



**MINISTRY OF EDUCATION, YOUTH AND SPORT
BUILD BRIGHT UNIVERSITY
SCHOOL OF DOCTORAL STUDIES**

CHHIM PHET

**SUSTAINABLE HERITAGE MANAGEMENT: A CASE STUDY OF BAKONG
COMMUNE, SIEM REAP PROVINCE, CAMBODIA**

Thesis Submitted for the Degree of

Doctor of Philosophy

Specialization:

Management

Siem Reap, 2025



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**Under the Guidance of
Prof. Dr. Manaranjan Behera**

Siem Reap, 2025

Declaration

I hereby declare that this thesis is my work, done after registration for the Ph.D. degree at Build Bright University, and its contents have not previously appeared in any thesis or dissertation submitted to any institution for a degree in terms of research or education.

I accept responsibility for the conduct of the procedures in accordance with the University Committee, and I have followed the University's research ethic guidelines on Sustainable Heritage Management in Bakong in Siem Reap as a case study. In this research, I have attempted to identify all the problems related to the research that arose during this study, obtained the relevant ethical and/or safety approvals (where applicable), and acknowledged my obligations and the rights of the participants.

CHHIM PHET



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BUILD BRIGHT UNIVERSITY, CAMBODIA

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CERTIFICATE

This is to certify that the thesis entitled **"Sustainable Heritage Management: A Case Study of Bakong Commune, Siem Reap Province, Cambodia"** written and submitted by Mr. Chhim Phet towards the fulfillment of the requirements of the Degree of Doctor of Philosophy (Ph.D.) in Management to the Build Bright University, Cambodia is a record of genuine research work carried out under my guidance and supervision. The thesis or a part thereof has not been submitted to any other university/institution for any research degree.

MANARANJAN BEHERA
(Supervisor)

ACKNOWLEDGEMENTS

ACKNOWLEDGEMENTS

“Pheuk teuk neuk dal praphub teuk.” (“ផឹក ទឹក នឹក ដល់ ប្រភព ទឹក”), which translates to English as: drink the water remember the source. Therefore, I would like to acknowledge the assistance of everyone who made this possible.

My deepest gratitude for the completion of this research goes to my supervisor and mentor Prof. Dr. Manaranjan Behera and also Senior Dean of the Build Bright University (BBU), for giving me valuable comments, advice and criticism all throughout the writing of my thesis. I would like to express my profound gratitude and thanks to my advisor for his intellectual and academic guidance, which has inspired me to successfully prepare this thesis in my academic research and daily life.

I would also like to thank His Excellency, Rector of the Build Bright University Cambodia, Dr. In Vireakcheat, for giving me a chance to join the Ph.D. program of this university. I am also thankful to Vice President Associate Prof. Diep Seiha, Senior Vice President Dr. Dy Davuth, and Associate Dean Mr. Yim Arun, all of Build Bright University, Cambodia, and the Director and Deputy Director of Build Bright University, Siem Reap Campus, Assistant Prof. Chhuon Phirun, and Mr. Kang Chantha, respectively for their official and technical supports and encouragements for my study during these difficult few years. I also would like to deeply thank the BBU staff, especially the administration, accountants and librarians both at Build Bright University Phnom Penh and Siem Reap campuses.

I would like to express my deepest gratitude and sincere appreciation to H.E. Dr. Eang Sophalleth, Minister of the Ministry of Environment, for his invaluable support and

guidance. My heartfelt thanks also go to Professor Philip Taylor, Mr. Michel Verrot, Ms. Phutik Chhouk, Mr. Sok Sina, Dr. Seng Busung, my teachers and colleagues, as well as my fellow Ph.D. candidate, Mr. Sean Phalla. I am also deeply grateful to all my friends who have always encouraged me and brought joy to my journey, filling each day with hope and inspiration.

