

MEMORANDUM OF AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

This Memorandum of Agreement (MOA) is made and entered into by and between:

The **DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES-CORDILLERA ADMINISTRATIVE REGION (DENR-CAR)**, a government agency created by virtue of the laws of the Philippines, with office address at DENR Compound, Gibraltar, Baguio City herein represented by its Regional Executive Director, **RALPH C. PABLO**, herein referred to as the co-implementing agency "**DENR**"
and

The **UNIVERSITY OF THE PHILIPPINES BAGUIO**, the National University created by virtue of Act No. 1870, as amended, and strengthened by Republic Act 9500, through its constituent university, U.P. Baguio, represented by its Chancellor, **CORAZON L. ABANSI**, hereinafter referred to as the implementing agency "**UP Baguio**".

WITNESSETH:

WHEREAS, the **DENR** is the primary government agency responsible for the conservation, management, development and proper use of the country's environment and natural resources, specifically forest and grazing lands, mineral resources, including those in reservation and watershed areas, and lands of the public domain, as well as licensing and regulation of all natural resources as may be provided by law in order to ensure equitable sharing of benefits derived for the welfare of the present and future generations of Filipinos;

WHEREAS, in accordance to DENR Memorandum Circular (DMC) No. 2016-02 dated 16 May 2016 otherwise known as Revised Guidelines and Procedures on the Appraisal, Selection, and Approval of Project Proposals submitted to the Central Office for Funding as Special Projects, the DENR approved the project proposal and provided special project funds for the implementation of the project titled "*Assessment of Bioinvasion and Proliferation of Exotic Plant Species in Camp John Hay Forest Reserve in Baguio City: A Basis for the Policy Inputs on the Management of Exotic Plants and Promotion and Restoration of Native Plants*" hereinafter referred to as "the Project";

WHEREAS, the Project aims to:

- 1) determine the species composition, diversity, and conservation status of exotic and native species and correlate to the prevailing physical condition in Camp John Hay forest reserve;
- 2) determine if the abundance, size, and species composition (native vs exotic) of plants at different sampling sites will have corresponding effect on the species richness and density of the associated bird communities;
- 3) assess the economic costs and impacts of invasive plants on biodiversity and develop a model to predict the spread of potentially invasive plant species;
- 4) capacitate the gardeners and other stakeholders on the selection and propagation of native plants in the nursery and fernery; and,
- 5) formulate science-based policy inputs for the local and national management of Invasive Plants and Restoration of Native Plants;

WHEREAS, the **UP Baguio** faculty members who will be conducting the research are:

- 1) adept and competent to do research in their chosen area of concentration in conservation and restoration;
- 2) prepared to take on research and consultancy in natural resources conservation and management;







- 3) equipped with the necessary credentials to pursue professional practice of inventory of selected flora and fauna;
- 4) ready to make recommendations for a sustainable ecotourism; and,
- 5) willing to disseminate the knowledge to various stakeholders;

WHEREAS, **UP Baguio** submitted project proposal to DENR Central Office's **Foreign-Assisted and Special Projects Services (FASPS)** to conduct a research on the inventory of plants and birds on selected sites within the forest subwatershed zone of Camp John Hay (CJH), employ mathematical models to study and predict the potential bioinvasion of exotic plants in the area, set up one of Baguio's first native plant nursery and fernery, and formulate science-based management and restoration plans for CJH and the city of Baguio;

WHEREAS, the proposal was approved for funding in the amount of **Two Million Pesos (PhP 2,000,000.00)** per DENR-Central Office Memorandum dated 23 January 2023;

WHEREAS, the DENR-Central Office will transfer the said amount to PENRO-Benguet to facilitate the disbursement of funds to UP Baguio;

NOW, THEREFORE, for and in consideration of the foregoing, the PARTIES do hereby agree to undertake its respective commitments under the following terms and conditions:

SCOPE AND LIMITATIONS

This MOA is entered into and executed by the Parties for the purpose of implementing the project titled, "**Assessment of Bioinvasion and Proliferation of Exotic Plant Species in Camp John Hay Forest Reserve in Baguio City: A Basis for the Policy Inputs on the Management of Exotic Plants and Promotion and Restoration of Native Plants**".

