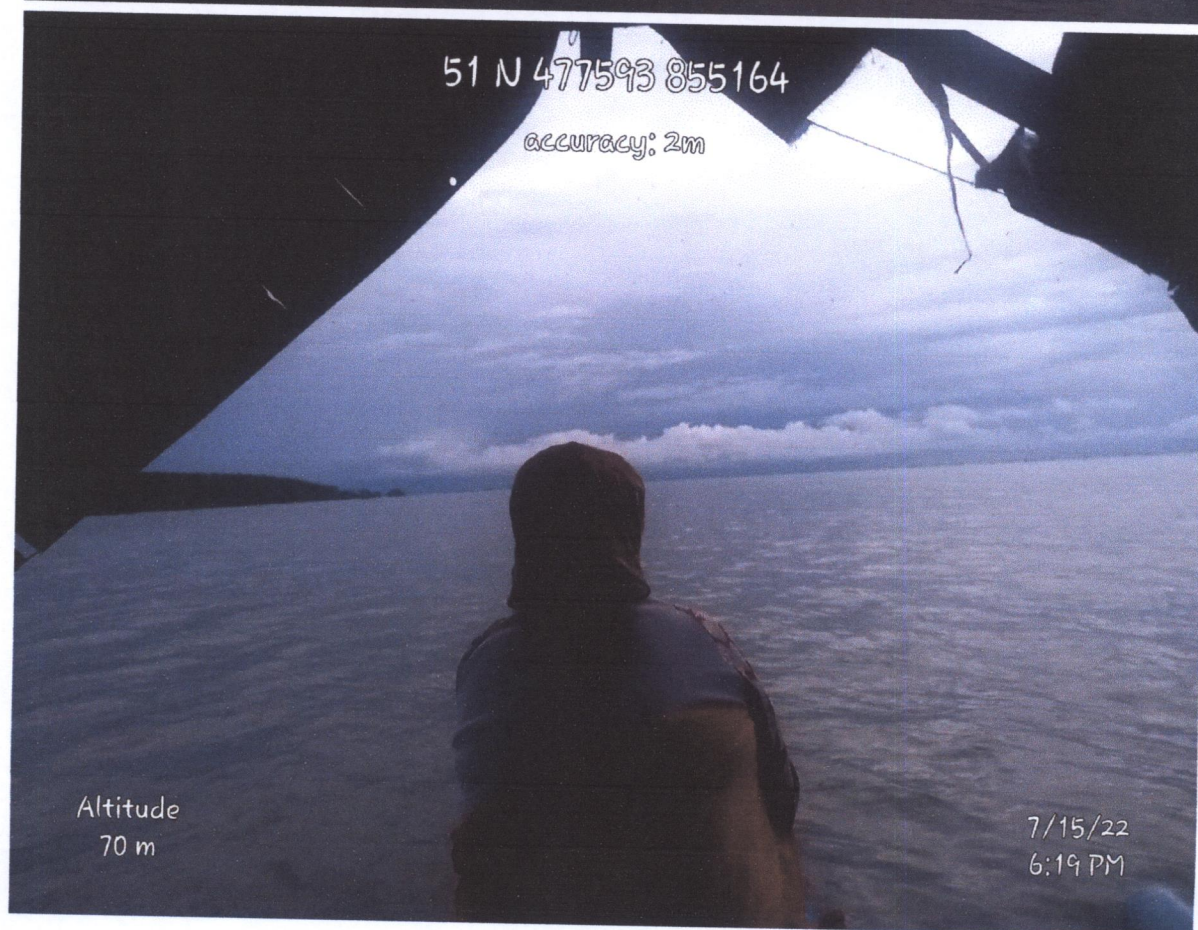
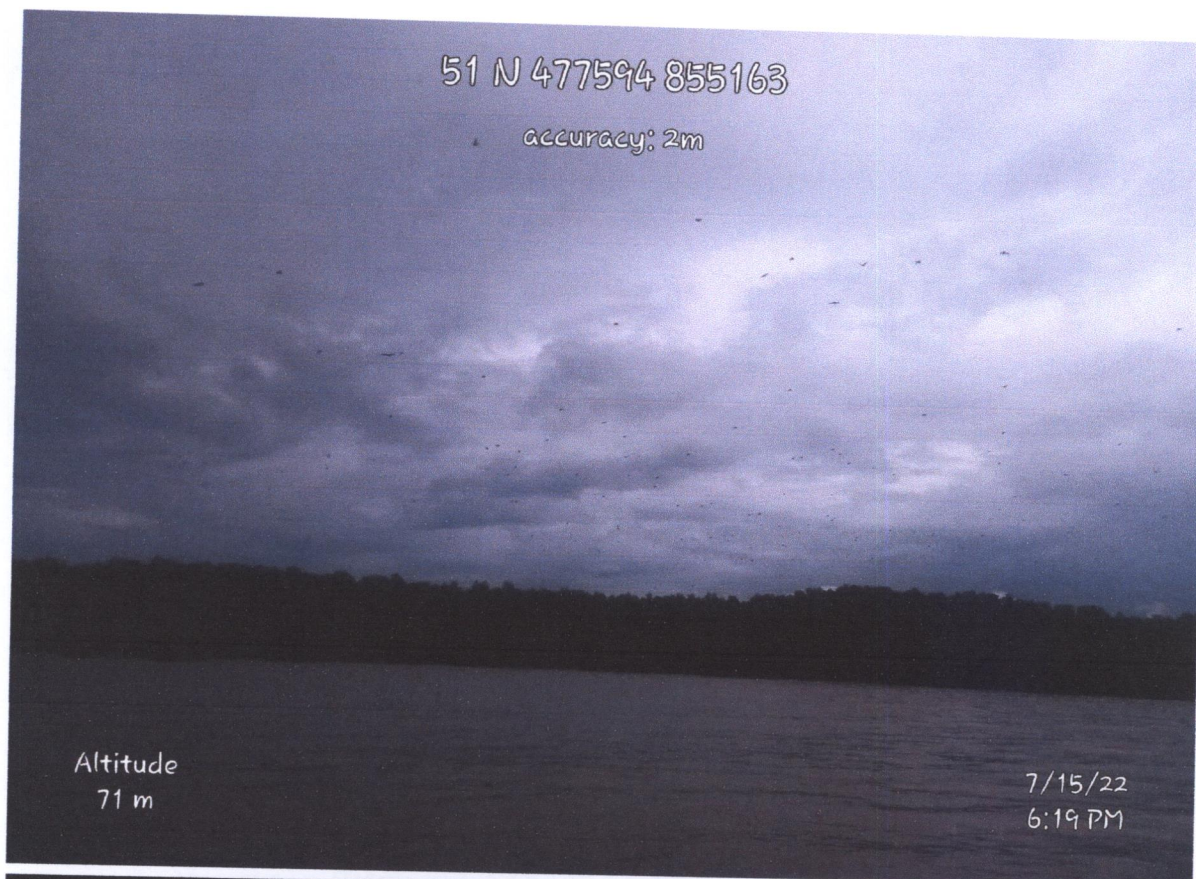


