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7 **DENR ADMINISTRATIVE ORDER**

8 No. 2023 - _____
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11 **SUBJECT: GUIDELINES ON THE MANAGEMENT OF CAVES**
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14 Pursuant to Section 5 of Republic Act (RA) No. 9072 "*National Caves and Cave*
15 *Resources Management and Protection Act*", RA No. 7586 "*National Integrated*
16 *Protected Areas System Act*" as amended by RA No. 11038 "*Expanded National*
17 *Integrated Protected Areas System Act*", RA No. 9147 "*Wildlife Resources*
18 *Conservation and Protection Act*", RA No. 10066 "*Philippine Cultural Heritage Act*",
19 RA No. 8371 "*Indigenous Peoples' Rights Act*", RA No. 7160 "*Local Government*
20 *Code*", RA No. 7942 "*Philippine Mining Act*", RA No. 7611 "*Strategic Environmental*
21 *Plan for Palawan Act*", RA No. 9593 "*Tourism Act*" and their corresponding
22 implementing rules and regulations, including DAO 2021-34 "*Guidelines for the*
23 *Establishment and Implementation the Cave Management, Protection and*
24 *Conservation Program*", DENR Memorandum Circular (DMC) No. 2007-04
25 "*Procedure in Cave Classification*", the following guidelines on the management of
26 caves is hereby issued for the guidance and compliance of all concerned.
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29 **SECTION 1. Basic Policy.** It is the policy of the State to protect and conserve caves
30 and cave resources to contribute in achieving a balanced and healthful ecology and as
31 part of natural heritage for the present and future generations. Towards this end, the
32 State shall develop appropriate guidelines and strategies to ensure the effective
33 management of caves and cave resources by stakeholders.
34

35 **SECTION 2. Objectives.** This Order aims to provide guidelines on the processes
36 involved in the management, protection and conservation of caves and cave resources.
37 Specifically:
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- 39 1. Provide standard procedure and methodologies to various DENR field offices
40 and other stakeholders for the conduct of cave inventory, assessment,
41 classification, planning, and implementation and monitoring of cave
42 management plan; and
43 2. Harmonize existing policies, rules and regulations on the management and
44 sustainable use of caves and cave resources.
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46 **SECTION 3. Scope and Coverage.** This Order shall cover all terrestrial and
47 underwater caves, whether within private/public land, protected areas (PAs) and
48 ancestral lands/domain.
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SECTION 4. Cave Management Process. Cave Management consists of a series of steps leading to the management, protection and conservation of caves and cave resources while sustaining allowable uses based on its cave classification. **Annex A** provides the cave management process flow.

The process of cave management are as follows:

4.1 Cave Inventory

4.1.1. All DENR Regional Offices, PENRO, CENRO, Protected Area Management Office (PAMO) and Palawan Council for Sustainable Development (PCSD) shall conduct and maintain an inventory of identified caves within their jurisdiction. All caves within a municipality/province and/or within a protected area shall be identified and listed in an inventory using the Cave Inventory Form (**Annex B**), which include information on the cave name (including other names), location (indicating the name of Protected Area for caves located in such areas), existing use of the cave, land use of adjacent areas, and coordinates of cave entrances/exits for subsequent location mapping. **Annex C** provides the considerations in assigning names for caves in the said inventory.

4.1.2. The concerned DENR Field Office may gather information on caves from reports of concerned individuals/organizations or secondary data e.g. reports from National Museum, and National Historical Commission of the Philippines, sinkhole assessment reports, researches, Biodiversity Assessment and Monitoring System and Protected Area Suitability Assessment reports, etc. Such reports shall be subjected to validation by the concerned field office before inclusion in the cave inventory.

4.1.3. The inventories and corresponding location maps shall be consolidated by the DENR Regional Office and annually submitted to the Biodiversity Management Bureau (BMB) for inclusion into a national cave database.

4.1.4. The inventory of caves in each region including protected areas shall be completed after two (2) years upon the issuance of this Order. The cave inventory shall be updated every five (5) years.

4.2 Cave Assessment and Classification

All inventoried caves shall be characterized/assessed to determine their classification pursuant to Section 12 and 13 of DAO No. 2003-29. The Regional Offices shall include the assessment of caves in their annual work and financial plan until all inventoried caves are assessed. Caves which are under considerable pressure from threats, harbor rich biodiversity or ecologically-important species or population, and caves currently being used for ecotourism and other purposes shall be prioritized for assessment.

Comprehensive assessment shall be conducted for caves previously assessed by other agencies for a specific cave value such as archaeological, paleontological, geological, etc.

4.2.1 Cave Assessment

4.2.1.1. The assessment of caves shall cover the characterization of cave values in terms of biology, geology, hydrology, archaeology, paleontology, and cultural. This includes survey and mapping of the extent of the cave passages and presence of hazards. The standardized methods for cave assessment shall be provided in a separate manual to be developed by BMB.

4.2.1.2. The DENR Regional Executive Director (RED) shall create a multi-disciplinary Regional Cave Assessment Team (RCAT) through a Special Order composed of trained staff from the DENR Regional/Field Offices including representatives from MGB, EMB, and ERDB, and respective PAMO, for caves within protected areas. The DENR RED may invite experts from the following disciplines – biology, geology, hydrology, archaeology, socio-economics, and other relevant field of expertise to be members of the RCAT. The DENR RED may call on other DENR technical staff, representatives from caving organizations and other concerned stakeholders to participate in the conduct of cave assessment.

In case of caves in Palawan, the Palawan Council for Sustainable Development (PCSD) Executive Director shall create the multi-disciplinary cave assessment team composed of similar local agencies/organizations.

4.2.1.3 Prior to cave assessment, preparatory activities shall be conducted, including but not limited to, coordination with stakeholders e.g. LGU, private landowner, IP community, etc., preparation of logistics, and checking of weather forecast.

4.2.1.4. The cave assessment shall yield the following outputs:

- a. Accomplished Cave Assessment Report Form (**Annex D**) with recommended cave classification in accordance with Section 3 of DMC No. 2007-04. The report should include high resolution and geotagged photo-documentation of the assessment; and
- b. Cave map with at least Grade 3C in accordance to DMC No. 2007-04 and follows the prescribed layout (**Annex E**) and the technical description (**Annex F**) of the cave map including shapefiles;

4.2.1.5. Re-assessment of caves shall be conducted every five (5) years to update the information on the cave values and ascertain if the cave classification is still appropriate for its current condition.

4.2.2. Cave Classification

4.2.2.1. The Team shall submit the outputs of cave assessment as provided under 4.2.1.3 hereof, to the CENRO/PENRO where the cave is located or the Protected Area Superintendent (PASu) in case of caves within protected areas or to the PCSD Executive Director, in case of caves within Palawan, for review and affirmation.

4.2.2.2. Upon affirmation, the PENRO/CENRO/PASu/PCSD Executive Director shall submit these above-mentioned documents to their respective Regional - Conservation

and Development Division (CDD) or to the Environment and Natural Resources Committee of PCSD (ENR-PCSD) in the case of Palawan province;

4.2.2.3. The CDD in turn, shall convene the Regional Cave Committee (RCC) or Provincial Cave Committee (PCC) in the case of island provinces, for evaluation and issuance of a Resolution endorsing the classification of a cave. In case of caves within protected area, the RCC/PCC shall provide assistance to the Protected Area Management Board (PAMB) in the review of the documentary requirements for endorsement of cave classification through a PAMB resolution. In the case of caves within Palawan, the ENR-PCSD shall review the submitted documents; and

4.2.2.4. The RCC/PCC/PAMB shall submit their resolution to the DENR RED, through the CDD, for approval of the proposed cave classification. The DENR RED shall approve the recommendation of the RCC/PCC or the PAMB on the classification of a cave by affixing his/her signature on the RCC/PCC/PAMB Resolution. In the case of the province of Palawan, the PCSD shall issue the resolution on cave classification, with approval by the PCSD Executive Director.

4.2.3. Inclusion in the National List of Classified Caves

4.2.3.1. The DENR Regional Office/PCSD shall submit the following documentary requirements for cave classification to BMB for evaluation as to consistency with existing guidelines on cave classification and refer back its comments and recommendation to the region, if any:

- a. Accomplished Cave Assessment Report Form with recommended cave classification, and high resolution and geotagged photo-documentation of the assessment;
- b. Cave map with at least Grade 3C, its technical description and shapefiles; and
- c. RCC/PCC/PAMB/PCSD Resolution endorsing the classification of the cave, as approved by the DENR RED or PCSD Executive Director, as the case may be.

