

# Methodology for Establishing the Appropriate Protected Area based on the Analysis of Old Drawings In case of Gia Long Mausoleum, Hue

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## Abstract

This paper focused on the first imperial Mausoleum of the Nguyen Dynasty of Vietnam, Emperor Gia Long (reigned 1802-20), which is one of the components of the World Heritage property [Complex of Hué Monuments]. The paper discussed the relationship between the Gia Long Mausoleum (after this GLM) and its territory from the aspects of "Shan-Shui design", "water management system suitable to tropical monsoon climate" and "symbiosis with local communities". This study also revealed that the current protected area is only a tiny part of the area that Gia Long planned by deciphering an old drawing which expresses the ideal worldview of Gia Long and an old map which shows the forbidden area in that era. These research findings contribute to expanding and deepening the OUV of GLM, which was not fully taken into account when the site was inscribed on the World Heritage List in 1993 and provide a basis for establishing the appropriate protected area of GLM.

## Keywords

Feng-Shui, Shan-Shui, Cultural landscape, Mausoleum, Hue.

## 1. Research Overview

The World Heritage property of "Complex of Hué Monuments" in Vietnam consists of 14 sites, and its seven sites are the emperors' Mausoleums<sup>1</sup> of the Nguyen dynasty (1802-1945). These mausoleums were designed in harmony with the surrounding environment by selecting sites with good topographical features. In general, it is said that the selection of sites was based on the Feng-Shui method established in China (especially the Form School Method of Feng-Shui), and the design of the mausoleums was influenced by the design(plan) of the Ming dynasty of China. However, careful analysis reveals that it differs from the Chinese Fen-Shui method and Ming-Style mausoleums. Instead, it would be a great misunderstanding if the Nguyen Dynasty mausoleum complex, which represents the unique culture that blossomed in the central region of Vietnam, was simply designed by

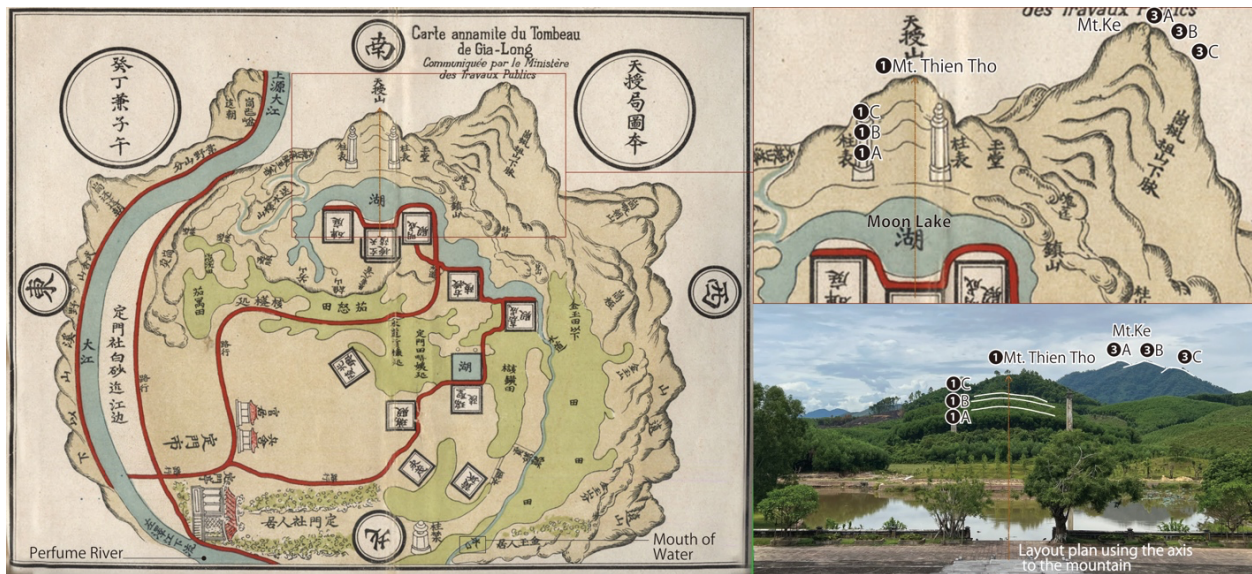


Fig.1 Analysis of the drawn mountains on the old drawing from *Les Tombeaux de Hué - Gia-Long*, 1923, tav. XIX (The photo on the right was taken by author.)