Pictures showing the bat exit count in Station 3 (Floating Cottage) located at Kabug Island, Laih, Siay, ZSP





Pictures showing the bat exit count in Station 4 (Seaward portion of Kabug Island))  
located at Kabug Island, Laih, Siay, ZSP





Drone images/pictures of Kabug Mangrove Parks and with known "Bats" sightings located at Barangay Laih Siay, Zamboanga Sibugay.





Drone images/pictures of identified Bats roosting site located at Barangay Tigbucay, Tungawan, Zamboanga Sibugay. It was observed that the area was devoid of roosting bats during the conduct of monitoring as per drone image capture.







Republic of the Philippines  
**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**  
*Community Environment & Natural Resources Office*  
**CENRO ZAMBOANGA CITY**  
Gen. Vicente Alvarez St., Zamboanga City  
(062)957-4992 (062)933-7479 [cenrozamboangacity@gmail.com](mailto:cenrozamboangacity@gmail.com)

## MEMORANDUM

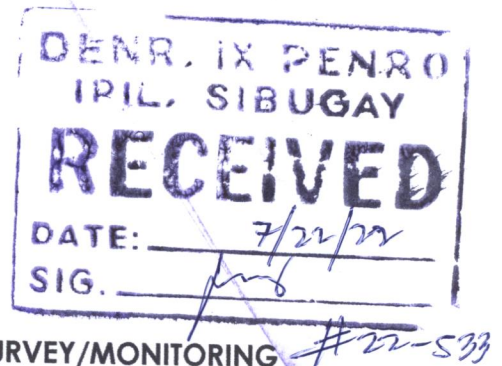
**FOR :** **THE REGIONAL EXECUTIVE DIRECTOR**  
DENR IX PCCA Regional Gov't Center  
Balintawak, Pagadian City

**THRU :** **THE PENR OFFICER**  
PENRO, Zamboanga Sibugay  
Ipil, Zamboanga Sibugay

**FROM :** **THE OIC-CENR OFFICER**  
This Office

**SUBJECT :** **THIRD 3<sup>RD</sup> QUARTER POPULATION SURVEY/MONITORING  
FOR BATS AT LICOMO, AND STA. CRUZ ISLAND,  
ZAMBOANGA CITY UNDER CENRO ZAMBOANGA**