The PCSD shall furnish the DENR Region 4B with a copy of the abovementioned documents for record purposes.

4.2.3.2 The BMB shall prepare a consolidated National List of Classified Caves annually for caves which satisfied the requirements for cave classification and endorse through channels, the corresponding draft Department Memorandum Circular for approval by the Secretary.

4.2.3.3. A cave management plan (CMP) shall be formulated for each classified caves in accordance to its allowable use based on classification. The DENR Regional Office, in coordination with its concerned field offices, shall facilitate the preparation of the cave management plan through a participatory approach.

4.3. Cave management planning process

4.3.1. The CENRO/PENRO/PAMO with jurisdiction over a classified cave, in collaboration with concerned LGUs and/or other stakeholders, shall initiate the conduct of consultation workshop, or a series of workshops, as applicable, to formulate the CMP. These shall be participated in by representatives from stakeholders such as local government units (LGU), local community, people's organizations (PO), non-government organizations (NGO), indigenous peoples/communities (IP/C), academe, and concerned private sector, as applicable.

The prescribed outline of a cave management plan is provided in **Annex G** hereof. This shall also serve as guide on the necessary information and data that needs to be considered in the determination of strategic interventions.

In case of caves within two or more administrative boundaries, the stakeholders shall share the responsibility on the co-management of caves within their jurisdiction.

4.3.2. Management strategies to address threats and concerns shall consider the above surface area of the underground cave passages including sufficient buffer, *i.e.* adjacent forests and karst, to mitigate possible impacts of anthropogenic activities to the integrity of the cave or cave network;

4.3.3 Management strategies and interventions shall be implemented such as but not limited to:

- a. Resource Protection and Management
- b. Ecological Restoration
- c. Waste Management
- d. Sustainable Cave/Wetland Resource Use
- e. Sustainable Ecotourism
- f. Cave/Wetland Zoning with maps and data
- g. Visitor Safety/Management
- h. Social Marketing/ IEC Campaign
- i. Human Resources Development/ Capacity Building
- j. Livelihood Development
- k. Research and Development
- l. Local Policy
- m. Gender and Development
- n. Vulnerability Assessment
- o. Indigenous Peoples Concern

4.3.4. Ecotourism activities shall complement the cave classification and the provisions under DAO No. 2009-09 "*Standard design and specifications of signs, buildings, facilities and other infrastructure that may be installed and/or constructed within protected areas*", DAO No. 2013-19 "*Guidelines on ecotourism planning and management in protected areas*", BMB Technical Bulletin (TB) No. 2017-01 "*Guidelines in safeguarding caves utilized for ecotourism*" and other safety protocols as may be issued from time to time by the BMB e.g. "*Advisory on Protocols for Safe Caving during CoVID-19 pandemic*" (BMB Memorandum to all DENR Regions dated 6 April 2021).

4.3.5. For Class I caves, the focus of management shall be on the protection of the cave and the conservation of its immediate vicinity especially its surface vegetation. Research shall be encouraged to enrich the country's knowledge on cave and cave resources. Depending on the research, appropriate permit shall be secured in accordance to existing protocols. Separate guidelines on cave resource collection for research purposes shall be formulated;

4.3.6. For Class II caves, zoning of the cave interior shall be done to determine passages that can be used for tourism purposes and lessen its impact to the cave ecosystem;

4.3.7. In case of multiple Class II or III caves within an area, it is advisable that only one (1) cave be used for ecotourism purposes at a time. This is to allow caves to recover from or minimize impacts of ecotourism activities, ensure maintenance of cave fauna habitat and conserve cave resources;

4.3.8. In the case of caves within a protected area, the CMP shall be incorporated into the Protected Area Management Plan.

4.3.9. One CMP may be formulated for multiple caves provided that their cave openings are in close proximity. Specific mitigation measures within the integrated management plan shall be developed for each cave, depending on their condition, hazards, and threats;

4.3.9. The CMP shall determine the management scheme or modality for the cave as described in Section 4.5 hereof. In consonance with the *Mandanas Ruling*, the LGU may take the lead in the management of a classified cave. Provided, that the LGUs shall be guided by the approved cave management plan and the existing standards and guidelines on cave management prescribed by the DENR as the primary agency mandated by RA 9072 in the management of caves;

4.3.10. The cave management plan shall have a duration of ten (10) years, and shall be reviewed every five (5) years.

4.4. Review, approval and adoption of Cave Management Plan

4.4.1. The draft cave management plan shall be endorsed by the CENRO/PENRO/PASu to the concerned DENR Regional Office. The CDD shall review the cave management plan and facilitate its approval by the DENR RED. The RED shall endorse the approved cave management plan to the BLGU and MLGU or appropriate management bodies (PAMB or PCSD) for their respective adoption through ordinance and resolution. A copy of the approved cave management plan including ordinances/resolutions adopting the Plan shall be submitted to BMB.

4.4.2. In case of cave or caves within an existing protected area or critical habitat (CH), the approved cave management plan shall be integrated into their respective management plans. In case the PA/CH management plan is already existing and not due for updating, the cave management plan shall be formulated in line with the PA/CH

management plan and adopted by the PAMB, or any appropriate management body, as supplement to the to the existing management plan.

4.5. Implementation of Cave Management Plan

To ensure the effective management of classified caves, the following management modalities may be adopted:

4.5.1. Caves and cave resources are owned by the State. As such it shall be managed by the DENR in coordination with concerned agencies and stakeholders such as the PCSD for caves in Palawan, concerned LGUs, or PAMO, for caves within protected areas, indigenous people/community for caves within ancestral land/domain, and private landowners for caves within private land.

4.5.2. For caves located in public lands outside Protected Areas, the DENR RED may enter into partnership with the concerned LGU through a Memorandum of Agreement (MOA) for the co-management of a cave. Alternatively, the DENR RED may opt to delegate the full management of a cave to the LGU, which shall be indicated in the MOA. Provided, that disposition of cave resources such as the issuance of permits/clearance to collect/use cave resources, undertake study and other regulated activities inherent to the mandate of the DENR remains with the DENR RED or the CENRO/PENRO based on existing procedures of the Department. The role of the LGUs and private landowner shall be limited to the protection and management of the cave, and the implementation of activities in the approved cave management plan. In cases of caves outside protected area, fees collected from the use of the cave (such as entrance fees) and sharing scheme shall be agreed upon by major stakeholders and stipulated in the MOA. **Annex H.1** provides the template of a MOA between the DENR and LGU.

4.5.3. For caves located in, or whose access is located in, private lands, the DENR RED may formalize partnership through a MOA with the LGU and Private Landowner. **Annex H.2** provides the prescribed template of the MOA between and among the DENR, LGU and Landowner.

4.5.4. For caves within ancestral lands/domain, the rights to the management and protection of caves rests within the concerned indigenous people in accordance to Section 7 of DAO No. 2003-29. Responsibility in the management of caves may be transferred to DENR in writing. In such eventuality, the DENR RED may enter into a MOA among the LGU and the tribal council.

4.5.5 For any of the above management modalities involving the LGU, a management council may be created under the MOA to oversee the implementation of the CMP at the ground level. It shall be composed of representatives from MLGU, BLGU, CENRO/PENRO concerned, Department of Tourism, other National Government Agencies, NGOs, POs, academe and other concerned stakeholders e.g. private landowner, IPs, etc. The Council shall be chaired by the Local Chief Executive. The Council shall provide updates to the RCC/PCC biannually.

4.6. Monitoring and Evaluation

349
350 4.6.1. Monitoring and evaluation of cave management activities within the Region
351 shall be conducted biannually. The RCAT/PCC/RCC/PAMB/PCSD through their
352 CENRO/PENRO/PAMO members shall monitor the status of the cave, progress of
353 management plan implementation and the effectiveness of management interventions
354 based on indicators agreed upon in the Monitoring and Evaluation component of the
355 Cave Management Plan including validation of the bi-annual implementation reports
356 from the Cave Management Councils.