I. ROLES AND RESPONSIBILITIES

A. PENRO-Benguet

1. Shall, upon receipt of the amount of Php 2,000,000.00, inclusive of value-added tax, facilitate payment to UP Baguio in accordance with the schedule of payment as indicated in the TOR and subject to acceptability of deliverables.

B. UP Baguio

1. Shall lead in providing the services and performing obligations, together with the identified partner institutions (i.e. **John Hay Management Corporation, Watershed and Water Resources Research Development and Extension Center Benguet State University, and Don Mariano Marcos Memorial State University**), in conformity with the Terms of Reference (TOR) in the Service Requirement for the project, "**Assessment of Bioinvasion and Proliferation of Exotic Plant Species in Camp John Hay Forest Reserve in Baguio City: A Basis for the Policy Inputs on the Management of Exotic Plants and Promotion and Restoration of Native Plants**", hereby attached as Annex A and shall form part of the MOA.
2. Shall provide and supply all materials, equipment, and competent manpower to perform the aforementioned project, and shall abide by the existing health and safety environment, and quality procedures to ensure that wastes generated in the conduct of Project are properly disposed.



3. Shall submit regular reports to PENRO-Benguet in accordance to the approved TOR including the Financial Statement and Disbursement Report of Funds released. Outputs should be reviewed and endorsed for payment by a Technical Working Group (TWG) to be created by the DENR-CAR Regional Office. Also, submission of corresponding Project reports to FASPS should be coursed through the DENR-CAR.

II. INTELLECTUAL PROPERTY RIGHTS

DENR-CAR and UP Baguio hereby agree and understand that intellectual property rights, ownership and enjoyment thereof arising from this partnership shall be governed by the applicable provision of RA No. 10055, otherwise known as An Act Providing the Framework and Support for the Ownership, Management, Use and Commercialization of Intellectual Property Generated from Research and Development Funded by the Government and Other Purposes, including their respective Rules and Regulations, as well as existing and future policies of the UP System on Intellectual Property Rights such as but not limited to the following:

1. Any Knowledge Products related to this partnership that will include but are not limited to videos, posters, brochures and publications shall clearly establish and identify the individual Parties as the source of the output and shall acknowledge the contribution of said individual Parties involved in this MOA with reference to the entity they represent;
2. All reports arising from the activities undertaken by virtue of and pursuant to this MOA shall acknowledge all the individual Parties involved with reference to the entity which they represent; and,
3. Principal authorship in any publication or IEC materials arising from this project should accurately reflect the relative scientific or professional contributions of the individuals involved in the project. Minor contributions to the research or to the writing for publications are only to be acknowledged appropriately, such as in footnote or acknowledgement section of the report.

III. MISCELLANEOUS PROVISIONS

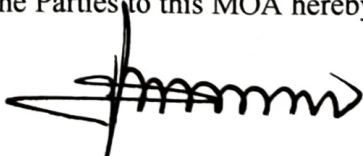
No part of the project including the rights thereto may be transferred or assigned by UP Baguio nor shall any part of the project be subcontracted without the written consent of both parties.

If UP Baguio, through its own default, fails to deliver any or all services within the period/s specified in this MOA, then the DENR shall, without prejudice to other remedies under this MOA and Applicable Laws, impose a penalty by way of deduction from the MOA price, as liquidated damages, a sum equivalent to one-tenth (1/10) of one percent (1%) of the price of the unperformed portion of the services for each day of delay based on the approved MOA schedule up to the maximum deduction of ten (10%) of the MOA price. Once, the maximum of 10% deduction is reached, the DENR may consider termination of this MOA.

Request for extension of submission of deliverable maybe granted upon approval of the request with valid justification and shall be made one (1) month prior to the agreed timeline for submission.

In the event of a dispute under this MOA, both the DENR and UP Baguio shall agree to work together to find prompt and mutually acceptable solution. In case of failure by the parties to reach an amicable settlement, such dispute shall be submitted to arbitration according to the provisions of RA 9285, otherwise known as the "Alternative Dispute Resolution (ADR) Act of 2004".

The Parties to this MOA hereby agree to the full performance of the covenants contained therein.



IV. SEPARABILITY CLAUSE

If any part of this MOA is declared unenforceable or void, the rest of the provisions shall nevertheless remain in full force and effect.

V. TERM AND AMENDMENTS

This MOA shall be effective from **April 1, 2023 to March 31, 2025** based on the approved Work and Financial Plan (WFP) contained in **Annex B**, unless sooner terminated by any of the Parties on account of the breach by any of the Parties of its obligations herein.

