



Republic of the Philippines  
Department of Environment and Natural Resources  
MIMAROPA Region  
**PROVINCIAL ENVIRONMENT AND NATURAL RESOURCES OFFICE**

September 28, 2022

**MEMORANDUM**

FOR : The Regional Executive Director  
MIMAROPA Region  
Ermita, Manila

THRU : The ARD, Technical Services  
MIMAROPA Region  
Ermita, Manila

FROM : The OIC-PENR Officer  
Mamburao, Occidental Mindoro

SUBJECT : SUBMISSION OF ACTIVITY DESIGN FOR THE CONDUCT OF  
THE HIGH CONSERVATION VALUE AREA WORKSHOP FOR  
HABITAT SUSTAINABILITY MAPPING AND INITIAL  
LANDSCAPE ANALYSIS FOR CORRIDOR CONNECTIVITY OF  
*BABALUS MINDORENSIS* (HUEDE 1888)



Respectfully forwarded herewith is the Memorandum dated September 28, 2022 of the Project Manager of the Mindoro Biodiversity Corridor Project regarding the activity design for the conduct of the High Conservation Value Area Workshop for Habitat Sustainability Mapping and Initial Landscape Analysis for Corridor Connectivity of *Babalus mindorensis* (Huede 1888) under the DENR-UNDP/GEF "Integrated Approach in the Management of Major Biodiversity Corridors in the Philippines (BD Corridor Project), to be held tentatively on October 27-28, 2022, in Mindoro at a venue to be announced.

The said activity's objective is to provide a general overview on the implementation of the HVCA Approach, focusing on HCVs 1 to 3 from the proposed Philippine categories, for landscape planning of corridor connectivity and habitat suitability.

For information, recommendation, and approval.

  
**ERNESTO E. TAÑADA**

Attached:

1. Activity design for the HCVA (3 copies)





Republic of the Philippines  
Department of Environment and Natural Resources  
**PROVINCIAL ENVIRONMENT AND NATURAL RESOURCES OFFICE**  
MIMAROPA Region

September 28, 2022

**MEMORANDUM**

FOR : The OIC, PENR Officer  
Mamburao, Occidental Mindoro

THRU : The In-Charge, Technical Services Division

FROM : The Project Manager  
Mindoro Biodiversity Corridor Project

SUBJECT : SUBMISSION OF ACTIVITY DESIGN FOR THE CONDUCT  
OF THE HIGH CONSERVATION VALUE AREA  
WORKSHOP FOR HABITAT SUSTAINABILITY MAPPING  
AND INITIAL LANDSCAPE ANALYSIS FOR CORRIDOR  
CONNECTIVITY OF *BABALUS MINDORENSIS* (HUEDE  
1888)

Respectfully forwarded herewith is the Memorandum dated September 28, 2022 of the Project Manager of the Mindoro Biodiversity Corridor Project regarding the activity design for the conduct of the High Conservation Value Area Workshop for Habitat Sustainability Mapping and Initial Landscape Analysis for Corridor Connectivity of *Babalus mindorensis* (Huede 1888) under the DENR-UNDP/GEF "Integrated Approach in the Management of Major Biodiversity Corridors in the Philippines (BD Corridor Project), to be held tentatively on October 27-28, 2022, in Mindoro at a venue to be announced.

The said activity's objective is to provide a general overview on the implementation of the HVCA Approach, focusing on HCVs 1 to 3 from the proposed Philippine categories, for landscape planning of corridor connectivity and habitat suitability.

For information, recommendation and approval.

  
**SHALIMAR G. ILEJAY**



# BIODIVERSITY CORRIDOR PROJECT



## Integrated Approach in Management of Major Biodiversity Corridors of the Philippines

### ACTIVITY DESIGN

**TITLE** : High Conservation Value Area Workshop for Habitat Suitability Mapping and Initial Landscape Analysis for Corridor Connectivity of *Bubalus mindorensis* (Heude 1888)

**DATE** : October 27 to 28, 2022 (Tentative)

**VENUE** : Mamburao, Occidental Mindoro

#### I. BACKGROUND AND RATIONALE

Implementation of the project entitled, “**Integrated Approach in Management of Major Biodiversity Corridors of the Philippines**” or **BD Cor Project**, is a multi-agency commitment and convergence of management through the Department of Environment and Natural Resources (DENR) and funded by the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP). The BD Cor Project aims to “*operationalize integrated management of biodiversity corridors to generate multiple benefits including effective conservation of globally threatened species and high conservation value forests, reduce deforestation and degradation and enhance local biodiversity-friendly livelihoods*”. These will be addressed through the reduction of threats and pressures involving conflicts in land utilization, physical developments, deforestation and degradation of ecosystems, increasing human-wildlife conflicts, pollution – including the introduction and proliferation of invasive alien species (IAS), and impacts of climate change.