357
358 4.6.2. The DENR Regional Offices shall consolidate monitoring reports including
359 biannual reports from management councils, to formulate an annual Regional Report
360 on the implementation of cave management plans which shall be submitted to BMB.

361
362 4.6.3. BMB shall consolidate the issues and concerns from regional reports as basis
363 for informed cave policy development process and for integration in national report for
364 the implementation of the Philippine Biodiversity Strategy and Action Plan, Philippine
365 Development Plan, Aichi Targets of the Convention on Biodiversity and other such
366 targets, plans and programs on biodiversity.

367 **SECTION 5. Special concerns on cave and cave resources management**

368
369
370 5.1. *Reclassification.* Caves may be reclassified based on specific study/ experts'
371 advice. The proposed reclassification shall be reviewed by the RCC/PCC or PAMB for
372 caves within protected areas or PCSD for caves within Palawan and endorsed by the
373 RED/ PCSD Executive Director. Updated cave assessment form, at least Grade 3C cave
374 map and RCC/PCC/PAMB/PCSD resolution shall be submitted to BMB. The BMB
375 shall prepare a list of reclassified caves and endorse to the DENR Secretary for
376 publication.

377
378 5.2. *Extraction of cave resources.* In case of extraction of cave resources, necessary
379 permits shall be secured pursuant to Section 14 and 15 of DAO No. 2003-29. BMB
380 shall develop specific guidelines on extraction of certain cave resources such as guano,
381 edible bird's nest, water, etc., in coordination with concerned national government
382 offices e.g. MGB, ERDB, EMB, etc.

383
384 5.3. *Development projects affecting caves.* Development projects that would affect
385 caves especially Class 1 and 2 caves, shall be covered by the Environmental Impact
386 Statement System pursuant to EMB Memorandum Circulars No. 2014-004 "*Declaring*
387 *Class 1 and 2 caves as Environmentally Critical Areas (ECAs)*" and 2014-005
388 "*Guidelines for covering screening and standardize requirements under the Philippine*
389 *Environmental Impact Statement System amending the relevant portions of MC 2007-*
390 *02*".

391
392 5.4 *Caves within Strict Protection Zone (SPZ) of Protected Areas.* Caves within SPZ
393 regardless of its classification shall be closed to the public pursuant to RA No. 7586 as
394 amended by RA No. 11038.

395
396 **SECTION 6. Reporting.** Hard and electronic copies of the documents and forms
397 generated in every process of cave management shall be submitted to BMB, including
398 but not limited to:

1. Cave Inventory Form (Annex B);
2. Cave Assessment Form (Annex D);
3. Cave maps in plan and profile view (Annex E);
4. Technical description (Annex F);
5. RCC/PCC/PAMB/PCSD resolution;
6. Cave management plan;
7. Memorandum of Agreement for the management of cave (Annex H.1 and H.2);
8. Implementation/Progress report (Annex I);
9. Monitoring report; and
10. Annual Regional report

Other modes shall be considered for submission of electronic copy such as uploading in a database, once available.

SECTION 7. Fund Allocation. The DENR shall allocate funds to support activities for the implementation of this Order.

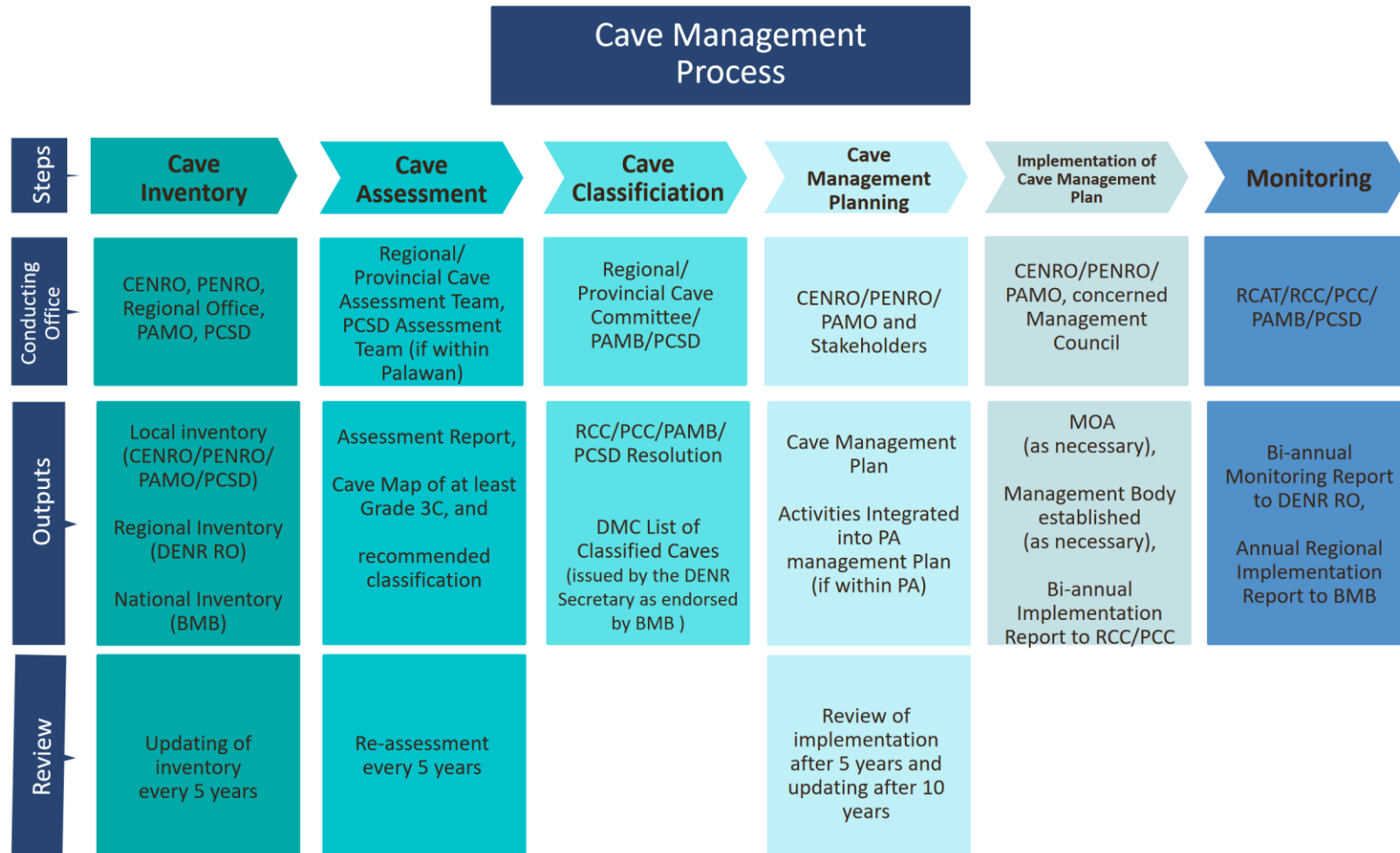
SECTION 8. Separability Clause. If any provision of this Order shall be held invalid, or unconstitutional, the other portions or provisions hereof which are not affected shall continue in full force and effect.

SECTION 9. Repealing Clause. All Orders and other similar issuances, or parts thereof, inconsistent herewith are hereby revoked, amended or modified accordingly.

SECTION 10. Effectivity. This Order shall take effect fifteen (15) days after its publication in a newspaper of general circulation and upon acknowledgement of receipt of a copy thereof by the Office of the National Administrative Register (ONAR).

MARIA ANTONIA YULO-LOYZAGA
Secretary

ANNEX A. Process Flow of Cave Management



ANNEX B. Cave Inventory Form¹

[illegible]

ANNEX C. Considerations in the Naming of Caves²

1. In naming caves, the following shall be considered:
 - a. The name of the cave known to the local/indigenous community shall be the first option
 - b. Uniqueness or outstanding attribute or prominent feature of the cave
 - c. Names associated with historical events or deceased prominent persons as may be supported by the concerned local community
2. In naming caves, the following shall be avoided:
 - a. Use of the possessive form (i.e. 's) for names
 - b. Names of living persons
 - c. Names of owners of a property where the cave is situated
 - d. Names that are associated with commercial or industrial enterprise/brands
 - e. The use of scientific names of plants and animals
 - f. The same name for two or more caves within the same province or region
 - g. Excessive number of words; limit names to 3 words
 - h. Offensive language e.g. sexually offensive, culturally bias, etc.
3. Other considerations:
 - a. For unnamed cave or feature, it is preferable to give a new name instead of adopting an existing name of a nearby cave by addition of numbers and points of the compass.
 - b. Names of caves should be permanent
 - c. In case of two or more caves or features which were initially described to be separate but later exploration revealed that they are connected, the latest name/s should be disregarded.

