

# **PÁMIGANAKÂ: MANIFESTING DARK TOURISM TO CULTIVATE CULTURAL MEMORY IN THE VOLCANIC LANDSCAPE OF PORAC, PAMPANGA**

**Mary Christine M. Garcia\*<sup>1</sup>, Nappy L. Navarra, D. Eng.<sup>2</sup>**

Undergraduate, College of Architecture, University of the Philippines Diliman<sup>1</sup>, Integrated Graduate Program Coordinator, Environmental Landscapes Studio Laboratory Coordinator, Faculty, College of Architecture, University of the Philippines Diliman<sup>2</sup>  
Email: [garciamcmmi@gmail.com](mailto:garciamcmmi@gmail.com)<sup>1</sup>, [nlnavarra@up.edu.ph](mailto:nlnavarra@up.edu.ph)<sup>2</sup>

## **Abstract**

This study explores the manifestation of dark tourism in the volcanic landscape of Porac, Pampanga in Philippines after the Mount Pinatubo eruption in 1991. The concept of dark tourism involves visitation of sites linked with tragedy, disaster, or historical trauma, with an educational aim that evokes feelings of grief and condemnation, which are evident in landmarks, ruins, or memorabilia of its atrocity. Experiences, familiarity, and perspectives of an archaeologist, geologist, farmer, priest, and tourism officer are unraveled in this study to gain a comprehensive understanding of the town. By incorporating the concept of dark tourism in the landscape design, the research delves into the complex approach of preserving cultural heritage, promoting ecological restoration, safety, and meeting the recreational needs of tourists. To facilitate this, six tourism circuits were created in mapping the tourist sites based on the Darkest-to-Lightest spectrum. These circuits were categorized according to their duration, level of difficulty, and target market. In the process of creating these circuits, while also anticipating the flock of tourists, it was necessary to come up with a tourism enterprise. This tourism enterprise serves as a service center, which includes accommodations, information center, local businesses, and transportation services that will allow tourists' travels to be more comfortable and enjoyable. In conclusion, this landscape design is a testament and manifestation of the suffering and tragedies of humans, and it is an avenue for acknowledging and remembering the past and a catharsis of human emotions and feelings of grief, condemnation, empathy, and reflection. Through the lens of memory culture, the Kapampangan's collective memory and shared history of Pinatubo's eruption become the fundamental elements of this design process that also brings the spirit of resiliency and survival that defines their journey.

**Keywords:** Memory Culture, Dark Tourism, Volcanic Landscape, Mountain Pinatubo

---

## **A. INTRODUCTION**

In the paper by Stone (2009), secularization of society has turned people into being indifferent and conformist with increased materialism and consumerism. This sudden shift has left individuals detached from the traditional, social, and religious foundations that provide moral guidance, which also make it part of the process of individualization. Through this process, individuals normally seek new sources of meaning, and this meaning may come from in the form of tourism that usually involve spiritual dimensions (Stivers, 1996).

Dark tourism is often defined as a form of tourism which involves visits to the actual or recreated locations that are associated with death, suffering, misfortune, or macabre, or disaster (Foncesca et. al., 2016). It involves visitation to places where deaths are historically significant to masses (Stone, 2006).

In the Philippines, the province of Pampanga has suffered numerous tragedies in its history, which shaped its course of history and culture and in Porac, Pampanga. Among these events

include extrajudicial killings of farmers, the eruption of Mount Pinatubo, the burials of heritage sites due to lahar, and the discovery of 300 ancient graves. These left a lasting impact, which contributed to the town's identity.

By embracing and recognizing the dark historical and cultural fabric of Porac, it is important to shed light on the significance of these dark episodes. From the past to the present, the concept of geological palimpsest draws upon the landscape's unique history revealing layers of dark episodes, with each one overshadowing the previous event by each layer of lahar as the Pinatubo erupts periodically. The representation of layers of lahar does not only shows its unique geography, but it also shapes the town's identity.