One of the critical aspects of project implementation revolves on the implementation of the High Conservation Value Areas (HCVA) Approach, which finds incorporation in Component 2 of the BD Cor Project. The Component entails the “*application of integrated network design and management of biodiversity corridors to ensure continued stability and sustainability of their biological ecosystem services and socio-economic conservation*”. The HCVA Approach determines at least six High Concentration Values (HCVs) with international and proposed Philippines categories – from the SIBOL initiative, and given by the following:

	International Categories	Proposed Philippine Categories
HCV 1	Species Diversity	Species
HCV 2	Landscape-level Ecosystems	Landscape-level Ecosystems and Mosaics
HCV 3	Ecosystems and Habitats	Threatened Habitats and Ecosystems
HCV 4	Ecosystem Services	Regulating and Maintenance Services
HCV 5	Community Needs	Provisioning Services
HCV 6	Cultural Values	Cultural Services



# BIODIVERSITY CORRIDOR PROJECT



## Integrated Approach in Management of Major Biodiversity Corridors of the Philippines

At the corridor level, the implementation of the HCVA in relation to the flagship species, *Bubalus mindorensis* (tamaraw) Heude 1888, entails the determination of suitable areas in line with known ecological requirements. These requirements come from confirmed sites where meta-populations are found and opportunistic sightings from surveys and monitoring of the Tamaraw Conservation Program (TCP), and plausible areas of occurrence from the Rapid Assessment of the Mindoro Island (Gonzales *et al* 2000<sup>1</sup>). The latter is the only known island-wide survey of terrestrial fauna and was able to provide deterministic points to prescribe values of areas for conservation based on ecological parameters, and occurrence based on endemism and conservation status. These activities for species conservation provide the bases to determine the current HCVs, particularly Species, Landscape-level Ecosystems, and Mosaics, and Threatened Habitats, and reflected in the following key information:

Bases of Ascription of Conservation Values	Priority Areas Based on Occurrence of <i>B. mindorensis</i>	Specifications of Priority Areas
Conducted Surveys of TCP on Confirmed Meta-Populations of <i>B. mindorensis</i>	Mts. Iglit-Baco Natural Park (particularly the ascribed core habitat area of the species) located in Sablayan, Occidental Mindoro	Site of Annual Tamaraw Counts and houses the largest known meta-population of about 427 individuals (i.e., 2021 data)
	Upper Amnay (collectively the Range of Mts. Lamlamayan and Batu-oy) located in Sablayan, Occidental Mindoro	About 103 to 119 individuals (i.e., 2018 data) are found in the mountain range
	Aruyan-Malati Reservation located in Barangays Malisbong and Ligaya, Sablayan, Occidental Mindoro	About three to 12 individuals (i.e., 2017 data) are present in the proposed critical habitat area from conducted and on-going camera trapping activities by World Wildlife Fund for Nature (WWF) and D'Aboville Foundation (DAF)
	Mt. Calavite Wildlife Sanctuary located in Paluan, Occidental Mindoro	At least two to eight individuals (i.e., 2018 data) are estimated to occur in the protected area

<sup>1</sup> Gonzales, J.C.T. Dans, A.T.L. Afuang, L.E. with contributions from Portillio, B.S. Pedregosa, M. Ledesma M.M. Hernaez B. Bulalacao, W.B. Yngente, V.B. Dans, F.G. Alviola, P.A. (2000). *Mindoro: Island-wide Survey of Fauna and Flora and Field Inventory of Selected Sites for Priority Conservation*. Muntinlupa City. Mindoro Biodiversity Conservation Foundation Inc. (MBCFI)

<sup>2</sup> One of the most recent expeditions near the Catuiran River where the species was first described in 1888