No amendment or modification of any of the terms and conditions of this MOA shall be valid unless evidenced by a written Agreement executed by the parties' respective authorized representatives.

This Agreement shall be in force and effect upon the signing of this instrument by the PARTIES.

IN WITNESS WHEREOF, the PARTIES have hereunto signed this Memorandum of Agreement this ____ day of _____ in _____.

DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES

UNIVERSITY OF THE PHILIPPINES
BAGUIO

By:

By:


RALPH C. PABLO, DPA, En.P.
Regional Executive Director *10*


CORAZON L. ABANSI, PhD
Chancellor

SIGNED IN THE PRESENCE OF:


EDGARDO S. FLOR
PENR Officer, Benguet


ROSEMARY M. GUTIERREZ, PhD
Vice-Chancellor for Academic Affairs

CERTIFIED FUNDS AVAILABLE:


GIZELLE MAYE CORNEL ANOS
Accountant, PENRO-Benguet

ACKNOWLEDGMENT

REPUBLIC OF THE PHILIPPINES)
BAGUIO CITY) S.S.

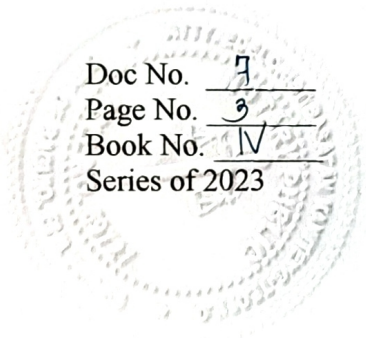
BEFORE ME, a Notary for Baguio City, the following persons has personally appeared:


Name	ID No.	Issued at	Issued on
RALPH C. PABLO			
CORAZON L. ABANSI			




All known to me and to me known to be the same persons who executed the foregoing Memorandum of Agreement and who acknowledged to me that the same is executed by them in their own free voluntary act and that of the Institutions that they represent.

The Memorandum of Agreement consists of five (5) pages including this page, all of which pages bear their signatures and refers to the agreement herein-acknowledged.

WITNESS MY HAND AND SEAL this _____ day of **26 JUN 2023**, 2023 in Baguio City, Philippines.




Atty. EDELCRIST B. MANITENG-TEOFILO
Notary Public for Baguio City
Until December 31, 2024
NA-165-KC-22-P ; Baguio City
PTR No. 5987455 ; 01-10-23 ; Baguio City
BP O.R. No. 251869 ; 01-01-23 Baguio-Benguet Chapter
Roll No. 69727; June 1, 2017
55-A Luna St., Purok 7, Apugan, Irisan, Baguio City

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ANNEX A: Terms of Reference

Project Title: Assessment of Bioinvasion and Proliferation of Exotic Plant Species in Camp John Hay Forest Reserve in Baguio City: A Basis for the Policy Inputs on the Management of Exotic Plants and Promotion and Restoration of Native Plants

I. Background

Biological invasion or bioinvasion, defined as proliferation plus exclusive competition of exotic species versus native species, is one of the leading threats to irreversible biodiversity loss (Baguinon & Miel, 2013). Unfortunately, exotic or alien plants have been deliberately introduced into natural forests, national parks (Baguinon, Quimado, & Francisco, 2005), and urban landscapes (Flores, et al., 2020). The complex nature of ecosystems makes it difficult to understand the full impacts of introduced species. We only realize the consequences of the introduction when damage is already significantly affecting our environment and our well-being.

It is only in the beginning of the 21st Century that the foresters are becoming alerted by the invasive properties of these introduced trees. Still in the country report of Baguinon et al. (2005), certain plants were already established to be invasive in the areas where they were introduced, which include mahogany (*Swietenia macrophylla*), alder (*Alnus* spp.), paper mulberry (*Broussonetia papyrifera*), hagonoy (*Chromolaena odorata*), coronitas (*Lantana camara*), ipil-ipil (*Leucaena leucocephala*), aroma (*Acacia farnesiana*), and mesquite aroma (*Prosopis juliflorae*).

Alien-driven extinctions might have been occurring in the past but were undocumented. They are becoming prevalent driver of recent extinctions of native plants, reptiles, birds, and mammals (Bellard, Cassey, & Blackburn, 2016).