**DATE :** **JULY 20, 2022**



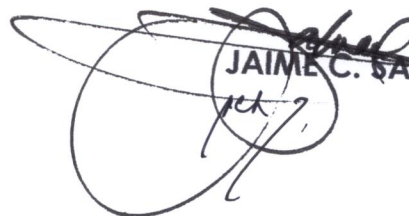
Respectfully forwarded to that end is the accomplishment report above cited subject conducted on July 12-15, 2022 at Barangay Licomo and Sta. Cruz Island, this City

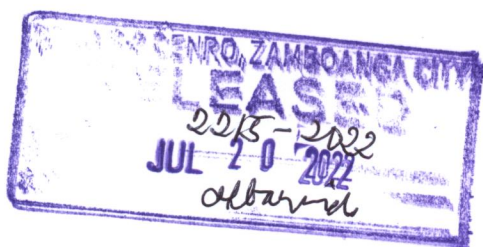
ACTIVITY	SUMMARY OF ACCOMPLISHMENT
<b>MONITORING OF THREATENED SPECIES---</b>	
<b>BATS ROOSTING SITE AT GREAT STA. CRUZ ISLAND Z.C</b>	
<b>Large flying fox</b> ( <i>Pteropus vampyrus</i> ) and <b>Small flying fox</b> ( <i>Pteropus hypomelanus</i> )	<ul style="list-style-type: none"><li>➤ Personnel of PAMBCU conducted population/survey monitoring of roosting site/s of bats at Great Sta. Cruz Island, this City. The team was able to locate the actual bats roosting site particularly at the Northeast portion from the community area which is more or less 200 meters away with a geographic coordinates of Latitude 6°51'59"N, Longitude 122° 4'9"E. Notably, the roosting site is covered with dense mangrove vegetation.</li><li>➤ The team was able to record an estimated count/population of One thousand three hundred twenty five (1,325) heads consisting of mixed <b>Large flying fox</b> (<i>Pteropus vampyrus</i>) and <b>Small flying fox</b> (<i>Pteropus hypomelanus</i>). Per observation, the dominant species is the Large flying fox comprising of about 80% of the total</li></ul>



	<p>population counted.</p> <ul style="list-style-type: none"> <li>➤ Correspondingly, the team conducted bats exit count at R.T. Lim Boulevard area. Unfortunately, there were no sightings of bats due to bad weather condition.</li> </ul>
<p><b>BATS ROOSTING SITE AT BARANGAY LICOMO, Z.C</b></p> <p><b>Large flying fox</b> (<i>Pteropus vampyrus</i>) and <b>Small flying fox</b> (<i>Pteropus hypomelanus</i>)</p>	<ul style="list-style-type: none"> <li>➤ The team also monitored the Bats roosting site at Bungalón area, Barangay Tictapul, this City, last July 12, 2022. The team was able to noticed/observed the presence of bats in the said area.</li> <li>➤ Population estimate through roost count was done. A total of Five Hundred Forty Eight (548) bats of mixed <b>Large flying fox</b> (<i>Pteropus vampyrus</i>) and <b>Small flying fox</b> (<i>Pteropus hypomelanus</i>). The total number comprises an estimate of 75% <i>P. vampyrus</i> and 25% <i>P. hypomelanus</i>.</li> <li>➤ The team also conducted bats exit count using manual counters. A total of two hundred ninety-eight (298) bats were counted heading towards Barangay Vitali.</li> <li>➤ The roost count covers only about 50% of the roosting area. Bats roost in clusters with satellites distributed on mangroves areas along waterways of fishponds particularly within the dense mangrove vegetation found in the area.</li> </ul>

For information and record.

  
**JAIME C. SALVADOR**  
 jcs







Republic of the Philippines  
**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**  
Community Environment & Natural Resources Office  
**CENRO ZAMBOANGA CITY**  
Gen. Vicente Alvarez St., Zamboanga City  
(062)957-4992 (062)933-7479 [cenrozamboangacity@gmail.com](mailto:cenrozamboangacity@gmail.com)