ANNEX D. Cave Assessment Report Form³

CAVE ASSESSMENT FORM

Name of Compiler: _____
Date compiled: _____
Name of Cave: _____
Other Name of Cave: _____
Region: _____ Province _____
Municipality/City: _____ Barangay _____
Sitio/Purok: _____
Surveyed Length: _____ meters
Period of Assessment: _____

I. GENERAL INFORMATION

1. Evolution of the Cave (include cave's origin, solution, tectonic movement, degradational/ formation of talus, erosional etc.)
2. Geographic location and description
Coordinates (in Decimal Degrees format): Latitude _____ N Longitude _____ E
Elevation: _____ masl
Land Classification (please check)
☐ Alienable or Disposable
☐ Agricultural
☐ Residential commercial, industrial, or for similar productive purposes (state name of land holder: _____)
☐ Educational, charitable, or other similar purposes
☐ Reservations for town sites and for public and quasi-public uses
☐ Mineral land
☐ National Park (State name of PA: _____)
☐ Timber land
3. Accessibility (State how the cave can be reached from the nearest barangay, major cities, municipalities, regional centers; indicate distance, means of transportation)
4. Climatological data (rainfall pattern, climate type)

Climate Type (*Based on PAGASA Classification; please check*):

	Climate Types	Description
<input type="checkbox"/>	Type I	Two pronounced season; Dry from November to April and wet during the rest of the year.
<input type="checkbox"/>	Type II	No dry season with a very pronounced maximum rainfall during the months of November to December.
<input type="checkbox"/>	Type III	Seasons not very pronounced relatively dry from November to April and wet for the rest of the year.
<input type="checkbox"/>	Type IV	Rainfall more or less evenly distributed throughout the year.

³ Source: Manual on Cave Classification as adopted through DENR Memorandum Circular 2007-04 “*Procedure in Cave Classification*”

Precipitation/Rainfall (in millimeter (mm), average per month; total amount per year; maximum and minimum level):

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Minimum (mm)													
Maximum (mm)													
Average (mm)													

Temperature (in Degree Celsius °C, average per month; maximum and minimum level):

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Minimum (°C)												
Maximum (°C)												
Average (°C)												

Heat Index (in Degree Celsius °C, average per month; maximum and minimum level):

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Minimum (°C)												
Maximum (°C)												
Average (°C)												

5. Existing land-use patterns in the area of the cave.

Listing by Type	Area (ha)		Remarks
	Adjacent to cave	Above the cave	
Reforestation area			
Reservation			
Logging			
Grazing/Pasture			
Settlements			
Mineral Extraction			
Others			

6. Recognitions (Land designation)

	Title of Recognition	Existing Legal Instrument/Basis	Remarks
Ancestral Domain			
Geological Monument			
Cultural Site (Historical, Archeological, or Anthropological)			
Local Conservation Area			
Tourism Area			
Others			

7. Demographic Information (secondary data gathered from municipality, indicate data source and reference date)

Name of Barangay	Barangay Population	Number of Households	Number of Families	Major means of Livelihood

**Indicate here the data source and reference date*

8. Uses / Human Activities

Identify the current and past uses/ activities inside the cave (indicate in the cave map)

Type of Activity	Implementation period ¹	Station/s Covered*	Implementor ²	Remarks

*Refer to station in the cave map

¹ – State the duration (month and year)

² – State the name of the individual/organization

9. Physical Features

a. Cave Map (Describe the size of the cave, length, height and width, its mouth, floor and ceiling)

**cave map should conform to international standard or equivalent to British Cave Research Association standard of Grade 3C or higher. Cave map should follow the layout and legends prescribed under BMB Technical Bulletin 2021—01 Standards in the Production and Layout of Cave Maps.*

b. Status of the Cave (please check; provide pictures)

b.1 () Undisturbed Cave (State what probable factors could have worked for their protection)

_____ Difficult access

_____ Within protected area

_____ Inside private property

b.2 () Disturbed Cave

() Natural (Description/Example)

() Anthropologically Induced

() Vandalized (State extent, location of vandalism; describe the vandalism; attach photo)

() Exploited (State cause and extent of exploitation)

() For status not included in the criteria (specify e.g. part of the cave is undisturbed and part of the cave is disturbed)

() Other

II. NATURAL FEATURES

1. Vegetative Cover

Instructions: Provide a photo, preferably drone shot, of the vegetative cover above the cave. (mosaic)



1.1 Flora outside the cave.

[illegible]

¹DENR Administrative Order 2017-11 *Updated National List of Threatened Philippine Plants and their Categories*

[illegible]

²DENR Administrative Order 2017-11 *Updated National List of Threatened Philippine Plants and their Categories*

2. Fauna

Instructions: Enumerate the fauna observed in the cave. Indicate/estimate their abundance accordingly. Indicate the location and/or station/s where the organisms were observed. Write additional observations under Remarks (For bats, note if nursing mothers or baby bats are present; for birds, note if nests, eggs or hatchlings are present). Attach additional sheets if necessary.

2.1 Fauna inside the cave

a. Vertebrates.

[illegible]

¹State the Family of the species listed

²DENR Administrative Order 2019-09 *Updated National List of Threatened Philippine Fauna and their Categories*

b. Arthropods and other invertebrates.

Invertebrates Inside Cave Datasheet							Page ____ of ____		
Name of Cave:				Date:					
Island:		Province:		Town/City:			Barangay:		
Zone:									
Order	Family ¹	Species Name	Common Name	Abundance	Location (station number)	Conservation Status			Remarks
						IUCN	DAO ²	CITES	

¹State the Family of the species listed
²DENR Administrative Order 2019-09 *Updated National List of Threatened Philippine Fauna and their Categories*

c. Guano characterization

[illegible]

*Color description	
1	Light to dark yellow (possibly from fruit bat)
2	Light brown with yellow flecks (fruit bat)
3	Medium brown
4	Dark brown with black flecks
5	Over half of the guano is black

**Particle Size	
1	Very fine, smooth outline, small clumps with feathers and visible plant fibers, mosses,(possibly swiftlets)
2	Fine, mostly smooth outline, small to large clumps
3	Medium size, rough outline, medium clumps
4	Quite coarse, rough outline, large clumps
5	Coarse, very rough outline, large clumps

[illegible]¹State the Family of the species listed

²DENR Administrative Order 2019-09 *Updated National List of Threatened Philippine Fauna and their Categories*

3. Geology

3.1 Speleothems inside the cave.

Speleothem	Approximate no. (rare – 0 to 10, few – 11 to 30, common – 31 to 50, abundant - > 50)	Location (Station #)	Remarks (e.g. damaged, dirty, etc.)
Pool Deposits			
Rimstone dams (gour pools)			
Shelfstone			
Folia			
Cave rafts			
Flowing and dripping waters			
Cave pearls			
Flowstone			
Soda straws			
Stalactites			
Stalagmites			
Columns			
Draperies			
Capillary Water			
Helictites			
Anthodites			
Frostwork			
Shields			
Evaporative Water			
Coralloids/cave popcorn			
Oulopholites (gypsum flowers)			
Microbial			
Moonmilk			
Mammillary			
Erratic Forms (crystal growth controlled)			
Subaqueous Forms			
Concretions of various kinds (limestone concretions e.g. cave pearls, iron, basalt)			
Pool deposits			
Crystal Linings			
Others			

2.2. Mineral deposits inside the cave.

Mineral	Location (station #)	Physical Characteristic (Habit*, color, other distinctive features)	Remarks
Aragonite			
Calcite			
Dolomite			
Huntite			
Hydromagnesite			
Magnesite			
Others			

* - General appearance of mineral e.g. crystal, long slender,

3.3. Other geological features inside/outside the cave. Include other geomorphic units; similar radius as flora and fauna assessment

Features	Location (station #)	Remarks
Faults		
Joints		
Fractures		
Paleontological Feature		
Notches		
Karst Windows		
Sinkholes		
Scallop		
Others		

4. Hydrology

Is the water from the cave being used/extracted for domestic use and other purposes (_____)?

