

A study of architectural transformation, utilization strategies, and conservation approaches to enhance cultural significance: A case study of the ZPP-N area

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Abstract

This study aimed to study the physical changes - guidelines for the use and preservation of Luang Prabang and including determining how to restore and use the area to its original state for sustainable value. The located of the study area was selected the Zone de Protection du Patrimoine Naturel (ZPP-N), this area were covered 2 villages such as: That Luang and Vishoun villages. The sample was used a random interview method with residents of the area and asked scholar/experts. The data was analyzed by using a SWOT method. The results found that:

In the past, it has been seen that the ZPP-N area has undergone many changes, caused by many factors, especially of the increasing of the tourists and population in that area, which requires the improvement and development of infrastructure to accommodate, especially the construction and improvement of guesthouses, hotels, restaurants, shops, as well as general tourist service points, as well as the improvement of various landscapes. All of this has resulted in the filling of ponds, cutting down trees and improving fences, especially in the coastal areas, which have been seen to be erosion-preventing for protecting the heritage area from being destroyed. The physical changes that have occurred are only changes over time, but in general, the unique architecture of the Luang Prabang people that have been respected and preserved since ancient times, whether in the form of guesthouses, hotels and decorations, has been preserved to withstand environmental changes.

From the changes are also caused by economic growth, which have seen investors come to rent or lease, which have been improved and built, such changes are difficult to control. However, in the past, relevant parties have used various policies and measures to protect and promote the preservation of cultural heritage to contribute to improving the lives of various ethnic groups and creating social order.

Keywords: Natural and Landscape Zone; Physical Changes; Heritage; Protection du Patrimoine Naturel

1. Introduction

Luang Prabang is the capital of Luang Prabang Province in Laos. Located on a small plain, its boundaries and shape are determined by geographical features, which have been inhabited by humans since ancient times. Luang Prabang is a World Heritage City, distinguished by its unique cultural heritage, with its urban planning, a combination of traditional architectural structures and house styles from the 19th and 20th centuries. The city has a unique and beautiful architectural style, a landscape surrounded by natural beauty, including mountains, the Mekong and Khan rivers, a way of life deeply rooted in tradition and belief, and was recognized by UNESCO (1995) as a World Heritage City on 9th December 1995.

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In addition, ICOMOS (1993a) conducted an evaluation under the World Heritage Committee Convention. At that time, the World Heritage Office of the Organization, consisting of the Department of Museums and Antiquities and experts from UNESCO, unanimously agreed that Luang Prabang is a sensitive national heritage site because it is a physical heritage site linked to the way of life of the people, which is of interest to tourists from all over the world who want to visit it. Those who are caught in the ever-increasing flow of international tourism are accelerating the physical changes that are a cause for concern. It can be said that Luang Prabang has become a cultural tourism destination related to the "past". From the increase in tourists, it is seen that there is a need to develop infrastructure to accommodate them, especially the construction of guesthouses, hotels, restaurants, etc. to welcome or service them. What has been improved and built is all a physical change or a change in the traditional landscape or traditional architecture of Luang Prabang, because some heritage sites are invested by foreign investors (Report of the Department of Information and Culture, Luang Prabang, 2024). Such events, causing changes to traditional architecture, are difficult to control.

Lang Prabang is a heritage city with many outstanding aspects because it is located on the Khan River flowing into the Mekong River, surrounded by mountains and forests. There is also Pho Si in the center of the city, which was designated as the capital of the Lao Kingdom of Lan Xang in the past. Through the historical evolution of Laos for hundreds of years, in addition to preserving the old city, Luang Prabang is distinguished by its culture, history and nature, ancient monuments and architecture, which reflect a way of life with a rich natural beauty, including environmental protection, as well as the protection of the ZPP-N area, which is a special heritage area that must be protected in order to preserve this beautiful scenery. The area includes: a natural forest area consisting of two small mountains located on the right bank of the river in the area of Ban Xieng Man, a wetland area of 180 ponds located between Ban That Luang, Ban Vieng Kaeo, Ban Vishun and Ban Mano. Green zones control the banks of the Khan and Mekong rivers, including the area around Mount Si. However, currently, the population in Luang Prabang is increasing, including people from other provinces who are also coming to live, as well as economic growth, which requires the construction and improvement of various facilities, which means the use of land, and in some places, construction is going to the river, which affects the flora, which transmits the beauty that once existed, as well as affecting Luang Prabang's status as a heritage city.