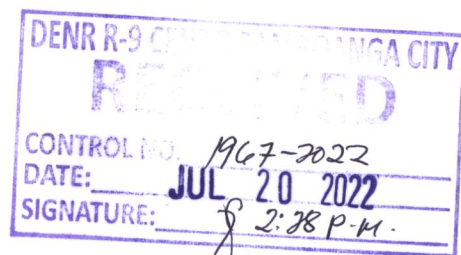
## MEMORANDUM

**FOR :** THE CENR OFFICER  
CENRO ZAMBOANGA CITY  
This City

**FROM :** THE UNDERSIGNED  
This Office

**SUBJECT :** REPORT ON THE CY 2022 3<sup>RD</sup> QUARTER POPULATION  
SURVEY/MONITORING FOR BATS AT LICOMO,  
ZAMBOANGA CITY UNDER CENRO ZAMBOANGA

**DATE :** JULY 18, 2022



Pleased be informed that the last July 12, 2022 at around 6:30 in the morning the undersigned proceeded to Barangay Licomo to coordinate with Barangay Officials with regards to the abovementioned subject.

On board on a hired pump-boat embarking from Sidsiran area, the team observed mangroves along waterways towards Bungalon area. The bats were seen among mangrove trees without leaves. The team disembarked the pump-boat at the nearby fishpond area of Mr. Jojo Gregorio which is adjacent to the bats roosting area. The roosting area is a 200-meter foot walk passing along fishpond dikes from the disembarking area.

Proper documentation and data were gathered and noted in the attached survey form. Population estimate was done through roost count and resulted to a total of 548 bats of mixed **Large flying fox** (*Pteropus vampyrus*) and **Small Lying fox** (*Pteropus hypomelanus*). The total number comprises an estimate of 25% *P. hypomelanus* and 75% of *P. vampyrus*.

The roost count covers only about 50% of the roosting area. Bats roost in clusters with satellites distributed on mangroves along waterways of fishponds and within the dense flora area.

Under the AOR of CENRO Zamboanga City, there are two (2) identified roosting sites for Bats and are being monitored quarterly.



# PHOTO DOCUMENTATION



PHOTOS SHOWING THE ROOSTING SITE  
AT TICTAPUL, ZAMBOANGA CIT

peh



Per interview made with the fishpond operators, they are willing to help the department in the protection and conservation of the said wildlife species including waterbirds that's commonly present in the area.

For information and record.

  
**GERRY L. CAÑETE JR.**  
Forest Technician I

  
**RAQUEL R. MORTERA**  
Forest Technician I

  
**KARINA D.T. ESTRELLA**  
Forest Technician I

  
**JACQUELINE D. ISHMAEL**  
Forester I

Noted by;

  
**AARON C. HACHERO**  
Forester-II/Chief, PAMBCU





Source: Esri, DigitalGlobe, GeoEye, Earthstar (Google), CNR/Airphoto (US), USDA, Landsat, AerialView, IGN, and the U.S. Government

# POPULATION SURVEY/MONITORING SITE FOR BATS

## MAP



SCALE: 1:50,000

## LOCATION:



## LEGEND:

- PP 2152
- Bats Roosting Site

Prepared by: **JACOBINE D. ISMAEL**, Forester I  
 Monitored by: **GERRY T. ANETE, JR.**, Forest Technician I

Attested by: **AARON C. HACNERO**, Forster II/Chief, Project  
**RAOUEL R. MORTERA**, Forest Technician I





# ROOST CHARACTERISTICS DATA SHEET

Date: July 18, 2022

Scribe: Raquel R. Mortera, Gerry L. Canete  
Karina D.I Estrella, Jacqueline D. Ishmael

<b>Roost location (general area):</b>	<b>Species in roost:</b>	<b>Lat/Long of roost:</b>
Tictapul, Zamboanga City	Giant flying fox ( <i>Pteropus vampyrus</i> ), Small flying fox ( <i>Pteropus hypomelanus</i> )	N 7°23'7" E 122°19'22" Elevation of roost: 78 m. ASL
<b>How close can the roost be approached?</b>  10 meters	<b>Estimate percentage of roost perimeter which can be accessed:</b>  45 %	<b>Describe bats' reaction to approach of researchers:</b>  The bats makes loud noises and a few was flying from one tree to another.
<b>Describe roosting pattern (clumped/with satellites?):</b>  Clumped on branches exposed to the sun	<b>Describe roost trees/vegetation (type, condition, species roosting differences):</b>  Rhizophora species and Xylocarpus species	<b>Describe signs of human access (e.g. trails, garbage, hunting information):</b>  The roosting site was surrounded by fishponds
<b># of trees within roosting area above 5 meters tall:</b>  25-35	<b># of dead trees above 5 m:</b>  15	<b># of trees with roosting bats:</b>  15-20
<b>Estimate area containing roosting bats:</b>  0.50 Hectares	<b>Topography (e.g. ridge, upper slope, orientation of slope, valley bottom):</b>  0-6% slope -- flat	<b>Nearness to river and description (e.g. width, gradient):</b>  200m to the nearest river. The river is 25m wide and has a slow flowing gradient
<b>Distance to ocean:</b>  1 km	<b>Human settlements (how close, how many):</b>  300m to the nearest human settlement	<b>Roost permanent or changing? Temporal pattern of change? Location of alternative roost sites?</b>  Permanent roost but also exhibits temporal pattern.
<b>Travel directions and transit time:</b>  Northwest and Southwest	<b>Contacts:</b>  Protected Area Management and Biodiversity Conservation Unit (PAMBCU) CENRO ZAMBOANGA CITY Gen. Vicente Alvarez St., Zamboanga City	