__Yes __No

4.1. Hydrological features inside the cave.

Features	Location (station #)	Flow			Origin	Size/ Volume	Remarks
		Perennial	Intermittent	Velocity			

*for rivers, indicate direction of flow relative to the entrance. Indicate location and reference points.

4.2. Hydrological features outside the cave (identify the location of head waters, if present).

Features*	Location	Flow			Origin		Size/ Volume	Remarks
		Perennial	Intermittent	Velocity	Natural	Man-made		

*- state the name of the wetland

4.3. Water quality

Parameter	Sampling Sites ¹		
	1 (Station#)	2 (Station#)	3 (Station#)
Physico-Chemical			
Nitrate (mg/L)			
Phosphate (mg/L)			
Chloride (mg/L)			
Total Suspended Solids (mg/L)			
Dissolved Oxygen ² (mg/L)			
BOD (mg/l)			
pH			
Color (TCU)			
Temperature ³ (°C)			
Bacteriological			
Fecal coliform (MPN/100ml)			

*DAO No. 2016-08: DENR Administrative Order No. 08 series of 2016 (Water Quality Guidelines and General Effluent Standards of 2016).

*PNSDW – 2007: Dept. of Health Administrative Order No. 2007 – 0012 (Philippine National Standards for Drinking Water 2007)

Findings:

5. Cave Hazards.

Please indicate if any of the following are present and their respective location in the cave.

Cave Hazards	Location (station #)	Remarks
Bad air ¹ (from guano, poor air circulation, low supply of oxygen)		
Presence of swiftly running underground river system		
Deep sumps or pools		
Flooding indicators		
vertical pitches/entrances		
Tight crawlways/squeezes		
Presence of rockfall		
Cavern roof collapse		
Deep mud		
Unstable flooring		
Sharp rocks		
Spalling ²		
Heaving ³		
Extremely cold temperatures		
Others		

¹refers to the condition of air in caves characterized by low levels of oxygen, high levels of carbon dioxide and other hazardous gases such as methane. Low levels of oxygen and high levels of carbon dioxide in caves or certain cave passages pose dangers to the human body. Bad air is indicated by hyperventilation, increased heart rate, dizziness, dry acidic taste in the mouth, increased pulse rate, labored breathing, and headache. Annexes C to E provides general information on the relationship between caves and levels of CO₂ and O₂.

²refers to breaking down or chipping off of rock faces/surfaces due to stress

³refers to a process where cracks form in the rock due to subsidence

III. ANTHROPOLOGICAL FEATURES

Are there indigenous peoples (IP's) or settlers living within the general location?

If yes, then specify the name of the IP and other information listed below.

IP/Local Settlers	Approximate Population	Traditional Uses/ Cultural Activities

IV. CULTURAL FEATURES

1. Are there artifacts and/or ecofacts on the present floor area of the cave, rock shelter or overhang?

_____ Yes _____ None *If yes, indicate location/s (station #)*

Artifacts	Location (station #)	Remarks
Stone tools (flaked)		
Stone tools (polished)		
Shell tools		
Tradeware ceramics (porcelain, stoneware)		
Pottery (earthenware)		
Pottery (earthenware with designs)		
Metal implements		
Wooden coffins		
Ecofacts		
Fossils		
Human bones		
Animal bones		
Wood		
Shells (land)		
Shells (freshwater)		
Shells (marine)		
Cave Wall Paintings		
Charcoal drawings		
Hematite paintings		
Engraved artwork		
Others		

2. Is the cave used or part of any activity with historical significance?

_____ Yes _____ None *If yes, indicate location/s (station #)*

Name of Historical Figure/Organization	Activity done relative to the cave	Remarks

V. THREATS, PROBLEMS AND POSSIBLE SOLUTIONS

Identify and describe the actual and/or potential threats, conflicts (man-made or natural) and other forms of disturbances that would affect the integrity of the cave.

Threats/Problems	Current	Potential	Initiatives	Possible Solutions
Deforestation				
Agriculture				
Urbanization				
Industrialization				
Tourism and Recreation				
Destruction of speleothem				
Solid Waste				
Liquid Waste (Polluted Water, Untreated waste water, etc.)				
Chemical Waste				
Wildlife Hunting				
Water Exploitation (dams, groundwater pumping, inundation)				
Treasure hunting				
Used by insurgents				
Others				

VI. ECOSYSTEM SERVICES

What are the ecosystem services that the cave provides?

Ecosystem Service	Description	Relative Location (mention if it is located outside or inside the cave. If inside, specify the station number)
Provision of fresh water		
Provision of food		
Provision of genetic resources		
Provision of natural medicines and pharmaceuticals		
Fertilizer		
Waste disposal		
Provision of shelter for human		
Provision of habitat		
Air quality regulation		
Water regulation		
Flood hazard regulation		
Pest regulation		
Regulation of human diseases		
Pollination		
Cultural heritage		
Recreation and tourism		
Aesthetic value		
Spiritual and religious value		
Inspirational value		
Research		
Geological formation		
Primary production		
Nutrient cycling		
Water recycling		
Others		

VII. POTENTIAL USES OF THE CAVE

Potential Uses	Remarks
Scientific Research	
Tourism and Recreation	
Exploration	
Others	

VIII. RECOMMENDATIONS

1. State the recommended classification and reason.
2. For recommended Class II caves, indicate the zones/stations that will be closed to the public.
3. State recommended actions for the protection of notable cave resources and mitigation of identified threats/hazards.


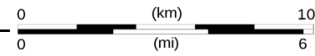
Prepared by:**Concurred by:**

Assessment Team members

Complete Name	Position/Designation	Office	Contact Details



ANNEX E. Proposed Lay-out of a Cave Map⁴

Landscape

<p style="font-size: 2em; margin: 0;">Cave Map (profile/plan view)</p>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">True North</div> <div style="border: 1px solid black; padding: 2px;">Scale Bar</div>	 									
	<p>CAVE NAME (Cambria, 12, Bold, All Caps, and Centered)</p> <p>Location: (Cambria, 10, Bold, All Caps, and Centered)</p> <p style="font-size: 0.8em;">(Cambria, 8, Bold, Italic, and Centered) <i>Universal Transverse Mercator (UTM), Zone 51 N Philippine Reference System of 1992 (PRS92)</i></p>										
	<p>Legends:</p> <p>NOTE: This map indicates the boundaries of the Cave based on the assessment undertaken by the Cave Assessment Team. Survey Date: Month/Date/Year</p>										
	<p>Location Map</p> 										
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Prepared by:</td> <td style="width: 33%;">Under the Supervision of:</td> <td style="width: 34%;"></td> </tr> <tr> <td style="text-align: center;"> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> Cartographer </td> <td style="text-align: center;"> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> Chief, Conservation and Development Division </td> <td></td> </tr> <tr> <td style="text-align: center;"> Attested by: <div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> PENR Officer </td> <td style="text-align: center;"> Noted by: <div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> ARD for Technical Services </td> <td></td> </tr> </table>			Prepared by:	Under the Supervision of:		<div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> Cartographer	<div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> Chief, Conservation and Development Division		Attested by: <div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> PENR Officer	Noted by: <div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> ARD for Technical Services	
Prepared by:	Under the Supervision of:										
<div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> Cartographer	<div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> Chief, Conservation and Development Division										
Attested by: <div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> PENR Officer	Noted by: <div style="border-bottom: 1px solid black; margin-bottom: 5px;">NAME</div> ARD for Technical Services										