I deeply thank Dr. Hang Pouv, Director of APSARA Authority, for his inspiration from the start of my research, and the EFEO and CKS staff for granting access to essential documents. My gratitude also goes to Mr. Khieu Chan, Mrs. Em Sreipov (APSARA); Mrs. Daraneth Briand, Mrs. Chhor Siveng, Mr. Proeung Sokhim (CKS); and Dr. Brice Vincent, Dr. Christophe Pottier, Mr. Mavo Nita, and Mr. Tauch Takama (EFEO) for their support.

My deepest thanks to Dr. Hang Pouv, Director of APSARA Authority, for inspiring my research, and to the EFEO and CKS staff for granting access to essential documents, including Mr. Khieu Chan, Mrs. Em Sreipov (APSARA); Mrs. Daraneth Briand, Mrs. Chhor Siveng, Mr. Proeung Sokhim (CKS); and Dr. Brice Vincent, Dr. Christophe Pottier, Mr. Mavo Nita, and Mr. Tauch Takama (EFEO).

My gratitude to local villagers, religious leaders, village and commune chiefs, Governor Mr. So Platon, former Governor Mr. Mak Sam Phea, APSARA Authority staff (Mr. Heng Jeudi, Mr. Ly Puthea, Mr. Saray Kim Huol, and teams), the forestry and tourism teams in Bakong, and the Siem Reap planning department. Thanks also to wise man Pou Oeum, local leaders, businesswomen of Bakong, and head monks of Wat Lolei and Wat Prasat Bakong for their patience and insights. Special thanks to Mr. Yim Chanrith, Angkor Heritage ticket inspector, for crucial data on tourist flow of the Angkor Park.

Thank you to the national and international teams I have worked with since 1997 on Angkor Park, including UNESCO, Angkor Conservation, I.Ge.S, G.A.C.P, and F.S.P.

My sincere thanks to HOLCIM founder Mr. Paul, H.E. and his friend Vittorio Roveda, and Mr. Kuch Sinth, Director of the Wat Prasat Bakong restoration project. I also deeply appreciate my dedicated assistants—Ms. Cheoun Kongkea (Banteay Srei NGO), Ms. Khat Sreirat, Ms. Khat Srei Pov, and Mr. Loeum Loeut (Build Bright University)—for their outstanding teamwork and support.

I would also like to thank the people of T.G.C (The Global Child): Ms. Judith Wheeler founder of T.G.C, Mr. Heng Dara, Director of T.G.C in Cambodia, and the volunteer teachers from the United States: Emily Myers, Elisabeth Dubois, Ms. Anna Trancozo and Ms. Gigi Goldaber, who helped me with the editing of my English for my thesis to share with all the national and international researchers.

Last but not least, I would like to express my gratitude to my wife and my daughter. Without their tremendous support and encouragement in the past few years, it would not have been possible for me to complete my study.

Finally unforgettable in my memories, I would like to dedicate this hard work to my parents, sister and brother who were all killed during the genocide caused by the Khmer Rouge regime.

CHHIM PHET

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LIST OF ABBREVIATIONS

APSARA	Authority for the Protection of the Site and Management of the Region of Angkor
AWHS:	Full Angkor World Heritage Site
CIDA	Canadian International Development Agency
CHE	Cultural Heritage Entrepreneur
EFEU	École Française d'Extrême-Orient
EU	European Union
GACP	German Apsara Conservation Project
GAP	Greater Angkor Project
GCP	Ground Control Pint
GDP	Gross Domestic Product
GAEA	Global Action for Environment Awareness
GIS	Geographic Information System
HCC	Home Collection Centre
ICC	International Coordination Committee (for the Safeguarding and Development of Historic Site of Angkor)