Republic of the Philippines  
**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**  
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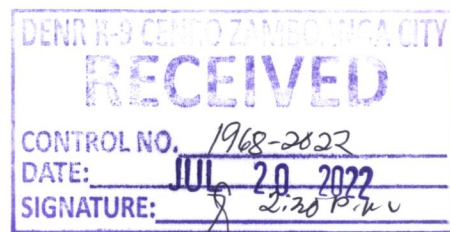
**MEMORANDUM**

**FOR :** THE OIC-CENR OFFICER  
CENRO ZAMBOANGA CITY

**FROM :** THE UNDERSIGNED  
This Office

**SUBJECT :** REPORT ON THE CY 2022 3<sup>RD</sup> QUARTER POPULATION  
SURVEY/MONITORING FOR BATS AT GREAT STA. CRUZ  
ISLAND, BARANGAY STA. BARBARA, ZAMBOANGA  
CITY UNDER CENRO ZAMBOANGA

**DATE :** JULY 18, 2022



Please be informed that the undersigned conducted population survey/monitoring activities on Bats roosting site at Great Sta. Cruz Island, this City last July 14-15, 2022.

On July 15, 2022 at around 7:00 in the morning, the undersigned proceeded to Great Sta. Cruz Island via motorized pump boat from main land for about 30 minutes travel of more or less 3 kilometers. Upon arrival in the said Island, (community area) the team embarked on a boat paddling towards the roosting site near the community area for a clearer view and proper documentation and observation.

Fortunately, team was able to identify the bats roosting site located at the Northeast portion from the community area near Silsilah School with more or less 200 meter having a geographic coordinates of Latitude 6°51'58.70"N, Longitude 122° 4'8.02"E significantly, the roosting site is covered with dense mangrove species.

The team was able to record an estimated count/population of One thousand three hundred twenty five (1,325) heads of mixed **Large flying fox** (*Pteropus vampyrus*) and **Small flying fox** (*Pteropus hypomelanus*). Per observation, the dominant species is the Large flying fox comprising of about 75% of the total population counted. During the conduct of the monitoring activities, the team was not able to go near the roosting tree due to dense mangrove vegetation. However, took photos and video footage.

On the same day at around 6:05 0'clock in the afternoon, the team equipped with manual counters conducted bats exit count within R.T. Lim



Boulevard area. Unfortunately, there were no sightings of bats due to bad weather condition and direction of the wind.

It is worthwhile to note that, the said wildlife usually has a permanent roost and temporary roost or a sub-roosting sites. These shifting pattern of roosting area is not new as it was already observed during previous monitoring activities. It was determined before that because of their abundance and roosting characteristic (which is in cluster) most of the roosting tree loss or shed off their leaves due to the excreta or bats waste thus exposing them to direct sunlight. With this, bats tend to transfer to another location/site as their roosting site.

Moreover, these wildlife species are being protected from human disturbance specifically hunting, which, is being secured by the locals residing near and within the area, in close monitoring and supervision with Protected Area Management Office personnel (PAMO-LGU).

For information and record.