Portrait

<h2>Cave Map (profile/plan view)</h2>			
<div style="margin-bottom: 10px;"> <div style="border: 1px solid black; padding: 2px; display: inline-block;">True North</div> <div style="display: inline-block; width: 50px; height: 20px; border-bottom: 1px solid black; margin-left: 5px;"></div> </div> <div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">Scale Bar</div> <div style="display: inline-block; width: 150px; height: 20px; border-bottom: 1px solid black; margin-left: 5px;"></div> </div>	<div style="text-align: center;">  <p>(km) 0 10</p> <p>(mi) 0 6</p> <p>CAVE NAME (Cambria, 12, Bold, All Caps, and Centered)</p> <p>Location: (Cambria, 10, Bold, All Caps, and Centered)</p> <p><small>Universal Transverse Mercator (UTM), Zone 51 N Philippine Reference System of 1992 (PRS92)</small> (Cambria, 8, Bold, Italic, and Centered)</p> </div>	<p>Legends:</p> <p>NOTE: This map indicates the boundaries of the Cave based on the assessment undertaken by the Cave Assessment Team.</p> <p>Survey Date: Month/Date/Year</p> <hr/> <div style="display: flex; justify-content: space-between;"> <div> <p>Prepared by: <u>NAME</u> Cartographer</p> <p>Attested by: <u>NAME</u> PENR Officer</p> </div> <div> <p>Under the Supervision of: <u>NAME</u> Chief, Conservation and Development Division</p> <p>Noted by: <u>NAME</u> ARD for Technical Services</p> </div> </div> <div style="text-align: center; margin-top: 10px;">  </div>	<p>Location Map</p>

ANNEX F. Technical Description Form⁵

Cave Name:			
Location:		Coordinates: (Decimal Degrees)	
Team members:		Equipment used for mapping:	

Cave Opening	Coordinates					
	Latitude (Decimal Degrees)			Longitude (Decimal Degrees)		

Station	Distance (m)					Bearing	Inclination	Noteworthy Features / Remarks
	Between Stations	Up	Down	Left	Right			

*Another sheet can be used if more space is needed.

ANNEX G. Outline of Cave Management Plan⁶

OUTLINE OF CAVE/ WETLAND MANAGEMENT PLAN

- I. Title Page
- II. Table of Contents and Annexes
- III. Foreword
- IV. Acknowledgement
- V. Executive summary
- VI. List of Acronyms and Abbreviations
- VII. Introduction
 1. Statement of Policies (*National and International*)
 2. Historical background (*when discovered, initial exploration, how it was named*)
 3. Purpose of the Plan
 4. Links between resource use and conservation needs
 5. Present land use pattern, including adjacent areas, indicating relative location
 6. Brief description of the planning process (*documentation to be part of the annexes*)
- VIII. Area Profile
 1. Geographic location – *should include map of area with information on coordinates, administrative/legal jurisdiction, boundaries and accessibility*
 2. Conservation measures – *Protected Area (PA), Key Biodiversity Area (KBA), Critical Habitat (CH), Indigenous peoples'/community conserved territories and areas (ICCA)*
 3. Bio-physical profile (*Include spatial representations/maps*) of the following:
 - a. General topography and physiography:
 - i. Shape and dimensions (*provide a sketch map for the shape; size of the area, including minimum wet area of wetland during dry and wet season; length, width and depth of water level (if wetland)/ height (if cave) for at least three sections, including tributaries (wetland)/ openings (cave)*)
 - ii. Soil (*soil type, substrate type*)
 - iii. Hydrology (*surface/groundwater source, inflow/outflow, water quality, flooding/tidal regime, if applicable*)

- iv. Climatology (*climate type, climate zone, precipitation, temperature, wind*)
 - v. Biogeography
 - b. Wetland type/Classification
 - c. Flora and Fauna – *economically important, rare and threatened species, seasonal/migratory species*
 - d. Geology including geologic hazards
 - e. Vulnerability studies
- 4. Socio-cultural profile
 - a. Anthropological/paleontological/archeological data
 - b. IKSP with emphasis on resource management
 - c. Historical
 - d. Sex disaggregated demography (*population in and around the area, migration pattern, etc.*)
 - e. Social organizations including women group
 - f. Social and institutional infrastructures reflect on map (*schools, clinics, churches, etc.*)
 - g. Settlement pattern
 - h. Built up area including map of settlements
- 5. Economic profile
 - a. Land use (*include land use surrounding the cave, adjacent river basin and in the coastal zone, where applicable*)
 - b. Resource use (*sex-disaggregated resource users*)
 - c. Other ecosystem services of the wetland/cave (*review of the provisioning, regulating, cultural, supporting services*) – *indicate relative location*
 - d. Economic activities/livelihood/enterprises (*sex-disaggregated*)
 - e. Patron-client relationships
 - f. Reciprocal arrangements – *agreement in which two (2) or more parties agree to share resources or perform certain action in an emergency case to achieve a common goal*
 - g. Economic infrastructures (*roads, electricity, water facility*)
- 6. Political profile
 - a. Political setup
 - b. Jurisdictional arrangements
 - c. Institutional systems
 - d. IP Governance, if any
- IX. Legal status and regulations/framework
 - 1. Existing laws and regulations
 - 2. Administrative and executive issuances
 - 3. Land tenure
 - 4. Local ordinances and other issuances
- X. Past and Current Initiatives (*supported with maps/tables/figures; documentation of past initiatives*)
 - 1. Past and on-going activities (*both private and government*)

2. Researches
 3. Implementing institutions, agencies or persons
- XI. Situational Analysis (*Purposive assessment of the area*)
Reasons why cave/wetland was classified as such, significant features of the cave/wetland, status of biodiversity, flora and fauna including invasive species and habitat of concern in that cave/wetland, current status of the cave/wetland, restoration and conservation needs, potential problems, existing threats and trends, management constraints, local community interests, potential of the area, roles of LGUs and other major stakeholders, required change in legal status
- XII. Scope and limitation – *should indicate data/information not available*
To include provision for data gaps clustered into:
- a. cave. wetland and environs development/management (*for the natural system*)
 - b. community preparations and participation with gender concerns; visitor management and other linkages
- XIII. Vision statement – *description of the future state that the plan wants to attain*
 Mission statement – *statement of the methods, ways and means to attain the vision*
 Goals – *general statement of a problem that needs to be resolved and should be attainable in 10 years; the desired outcome if the critical issues identified in the situational analysis are addressed.*
- The following are to be considered in structuring goals:*
- a. Ecological restoration
 - b. Sustainable livelihoods
 - c. Institutional development
 - d. Communication, Education, and Public Awareness (CEPA)
- XIV. Objectives – *Quantifiable presentation of the problem statement*
- XV. Management strategies and Intervention (*include spatial representation*)
- Different approaches that will integrate management activities to address issues identified in the situational analysis.*
- a. Resource Protection and Management (specify activities)
 - b. Ecological Restoration
 - c. Waste Management
 - d. Sustainable Cave/Wetland Resource Use (*e.g. guano collection, NTFP*)
 - e. Sustainable Ecotourism (*with possible linkages with outer tourism circuit*)
 - f. Cave/Wetland Zoning with maps and data
 - g. Visitor Safety/Management (*risk assessment/ cave/wetland hazard management*)
 - h. Social Marketing/ IEC Campaign
 - i. Human Resources Development/ Capacity Building

- j. Livelihood Development
 - k. Research and Development (*including area/species assessments*)
 - l. Local Policy
 - m. Gender and Development
 - n. Vulnerability Assessment
 - o. Indigenous Peoples Concern
- XVI. Implementation Scheme (*to specify what particular unit will be in charge of overseeing or implementing the Cave/Wetland Management Plan; organization structure and functional chart*)
- XVII. Specify legal instruments needed to adopt and implement the plan
- a. For non-Pas, resolution of concerned LGUs (municipal/city and barangay level), as recommended by the RCC/PCC and approved by the RED
 - b. For Pas, PAMB and RED to approve the adoption of the Cave/Wetland Management Plan
- XVIII. Monitoring and Evaluation and Feedback mechanism (*who and what to do, when to do, identify indicators to assess management effectiveness, feedback mechanism to feed into the implementation scheme*)
- XIX. Budgetary requirements
- a. Cost of plan implementation
 - b. Fund sourcing
 - c. Financial sustainability mechanism
- XX. References
- XXI. Annexes
- a. Maps
 - b. Work and Financial Plan
 - c. Organizational Structure
 - d. Resolutions adopting the plan (*DENR, LGU and PAMB in the case of PAs*)
 - e. Planning process documentation
- XXII. Action plans for: (see format below)

Action plans should be a duration of ten (10) years and shall be reviewed every five (5) years.