# BIODIVERSITY CORRIDOR PROJECT



## Integrated Approach in Management of Major Biodiversity Corridors of the Philippines

Island-wide Rapid Assessment of Gonzales <i>et al</i> (2000)	Mt. Gimparay located in Naujan, Oriental Mindoro	At least 25 to 30 individuals (i.e., 2018 data) from MBCFI-DAF-TCP joint survey <sup>2</sup>
	Upper Inner Mindoro Range encompassing the range of Mts. Burnal, Sumbrero, and Sukdulan, and Upper Luyang Creek within the administrative jurisdictions of Naujan and Victoria, Oriental Mindoro	About eight to 11 individuals (i.e., 2018 data) were observed during the survey conducted by TCP
	Priority Site 1: Northwest Mindoro Highlands and Mount Calavite – Anduyan Mountain Range	This priority site contains varied vegetation types typical of the western dry climatic zone that contains lowland forests, scattered scrub forest along gulleys and extensive grasslands on the upper elevations
	Priority Site 2: Northern Mindoro Highlands and Mount Halcon massif	This priority site contains more dense vegetation types typical of the eastern wet climatic zone that contains varied forest habitats from the coastal floodplains to the mountains, with a unique alpine heath zone at the peaks
	Priority Site 3: Central Mindoro highlands and Mount Baco mountain massif	This priority site contains highly variable vegetation types typical for Priority Sites 2, 3, and 4
	Priority Site 4: Southern Mindoro Highlands and Mount Hinunduang Range	This priority site contains an extension of priority site 1 on the southeastern portion but occurs in a different geological formation – forests on limestone

Current initiatives for the in-depth determination of the actual areas where the species are found also find integration in the implementation of Research of the Meta-population of Tamaraw in Mindoro spearheaded by TCP and funded under the Foreign-Assisted Special Project Service (FASPS). A component of the Research is the island-wide identification and mapping of locations and habitats of *B. mindorensis*, which should produce spatial maps on distribution and



# BIODIVERSITY CORRIDOR PROJECT



## Integrated Approach in Management of Major Biodiversity Corridors of the Philippines

establishment of known habitats. This initial component is currently lacking from the implementation of the Research, which this activity will attempt to augment through the implementation of the HCVA Approach.

The determination of the HCVs of the known and prospective areas, through spatial mapping and analyses of suitability from known ecological parameterizations, will set the direction of implementing the BD Cor Project in line with corridor connectivity. This will also provide substantial bases for measures and strategies to connect meta-population given the aforementioned pressures within the corridor.

## II. OBJECTIVES

**General Objective:** Provide a general overview on the implementation of the HCVA Approach, focusing on HCVs 1 to 3 from the proposed Philippine categories, for landscape planning of corridor connectivity and habitat suitability.

### Specific Objectives:

1. Provide an overview on the approaches to landscape planning, specific to MBC, based on the policy outlook on emerging threats and pressures, and implemented initiatives in line with the conservation of *B. mindorensis*;
2. Familiarize adjoining technical personnel on the HCVA Approach, highlighting HCVs 1 to 3, and measures of corridor connectivity;
3. Familiarize adjoining technical personnel on the integrated and collective efforts of conservation partners and nationally implemented projects;
4. Formulate criteria on habitat suitability for *B. mindorensis* based on ecological parameters, determined threats and pressures, and state of landscape of the Mindoro Island;
5. Integrate existing techniques on corridor connectivity and suitability analyses from various conservation perspectives;
6. Equip adjoining personnel on the utilization of mapping software for the HCVA Approach; and
7. Produce habitat suitability maps in support of the Research for Meta-population of Tamaraw in Mindoro.

## III. EXPECTED OUTCOMES AND OUTPUTS

<b>Outcomes</b>	1. Personnel equipped with the appropriate knowledge on the implementation of HCVA Approach for MBC
-----------------	---



# BIODIVERSITY CORRIDOR PROJECT



## Integrated Approach in Management of Major Biodiversity Corridors of the Philippines

	<ol style="list-style-type: none"> <li>2. Personnel equipped on the use of mapping software for HCVA Approach</li> <li>3. HCVA Approach will find streamlining in the overall implementation of biodiversity conservation for future planning of DENROs in Mindoro Island</li> </ol>
<b>Outputs</b>	<ol style="list-style-type: none"> <li>1. Criteria development for deterministic characterization of areas in the MBC with suitability for habitats of <i>B. mindorensis</i></li> <li>2. Connectivity measures developed for <i>B. mindorensis</i></li> <li>3. Habitat suitability map for <i>B. mindorensis</i></li> <li>4. Location map of habitats of <i>B. mindorensis</i> based on HCVs and determined biodiversity envelopes</li> </ol>