Apparently, the prevalence of exotic or alien species in certain areas may lead to biodiversity loss of native flora and fauna species, and negatively affects the quality of the habitat (Pyšek, et al., 2020). Hence, in the Joint DENR-DA Administrative Order No. 2020-02, the National Invasive Species Strategy Action Plan (NISSAP) becomes the national framework for the management of Invasive Alien Species (IAS) in the Philippines for 2020-2030. The NISSAP provides nine strategic goals towards a holistic, collaborative, and multi-sectoral approach in managing the risks of the IAS including:

- 1) Leadership and coordination
- 2) Prevention
- 3) Early detection and rapid response
- 4) Control and management
- 5) Restoration
- 6) Research and information management
- 7) Education and public awareness
- 8) International cooperation
- 9) Training needs (capacity building for field offices and other relevant agencies)

Camp John Hay Forest Reserve as the Project Site

Historically, Camp John Hay in Baguio City was declared a military reservation (CJHMR) on October 10, 1903. A military reservation by its very nature is strictly for public purpose. With the issuance of Proclamation No. 198 and Proclamation No. 420, the character of John Hay Air Station (now called as Camp John Hay) remains to be an inalienable land of public domain since, the purposes of which are for the conservation of the natural resources within the area and "converting it into alternative productive uses". Therefore, CJH is strictly for public purpose, incapable of private appropriation, and warranting effort for its preservation and conservation.

CJH is managed by JHMC which is fully subsidized by the BCDA but it is with extreme difficulty that the JHMC can ever pass budget approval to support scientific studies, since this is not in its corporate mandate. Hence, JHMC needs the support of the scientific community and the academe to help out its conservation and environmental protection efforts in CJH.

The Camp John Hay (CJH) Forest Reserve covers more than half or 53% of the 9% remaining forest cover in the entire City of Baguio and this is the biggest forest cover adequate as site of the study.

CJH Forest Reserve is a popular ecotourism site and a forest sub-watershed reservation in Baguio City making it a strategic area to conduct a pilot study on the detection of probable bioinvasion and the proliferation of exotic ornamental plants. As part of the upland watershed that contributes to the Bued River, the condition of the CJH Forest Reserve plays a crucial role to water security.

Furthermore, CJH is identified as a birding hotspot (Allen, 2020) and migratory pathway in the East Asia-Australasian Flyway, boasting a number of endemic, resident, and migratory birds in its forest trails (Floresca, 2015). In fact, the Department of Tourism-CAR recently considered Camp John Hay as Birdwatching Site after the validation conducted on August 30-31, 2022. Unfortunately, not a lot of science-based data regarding the bioinvasion of exotic vegetation and the local bird biodiversity are found in the Philippines, much less on the wildlife of Baguio City.

While there were biodiversity studies conducted at CJH Forest Reserve in the past, none of these reports are published to make the information readily available to the public. In the unpublished report of Austria and Romero (2003), the African tulip was not recorded. Subsequently in 2006, a multi-partite monitoring of plant species at CJH eco-trail was conducted (Costales, Unpublished report). The team reported 98 plants of which 35 (36%) are introduced species, including African tulip (*Spathodea campanulata*).

In the few reconnaissance trips conducted along the yellow- and eco-trails in the camp, our team noticed that there are apparently more exotic than native plants already. The African tulips for instance are very close to each other, indicating that they are rapidly spreading. We need to validate this observation by conducting a more intensive inventory to profile the plant community at selected sites in CJH Forest Reserve and determining any relationship with the associated bird species.

Further, there was an observed decline of migratory birds spotted at CJH Forest Reserve in the past three years (Floresca, Pers. Obs.). Moreover, birds and plant association are an important indicator of the quality of a habitat. Specifically, frugivore birds, play a crucial role in the natural regeneration process of both local and exotic plants (including trees) through dispersal of seeds (Buba & Jaafar, 2021).

Currently, the BMB is integrating the management and control of IAS to the DENR Regional Offices through regular activity to assess the IAS covering the Protected Areas (PAs). Hence, this study will be useful to BMB in prioritizing the management and control of IAS, particularly on the areas outside of the PAs. Thus, this will give different perspective to the management and control of IAS/ exotic species for non-PAs such as in urban green spaces.