Action Plan (*Proposed format*)

Goal:						
Issues/Concern / Objective	Activity (Planned Actions)	Measurable Outcome	Timeframe	Responsible Agency/Person	Potential Support/ Partner Organization	Budget Estimate

ANNEX H.1. DENR-LGU Memorandum of Agreement Template⁷

MEMORANDUM OF AGREEMENT

(Caves and Cave Resources Conservation, Management and Protection)

KNOW ALL MEN BY THESE PRESENTS

This **AGREEMENT** is made and entered into on _____ by:

The **DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**
REGION _____, with Office address at _____, represented by
its Regional Executive Director _____ hereinafter referred to as the “**DENR**”;

-and-

The **LOCAL GOVERNMENT UNIT** of the city/municipality of _____,
Province of _____ with Office address at _____,
represented by its Local Chief Executive, _____, as authorized by the
Sangguniang Bayan (SB)/ Panglungsod (SP) through SB/SP Resolution No. _____ on
_____ dated _____ hereinafter referred to as the “**LGU**”.

WITNESSETH

WHEREAS, it is the policy of the State to conserve, protect and manage caves and cave resources as part of the country's natural wealth;

WHEREAS, the DENR is the lead agency tasked to implement the provisions of Republic Act No. 9072 otherwise known as the "National Caves and Cave Resources Management and Protection Act" or “Cave Act” in coordination with the Department of Tourism, the National Museum, the National Historical Commission of the Philippines, the Department of Interior and Local Government and concerned LGUs for specific caves;

WHEREAS, the DENR is authorized to enter into an agreement with the LGU for the preservation, development and management of cave or caves located in the territorial jurisdiction of such LGU;

WHEREAS, the LGU share with the national government the responsibility in the management and maintenance of ecological balance within their territorial jurisdiction, subject to Republic Act No. 7160 or the "Local Government Code of 1991" and national policies;

WHEREAS, the DENR and the LGU agree on the co-management of certain caves within the territorial jurisdiction of the LGU;

WHEREAS, all Parties agree on the sharing of duties and responsibilities and accountabilities for the common goal of preservation, development and management of a specific cave;

NOW THEREFORE, for and in consideration of the foregoing premises and the mutual covenants herein set forth, the parties agree on the following:

A. OBJECTIVE OF THIS AGREEMENT

This Agreement is entered into by the DENR and the LGU for the purpose of implementing the management plan of a certain cave located within the territorial jurisdiction of the LGU, subject to valid and existing rights, applicable laws, policies, rules and regulations.

B. COVERAGE

This Agreement covers (name of cave) _____, which is **Class__**, listed in DMC No. _____, and located in Barangay _____, City/Municipality of _____, Province of _____.

C. RESPONSIBILITIES OF PARTIES INVOLVED

1. The DENR shall:

- 1.1 Regulate the collection and removal of cave resources in Class III caves prior to suitable clearance from PAWB, LGU, and/ or National Museum;
- 1.2 In general, provide trainings and other related services to the LGU that will ensure the effective protection, development and management of the subject cave/s;
- 1.3 Subject to availability of funds and through the Regional Office, prepare annual or quarterly plan to support tasks to protect, develop and manage the subject caves;
- 1.4 Upon request, provide technical assistance to the LGU on the implementation of the Cave Management Plan;
- 1.5 Monitor the implementation of the Cave Management Plan, and oversee the implementation of this Agreement;
- 1.6 Through the concerned Regional Office, deputize the Cave Protection Enforcement Officers (CPEOs) from locally-based non-government organizations (NGOs), peoples' organizations (POs) and other volunteers in accordance with existing rules and regulations;
- 1.7 *[Insert here other specific DENR responsibilities as appropriate under the circumstances of each case.]*

2. The LGU shall:

- 2.1 Appoint a City/Municipal Environment and Natural Resources Officer who shall assume the tasks and functions of this Agreement including the implementation of the Cave Management Plan for _____;
- 2.2 Provide manpower and financial resources for the protection, conservation and management of the subject caves;
- 2.3 Where appropriate, integrate the cave management plan in the land use, development, investment and revenue plans of the City/Municipality;
- 2.4 Enact the necessary ordinances, rules and regulations consistent with national policies in support of the co-management of the subject caves;
- 2.5 Raise awareness among its constituents on the importance of conservation, protection and sustainable use of caves and cave resources;
- 2.6 Encourage and promote the participation of the private sector and entrepreneurs in the implementation of the Cave Management Plan and subsequent management/development plans especially those ventures that are related to agriculture and nature-based ecotourism;
- 2.7 Actively participate in the implementation of the Cave Management, Protection and Conservation Program within its territorial jurisdiction;

- 2.8 In general, provide such other resources and services that will ensure the effective conservation, protection and management of the subject caves; and,
- 2.9 *[Insert here other specific LGU responsibilities as appropriate under the circumstances of each case like assigning staff to be deputized as CPEO, etc.]*

D. GENERAL PROVISIONS

1. Within fifteen (15) working days following approval of this Agreement, the Sangguniang Panglungsod/Bayan, shall enact an ordinance imposing entrance fees and other charges for the utilization of the subject caves, and creating a special account in its general fund for the income derived by the LGU from the subject caves which is to be utilized for the maintenance, improvement, protection, monitoring, staff capacity building, and other related expenses of the subject cave. The Ordinance shall be reviewed annually by the Regional Cave Committee and updated every three (3) years by the Sangguniang Panglungsod/ Bayan, if appropriate.
2. Fees charged by the DENR shall accrue to the General Fund.
3. A management council may be created to oversee the implementation of the CMP. It shall be composed of representatives from the MLGU, BLGU, concerned CENRO/PENRO, Department of Tourism, other National Government Agencies, NGOs, POs, academe and other concerned stakeholders e.g. private landowner, IPs, etc. The Council shall be chaired by the Local Chief Executive and shall provide updates to the Regional/Provincial Cave Committee biannually.

E. DURATION OF THE AGREEMENT

This Agreement shall take effect immediately upon signing and remain in force for a period of five (5) years. Prior to its expiration, the Agreement may be renewed for another five (5) years subject to the favorable endorsement of the concerned Regional Cave Committee and upon compliance by the LGU with the terms and conditions of this Agreement as well as the applicable laws, rules and regulations.

IN WITNESS WHEREOF, the parties hereunto affixed their signatures this _____ at _____.

**DEPARTMENT OF
ENVIRONMENT AND NATURAL
RESOURCES –
REGION _____**

**CITY/MUNICIPALITY OF
_____**

By:

By:

Regional Executive Director

City/Municipal Mayor

WITNESSETH BY:

ACKNOWLEDGMENT

BEFORE ME, this _____ day of _____ in _____, Philippines,
personally appeared:

_____ Passport No. ____ Issued at ____ Valid until _____	_____ Passport No. ____ Issued at ____ Valid until _____
---	---

Both known to me as the same person who executed the foregoing Cave co-management Agreement and exhibited to me their respective Philippine Passports as indicated below their names and acknowledged to me that the same is their voluntary act and deed and free act of the entities which they respectively represent.

Notary Public

Doc No. ____
Page No. ____
Book No. ____
Series of 20 ____

ANNEX H.2. DENR-LGU-Landowner Memorandum of Agreement Template⁸

MEMORANDUM OF AGREEMENT

(Caves and Cave Resources Conservation, Management and Protection)

KNOW ALL MEN BY THESE PRESENTS

This **AGREEMENT** is made and entered into on _____ by:

The **DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**
REGION _____, with Office address at _____, represented by
its Regional Executive Director _____ hereinafter referred to as the “**DENR**”;

-and-

The **LOCAL GOVERNMENT UNIT** of the city/municipality of _____,
Province of _____ with Office address at _____
represented by its Local Chief Executive, Hon. _____, as authorized by the
Sanguniang Bayan (SB)/ Panglungsod (SP) through SB/SP Resolution No. _____ on
_____ dated _____ hereinafter referred to as the “**LGU**”.