the Feng-Shui method. The design of the Complex of Hué Monuments was based, first of all, on the philosophy of topological deciphering and ecological design, which has evolved to face and live in harmony with nature throughout East Asia, where tree-covered mountains and abundant water are available. We (the authors) name this philosophy "Shan-Shui (Mountains-Water) philosophy" and name the ecological design that reflects this philosophy and respects natural landforms "Shan-Shui design". Each mausoleum was built in an inseparable part of the surrounding environment through Shan-Shui design. However, even though each mausoleum was designed to harmonise with the surrounding environment, the protected area of each mausoleum recognised as a World Heritage property does not include its surrounding environment(territory). It has not been protected from the viewpoint of preserving cultural landscapes and traditional water management systems.

This paper takes Gia Long Mausoleum<sup>2</sup> (after this GLM) of the First Emperor (reigned 1802-1820), which was formed based on Shan-Shui philosophy and focuses on the relationship between GLM and its territory. Furthermore, this paper presents the methodology of establishing an appropriate protected area for GLM based on the old drawing (Fig.1)<sup>3</sup> and the old map (Fig.6).

## 2. Relationship between GLM and its surroundings

### 2-1. Shan-Shui Design

According to the record<sup>4</sup>, Gia Long finally selected this place for his mausoleum by himself because of the group of mountains and hills surrounding and the *Qi* (energy) of the geomancy concentrated in this site and that he gave names to each peak before commencing construction of GLM in 1815. Far mountains are also used in the layout plan of the mausoleum, with the axis of the mausoleum designed to be perfectly oriented towards the top of the mountains (ex. GLM, Mother's mausoleum[瑞聖殿]). These show the importance of the surrounding mountains for the mausoleum.

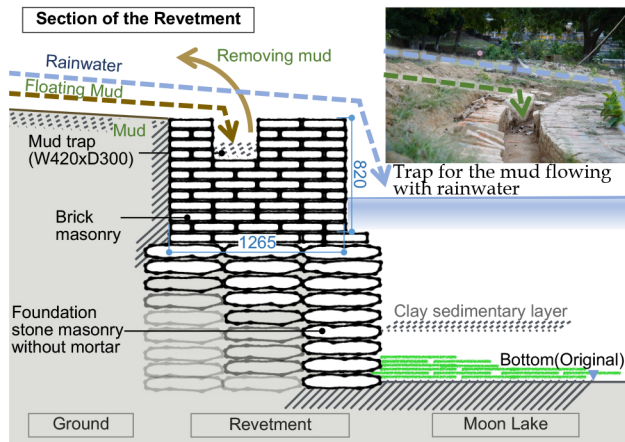


Fig. 2 An example of the water control devices for the water management system in Moon Lake (This image of the revetment was drawn by WIURS (authors) based on the excavation report in 2019 by HMCC and authors' field survey.)

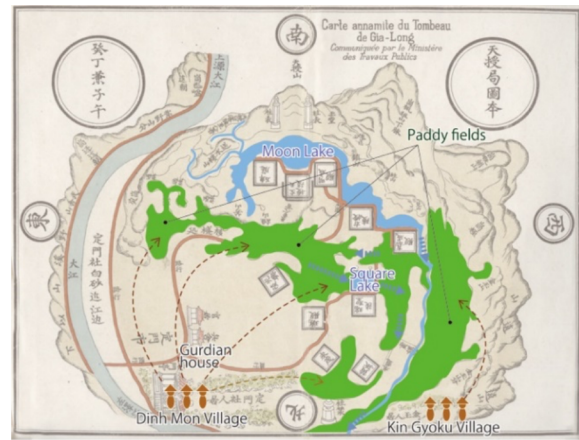


Fig. 3 Symbiosis between GLM and villagers through the management of paddy fields