II. Project Objectives

General Objective:

To determine and assess the composition and diversity of native and exotic plant species in Camp John Hay Forest Reserve as basis for the promotion and restoration of native plants and management of exotic plants in Baguio City.

Specific Objectives:

1. To determine the species composition, diversity, and conservation status of exotic and native species and correlate to the prevailing physical condition in CJH;
2. To determine if the abundance, size, and species composition (native vs exotic) of plants at different sampling sites will have corresponding effect on the species richness and density of the associated bird communities;
3. To assess the economic costs and impacts of invasive plants on biodiversity and develop a model to predict the spread of potentially invasive plant species;
4. To capacitate the gardeners and other stakeholders on the selection and propagation of native plants in the nursery and fernery; and,
5. To formulate science-based policy inputs for the local and national management of Invasive Plants and Restoration of Native Plants.

III. Expected Project Outputs/ Deliverables

- Intensive inventory and assessment report on the potentially invasive introduced species and the native species including the categorization among the exotic species, known IAS, and native species in CJH Forest Reserve.
- Development of tools (mathematical model and economic valuation method) that will determine and assess the invasive properties of species and their impact to bird population. This will be an input in improving guidelines for control and management of IAS and exotic species as follows:
 - Input to the enhancement of the DENR Administrative Order (referring to the policy of BMB concerning the management of IAS and exotic species) which will focus on the needs for scientific information for the control and management of IAS/exotic species on the areas outside the established Pas.
 - Input to the policy formulation of the entire Baguio City as an urban green space for the management measures of IAS/exotic species
- IEC materials including publishable papers in scientific journals.

IV. Scope of Work and Specific Responsibilities

UP Baguio Project Leader (Zenaida G. Baoanan)	
General Roles	Specific Responsibilities
<ul style="list-style-type: none"> ● Primarily responsible for the successful completion of a project ● Ensure that the project proceeds within the specified time frame and under the established budget while achieving its objectives. ● Make sure that projects are given sufficient resources while managing relationships with contributors and stakeholders. 	<ul style="list-style-type: none"> ● Developing a project plan ● Managing deliverables according to the plan ● Recruiting project staff ● Leading and managing the project team ● Determining the methodology used on the project ● Establishing a project schedule and determining each phase ● Assigning tasks to project team members ● Communicating with upper management
Project Team Members from UP Baguio	
General Roles	Specific Responsibilities
<p>Common responsibility for all team members</p> <ul style="list-style-type: none"> ● individuals who actively work on one or more phases of the project. They may be in-house staff or external consultants, working on the project on a full-time or part-time basis. 	<ul style="list-style-type: none"> ● Contributing to overall project objectives ● Completing individual deliverables as stated in the specified roles ● Providing expertise ● Working with users to establish and meet project needs ● Documenting the process ● Supervising the research assistants and theses students (for team members from the academe)

<ul style="list-style-type: none"> ● Project team member roles can vary according to each project. 	<ul style="list-style-type: none"> ● Supervising the resident gardeners, foresters, and maintenance officers (for team members from WWRRDEC, JHMC, and DENR-CAR)
Member 1 (Liezal M. Magtoto-UP Baguio)	<ul style="list-style-type: none"> ● Spearhead the vegetation analysis in addition to the general tasks of project team members enumerated above
Member 2 (Rizavel C. Addawe-UP Baguio)	<ul style="list-style-type: none"> ● Spearhead the mathematical modeling and statistical analyses in addition to the general tasks of project team members enumerated above
Member 3 (Jhunas Paul T. Viernes UP Baguio)	<ul style="list-style-type: none"> ● Assist in the mathematical modeling and economic valuation in addition to the general tasks of project team members enumerated above
Support Staff	
	<ul style="list-style-type: none"> ● Processes documents in connection with the project's finances and in compliance with the accepted accounting and auditing procedures of the funding agency ● Record keeping of all transactions of the project ● Prepares travel documents of faculty and staff ● Make requisition for purchase of equipment and supplies ● Prepares financial report of the project ● Assist in the data collection and other tasks assigned by the project leader
Research assistant	
	<ul style="list-style-type: none"> ● Conduct literature reviews ● Conduct field work ● Collect, encode, and analyze data ● Prepare materials for submission to granting agencies and foundations ● Provide ready access to all experimental data for the faculty researcher and/or supervisor ● Assist undergraduate/graduate students working on the research project (maintaining records on assignment completion, acting as liaison/mediator between the undergraduate/graduate students and the faculty researcher) ● Attend project meetings and take minutes of meetings ● Attend area seminars and other meetings as necessary ● Summarize project results ● Prepare progress reports for the PI and funding agency ● Prepare other articles, reports, and presentations

