

**Adopting the Enhanced Cave Assessment Form – Annex B**

**WHEREAS**, Sections 12 and 13 of DENR Administrative Order No. 2003-29, Implementing Rules and Regulations of the National Caves and Cave Resources Management and Protection Act (Republic Act No. 9072), provides the classification of caves to determine their appropriate use;

**WHEREAS**, DENR Memorandum Circular 2007-04, “Procedure in Cave Classification”, provided a detailed cave assessment form in Annex B of the Manual on Cave Classification for the use of the Regional Cave Assessment Teams (RCAT);

**WHEREAS**, BMB with partners worked together to enhance the Cave Assessment Form to provide more extensive and improved quality of data for a more accurate classification of caves in the country;

**WHEREAS**, a workshop was held in August 2009 in Cebu with the BMB, experts, academe and NGOs on the proposed enhanced Cave Assessment form;

**WHEREAS**, during the 10<sup>th</sup> National Cave Congress on April 2010, the proposed enhanced Cave Assessment Form was pre-tested in Kapalong, Davao del Norte;

**WHEREAS**, the said Assessment Form was reviewed by National Cave Committee (NCC) members during the 20<sup>th</sup> NCC Meeting held last April 13, 2016 and recommended the adoption of the enhanced Cave Assessment Form – Annex B;

**WHEREFORE, BE IT RESOLVED AS IT IS HEREBY RESOLVED**, the enhanced Cave Assessment Form – Annex B, as attached, be adopted.

ADOPTED this 20 day of February 2017, at Quezon City, Philippines.

  
**ANGEL P. BAUTISTA**  
National Museum

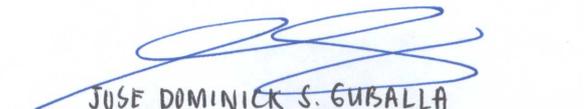
  
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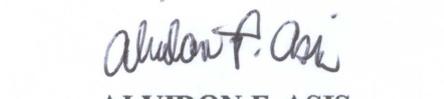
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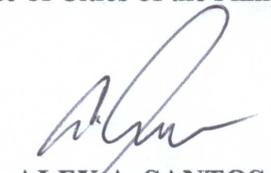
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**ENHANCED ANNEX B**  
**CAVE ASSESSMENT FORM**

Name of Compiler: \_\_\_\_\_  
 Date compiled: \_\_\_\_\_  
 Name of Cave: \_\_\_\_\_  
 Region: \_\_\_\_\_ Province: \_\_\_\_\_  
 Municipality/City: \_\_\_\_\_ Barangay: \_\_\_\_\_  
 Sitio/Purok: \_\_\_\_\_  
 Size of the Area: \_\_\_\_\_ ha (area enclosed by the proposed boundary)  
 Period of Assessment: \_\_\_\_\_

**I. GENERAL INFORMATION**

1. Evolution of the Cave (include cave's origin, solution, tectonic movement, degradational/formation of talus, erosion etc.)
2. Geographic location and description  
 Coordinates  
 Elevation  
 Land Status (please check)  
 Agricultural  
 Mineral land  
 National Park  
 Timberland  
 Residential  
 Others (specify) \_\_\_\_\_
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)
5. Existing land-use patterns in area adjacent to the cave.

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

6. 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

7. Uses / Human Activities

7.1 Identify the current activities inside the cave (indicate in the cave map)

Type of Activity	Implementation period	Station/s Covered*	Implementing Agencies	Remarks

\*Refer to station in the cave map

7.2 Identify past uses/ activities (indicate in the cave map)

Type of Activity	Implementation period	Station/s Covered*	Implementing Agencies	Remarks

\*Refer to station in the cave map

8. 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.

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

b.1 ( ) Undisturbed Cave (newly discovered cave)

b.2 ( ) Intact (State what probable factors could have worked for their protection)

\_\_\_ Difficult access

\_\_\_ Within protected area

\_\_\_ Inside private property

b.3 ( ) Vandalized (State extent, location of vandalism; describe vandalism)

b.4 ( ) Exploited (State cause and extent of exploitation)

b.5 ( ) Claimant (State name)

b.6 ( ) For status not included in the criteria (specify e.g. part of the cave is undisturbed and part of the cave is disturbed)

II. NATURAL FEATURES

1. Vegetative Cover

1.1 Flora outside the cave.

Scientific name	Common name	Uses	Importance/ Value	Conservation status <sup>1</sup>	Stratification <sup>2</sup>	dbh	Remarks

<sup>1</sup>Based on DAO 2007-01 or succeeding amendments

<sup>2</sup>emergent, canopy, understory, forest floor, etc.