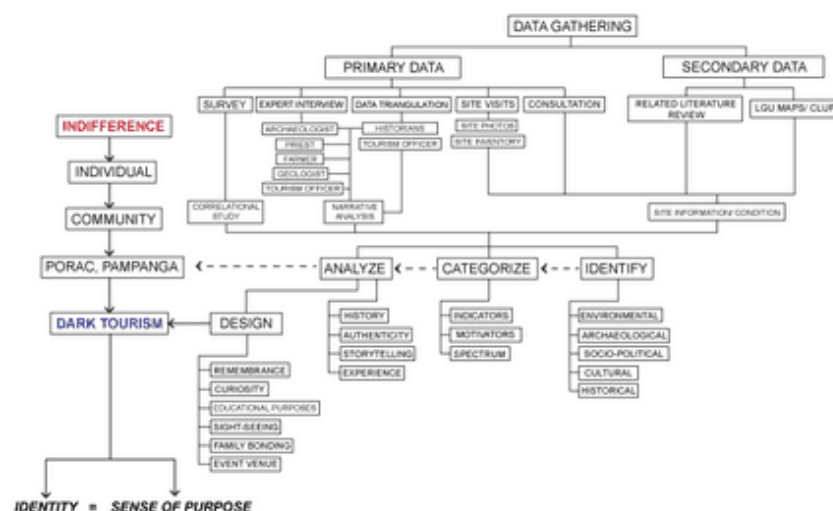
In this context, the concept of memory culture does not only refer to the beliefs, practices, and history of a community; it also encompasses the recollections of past trauma experienced by a group of victims. Through these shared traumas, it forms our own collective psyche, an invisible understanding, yet omnipresent through evidence, allowing us humans to evoke feelings of grief and condemnation. These sites where actual or recreated instances of trauma and suffering have occurred distorts the reality of a perfect and comfortable life, allowing us to see and touch the reality of death in a controlled and safe space and offers a form of catharsis. These are tangible reminders of the inevitability of death, the fallibility of human nature, and frailty of the human physique challenging us to reflect within ourselves and understand our collective responsibility as a community. By engaging with these experiences, we are confronted with the uncomfortable truth and the idea of how detached we are to their reality, how indifferent we are to the victims, and that we are an accomplice to these tragedies.

In this light, the question arises: how can the development of a volcanic landscape in Porac be achieved in forming a community identity and in defining an individual's sense of purpose through dark tourism? This question seeks to explore how the unique geological and historical context of Porac can be used to create a meaningful connection between the land, its residents, and its visitors through a sustainable landscape development.

The study is significant to address and contextualize this aspect of human nature through the commemoration of the dark historical and cultural fabric of Porac. Only then the tourist and residents, unaware of the full narrative and history of Porac, will realize its rich and dark history and connect, empathize with the community's shared grief and condemnation, and ultimately form a community identity in defining an individual's sense of purpose. This study will benefit the residents, tourists, and individuals, the local government units (LGU), the National Historical Commission of the Philippines, the Department of Agrarian Reform (DAR), and the Department of Tourism (DOT) in formulating policies and procedures in terms of heritage preservation, tourism development, and community engagement.

## **B. RESEARCH METHOD**

**Figure 1. Methodological Framework of the Study**



The research methodological framework of the study was used to analyze the problem of the study, obtain data from research, answer the research inquiries, and design a landscape based on the findings.

This study was initially conducted by identifying the main problem. Then, it would proceed by gathering related literature review, such as books, journals, case studies, and articles, satellite data, and pertinent LGU maps and Comprehensive Land Use Plan (CLUP) of the site and conducting several site visits in Porac in obtaining the site information and conditions. Theories and concepts from the related literature review are also integrated to establish space programming and understand the human psyche.

Subsequently, interviews on experts, such as archaeologist, farmer, priest, tourism officer, and geologist, and surveys on the general population were conducted to perform a data triangulation, narrative/thematic analysis and correlational study. The findings on the narrative/thematic analysis, correlational study, and site information/condition will be analyzed by identifying their environmental, archaeological, socio-political, cultural, and political aspects. These are then categorized based on study conducted by Fabros (2023) on indicators, spectrum, and motivations in visiting a dark tourism site in the Philippine context and they were attributed in the process of conducting the study. After that, they will be analyzed based on their history, authenticity, storytelling, and experience leading to the design development of the circuit. Through this process, it will ultimately lead to forming a community identity in defining an individual's sense of purpose.