  
**RAQUEL R. MORTERA**  
Forest Technician I

  
**GERRY L. CANETE, JR.**  
Forest Technician I

  
**KARINA D. ETSRELLA**  
Forest Technician II

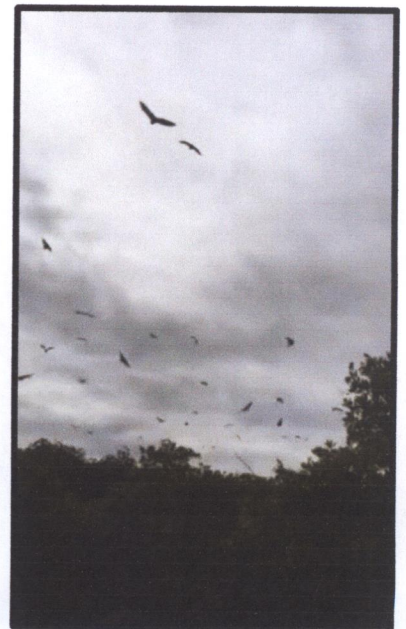
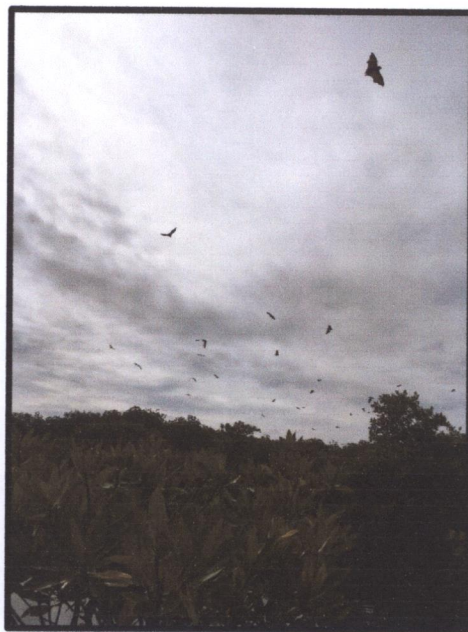
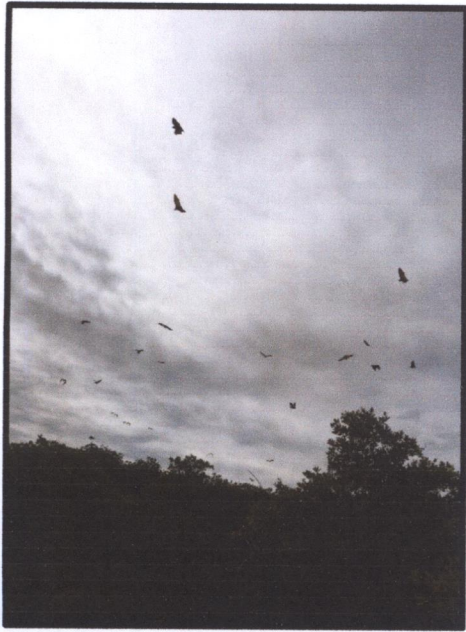
  
**JACQUELINE D. ISHMAEL**  
Forester I

Noted by:

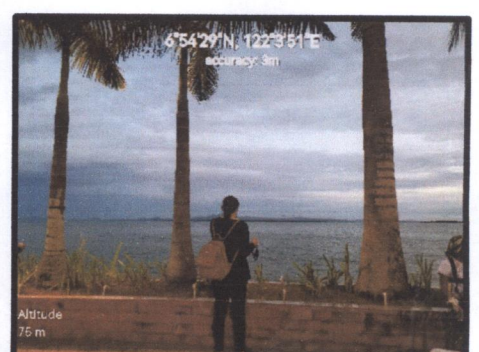
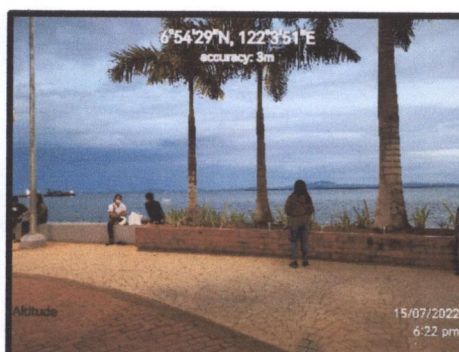
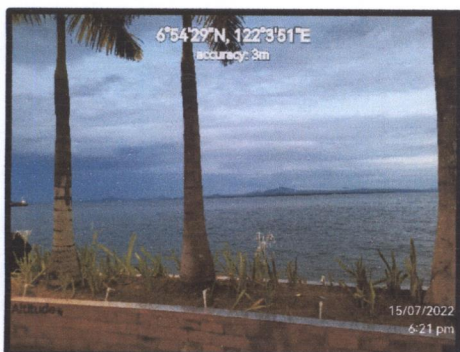
  