1.2. Flora inside the cave (entrance to twilight zone).

Scientific name	Common name	Uses	Importance/ Value	Conservation status*	Remarks

\*Based on DAO 2007-01 or succeeding amendments

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 (enumerate species):

a. Vertebrates.

Scientific name	Common name	Abundance (range)	Location (station #)	Conservation status*	Remarks

\*Based on DAO 2004-15 or succeeding amendments

b. Arthropods and other invertebrates.

Scientific name	Common name	Abundance (range)	Location (station #)	Conservation status*	Remarks

\*Based on DAO 2004-15 or succeeding amendments

c. Guano characterization

Sample #	Species (e.g. fruit bat, insect bat, swiftlet)	Location (station #)	Depth	Area (m <sup>2</sup> )	Physical Characteristics (e.g. texture, consistency, dry or wet)	Relative age (old or new)	Other observations (presence of feathers, plant fibers)

2.2. Fauna outside the cave.

Scientific name	Common name	Abundance	Location (station #)	Conservation Status*	Remarks

\*Based on DAO 2004-15 or succeeding amendments

3. Geology

3.1 Speleothems inside the cave.

Speleothem	Approximate no.	Zone		Remarks (e.g. damaged, dirty, etc.)
		Twilight	Dark	
Stalactites				
Stalagmites				
Draperies				
Flowstone Sheets				
Columns				
Mammillary				
Erratic Forms (crystal growth controlled)				
Shields				
Helictites				
Botryoidal Forms (popcorns, grapes, etc.)				
Anthodites				
Oulopholites (gypsum flowers)				
Moonmilk				
Subaqueous Forms				
Rimstone dams (gour pools)				
Concretions of various kinds (limestone concretions e.g. cave pearls, iron, basalt)				
Pool deposits				
Crystal Linings				
Others				

3.2. Mineral deposits inside the cave.

Mineral	Location (station #)	Remarks
Aragonite		
Calcite		
Dolomite		
Huntite		
Hydromagnesite		
Magnesite		
Others		

3.3. Other geological features inside the cave.

Features	Location (station #)	Remarks
Faults		
Joints		
Cracks		
Fossils (paleontological feature)		
Others		

4. Hydrology

4.1. Hydrological features inside the cave.

Features	Location (station #)	Flow		Origin		Size/Volume	pH	Temperature	Remarks
		Perennial	Intermittent	Natural	Man-made				

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

4.2. Hydrological features outside the cave (within 2km radius).

Features	Location (station #)	Flow		Origin		Size/Volume	pH	Temperature	Remarks
		Perennial	Intermittent	Natural	Man-made				

5. Cave Hazards. Please indicate if any of the following are present. Please indicate location inside the cave.

Cave Hazards	Location (station #)	Remarks
Bad air <sup>1</sup> (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 <sup>2</sup>		
Heaving <sup>3</sup>		

Extremely cold temperatures		
Others		

<sup>1</sup>refers 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 CO<sub>2</sub> and O<sub>2</sub>.

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

<sup>3</sup>refers 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	Approximate Population	Livelihood Activities	Traditional Uses/ Cultural Activities

### IV. ARCHAEOLOGICAL FEATURES

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 #/chamber)*

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		
<b>Ecofacts</b>		
Fossils		
Human bones		
Animal bones		
Wood		
Shells (land)		
Shells (freshwater)		
Shells (marine)		
<b>Artworks</b>		
Charcoal drawings		
Hematite paintings		
Engraved artwork		
<b>Others</b>		

### 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	Possible Solutions	Remarks
Deforestation				
Agriculture				

Urbanization				
Industrialization				
Tourism and Recreation				
Chemical Waste				
Water Exploitation (dams, groundwater pumping, inundation)				
Treasure hunting				
Used by insurgents				
Others				

**VI. POTENTIAL USES OF THE CAVE**

Potential Uses	Remarks
Scientific Research	
Tourism and Recreation	
Exploration	
Others	

**VII. RECOMMENDATIONS**

**Prepared by:**  
 Assessment Team members  
 (Complete Name, Position/Designation, Office, Contact Details)

**Concurred by:**