### C. FINDINGS AND DISCUSSION

Through Google Forms, an online survey was conducted to the general population aged 18 years old and above. Through data gathering, 107 respondents were collected. This survey entails questions on the respondent's awareness, experiences, perception, and recommendations on the concept of dark tourism.

Based on the survey, majority of the respondents are aged 18-24 years old, female, college students. The majority also live within Luzon but not Pampanga. The last time they travelled for tourism was within the last three (3) months within Luzon. Within Visayas, survey says they travel twice to thrice times a year. They are willing to spend an amount of more than 5,000 but

less than 10,000 Pesos. Majority are sightseeing cultural tourists, who enjoy visiting historical landmarks, museums, and galleries.

### **Correlational Study on the Age Group vs. Frequency of Travel**

Upon entering the data sets of age group (x-value) and frequency of travel (y-value) in Excel, both data sets were assigned to a numerical value (e.g., 1 for 18-24, 2 for 25-34, 3 for 55-64, and 4 for 65 and above in age group, while 0.1 for never, 2.5 for 2-3 times a year, 5 for 4-6 times a year, and 7 for 6 times a year and above). These data sets were inputted in a column and were computed using the formula “=CORREL(range1, range2).”

From the results, the Pearson’s r of the data is equal to -0.1915, which means that the correlation between the age group and frequency of travel is weak. This suggests that while younger age group tend to travel more frequently, and older age groups tend to travel less frequently. However, this cannot be proven a hundred percent as the strength of this relationship is weak. It is also important to note that the age group does not necessarily imply a causal relationship. There could be other factors that might affect the relationship and it should be further analyzed.

### **Correlational Study on the Gender vs. Frequency of Travel**

From the results, the Pearson’s r of the data is equal to -0.1234, which means that the correlation between gender and frequency of travel is inverse but weak. This suggests that there is a slight chance that the proportion of males tend to increase relative to female as the frequency of travel increases. However, this cannot be proven a hundred percent as the strength of this relationship is weak.

### **Narrative/ Thematic Analysis**

Based on the interviewes done, the narrative analysis was formed through thematic analysis. Within the narrative, significant concepts or information are coded to highlight key passages for categorization based on common themes. This process allows for a comprehensive exploration of the underlying patterns and insights within the data.

**Table 1.** Narrative/Thematic Analysis of the interview of experts

EXPERT	CODES	THEMES
Geologist	<ul style="list-style-type: none"> <li>• Porac's geological features</li> <li>• Impact of Pinatubo eruption on landscape</li> <li>• Contribution to geotourism</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental Hazards and Management</li> <li>• Narratives of Place and Identity</li> </ul>
Archaeologist	<ul style="list-style-type: none"> <li>• Archaeological excavation in Babo Balukbuk site</li> <li>• Presence of human remains and artifacts</li> <li>• Aeta's historical presence</li> </ul>	<ul style="list-style-type: none"> <li>• Cultural Continuity and Transformation</li> <li>• Narratives of Place and Identity</li> </ul>
Priest	<ul style="list-style-type: none"> <li>• Impact of Pinatubo eruption on community</li> <li>• Spiritual and cultural practices</li> <li>• Resilience and adaptation</li> </ul>	<ul style="list-style-type: none"> <li>• Cultural Continuity and Transformation</li> <li>• Narratives of Place and Identity</li> </ul>
Tourism Officer	<ul style="list-style-type: none"> <li>• Tourism events and activities</li> <li>• Promotion of dark tourism</li> <li>• Collaborations and consultations</li> <li>• Economic activities related to tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Cultural Continuity and Transformation</li> <li>• Tourism as Economic Diversification and Opportunities</li> <li>• Community Engagement and Empowerment</li> </ul>
Farmer	<ul style="list-style-type: none"> <li>• Land dispute with developers</li> <li>• Legal conflict</li> <li>• Impact of Pinatubo eruption</li> <li>• Community resilience</li> <li>• Cultural identity</li> </ul>	<ul style="list-style-type: none"> <li>• Land Rights and Conflict</li> <li>• Community Engagement and Empowerment</li> </ul>