The old drawing<sup>5</sup> presents the essential components of Shan-Shui philosophy and makes us understand the view of the ideal world of Gia Long based on Shan-Shui philosophy. Mt. Ke was given a role as Grandfather Mountain [祖山], and the site of GLM is supplied *Qi* vein [氣脈] (energy flow) from there. The energy flow comes from mountains as a water stream and stops at Moon Lake [月湖] in front of GLM. After that, water goes to the mouth of the water [水口] that reaches Perfume River [香江]. These water flows also have been important for GLM. In 1843, the third emperor Thieu Tri said that «the two streams which flow in the region of the tombs and surround them, form a set of auspicious figures; moreover, they must be left free in their course, without being stopped by any obstacle». It was issued as an ordinance of the emperor<sup>6</sup>.

## 2-2. Water Management System suitable to Tropical Monsoon Climate

Hue has a high annual rainfall of 3,037 mm<sup>7</sup>, which varies significantly between the dry and rainy seasons. Under these conditions, Moon Lake, which is an essential component of the complex of GLM, has been carefully designed to ensure that the water level remains as stable as possible throughout the year without overflowing during heavy rainfall in the wet season and, conversely, without the lake bottom drying up during low rainfall in the dry season. For example, several water conduits have been installed in Moon Lake to invite water flows from the mountains and hills, and the shape of the revetment with a trap is designed to prevent mud from entering the lake from the mountains (Fig.2).

## 2-3. Symbiosis with the local communities

The water management system of GLM, including lakes and sluices etc., has provided water to the paddy fields of surrounding local communities. Water control devices have been inserted in various locations to maintain the water management system. The area around GLM had been inhabited before GLM was constructed, but with the tomb's construction, Dinh Mon village was formed by the people who lived surrounding area and who were brought from other areas as guardians. The villagers of Dinh Mon village needed to maintain the water

management system of GLM properly as guardians and as farmers for providing water to their paddy fields. There was a sustainable symbiotic relationship.

### **3. Current conservation issues and the limited protected area**

The harmony among "Shan-Shui design", "the water management system" and "symbiosis with the local communities in the territory of GLM" discussed in Chapter 2 has been forgotten in the modern era. Regarding the water management system, the revetment was gradually collapsing at the intake points to Moon Lake due to the inflow of sediment along with rainwater. Furthermore, increasing areas of paddy fields have been forced to give up on continuing paddy fields due to the lack of water, which is reportedly caused by the 2005 canal widening works, etc., according to the interview with the villagers. Meanwhile, forestry has become a major industry for the villagers. The landscape has changed significantly as pine forests, planted in mountains and hills around the mausoleums, have been replaced by acacia forests. Every 4 - 5 years, most acacia forests are cut, and the mountains are burned for the next forestry. The area has also become deeply rutted and caused mud and sand to flow during rainfall. Timber trucks entered the forestry area and destroyed a part of the revetment. The collapsed revetment served as an entrance, and buffalo entered and exited Moon Lake. Between 2019 and 2022, the revetments were conserved. But careful consideration and recovery work is still needed to restore the function of the original water management system. Also, it is necessary to recover the landscape of the surrounding mountains and hills, which is important for the Shan-Shui Design.

### **4. Forbidden areas of GLM in the past**

The old map (Fig. 6) shows 31 stone pillars placed outside of the group of mausoleums in this area, the map marked "forbidden area [外禁]", which suggests that the area inside of pillars had been the protected area. This map presents the perimeter of the forbidden area (1,640 lengths[丈] = 6,986.4 m) and the distance from each pillar to the mausoleum and private house. This information gives us hints about the approximate locations of the stone pillars. According to record<sup>8</sup>, the prohibition ordinance for Mountains of the Mausoleum [山陵条禁] was issued in 1816. Emperor Gia Long put stone pillars to mark the boundary of the GLM's territory and prohibited the cultivation of trees and plants inside the pillars. From these documents, it can be inferred that the acacia plantations that have expanded around GLM in recent years for forestry purposes were originally pine forests and that there was an ordinance to protect not only the area just around GLM but also its territory including the mausoleums of the Nguyen lords<sup>9</sup> as a forbidden area.