ICCROM	International Centre for the Study of the Preservation and Restoration of Cultural Property
ICOMOS	International Council on Monuments
IGeS	Ingegneria Geotecnica e Strutturale
JASA	Japan-APSARA Safeguarding Angkor
JICA	Japan International Cooperation Agency
MOT	Ministry of Tourism
NRICPT	National Research Institute for Cultural Properties Tokyo
RAF	Royal Angkor Foundation
RUFA	Royal University of Fine Arts
SCNC	Supreme Council on National Culture
SDs	Sustainable Development Goals
SDG	Sustainable Development
SIDA	Swedish International Development Agency
SHM	Sustainable Heritage Management
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organization
USA	United States of America
WFM	World Monument Fund
ZEMP	Zoning and Environmental Management Plan

ABSTRACT

ABSTRACT

Sustainable heritage management is vital for preserving cultural landmarks and promoting community development in Cambodia. Heritage sites, especially in Siem Reap, are key to national identity and the economy. This study focuses on Bakong Commune, home to Angkorian monuments, where tourism drives the economy but challenges heritage conservation. As tourism grows, effective management is essential for balancing preservation with local growth. The case study explores sustainable heritage management in Bakong Commune by assessing current practices and challenges and proposing strategies to protect heritage while improving community well-being for broader economic benefits.

This study on sustainable heritage management in Bakong Commune, Siem Reap, explores key questions regarding heritage conservation, local socio-economic dynamics, and the effectiveness of current strategies. The goal is to provide a comprehensive understanding of the challenges and opportunities for sustainability in the region. The specific research questions are as follows:

- i. What is sustainable heritage management?
- ii. What is the socio-economic profile of the heritage site area?
- iii. What are the heritage management practices in the study area?
- iv. Are heritage management practices sustainable in the study area?

- v. What are the gaps in heritage management practices in ensuring sustainability in the study area?

The specific objectives of the study are:

- i. To understand sustainable heritage management:
- ii. To analyze the socio-economic profile of the heritage site:
- iii. To examine the heritage management practices in the study area:
- iv. To evaluate the sustainability of heritage management practices in the study area:
- v. To identify gaps in heritage management practices ensuring sustainability:
- vi. To provide recommendations for sustainable heritage management in the study area:

These objectives address the research questions and offer a detailed examination of sustainable heritage management in Bakong Commune. By investigating socio-economic profiles, management practices, sustainability, and gaps, the study aims to provide valuable insights and recommendations to enhance the long-term sustainability of heritage conservation efforts in the region.

This research study is based on two key hypotheses that guide the investigation into sustainable heritage management in Bakong Commune, Siem Reap Province, Cambodia. These hypotheses are designed to explore the effectiveness and adequacy of current heritage management practices and assess their potential benefits. The two hypotheses are:

H0 1: There is no benefit to sustainable heritage management practices in the study area.

H0 2: The actions taken for sustainable heritage management in the study area are inadequate.

This study on Sustainable Heritage Management in the four villages of Aolaok, Lolei, Thnal Trang, and Stoeung in Bakong Commune, Siem Reap Province, Cambodia, identifies significant gaps and challenges in the current management approach at the Angkor Heritage Site. The findings provide crucial insights into local perceptions surrounding heritage management, particularly regarding community involvement, socio-economic inequalities, and the alignment of management policies with sustainability principles.

A major finding is the widespread lack of knowledge and participation among local residents regarding heritage management. Despite living near a globally recognized World Heritage Site, many are unaware of the importance of their involvement in preserving the heritage or feel excluded due to a lack of educational opportunities. This passive engagement prevents effective local participation in heritage conservation and community development, which is a key factor for the success of Sustainable Heritage Management (SHM) strategies.

The study shows that local perceptions of sustainable heritage management are influenced by socio-economic, cultural, and environmental factors. Despite Angkor's proximity, many residents remain impoverished, with a widening wealth gap. Cultural practices often clash with external management approaches, and environmental concerns like resource degradation and unsustainable tourism frustrate communities. These

challenges highlight the need for policies that balance heritage preservation with the community's socio-economic realities.

The study reveals that the benefits of heritage tourism are unevenly distributed, with most revenue going to external stakeholders, while local communities, especially in rural areas like Bakong Commune, see little economic improvement. This inequity leads to local disenfranchisement, as residents do not feel the positive impacts of living near a globally significant heritage site.