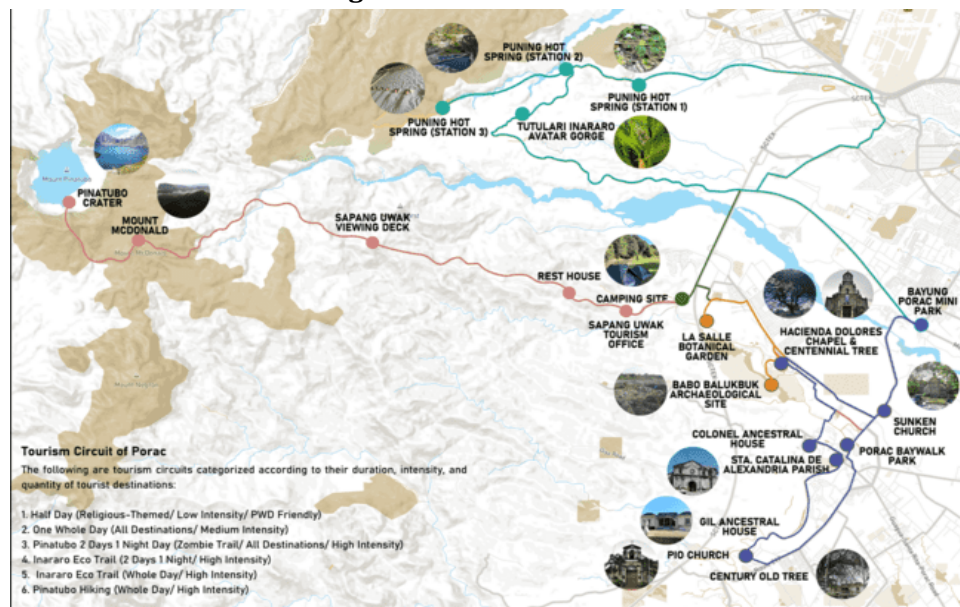
**Table 2.** Distribution of Sites to Darkest-to-Lightest Framework

Sites	Dark Fun Factories (Lightest)	Dark Exhibitions (Dark)	Dark Dungeons (Light)	Dark Resting Places (Lighter)	Dark Shrines (Darker)	Dark Conflict Sites (Lighter)	Dark Camps of Genocide (Darkest)
<b>Cultural</b>							
Sunken Church					✓		
Hacienda Dolores Chapel					✓		
Sta. Catalina de Alexandria Parish					✓		
Pio Church					✓		
<b>Natural</b>							
Century Old Sampaloc Tree near Pio Church						✓	
Century Old Acacia Tree near Hacienda Dolores Chapel						✓	
Bayung Porac Mini Park				✓			
La Salle Botanical Garden		✓					
<b>Historical</b>							
Simplicia Colonel Ancestral House		✓					
Gil Ancestral House		✓					
Babo Balukbuk Archaeological Excavation Site		✓					

Exhibition site.

From the literature review and site analysis done, figure 2 shows all the destinations and dark tourist sites involved in the tourism circuit.

**Figure 2. Tourism Circuit of Porac**



In the process of creating the tourism circuit, while also anticipating the flock of tourists, it has necessary to come up with a tourism enterprise. The Tourism Enterprise Zone does not only

## Darkest-to-Lightest Framework

Table 2 on the left shows the sites that were arranged into cultural, natural, and historical. They are analyzed one by one which category of the dark suppliers they belong. The sites may be belonged to two categories of the dark suppliers. However, one category may be chosen depending on the narrative that is to be portrayed. For instance, the Babo Balukbuk Site may be categorized as a Dark Resting Place that serves as a graveyard of the dead. However, since archaeological sites are an open graveyard unearthed for educational purposes and may be used as a tourist exhibit, they are now categorized as a Dark

encompass the landscape design, but also the tourism circuit since it comprises the tourist spots. The landscape design can also be called as a “service center” as it will provide accommodations or lodging, information center, local businesses, and transportation services.