Currently, the area has seen many changes, especially along the roadsides and along the banks, where many people have improved the area, decorated houses or built guesthouses, hotels, restaurants and shops, as well as tourist services. This includes building fences, cutting trees or filling in ponds, which has an impact on the conservation area.

In order to maintain and preserve the World Heritage City and maintain its outstanding achievements as a popular tourist city, which has won awards for many consecutive years, it has also been awarded the ASEAN Tourism City Standard, with standards and gradually developed in a sustainable and green direction. As a World Heritage City, Luang Prabang has set 4 strategies: to preserve it as a World Heritage City forever, to transform Luang Prabang into a lively, liveable, impressive and environmentally friendly garden city, to promote Luang Prabang as a center for cultural, historical and natural tourism, and to establish Luang Prabang as a center for research on Lao cultural values.

But as mentioned above, socio-economic growth has resulted in physical changes that are difficult to control, which has affected the good appearance of the World Heritage City or the so-called Heritage City of Civilization, which is rich in beautiful environments, ancient monuments, and unique traditions that go hand in hand with the people of Luang Prabang. However, in reality, these things have begun to change over time and with the changes in society that have occurred. Therefore, it is of interest to study physical changes - ways to use and preserve the values of Luang Prabang, including determining how to restore and use the area to return to its original state for sustainable values.

Objectives

Studying physical changes - approaches to using and preserving the values of Luang Prabang, including identifying ways to restore and use the area to its original state for sustainable values.

2. Research methods

2.1. Data collection tools

This research uses qualitative research methods and uses tools to assist in interviews and data collection, such as cameras and voice recorders. The interview format is based on theories related to heritage conservation, geographical and ecological changes, and legislation on heritage conservation in Luang Prabang province. The questions are divided into 3 parts:

- **Part 1:** General information of the respondents.

- **Part 2:** Opinions of scholars, experts and owners of protected areas on the physical changes that have occurred - the use and conservation guidelines that have created value in the heritage areas of Luang Prabang.
- **Part 3:** Their opinions on the guidelines for the conservation of heritage areas in Luang Prabang.

2.2. Population and sample size

2.2.1. Population

The population used in this study consisted of two groups:

- Owners of the conservation area, which in this case was selected as a representative of 4 villages: That Luang, Vishoun, Viengkeo and Mano villages. In particular, these villages are located around the special urban protection area. In this case, the families selected for the interview were groups living along the roadside or in green areas that are conservation areas, in order to see the changes and reasons that affect the physical changes.
- Scholars/experts, including 13 Lao heritage experts and 7 foreigners, were interviewed because the population was small.

2.3. Sample size

The sample size was determined using the formula of (Yamane, 1973) as follows:

$$n = \frac{N}{1 + N \cdot e^2}$$

n= Number of sample groups

N= All residents

e^2 = The expected value of the sample group

$$n = \frac{490}{1 + 490 \cdot (0.05)^2} = 220.22 \approx 220$$

- From the calculation of the owners of the residents of the 4 conservation areas, 220 people were determined.
- For the scholars/experts, there were a total of 20 people, of whom a small number were interviewed in total.

2.4. Data collection

In this study, the researchers used two sources: primary data (first-level data) and secondary data (second-level data), which are detailed as follows:

2.4.1. Primary Data

Primary data is data obtained from actual collection by interviewing groups of residents, including experts/

academics on planning, management and preservation of heritage cities in Prabang Capital, Luang Prabang Province. Distribution of face-to-face interviews with a questionnaire and a proposal letter. In the actual interview, observing the interview area, taking photos, recording videos and making actual measurements. Data collection began from September-November 2025, for interviews, random sampling was conducted until the required number was reached.