### **5. For Future management plan**

The old drawing (Fig. 1) shows what the planner (Emperor Gia Long) aimed for, explains landscape structure (world view) of the territory of GLM and presents the inseparable components of the complex of GLM. The territory of GLM was planned based on Shan-Shui philosophy. It had been conserved in an integrated manner, including the water management system and local communities that managed it when the drawing (Fig.1) was drawn.

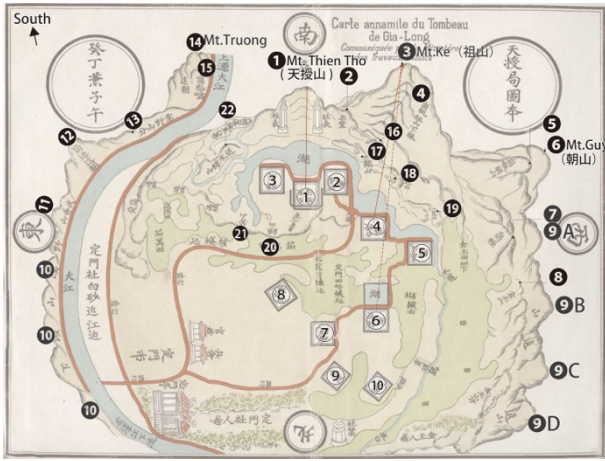


Fig. 4 Mountains and Mausoleums on the old drawing from *Les Tombeaux de Hué - Gia-Long*, op. cit.

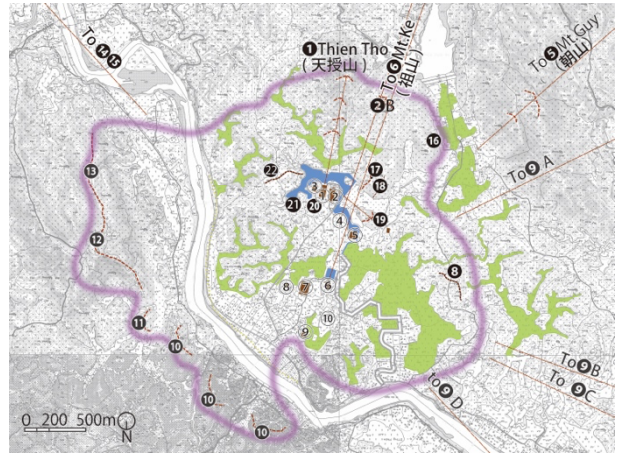


Fig. 5 Drawn area of the old drawing (Fig.4)