The research shows that current heritage management lacks a policy framework integrating the four pillars of sustainability: environmental, social, economic, and cultural. This imbalance leads to unsustainable outcomes, such as harmful tourism, weakened social sustainability from excluding local communities, and unequal economic benefits.

Thus, the findings call for more inclusive, equitable, and sustainable heritage management in Bakong Commune, focusing on local perspectives, community involvement, and fairer tourism benefit distribution.

Based on the findings from this study on Sustainable Heritage Management (SHM) in Bakong Commune, Siem Reap Province, Cambodia, several key interventions are recommended to address the challenges identified and foster sustainable development while improving heritage management practices.

- Financial Literacy Workshops

- Objective: Empower residents with basic financial management skills to navigate the agrarian market economy.

- Action: Initiate accessible workshops focusing on budgeting, saving, investment, and managing income from agriculture and tourism. Target women and youth for increased financial empowerment.

- Microfinance Initiatives

- Objective: Enhance access to financial services for local entrepreneurs, fostering economic growth and sustainability within the community.
- Action: Develop affordable microfinance programs specifically designed for small businesses and agricultural projects, in partnership with local banks, NGOs, and government agencies.

- Educational Enhancement

- Objective: Enhance education to support heritage-related activities and socio-economic outcomes.
- Action: Integrate heritage policy into the curriculum, offer courses on business, finance, and heritage management, and provide scholarships for higher education in Siem Reap.

- Heritage Management & Community Empowerment

- Objective: Engage local communities in heritage management and improve their socio-economic conditions.

- Action: Create inclusive heritage management programs with local advisory committees and training programs, fostering community involvement in decision-making and heritage preservation.

- Investment in Infrastructure

- Objective: Improve local infrastructure to support development and enhance the heritage site's appeal to tourists.
- Action: Invest in infrastructure, such as better roads, improved parking areas, and enhanced public services like healthcare and education, ensuring local communities benefit from tourism-related improvements.

- Community Support

- Objective: Provide construction materials and technical support for heritage conservation and economic development.
- Action: APSARA should supply materials and expertise for heritage projects, such as traditional housing models or community structures that align with heritage conservation and modern living needs.

- Agricultural Modernization

- Objective: Modernize agriculture for improved livelihoods and environmental sustainability.

- Action: Support farmers in adopting sustainable farming techniques, organic practices, and crop diversification through extension services, training, and access to technology.

- Problem-Solving Mechanism

- Objective: Streamline addressing heritage management issues transparently and efficiently.
- Action: Establish a one-stop office within APSARA to address community concerns, heritage management, and complaints, ensuring clear communication and action. These recommendations aim to improve community participation, reduce socio-economic inequalities, and promote sustainable development while preserving heritage and supporting local well-being in the Bakong Commune.

This study on Sustainable Heritage Management in Bakong Commune, Siem Reap Province, Cambodia, offers significant contributions to the field of heritage preservation, tourism management, and community development. By examining the socio-economic profile of the community, current heritage management practices, and their sustainability, the research highlights critical insights into the challenges and opportunities for managing cultural heritage in a rapidly developing region.

The study provides a comprehensive analysis of heritage conservation and its socio-economic impact in Bakong Commune. It emphasizes the complexities of balancing tourism development with sustainable heritage management. The research identifies key challenges, including uneven economic benefits from heritage tourism, lack of community

engagement, underdeveloped infrastructure, and limited financial literacy among local residents. The findings underscore the importance of integrating community development, environmental sustainability, and economic growth in heritage management strategies.

- Implications of the Research Findings:

The findings stress the need for a more inclusive and balanced approach to heritage management. Involving local communities in decision-making, diversifying local livelihoods, and adopting responsible tourism practices are critical to achieving sustainability. Additionally, the study calls for stronger regulatory enforcement and better coordination between stakeholders to reduce the negative impacts of tourism and ensure that the benefits of heritage preservation are equitably distributed among local residents, as the positive impacts far outweigh the negative.