Project Consultants	
	<ul style="list-style-type: none"> ● Provide expertise for the completion of the project (i.e. on modelling, economic valuation, landscaping, nursery and fernery improvement and capacity building)
John Hay Management Corporation (JHMC)	
Assign a focal person (Ms. Editha M. Mejia) to assist in the project implementation	<ul style="list-style-type: none"> ● Provide security personnel and field guides during activities related to the project
	<ul style="list-style-type: none"> ● Provide logistics including vehicles/transportation during the conduct of field activities within CJH reservation
	<ul style="list-style-type: none"> ● Provide results of previous inventory conducted at CJH to serve as baseline information
	<ul style="list-style-type: none"> ● Allow the use of their existing nursery and fernery for the propagation of native plants and ferns
	<ul style="list-style-type: none"> ● Provide staff to monitor and supervise the implementation of nursery and site development activities
	<ul style="list-style-type: none"> ● Provide additional manpower to assist in the floral and avifaunal assessments subject to technical training and transfer of technical knowledge and guidance from the experts of the team
	<ul style="list-style-type: none"> ● Provide research space for the project team and venue for trainings and workshops for the community
	<ul style="list-style-type: none"> ● Approve and provide inputs for and/or revise future project/activity plans for the restoration and management of the camp;
	<ul style="list-style-type: none"> ● Engage other stakeholders to participate in the restoration and conservation initiatives
	<ul style="list-style-type: none"> ● Share the native and endemic plants to the community, including UPB, DENR-CAR, WWRRDEC, BSU, and DMMMSU
	<ul style="list-style-type: none"> ● Provide other support services upon the discretion of the JHMC to fast-track and sustain the restoration and conservation of the area after the end of the project
DENR-CAR/PENRO/CENRO	
Assign focal persons within DENR-CAR Regional Office, PENRO Benguet, and CENRO	<ul style="list-style-type: none"> ● Provide technical assistance and help in the coordination with stakeholders in the conduct of the research study

Baguio as contact person during the conduct of the study	<ul style="list-style-type: none"> ● Provide logistic support such as vehicles/ transportation during the conduct of the study, if available (DENR-CAR)
	<ul style="list-style-type: none"> ● Monitor the implementation of the research study
	<ul style="list-style-type: none"> ● Facilitate the preparation of documents for payment of accomplishment by the proponent
	<ul style="list-style-type: none"> ● Conduct review of the progress/accomplishment reports prior to endorsement to FASPS, DENR-Central Office
	<ul style="list-style-type: none"> ● As counterpart, provide nursery site and gardener for the propagation of native plants (DENR-CAR)
	<ul style="list-style-type: none"> ● Sustain the restoration efforts after the end of the project

Watershed and Water Resources Research Development and Extension Center (WWRRDEC)	
Provide a project staff (Ms. Shirley Jaene Valdez) to assist in the project implementation	<ul style="list-style-type: none"> ● Provide results of previous inventory conducted at CJH to serve as baseline information
	<ul style="list-style-type: none"> ● Provide space for the establishment of nursery and fernery for the propagation of native plants and ferns
	<ul style="list-style-type: none"> ● Provide staff to monitor and supervise the implementation of nursery and site development activities
	<ul style="list-style-type: none"> ● Provide soil analysis from the sampling sites
	<ul style="list-style-type: none"> ● Provide additional manpower for the vegetation assessment
	<ul style="list-style-type: none"> ● Assist in sustaining the restoration efforts after the end of the project

Benguet State University (BSU)	
Provide a project staff (Dr. Roscinto Ian C. Lumbres) to assist in the project implementation and completion	<ul style="list-style-type: none"> ● Lead in the production of Land Use and Land Cover (LULC) change maps in CJH
	<ul style="list-style-type: none"> ● Train the local staff and the local community to conduct inventory and assessment of Land Use and Land Cover changes in CJH
	<ul style="list-style-type: none"> ● Provide technical assistance for the development of nursery and fernery for the propagation of native and endemic plants and ferns, respectively, in Camp John Hay (JHC)
	<ul style="list-style-type: none"> ● Provide technical assistance in determining optimal condition for the growth of the plants