### Maps and Profiles

**Figure 3. Accessibility Map**



**Figure 4. Road Network Map**



**Figure 5. Land Use Map**

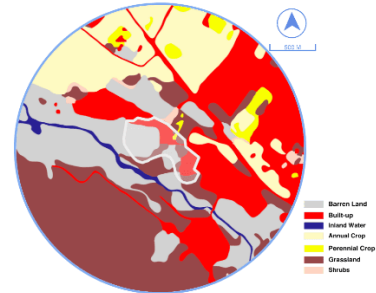
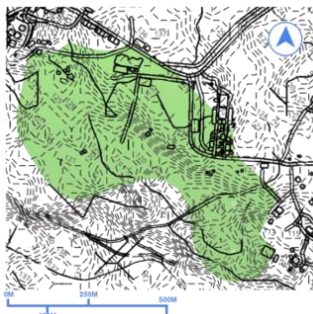


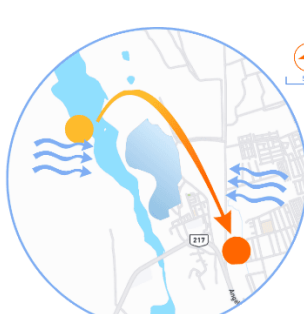
Figure 3 and 4 shows the four types of roads—the expressway, which is the Subic-Clark-Tarlac Expressway, national primary road, which is the Angeles-Porac-Floridablanca-Dinalupihan Road, the secondary roads, and the remaining are the local roads.

In figure 5, since the site is located at the alluvial fan of Mount Pinatubo, most of its area is barren, thus, used for quarrying sand, silt, and stones. The built-up areas in the site are not residential spaces, but rather infrastructures and parked vehicles of private companies, which used the site for quarrying. A part of the area are also grassy.

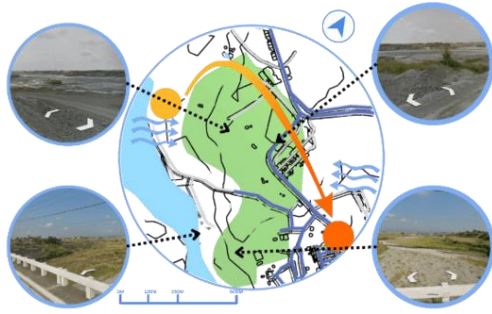
**Figure 6. Topography Map**



**Figure 7. Climate Analysis**



**Figure 8. Site Analysis and Inventory**



In figure 6, the highest point of the site comes from the west side, where the higher elevation of the river is located, while the lowest point is located in the Southeast, where the lowest point of the river is also located. This means that the natural flow of the water should come from the site going back to the river, which directs the water of Porac to the Manila Bay.

The illustration in figure 7 shows the sun path coming from east to west, and the wind path coming from the northeast (Amihan) and southwest (Habagat). According to the Comprehensive Land Use Planning of Porac (2021-2030), the climate of Porac is categorized into a Type 1, which means that the town experiences distinct dry conditions prevailing from November to April, while wet conditions for the remainder of the months. Moreover, the range of its rainfall is between 100 to 200 millimeters. On the other hand, the temperature of the province of Pampanga is expected to increase by 1°C in 2050. This shift could be detrimental to various sectors, such as water resources, irrigation, and agriculture.



Figure 8 shows the site composed of a vast plain of sand, soil, rocks, and boulders extracted by quarrying activities. It is also surrounded by industrial developments as the site is surrounded by lahar.

**Figure 9.** Elevation map of the site

Source: Google Earth Pro



The site has a total land area of 48.2 hectares, located at the southern part along the Pasig-Portrero River in Barangay Manibaug Pasig, Porac, Pampanga and Angeles-Porac-Floridablanca-Dinalupihan Road on the east. Its GPS coordinates are 15°06'33.44" North, 120°32'51.85". The minimum elevation of the site is 359 feet, its average elevation is 386 feet, and its maximum elevation is 435 feet with a maximum slope of 37% based on the map of Google Earth Pro.

**Figure 10-12.** Site Photos



Left photo shows the flow of the river that has been channelled by quarrying, lessening the impact of flooding. The middle photo shows a long retaining wall faces the river, which also directs rainwater to the river. On the other hand, the right photo shows a view from the site which overlooks a large area of lahar from the Pinatubo eruption.