- Limitations of the Study:

This study is limited to Bakong Commune and may not fully capture the heritage management challenges faced by other regions in Cambodia or Southeast Asia. Additionally, the reliance on qualitative data, particularly self-reported information, may introduce bias into the findings. Due to time and resource constraints, the research could not explore the environmental impacts of heritage tourism in greater detail or assess the long-term effects of current management strategies.

- Suggestions for Future Research:

Future studies could compare heritage management practices across Cambodia and Southeast Asia to identify best practices for sustainable conservation. Longitudinal research on the socio-economic impacts of heritage tourism could provide valuable insights into how local communities adapt. Additionally, exploring the role of technology in heritage management, such as digital preservation and virtual tourism, could improve conservation and enhance the visitor experience.

In conclusion, this study provides a detailed examination of sustainable heritage management in Bakong Commune and offers actionable recommendations to integrate cultural preservation with socio-economic development. By addressing gaps and focusing on community engagement, economic diversification, and infrastructure, Bakong Commune can establish a more sustainable heritage management model. This research contributes to the broader understanding of heritage management in Cambodia, offering insights for policymakers, practitioners, and future researchers.

CHAPTER I
INTRODUCTION

CHAPTER I

INTRODUCTION

The present chapter introduces the subject matter of the study. It covers the background of the study, the statement of the problem, research questions, objectives of the study, hypotheses, significance of the study, scope, limitations, and layout.

1.1 Background of the Study

Heritage, or cultural heritage, belongs to everyone. More work needs to be done to ensure that the benefits of heritage management are sustainable and accessible to all. This study contributes to accessing the benefits of sustainable heritage management by exploring and evaluating its sufficiency on one side of the Angkor archaeological park. The Royal Government of Cambodia expresses its appreciation to all who have contributed to its development and commits to the long-term conservation and presentation of the Angkor World Heritage Site through compliance with and the delivery of important policies and programs outlined in the Tourism Management Plan.

This thesis examines the issues surrounding heritage management at the Bakong site in Angkor's archaeological park in Cambodia. Like many heritage sites around the world, Bakong offers enormous opportunities for socio-economic and cultural development, benefiting employment opportunities. Yet, it also presents significant challenges in ensuring equal participation in management and benefits. Like the other ancient temples in the Angkor complex, Bakong has experienced an enormous increase in heritage tourism in recent years, which has transformed the local society and economy.

1.2 Statement of the Problem

Heritage brings numerous benefits, with one of the most significant being economic. Heritage tourism serves as a major source of revenue that can contribute to socio-economic development (Richard & Sharon, 2008; Abdelalim & Fahmy, 2017). However, scholars have pointed out that certain groups may be excluded from the benefits of tourism. For example, large companies in the tourism and transport sectors may monopolize these benefits, leaving local women, minorities, the poor, the uneducated, and other marginalized groups without a share (Mina, D., 2017; Xiaoping Z., Y. Yao, and J. (Justin) Li, 2019; Kim, S., 2018).

At the same time, certain groups may disproportionately suffer from heritage tourism development, such as being displaced from the site, excluded from economic activities in and around the heritage site, and prevented from practicing their culture, religion, and socio-economic activities connected to the heritage site (Kris, E., 1999). Additionally, the number of middle- and high-class tourists visiting heritage sites has increased rapidly (Balcar & Pearce, 1996). Cohen (1996) and Dickinson (1996) also argued that heritage tourism is increasingly recognized as one of the main sectors in the tourism industry, as modern tourists increasingly seek to experience the culture, social life, and natural environment of other regions. On the other hand, Bandarin (2002) wrote that cultural and natural heritage sites around the world can only be protected if the ongoing degradation of the global environment is reversed, while simultaneously improving the lives of those living in poverty.