**AARON C. HACHERO**  
Forester-II/Chief, PAMBCU



# PHOTO DOCUMENTATION OF POPULATION SURVEY/MONITORING OF BATS AT STA. CRUZ ISLAND, ZAMBOANGA CITY



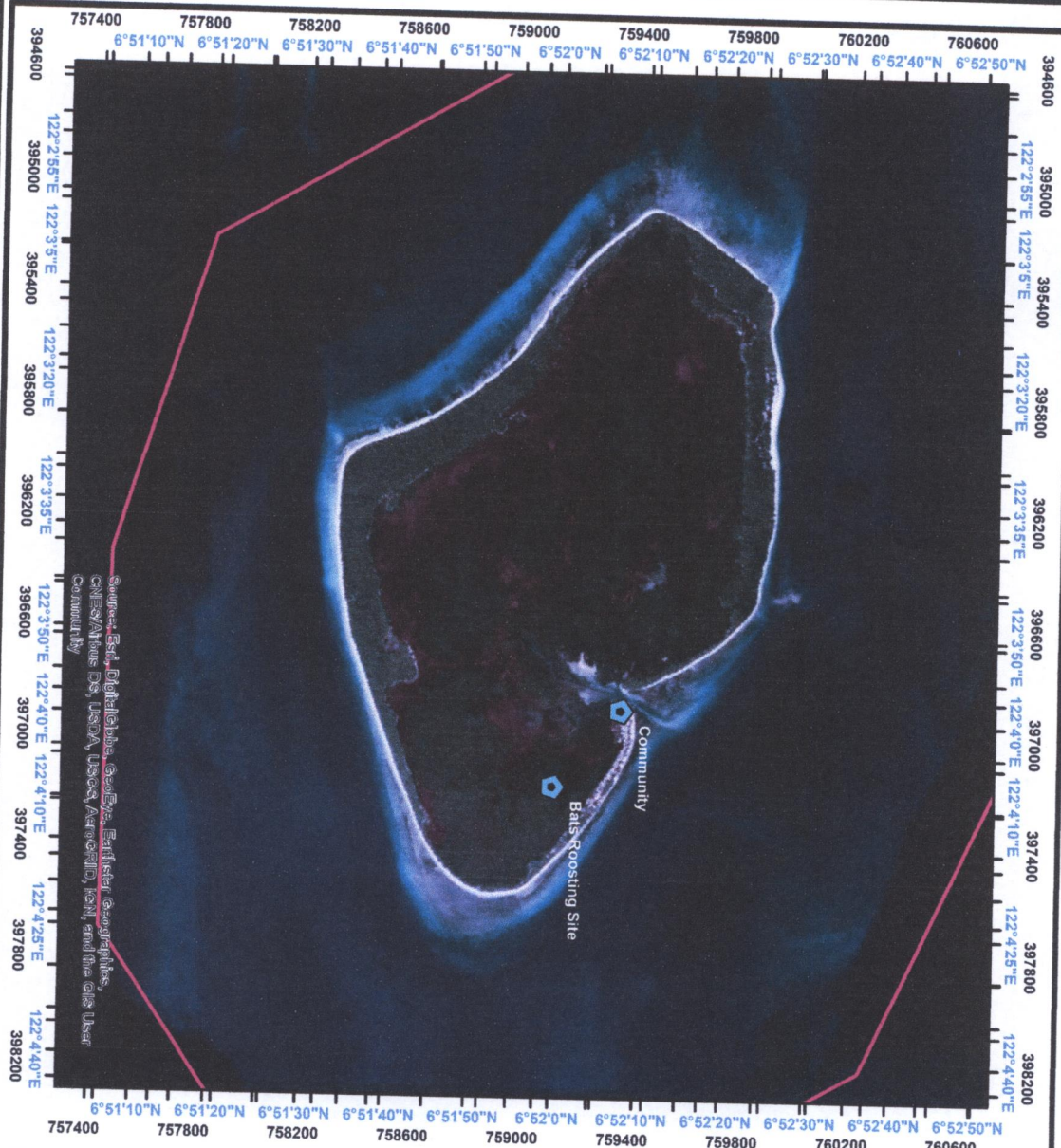
Photos showing the Bats roosting site located at the Northeast portion from the community area near Silsilah school



Photos showing the conduct of Bat exit count at R.T. Lim  
Boulevard, Cawa-Cawa, Zamboanga City

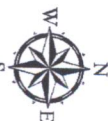
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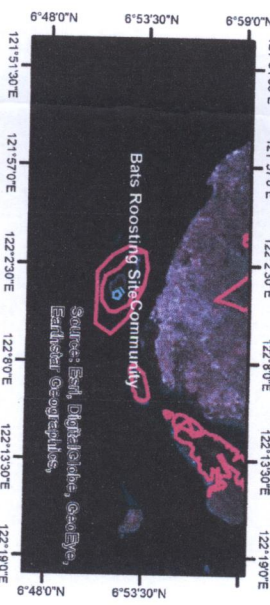
# POPULATION SURVEY/MONITORING SITE FOR BATS