Fig. 6 Former forbidden area of GLM presented by 31 stone

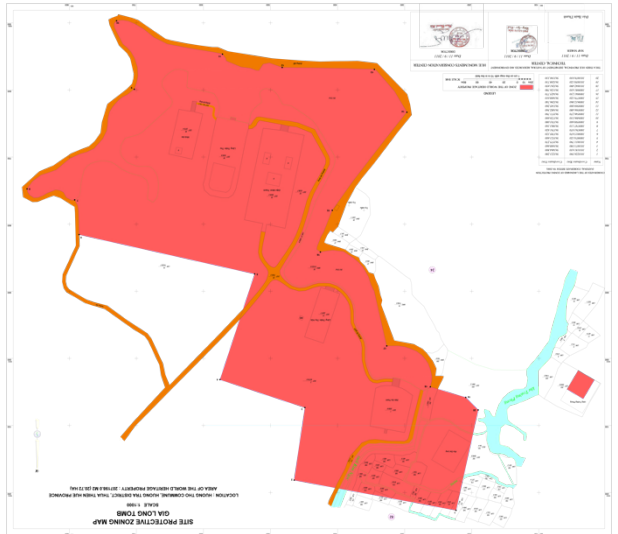


Fig.7 Present protected area as World Heritage property Gia

It is essential to reflect the historical relationship between GLM and its territory in the future management plan. Currently, the boundary of GLM has been only inscribed as a tiny area compared to the planned territory by Emperor Gia Long as the forbidden area in the past. The landscape on the drawing (foreground landscape and background landscape) (Fig.4,5), the former forbidden area (Fig.6), and the present protected area<sup>10</sup> (Fig.7) can be presented together on the one map as Fig.8. It must be a key clue for re-setting the appropriate protected area of GLM.

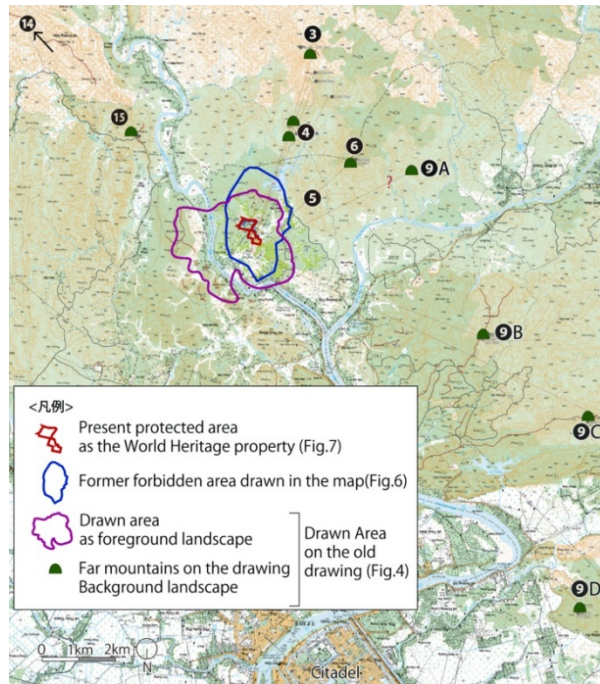


Fig. 8 Comparison of the areas of Fig.5 - 7

It is necessary not only the modification of the protected area as the boundary of property and buffer but also to revise the description of OUV for reflecting new findings based on academic research such as Shan-Shui design and the traditional water management system. The World Heritage Committee's procedures should also have mechanisms to encourage and support the revision of OUV for each property listed, particularly in the 20th century, to reflect the concept of Cultural Landscape and Historic Urban Landscape.

<sup>1</sup> On the World Heritage List, it was named as Gia Long "Tomb", but this paper use "Mausoleum".

<sup>2</sup> Thien Tho mausoleum[天授陵]

<sup>3</sup> This old drawing (Fig.1) printed in *Les Tombeaux de Hué - Gia-Long*, 1923 is considered to be reproduced of the original drawing. The original is considered to be drawn by the construction section[工部] of the Nguyen dynasty, but it has not been found yet.

<sup>4</sup> *Đại Nam thực lục*«The First Century», Vol.48, Record of the first emperor Gia Long, 1847, section of March 1814

<sup>5</sup> CHARLES PATRIS, LÉOPOLD MICHEL CADIÈRE, *Les Tombeaux de Hué - Gia-Long*, Hanoi, Imprimerie d'Extrême-Orient, 1923, tav. XIX

<sup>6</sup> *ivi*.p.47

<sup>7</sup> Source: climate-data.org

<sup>8</sup> *Đại Nam thực lục*«The First Century», Vol.54, Record of the first emperor Gia Long, 1847, section of November 1816

<sup>9</sup> The mausoleums of the Nguyen lords which Emperor Gia Long restored or reconstructed had not been included in the components of the World Heritage property of "Complex of Huế Monuments"

<sup>10</sup> Site protective zoning map Gia Long tomb, VN-678-item132, available at <https://whc.unesco.org/document/123604> (Accessed on 30 September 2022)

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