	<ul style="list-style-type: none"> ● Provide technical assistance in choosing the planting sites
	<ul style="list-style-type: none"> ● Recommend a monitoring plan for the replacement of exotic with native plants for future recruitment of fauna
	<ul style="list-style-type: none"> ● Mentor graduate and undergraduate students who wish to conduct their theses at CJH
Don Mariano Marcos Memorial State University (DMMMSU)	
Provide a project staff (Dr. Jocelyn A. Floresca) to assist in the project implementation and completion	<ul style="list-style-type: none"> ● Lead in the assessment of bird composition in CJH
	<ul style="list-style-type: none"> ● Train the local staff and the local community to conduct inventory and assessment of bird-plant interaction in CJH
	<ul style="list-style-type: none"> ● Recommend monitoring and restoration plans to protect the diversity of birds in CJH and in the city of Baguio
	<ul style="list-style-type: none"> ● Mentor graduate and undergraduate students who wish to conduct their theses at CJH
Graduate/undergraduate students	
Mentees	<ul style="list-style-type: none"> ● Must come up with a certain degree of independent work to satisfy the requirements of a thesis work
	<ul style="list-style-type: none"> ● Submit a copy of the completed thesis to DENR

V. Project Duration and Budget

The Project shall be implemented for twenty-four (24) months with a Contract cost of Php 2,000,000.00 to be funded by DENR Special Projects funds which refers to the DENR appropriation under Program II - Support to Operations, specifically under Fund 101 A.0.2.d which is entitled Conduct of Special Studies, Design and Development in Support of Forestry, Mining and Environmental Management Operations in the General Appropriations Act.

Since the faculty and staff from UP Baguio, JHMC, WWRRDEC, BSU, and DMMMSU who will be devoting time in the project are not receiving honoraria from DENR-FASPS, the corresponding amount that these researchers receive as salary from their respective employers will serve as counter support as summarized here:

Researcher	Rank	Rate/hour	Total number of hrs (for 2 years)	Counterpart support in PhP (rate x hours)
Dr. Zenaida G. Baoanan	Prof.	466.875	300	140,062.50
Dr. Rizavel C. Addawe	Prof.	466.875	300	140,062.50

Researcher	Rank	Rate/hour	Total number of hrs (for 2 years)	Counterpart support in PhP (rate x hours)
Dr. Roscinto Ian C. Lumbres	Assoc. Prof.	361.25	300	108,375.00
Dr. Liezel M. Magtoto	Assoc. Prof.	361.25	300	108,375.00
Dr. Jocelyn A. Floresca	Asst. Prof.	293.75	300	88,125.00
Mr. Jhun Paul T. Viernes	Asst. Prof.	293.75	300	88,125.00
Ms. Shirley Jaene Valdez	Equivalent to Instructor	238.75	300	71,625.00
Ms. Editha Mejia	Equivalent to Instructor	238.75	300	71,625.00
Subtotal				816,375.00

VI. Schedule of Payment and Deliverables

This schedule of payments and deliverables will serve as a guide for the implementation of the project but should be treated with flexibility in accordance with the needs encountered throughout the course of the project. Any deviation from this TOR shall be subjected to the approval of the DENR-CAR Regional Director.


Deliverables/ Outputs	Submission Date, Month and Year	Amount of Payment
Year 1		
Progress Billing No.1		
<p>Preparation of Inception Report</p> <p>Prepared inception report containing the over- all work plan, strategies, work schedules, methodologies on how the project objectives will be achieved.</p> <ul style="list-style-type: none"> - Copy of report (hard and soft copy and ppt. presentation) to be presented and submitted to DENR offices 	<p>Not later than one (1) month upon signing of the MOA</p>	<p>15% (PhP 300,000.00) of the total contract cost upon acceptance of the inception report by DENR</p>