-and-

_____, of legal age, single/married, with residence address at
_____, hereinafter referred to as the “**Landowner**”.

WITNESSETH

WHEREAS, it is the policy of the State to conserve, protect and manage caves and cave resources as part of the country's natural wealth;

WHEREAS, caves and cave resources as are owned by the State, whether the entrance to the cave is located in private or public land;

WHEREAS, the DENR is the lead agency tasked to implement the provisions of Republic Act No. 9072 otherwise known as the "National Caves and Cave Resources Management and Protection Act" or “Cave Act” in coordination with the Department of Tourism, the National Museum, the National Historical Commission of the Philippines, the Department of Interior and Local Government and concerned LGUs for specific caves;

WHEREAS, the DENR is authorized to enter into an agreement with the LGU for the preservation, development and management of cave or caves, **specifically Class 2 and 3**, located in the territorial jurisdiction of such LGU;

WHEREAS, the LGU share with the national government the responsibility in the management and maintenance of ecological balance within their territorial jurisdiction, subject to Republic Act No. 7160 or the "Local Government Code of 1991" and national policies;

WHEREAS, under DENR Administrative Order No. 2003-29 or the "Implementing Rules and Regulations of the National Caves and Cave Resources Management and Protection Act

(Republic Act No. 9072)", the Landowner may enter into a tripartite agreement with the **DENR** and the **LGU** for the conservation, management and protection of caves and cave resources, accessible through the Landowner's property;

WHEREAS, the Landowner is the absolute owner of a parcel of land covered by Transfer Certificate of Title (TCT) No. _____ situated in *[insert complete address]*, and within the territorial jurisdiction of the LGU, where an entrance to the *[insert name of cave]* may be found;

WHEREAS, the DENR, the LGU and Landowner have manifested their interest and willingness to enter into this Tripartite Agreement;

WHEREAS, all Parties agree on the sharing of duties and responsibilities and accountabilities for the common goal of preservation, development and management of a specific cave;

NOW THEREFORE, for and in consideration of the foregoing premises and the mutual covenants herein set forth, the parties agree on the following:

A. OBJECTIVE OF THIS AGREEMENT

This Agreement is entered into by DENR, LGU and xxxxxxxx for the purpose of implementing the management plan of a certain cave located within the territorial jurisdiction of the LGU, subject to valid and existing rights, applicable laws, policies, rules and regulations.

B. COVERAGE

This Agreement covers (name of cave), which is Class_, listed in DMC No._____, and located in Barangay_____, City/Municipality of _____, Province of_____.

C. RESPONSIBILITIES OF PARTIES INVOLVED

1. The DENR shall:

- 1.1 Regulate the collection and removal of cave resources in Class III cave prior to suitable clearance from PAWB, LGU, and/ or National Museum;
- 1.2 In general, provide trainings and other related services to ensure the effective protection, development and management of the subject caves;
- 1.3 Subject to availability of funds and through the Regional Office, prepare annual or quarterly plan to support tasks to protect, develop and manage the subject caves;
- 1.4 Upon request, provide technical assistance to the LGU on the implementation of the Cave Management Plan;
- 1.5 Monitor the implementation of the Cave Management Plan, and oversee the implementation of this Agreement;
- 1.6 Deputize the Cave Protection Enforcement Officers (CPEOs) from locally-based non-government organizations (NGOs), peoples' organizations (POs) and other volunteers in accordance with existing rules and regulations; and,
- 1.7 *[Insert here other specific DENR responsibilities as appropriate under the circumstances of each case.]*

2. The LGU shall:

- 2.1 Appoint a City/Municipal Environment and Natural Resources Officer who shall assume the tasks and functions of this Agreement including the implementation of the Cave Management Plan of xxxxxxxxxxxxxxxx;
- 2.2 Provide manpower and financial resources for the protection, conservation and management of the subject cave;
- 2.3 Where appropriate, integrate the caves management plan in the land use, development, investment and revenue plans of the City/Municipality;
- 2.4 Enact the necessary ordinances, rules and regulations consistent with national policies in support of the co-management of the subject caves;
- 2.5 Raise awareness among its constituents on the importance of conservation, protection and sustainable use of caves and cave resources;
- 2.6 Encourage and promote the participation of the private sector and entrepreneurs in the implementation of the Cave Management Plan and subsequent management/development plans especially those ventures that are related to agriculture and nature-based ecotourism;
- 2.7 Actively participate in the implementation of the Cave Management, Protection and Conservation Program within its territorial jurisdiction;
- 2.8 In general, provide such other resources and services that will ensure the effective conservation, protection and management of the subject cave; and,
- 2.9 *[Insert here other specific provision as appropriate under the circumstances of each case like assigning staff to be designated as CPEOs, etc.]*

3. The Landowner shall:

- 3.1 Ensure that persons who will utilize the subject cave and/or its resources possess the required permits and/or clearances from the DENR and, where applicable, from other government agencies;
- 3.2 Lead in the implementation of the Cave Management Plan with respect to the xxxxxxxxxxxxxxxxxxxxxxxx cave;
- 3.3 Assist in the protection and conservation of the subject cave;
- 3.4 Immediately report to the LGU and the DENR violations of the Caves Act which involve the subject cave;
- 3.5 Provide the necessary assistance in the filing and prosecution of cases against persons that violate cave laws, rules and regulations;
- 3.6 In general, provide such other resources and services that will ensure the effective conservation, protection and management of the subject caves.
- 3.7 *[Insert here other specific provisions as appropriate under the circumstances of each case like agreed sharing scheme, be deputized as CPEO, etc.]*

D. GENERAL PROVISIONS

1. Within fifteen (15) working days following approval of this Agreement, the Sangguniang Panglungsod/Bayan, shall enact an ordinance imposing entrance fees and other charges for the utilization of the subject caves, and creating a special account in its general fund for the income derived by the LGU from the subject caves which is to be utilized for the maintenance, improvement, protection, monitoring, staff capacity building, and other related expenses of the subject cave. The Ordinance shall be reviewed annually by the Regional Cave Committee and updated every three (3) years by the Sangguniang Panglungsod/ Bayan, if appropriate.
2. Fees charged by the DENR shall accrue to the General Fund

3. A management council may be created to oversee the implementation of the CMP. It shall be composed of representatives from the MLGU, BLGU, concerned CENRO/PENRO, Department of Tourism, other National Government Agencies, NGOs, POs, academe and other concerned stakeholders e.g. private landowner, IPs, etc. The Council shall be chaired by the Local Chief Executive and shall provide updates to the Regional/Provincial Cave Committee biannually.

E. DURATION OF THE AGREEMENT

This Agreement shall take effect immediately upon signing and remain in force for a period of five (5) years. Prior to its expiration, the Agreement may be renewed for another five (5) years subject to the favorable endorsement of the concerned Regional Cave Committee and upon compliance by the LGU with the terms and conditions of this Agreement as well as the applicable laws, rules and regulations.

IN WITNESS WHEREOF, the parties hereunto affixed their signatures this

_____ at _____.

**DEPARTMENT OF
ENVIRONMENT AND NATURAL
RESOURCES –
REGION _____**

CITY/MUNICIPALITY OF

By:

By:

Regional Executive Director

City/Municipal Mayor

Land-owner

WITNESSETH BY:

ACKNOWLEDGMENT

BEFORE ME, this _____ day of _____ in _____, Philippines,
personally appeared:

_____ Passport No. __ Issued at _____ Valid until _____	_____ Passport No. __ Issued at _____ Valid until _____
_____ Passport No. __ Issued at _____ Valid until _____	

Both known to me as the same persons who executed the foregoing Cave Co-management Agreement and exhibited to me their respective Philippine Passports as indicated below their names and acknowledged to me that the same is their voluntary act and deed and free act of the entities which they respectively represent.

Notary Public

Doc. No.
Page No.
Book No.
Series of _____

ANNEX I. IMPLEMENTATION/PROGRESS REPORT TEMPLATE

OUTLINE

- I. **Introduction/Background** (*brief discussion on the subject cave and preparatory activities made e.g. logistics, meetings, coordination with stakeholders, etc.*)
- II. **Details of the activity** (activities conducted relative to the Action Plan and its duration; result/findings)
- III. **Challenges** (issues encountered during the implementation)
- IV. **Next steps** (suggested next course of action)

SUMMARY OF THE ACTIVITY

MANAGEMENT STRATEGY (AS MENTIONED IN THE MANAGEMENT PLAN)	ACTIVITY	DATE CONDUCTED	RESPONSIBLE AGENCY/PERSON	REMARKS (MENTION ISSUES ENCOUNTERED, FINDINGS, ETC.)