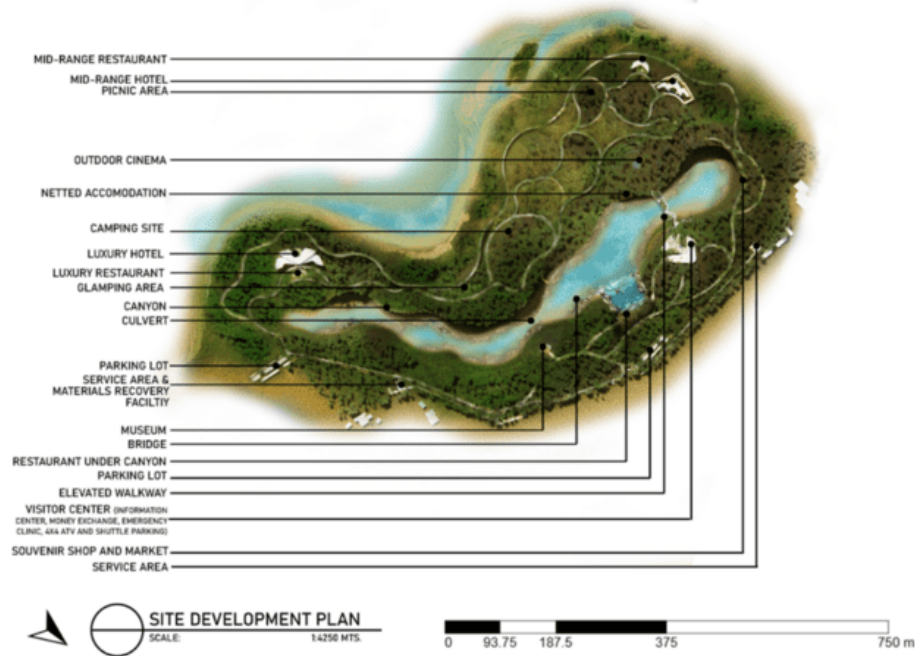
### **Landscape Design of the Tourism Enterprise**

The design concept of landscape design revolves around the ancient symbol of Ouroboros—a serpent going in circles where its mouth is engulfing the tip of its tail (Reemes, 2015). the symbol of Ouroboros in the landscape design lies in the repeated cycle of birth and death of humans and the endless suffering and traumas endured by the community of Porac since the beginning of time. Mount Pinatubo lies central to this idea, a metaphor that is omnipresent in the community, omnipotent with its capability to cause mass destruction and rejuvenation, and omniscient of time, a witness to these tragedies. The periodic eruption of Pinatubo became a sign of eternal cycle of life and death, of destruction and rejuvenation, and of joy and suffering. During eruption, lives are lost, communities are destroyed, humans are suffering, and every after eruption, new lives are born, landscape is reshaped and rejuvenated, and communities rebuild.

To portray the Ouroboros symbolism in the landscape design, the curvilinear form is mimicked through the form of the walkways, the buildings, and the landscape design. The spaces on the site surrounds a lengthy man-made depression for collected water allowing the users to circulate the site, while endlessly enjoying the views, just like how the Ouroboros go around in a circular manner. Not only that but the Darkest-Lightest spectrum was also incorporated where

the darkest part represents the private areas, while the lightest part represents the public areas. This gradient also follows the dichotomy of the Ouroboros, much like the Yin and Yang.

**Figure 13. Site Development Plan**



The central and most prominent representation of this symbolism is evident in the construction of canyon or riprap revetement and the collected water at the middle part of the site, not only by its curvilinear form, but also with its unique biome, geology and atmosphere.

**Figure 14. View of the Collected Water**



**Figure 15. Section-Elevation along the Development**



The cascading of rainfalls like a stream through the riprap, the erosion of soil particles, and the soil structure and texture of the area, which comprise of pyroclastics—a type of igneous rock that served as an inspiration of the landscape design. This process was mimicked in a way that aside from the rainfall that would stream down the gorge, the drainage of the whole site would also cascade down, filtering the water through a natural process of filtration, eventually directing the flow of the filtered water into the Pasig-Potrero river. This is not only sustainable, but also a natural and efficient way of filtering water and directing it to a river. The hydrological cycle of water in the site can also be related to the concept of Ouroboros, where the process of water being transformed is endless and infinite.