## IV. METHODOLOGY

### *Pre-workshop activities*

1. Drafting of invitation letter for Dr. Neil Aldrin D. Mallari as resource person for the activity
2. Sending out of invitation to adjoining Tamaraw Conservation Partners and Project MATAPAT
3. Preparation of Regional Special Order for adjoining personnel of DENROs in the Mindoro Island
4. Preparation of presentation on HCVA Approach, corridor connectivity, landscape planning, updates on the implementation of the Research on Meta-population of Tamaraw in Mindoro, and workshop mechanics

### *Workshop proper*

1. Presentation of project overview and landscape planning approaches for MBC
2. Presentation on the updates of the Research on Meta-population of Tamaraw in Mindoro, highlighting on the progress on determined sites with occurrences of *B. mindorensis*
3. Presentation and updates of the initiatives of Tamaraw Conservation Partners and Project MATAPAT
4. Presentation of the HCVA Approach, highlighting on HCVs 1 to 3, and mapping procedures
5. Presentation of workshop mechanics
6. Discussion and consensus building on suitability parameters
7. Mapping of suitable habitats of *B. mindorensis* based on parameters of areas in the Mindoro Island
8. Discussion on corridor connectivity measures for *B. mindorensis* based on locations of confirmed meta-populations, suitability parameters, and policy outlook

### *Working Days (Tentative)*

Working Days	Tentative Dates	Activity
--------------	-----------------	----------



# BIODIVERSITY CORRIDOR PROJECT



## Integrated Approach in Management of Major Biodiversity Corridors of the Philippines

Day 0	October 26, 2022	Travel time of participants not from Occidental Mindoro to venue; dry-run of workshop
Day 1	October 27, 2022	Workshop proper
Day 2	October 28, 2022	Workshop wrap-up and return of participants to respective work stations; post-activity assessment

### V. TARGET PARTICIPANTS

Organization / Office / Affiliation / Person	Prospective Participants	Number of Participants
<b>Resource Person/s</b>	Dr. Neil Aldrin D. Mallari and Team	4
<b>DENR</b>		21
<b>Regional Office</b>		2
Conservation and Development Division / GIS Unit	Karla S. Mangundayao – BD Cor Project Focal Roberto Martin C. Pagatpatan	
<b>PENR Offices</b>		7
Occidental Mindoro	Ernesto E. Tañada – OIC, PENRO Celso B. Almazan – In-charge, TSD Emiliza A. Calabio – Chief, CDS Noriel M. Dulatre Jocelyn C. Almacen	5
Oriental Mindoro	Amor D. Asi – Chief, CDS Nestor G. Mira, Jr.	2
<b>CENR Offices</b>		6
CENRO Sablayan	Dennis E. Feratero	1
CENRO San Jose	Ma. Teresita P. David, Jr.* Herold S. Castro	2
CENRO Roxas	Chucklee B. Ngabit	1
CENRO Socorro	Rodel M. Boyles – CENR Officer* Michaelanjelo A. Acuzar	2
<b>Protected Area Management Offices</b>		2
Mts. Iglit-Baco Natural Park	Eugene S. Secreto	1
Mt. Calavite Wildlife Sanctuary	Josie R. Corpuz	1
<b>TCP</b>		2
	Neil Anthony A. Del Mundo – Coordinator Alvin N. Tabuga – Technical Staff	
<b>BD Cor Project – Corridor Project Management Unit (CPMU)</b>		2
	Jan Lloyd I. Balon – Regional Landscape	



# BIODIVERSITY CORRIDOR PROJECT



## Integrated Approach in Management of Major Biodiversity Corridors of the Philippines

	Planning Specialist (Head of Secretariat) Clinth Jezter G. Dela Cruz – Community and Stakeholder Coordinator (Documenter)	
<b>Project MATAPAT</b>	Dr. Nikki Heherson A. Dagamac and team	<b>3</b>
<b>D'Aboville Foundation and Demo Farm, Inc. (DAF)</b>	Emmanuelle Schutz Fernando Garcia-Gil	<b>2</b>
<b>Mindoro Biodiversity Conservation Foundation, Inc. (MBCFI)</b>	Kathy Lene S. Cielo Elyza Hazel P. Tan	<b>2</b>
<b>TOTAL</b>		<b>32</b>