2.4.2. Secondary Data

The source of information is information obtained from reviewing relevant documents such as: textbooks, planning theories, reports, theses and research articles. The research on relevant Internet websites includes: research articles, theses, relevant laws, regulations and information from relevant departments.

2.5. Data analysis

The data analysis from the interview was conducted using SWOT analysis: an analysis of the changing conditions and the reasons for the physical changes to find the strengths, weaknesses, or what could be the main problems in

implementing the desired conditions in the future (vision), Strengths - Strengths or advantages of conservation. (Internal factors), Weaknesses - Weaknesses or disadvantages in urban development. (Internal factors) Opportunities - Opportunities to recover from such changes (External factors) Threats - Obstacles, limitations or factors that threaten the operation. In protecting the area within the capital Prabang (External factors) by analyzing to provide a guideline for determining how to restore and use the area to return to its original state for sustainable values.

3. Results

From the SWOT analysis of physical changes - approaches to use and conservation to maintain values in the ZPP-N area of the heritage area in Luang Prabang Capital, it is found that:

3.1. Internal assessment

(S-Strengths)

- S1: They still attach importance to preserving the area, although some people have a need to improve and build, which still requires approval from the relevant authorities.
- S2: Despite the physical changes, it is still seen that the identity and culture that represent the heritage of the Luang Prabang people and the reasons for the change in the climate are still preserved.
- S3: In the face of the changes that have occurred, whether it is infrastructure development, guesthouses, hotels, restaurants and other facilities, all of which are built to support economic growth in each period, especially the increase in tourists and population.
- S4: They also attach importance to policies and regulations to manage and protect the area, whether it is prohibitions or assistance in improving and maintaining important and revered monuments of the Luang Prabang people.
- S5: There are also policies and regulations to deal with violators or offenders, which are considered important to help protect the area from destruction.
- S6: The people of Luang Prabang still have faith and respect, which is one of the factors that contribute to its preservation and preservation.

W-Weaknesses

- W1: Some improvements or constructions have not yet followed the established standards and regulations, and it is still visible that many places have introduced foreign cultures, which is also seen that the responsible parties have joined in to improve and correct.
- W2: The treatment of violators has not been implemented as well as it should be, but it is still considered a challenge to change the unique and preserved physical environment in order to comply with ICOMOS regulations.
- W3: There are many foreign investors investing in the area, which is difficult to control such changes.
- W4: There is no plan to support future development, which is still visible that there are still frequent repairs and improvements, which affect the environment and beautiful scenery in the area.

3.2. External assessment

3.2.1. O-Opportunities

- O1: Physical change protection - The use and preservation of the value must be coordinated by many parties, especially those living in the area, using policies - regulations and measures to promote and protect the overall benefits and benefits that will be received, which will preserve the city of civilization as a World Heritage Site, which is still beautiful and remains in a beautiful landscape and environment, along with the people of Luang Prabang, forever.
- O2: The preservation will be something that can attract tourism, including support from various organizations.
- O3: It will also be preserved as a treasure and a thing of worship for the people of Luang Prabang and will remain with the Lao people forever.

3.2.2. T-Threats

- T1: In the face of increasing tourist arrivals and population growth, infrastructure needs to be improved and developed to accommodate them, which is considered an important factor that may affect physical changes and the way to protect the area.
- T2: It is also evident from the disasters that have occurred, which are considered issues that need to be considered and plans need to be made to cope with them.
- T3: The time period that may affect the changes, which requires plans to improve the changes that may occur.