**Figure 16-17.** View of the Elevated Walkway



This perspective shows the elevated walkway showcasing sharp angles and high contrasting colors to align with the theme of dark tourism.

**Figure 18.** View of the Waterfalls



This perspective shows the waterfalls in front of the restaurant. This feature not only enhances the visual aesthetic of the site, but also enhances the auditory quality by blocking noises.

**Figure 19.** View in front of the restaurant



**Figure 20.** View of the Museum



Figure 20 shows the museum overlooking the riprap revetement. The structure is incorporated with a boulder on both sides as a support and for aesthetic purposes. This structure also houses the remnants of the past, such as archaeological tools left by the ancestors of Porac.

**Figure 21.** View of the Museum



Figure 21 shows the hammock. This feature takes advantages and plays with the elevation of the site, while having a view of the entire site.

#### **D. CONCLUSION**

This landscape design located near the Pasig-Potrero River was found not only feasible, but effective as a sustainable landscape in naturally filtering, collecting, and directing water towards

the flowing water of river. The construction of this landscape design was done through the help of several experts in the different fields of Archaeology, Tourism, Theology, Agriculture, and Geology. The information gathered from these experts was identified based on the environmental, archaeological, socio-political, cultural, and historical aspects and analyzed through a narrative analysis and data triangulation. Correlational study was done in surveys, while site conditions and information were also considered through conducting site visits, consultations, literature review, and GIS maps. These information is then categorized based on indicators, motivators, and spectrum. These categorized outputs are analyzed based on history, authenticity, storytelling, and experiences, and ultimately, forming a landscaped design with interconnected dark tourism sites in highlighting the history and culture of Porac, Pampanga. On the darkest-to-lightest spaces of the site, while also incorporating the private vs. public gradient of spaces, it is also recommended to integrate a circuit of statues, monuments, or boards around the site as a “teaser” to the main circuit, where the actual tragedies happened.

## REFERENCES

- Fabros, Ma. G. M., Lopez, E. L. F., & Roma, M. N. (2023, February 27). Dark tourism in the Philippine context: Indicators, motivations, and spectrum. *Social Sciences & Humanities Erfurt-Cooper*, P., Sigurdsson, H., & Lopes, R. M. C. (2015). Volcanoes and Tourism. In H. Sigurdsson, B. Houghton, S. McNutt, H. Rymer, & J. Stix (Eds.), *The Encyclopedia of Volcanoes* (2nd ed., pp. 1295–1311). Academic Press. <https://doi.org/10.1016/B978-0-12-385938-9.00075-4>
- Fonseca, A. P., Seabra, C., & Silva, C. (2015, March 4). Dark tourism: Concepts, typologies and sites. *Journal of Tourism Research & Hospitality*. <https://repositorio.ipv.pt/handle/10400.19/3370>
- Porac Municipal Government. (2021). Comprehensive Land Use Plan - Porac, Pampanga (2021-2030), Volume 1. Pemerintah Kabupaten Banyuwangi. (2015, September 27). Geliat Ekonomi Di Pulau Merah. *KabarBwi*. <https://www.banyuwangikab.go.id/berita-daerah/geliat-ekonomi-di-pulau-merah.html>
- Reemes, D. M. (2015). *The Egyptian Ouroboros: An Iconological and Theological Study* (Order No. 3724898). Available from ProQuest Dissertations & Theses Global. (1732169631). <https://www.proquest.com/dissertations-theses/egyptian-ouroboros-iconological-theological-study/docview/1732169631/se-2>
- Stivers, R. (1996) Towards a sociology of morality. *International Journal of Sociology and Social Policy* 16 (1-2), 1-14.
- Stone, P. (2006). A Dark Tourism Spectrum: Towards a typology of death and macabre related tourist sites, attractions and exhibitions. *Tourism: An Interdisciplinary International Journal*, 54(2), 145-160.
- Stone, P.R. (2009) Dark Tourism: Morality and New Moral Spaces. In Sharpley R. & Stone, P.R. (eds) *The Darker Side of Travel: The Theory and Practice of Dark Tourism*. Aspects of Tourism Series, Bristol: Channel View Publications, pp. 56-72.