According to the Johannesburg World Summit on 'Africa Heritage and Sustainable Development,' heritage management is an important tool for promoting sustainable

development, alleviating poverty, and ensuring the continuity of mankind's living cultural heritages (UNESCO, 2002). Heritage management has a long history. In its early stages, the main focus was securing technical, economic, and political support for preserving and restoring monuments and other heritage items. Since the 1960s, new priorities have emerged in heritage management, such as increasing local participation in the benefits of heritage and cooperating with local communities' perspectives and priorities. This was formalized in the four-pillar approach to sustainable heritage management, developed by Jon H. (2011).

NSW (2004) wrote that the new direction in heritage management focuses on economic development, human rights, poverty alleviation, sustainability, and education. According to Peou et al. (2016), it is essential to consider sustainable management practices for heritage. However, perspective differences between stakeholders, such as economists, historians, archaeologists, art historians, and those involved in heritage conservation, often arise.

As Fang (2004) noted, the inevitable developments in recent decades, including large population growth, economic expansion, and an increasing number of domestic tourists, have created a need to manage the tension between preservation and development. Scholars such as Zhang and Ma (2006) have highlighted the complications of the management structure and the participation of local communities, which are major concerns related to world heritage resource management in China.

During the 1990s, the International Coordinating Committee (ICC) for the safeguarding and development of the historic site of Angkor worked closely with Cambodia to ensure that all necessary conditions were met to safeguard the monuments from decay,

vandalism, negligence, and landmines (UNESCO, 1993). In 1992, Angkor was inscribed on the World Heritage List, a designation that recognized the Angkor civilization (802–1431) and the monuments built during that period (Brigitta H., 2011).

Angkor is at the heart of an extraordinary human and scientific adventure. Following the Tokyo Declaration and the appeal of the late King Father Norodom Sihanouk, the international program for Angkor was implemented twenty years ago. This program featured an innovative approach that closely associates safeguarding operations with sustainable development efforts, which played an important role in the reconciliation and reconstruction of the country (Michael, 2013). UNESCO (2002) also noted that Angkor attracts domestic and international visitors through its historical monuments, landscapes, and local culture, all discovered within the jungle of Angkor Park, which was at that time registered as a UNESCO World Heritage Site.

Angkor is an internationally renowned icon and landmark, with cultural and natural significance of global importance. Many of Angkor's cultural heritage values extend into or are located in the broader landscape, beyond the boundaries of the Angkor World Heritage Area (UNESCO et al., 2013). According to UNESCO et al. (2013) and H.E. Dr. Sok AN (2012) in the Angkor Heritage Site World Heritage Area Tourism Management Plan, the Angkor Wat symbol on Cambodia's national flag represents Angkor as an inseparable part of the country's cultural identity. The Angkor World Heritage Site is a significant part of the heritage of humanity, embodying universal cultural values.

Angkor's preservation and development depend on the cooperation of UNESCO and other international partners. UNESCO, established on 16 November 1945, aims to contribute to building a culture of peace, eradicating poverty, promoting sustainable development, and

fostering intercultural dialogue through education, science, culture, communication, and information (United Nations, 2013).

In Miura's (2011) study, outstanding national heritage sites are evaluated and registered as World Heritage. Today, the concept of World Heritage has gained increasing significance as a field of study. This trend has been amplified by modern media, which contributes to growing interest in World Heritage sites and attracts more tourists. Media production plays a pivotal role in promoting these sites, encouraging visitors to engage with both the authentic and reconstructed aspects of these landmarks.

Chheang (2009) notes that heritage attractions bring both positive and negative impacts from tourism. On the positive side, tourism generates economic and socio-cultural benefits, but it also comes with costs and potential negative impacts. Russo et al. (2002) observed that while income from heritage tourism can help bridge funding gaps, unregulated tourism may result in costs that outweigh the benefits.

Angkor is located in a sacred place, and tourism and development must not jeopardize the continuity of traditional culture or cause physical damage to the archaeological resources, landscape, and monuments. For the thousands of people living within the Angkor World Heritage site, the opportunity to share Khmer culture must be accompanied by social and economic benefits (UNESCO, 2013).