4. Discussion

The study found that: The physical changes in this study area have changed in line with the socio-economic growth, especially in Luang Prabang, where many tourists visit, which requires the improvement and development of infrastructure to accommodate, including the improvement of various activities to serve the increasing number of tourists. This is consistent with the study by Singhayabussaya (2010) who found that: Improvement and development of infrastructure to accommodate the increase in tourist cities or tourist attractions is a necessary condition that cannot be ignored because it will facilitate them. In addition, it is also found that: Improvement and decoration is also another commercial strategy to attract tourists, but such improvements must be based on the regulations in the area, and are also consistent with the organization (UNESCO, 2004) and ICOMOS (1993 a, b, c, d) that have set various conditions for maintaining and preserving as a World Heritage City or regulations for maintaining and preserving heritage areas, which the capital of Luang Prabang has implemented these regulations. The study found that the landscape around the heritage area of Luang Prabang is considered important to create beauty and attract tourists. From the information provided by the interviewees, it was found that tourists like to stay along the banks of the Khan and Mekong Rivers, which have beautiful natural scenery. On the Mekong River side overlooking the Chiang or right bank of the Mekong River, the area of Ban Xieng Man can see the beautiful Phou Thao-Phou Nang mountains, which are considered beautiful and impressive to tourists. Therefore, maintaining and protecting these areas is considered important to make the heritage city beautiful with beautiful nature. This is in line with the study by Bounpany (2018) who studied the landscape of Luang Prabang and found that: Luang Prabang can still maintain a beautiful and unique landscape, especially the architecture of the houses that are still preserved in their original form and can still indicate the Lao Kingdom of the Elephants that has existed since ancient times. In addition, the natural beauty can still be preserved, even though it has changed, but it can also be seen that the uniqueness of the Luang Prabang people can still be preserved, which can indicate the heritage city. And despite the improvements, the basis is to develop with the times and in line with socio-economic development, but still comply with UNESCO regulations. (2011) strictly, especially the conditions and requirements for becoming a World Heritage City. This also includes the maintenance and protection of the natural resources in the Luang Prabang heritage area.

It is also seen that the preservation is difficult to improve and rebuild, such as the preservation of ancient houses, etc., which is seen as being satisfied with the preservation and assistance, including assistance in improvement, to maintain the original condition and form. Chaleunmuang (2003); Musikama (2005). The use of policies and regulations to protect and promote the conservation of the World Heritage City of Luang Prabang for long-term sustainability is necessary to be strictly implemented, which is in line with Prateep Pengtako, (2000). who said: The use of legal measures to support the conservation and development of the historical city of Ayutthaya. "In Ayutthaya to World Heritage" is seen as necessary to be used because if not treated with respect, the uniqueness that indicates the heritage will be lost.

5. Conclusion

From the study of physical changes - Guidelines for the use and preservation of the ZPP-N area, it can be summarized as follows:

In the past, it has been seen that the ZPP-N area has undergone many changes, which are caused by many factors such as: improving the infrastructure to accommodate the increasing number of tourists, the need to improve/modify the owners' own homes, and most importantly, the growth of the economy of Luang Prabang, which has led to the construction and improvement of guesthouses, hotels, restaurants, shops, as well as general tourist service points, as well as improving the scenery, all of which have resulted in filling in ponds, cutting down trees, improving fences, especially along the banks of the river, which can be seen as having been built to prevent erosion to prevent the heritage area from being destroyed.

Regarding the physical changes that have occurred, these are only changes over time, but in terms of the overall picture of the changes, the unique architecture of Luang Prabang people that have been respected and preserved since ancient times, whether it is the shape of guesthouses, hotels, and various decorations, in order to be resilient to environmental changes.

Therefore, in the face of physical changes over time, the Lao government has set policies on the protection of cultural heritage sites. It is necessary to maintain various agencies and organizations responsible for the protection and conservation of national heritage sites for long-term sustainability. In addition, the government must recognize the value and importance of ancient sites and artifacts within various heritage areas, and therefore it is necessary to determine measures and policies that are consistent with the geographical characteristics and location of each heritage site, including regulations to promote and develop those sites to contribute to improving the lives of various ethnic groups and creating social order.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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