\* - Previous TCP Coordinators

## VI. PROVISIONAL PROGRAM

Date/Time	Activity	Responsible Personnel
<i>Day 0</i> (October 26, 2022)		
	Travel of adjoining personnel not from Occidental Mindoro	CPMU and Activity Secretariat PENR Office Personnel
<i>Day 1</i> (October 27, 2022)		
08:00 AM – 09:00 AM	<i>Breakfast</i>	Secretariat
	Registration of participants	
09:00 AM – 09:30 AM	Opening Program	
	<ul style="list-style-type: none"> <li>Prayer and National Anthem</li> <li>Welcome Remarks</li> <li>Introduction of Participants</li> </ul>	Secretariat OIC-PENR Officer
09:30 AM – 09:40 AM	Project Overview and Landscape Planning for MBC	Secretariat CPMU, RLPS
09:40 AM – 10:00 AM	Updates on the Research on Meta- population of Tamaraw in Mindoro	TCP Coordinator
10:00 AM – 10:10 AM	<i>Snacks / Break</i>	
10:10 AM – 11:45 AM	HCVA Approach and Mapping Procedures	Resource Person/s
11:45 AM – 12:00 NN	Workshop mechanics	BD Cor Project Focal
12:00 NN – 01:00 PM	<i>Lunch</i>	
01:00 PM – 02:00 PM	Discussion of parameters and consensus building	BD Cor Project Focal
02:00 PM – 03:00 PM	Presentation of activities and mapping of suitable habitats of the Tamaraw	DAF MBCFI



# BIODIVERSITY CORRIDOR PROJECT



## Integrated Approach in Management of Major Biodiversity Corridors of the Philippines

	Conservation Partners and Project MATAPAT	Project MATAPAT
03:00 PM – 05:00 PM	Suitability mapping <i>Snacks</i>	Resource Person/s BD Cor Project Focal GIS Focal Personnel
05:00 PM	End of Day 1 <i>Dinner</i>	
<i>Day 2</i> <i>(October 28, 2022)</i>		
08:00 AM – 08:30 AM	<i>Breakfast</i>	
08:30 AM – 10:00 AM	Presentation of suitability map and discussion of corridor connectivity measures	Resource Person BD Cor Project Focal CPMU, RLPS
10:00 AM – 10:10 AM	<i>Snacks / Break</i>	
10:10 AM – 10:30 AM	Closing Program	
	<ul style="list-style-type: none"> <li>Awarding of Certificates / Token</li> </ul>	OIC-PENR Officer CENR Officer - Socorro In charge, TSD CDS Chiefs BD Cor Project Focal TCP Coordinator
10:30 AM	<ul style="list-style-type: none"> <li>Closing Remarks</li> </ul> Return of participants to official work stations	

## VII. BUDGETARY REQUIREMENTS

Summary	Assumptions			Budget (PHP)
	Provision	Unit Cost (PHP)	Number / Unit	
	<i>Day 0</i>			<i>13,000.00</i>
	Lunch	350.00	20 pax	7,000.00
	Dinner	300.00	20 pax	6,000.00
	<i>Day 1</i>			<i>36,800.00</i>
	Breakfast	200.00	32 pax	6,400.00
	AM Snacks	150.00	32 pax	4,800.00
	Lunch	350.00	32 pax	11,200.00
	PM Snacks	150.00	32 pax	4,800.00
	Dinner	300.00	32 pax	9,600.00
	<i>Day 2</i>			<i>11,200.00</i>
	Breakfast	200.00	32 pax	6,400.00
	AM Snacks	150.00	32 pax	4,800.00
<b>Sub-total</b>				<b>61,000.00</b>
Accommodation	Room	1,050.00	52 pax	54,600.00




# BIODIVERSITY CORRIDOR PROJECT



## Integrated Approach in Management of Major Biodiversity Corridors of the Philippines

Expenses	Venue	8,000.00	1 room x 2 days	16,000.00
<b>Sub-total</b>				<b>70,600.00</b>
Travel Expenses	Vehicle Rental	5,000.00	1 van x 2 days	10,000.00
<b>Sub-total</b>				<b>10,000.00</b>
Tokens	Tokens	1,000.00	6 pax	6,000.00
<b>Sub-total</b>				<b>6,000.00</b>
<b>GRAND TOTAL</b>				<b>147,600.00</b>

Prepared:

  
**FOR JAN LLOYD I. BALON**  
Regional Landscape Planning Specialist

Reviewed:

  
**SHALIMAR G. ILEJAY**  
Corridor Project Manager

Recommending Approval:

**DONNA MAYOR-GORDOVE, CESO IV**  
Assistant Regional Director for Management Services



Approved:

**LORMELYN E. CLAUDIO, CESO IV**  
Regional Executive Director