## MAP



SCALE: 1:20,000

### LOCATION:



### LEGEND:

- GLSCIPLS
- ⬠ Community & Bats Roosting Site

Prepared and monitored by:  
**JACQUELINE D. ISMAEL**  
 Forester I

**KARINA D. ESTRELA**  
 Forest Technician II

Attested by:  
**AARON C. HACHERO**  
 Forester II/ Chief, PABICU





ROOST CHARACTERISTICS DATA SHEET

Date: July 14, 2022

No.1

Scribe: Raquel R. Mortera, Gerry L. Cañete Jr.,  
Karina DT. Estrella, Jacqueline D. Ishmael

<b>Roost location (general area):</b> Great Sta. Cruz Island (Part of the community area)	<b>Species in roost:</b>  Giant flying fox ( <i>Pteropus vampyrus</i> ), Common Island flying fox ( <i>Pteropus hypomelanus</i> )	<b>Lat/Long of roost:</b>  Latitude 6°51'58.70"N, Longitude 122° 48.02"E Elevation of roost: 64 MSL	
	<b>How close can the roost be approached?</b>  Estimated 1-2 kilometers	<b>Describe bats' reaction to approach of researchers:</b>  They make loud noise and flying on a circular motion above the canopy of bakawan trees and flies from one tree to another.	
<b>Describe roosting pattern (clumped/with satellites?):</b>  Scattered under the shade of leaves and flying above the canopy of bakawan	<b>Describe roost trees/vegetation (type, condition, species roosting differences):</b>  Rhizophora species	<b>Describe signs of human access (e.g. trails, garbage, hunting information):</b>  Near the community with more or less 200 meters NE direction	
<b># trees within roosting area above 5 meters tall:</b>  More than 10 trees	<b># dead trees above 5 m:</b>  NONE	<b># trees with roosting bats:</b>  More than 10 trees	
<b>Estimate area containing roosting bats:</b>  500 sq. Meters to 1 Hectares	<b>Topography (e.g. ridge, upper slope, orientation of slope, valley bottom):</b>  0-8% slope	<b>Nearness to river and description (e.g. width, gradient):</b>  N/A	
<b>Distance to ocean:</b>  More or less 200 meters	<b>Human settlements (how close, how many):</b>  More or less 180 meters	<b>Roost permanent or changing? Temporal pattern of change? Location of alternative roost sites?</b>  Temporal pattern of change, but whole year round they stay within the protected area.	
<b>Travel directions and transit time:</b> <ul style="list-style-type: none"><li>- Paseo- Great Sta. Cruz Island (Community area) via pump boat – 25-30 minutes</li><li>- Roosting site (via yellow boat) – 15-30 minutes</li></ul>		<b>Contacts:</b>  Protected Area Management and Biodiversity Conservation Unit (PAMBCU) CENRO ZAMBOANGA CITY Gen. Vicente Alvarez St., Zamboanga City	





EXIT COUNT – COLONY SIZE DATA SHEET

<b>Counter's name:</b> Raquel R. Mortera Gerry L. Cañete Jr. Karina DI. Estrella Jacqueline D. Ishmael		<b>Date of count:</b> July 15, 2022	<b>Weather:</b> Cloudy	<b>Location (general area, province/ municipality)</b> Great Sta. Cruz Island (Part of Great and Little Sta. Cruz Islands PLS) Zamboanga City	
<b>Species in roost:</b> The team was allowed only to stay in the Great Sta Cruz Island until 2 PM by the PAMO LGU due to heavy waves at afternoon. So, the team conducted the Bat exit count at RT Lim Boulevard, Cawa-Cawa, instead. In which, this is the best spot for us to conduct the said activity. The distance of our exit post from the roosting site is almost 6 km.		<b>Counter location (description, landmarks) AND lat/long with direction of counting:</b>  Latitude: N 6°54'29" Longitude: E 122°3'51"		<b>Other counters counting the SAME part of the sky as you:</b>  NONE (no sightings of bats during the exit count due to weather condition and direction of the wind)	
<b>Start time (first bat flying):</b> NONE	<b>Stop time:</b> NONE	<b>Reason for stopping (e.g. too dark, no more bats):</b> NONE		<b>Flow of bats at stopping point (e.g. light, medium, heavy):</b> NONE	<b>Number of bats counted in the last minute of the count period:</b> NONE
<b>Number on your counter at end of count: Please indicate here:</b> NONE		<b>Counting interval (s) (e.g. by 1, 10, 50):</b> NONE		<b>Total number of bats counted (please show math):</b> NONE	
<b>Reliability of estimate (i.e., problems encountered):</b> NONE		<b>Describe exit pattern (e.g. dispersed, in a tight column):</b> NONE		<b>Direction bats were flying (using compass bearing, describing landmarks, etc.):</b> NONE	