Deliverables/ Outputs	Submission Date, Month and Year	Amount of Payment
<p>Progress Billing No.2:</p> <p>Research/Study Work</p> <p>The field activities will be conducted to meet the objectives.</p> <ul style="list-style-type: none"> - Submit copies of literature search; conducted meetings; initial copy of surveyed plant species; prepared land use and land cover map with trend analysis report ready for submission; developed, pretested, and reproduced copies of survey questionnaire for valuation methods 	<p>End of 2nd quarter of 2023</p>	<p>11.10 % (PhP 222,000.00) of total contract cost and upon submission and acceptance of deliverables</p>
<p>Progress Billing No.3</p> <p>Research/Study Work</p> <p>The field activities will be continued to meet the objectives.</p> <ul style="list-style-type: none"> - Report on collected data on physical condition of target sites, plant and bird surveys; floated survey questionnaires for tourists concerning economic costs and impacts of IAS on biodiversity; conducted capacity building for gardeners and stakeholders on propagating native plants; report on monthly monitoring on propagation of native plants in nursery and fernery 	<p>End of 3rd quarter of 2023</p>	<p>13.85 % (PhP 277,000.00) of total contract cost and upon submission and acceptance of deliverables</p>
<p>Progress Billing No.4</p> <p>Research/Study Work</p> <p>The field activities will be continued to meet the objectives.</p> <ul style="list-style-type: none"> - Report on collected data on physical condition of target sites, plant and bird surveys; floated survey questionnaires for tourists concerning economic costs and impacts of IAS on biodiversity; conducted 	<p>End of 4th quarter of 2023</p>	<p>12.60 % (PhP 252,000.00) of total contract cost and upon submission and acceptance of deliverables</p>

Deliverables/ Outputs	Submission Date, Month and Year	Amount of Payment
<p>capacity building for gardeners and stakeholders on propagating native plants; report on monthly monitoring on propagation of native plants in nursery and fernery</p>		
Year 2		
<p>Progress Billing No.5</p> <p>Research/Study Work</p> <p>Assessment meeting to see gaps encountered in the first year of implementation.</p> <ul style="list-style-type: none"> - Submit minutes of meeting <p>The field activities will be continued to meet the objectives.</p> <ul style="list-style-type: none"> - Report on survey concerning economic valuation - Report on collected data on physical condition of sampling sites, plant and bird surveys; floated survey questionnaires for tourists concerning economic costs and impacts of IAS on biodiversity; - report on monthly monitoring on propagation of native plants in nursery and fernery 	<p>End of 1st quarter of 2024</p>	<p>11.275 % (PhP 225,500.00) of total contract cost and upon submission and acceptance of deliverables</p>
<p>Progress Billing No.6</p> <p>Research/Study Work</p> <ul style="list-style-type: none"> - report on the species composition, diversity, and conservation status of exotic and native species correlated to the prevailing physical condition in CJH - report on monthly monitoring on propagation of native plants in nursery and fernery 	<p>End of 2nd quarter of 2024</p>	<p>6.525 % (PhP 130,500.00) of total contract cost and upon submission and acceptance of deliverables</p>
<p>Progress Billing No.7</p>	<p>End of 3rd quarter of 2024</p>	<p>8.775 % (PhP 175,500.00) of total contract cost and upon submission and acceptance of deliverables</p>

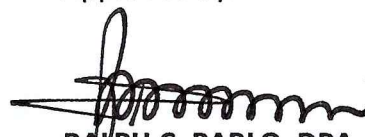
Deliverables/ Outputs	Submission Date, Month and Year	Amount of Payment
Research/Study Work <ul style="list-style-type: none"> - report on the correlation of birds with exotic and native plants in CJH - report on monthly monitoring on propagation of native plants in nursery and fernery 		
Progress Billing No.8 Research/Study Work <ul style="list-style-type: none"> - report on monthly monitoring on propagation of native plants in nursery and fernery - drafted policy recommendations for management of exotic plants and restoration of native species - produced IEC materials and information dissemination including photo-exhibit Report Writing and Publication <ul style="list-style-type: none"> - finalized and submitted technical report - presentation of reports to funding agency - drafted manuscripts for publications 	End of 4th quarter of 2024	20.875 % (PhP 417,500.00) of total contract cost and upon submission and acceptance of deliverables
TOTAL		PhP 2,000,000.00

Recommending Approval:



EDGARDO S. FLOR
PENR Officer
PENRO Benguet

Approved by:



RALPH C. PABLO, DPA, EnP, CESO III
Regional Executive Director
DENR- CAR

Concurred by:



ALO. OROLFO, PhD
FASPS Director, DENR

Conforme:



ZENAIDA G. BAOANAN, PhD
Proponent