For sustainable heritage development, a national authority must be established to take direct responsibility for onsite management. The Royal Decree of February 19, 1995, created the Authority for the Protection and Safeguarding of Angkor, and the Region of Angkor was established. This national authority is charged with the following responsibilities:

- Preservation, maintenance, and restoration of monuments
- Management of the historic water system (reservoirs, ponds, canals, rivers)
- Tourism management and engagement with communities living in traditional villages on the site
- Research to enhance the cultural values of the site and its region, especially the cultural heritage of Siem Reap town
- Protection and conservation of forests within and around the site
- Training and capacity building (UNESCO et al., 2013)

These activities are critical for sustainable heritage management. The increasing number of visitors has caused various impacts on the site, including structural damage to monuments, socio-cultural disruptions due to inappropriate behavior, and environmental degradation, such as changes in groundwater levels. However, the World Heritage Committee emphasizes the importance of ensuring that the social and economic welfare of local communities is protected, without negatively affecting the site's heritage values (Keiko, M., 2023).

In early 1998, the government approved pilot projects for community-based forest management in Kok Thnoat and Preah Dak villages in Angkor. According to Hubbard (2003), after forestry activities were banned in Angkor, local village incomes dropped by 90%. The projects were ultimately unsuccessful and proved economically unsustainable. Furthermore, there was a lack of integration of local communities into environmental management efforts, leading to an imbalance in addressing their needs and participation. Several scholars have pointed out persistent gaps and weaknesses in heritage management at Angkor, including the negative impacts on society due to the rapid

changes brought by Western civilization, the HIV/AIDS epidemic, and the environmental consequences of mass tourism (Vannarith, 2009). Miura (2011) argues that as the number of tourists at Angkor increases, it will have adverse effects on the environment and socio-cultural fabric, as well as on the quality of tourists' experiences in Angkor Park. Miura also highlighted that the local inhabitants are often overlooked in the management policies of the archaeological park, which is part of the World Heritage Site.

The Bakong temple group, dating back to the 9th century, is an incredible temple complex built by the Khmer kings and was a key site of the Khmer Empire. Angkor, the capital of the Khmer Empire, symbolizes the cultural and civilizational heritage of Southeast Asia. Bakong is part of Angkor Park and is one of its largest and most significant sites. The monuments at Angkor are among the largest and most beautiful remnants of Indian civilization in Southeast Asia. Angkor is also a major source of funding through tourism, contributing significantly to Cambodia's economy.

Heritage, or cultural heritage, exists worldwide. The challenge lies in ensuring that the benefits of Sustainable Heritage Management and Maintenance (SHMM) are both sustainable and accessible to all. This study aims to address this issue by presenting a case study of four villages in Bakong Commune, located within the Angkor Archaeological Park.

Heritage has become an increasingly important resource, and many actors around the world are considering ways to make it sustainable and accessible to everyone. It is also increasingly seen as a key element of socio-economic and socio-cultural life. Researchers have focused significant attention on how to maximize the benefits of sustainable heritage management and ensure equal access to these benefits.

To explore the benefits and local perceptions of heritage management in Bakong, a survey was conducted involving 315 families. The participants included a district governor, deputy governor, former district governor, commune chief, four village chiefs, members of a religious group, APSARA Authority staff, active local leaders, businesswomen, tourism police, and ticket inspectors involved in heritage management near Bakong.

In this study, weaknesses and gaps in the management framework were explored using a SWOT analysis. The strengths of management practices at Angkor, as well as the strengths, gaps, and weaknesses in the management practices in Bakong, were examined. Additionally, opportunities for improving developmental activities and potential threats to heritage management were analyzed.

To investigate these issues in Bakong, a SWOT analysis was conducted. Key stakeholders, local visitors, residents, community leaders, governmental officials, APSARA workers, and special interest groups were surveyed to understand their perceptions of sustainable heritage management in Bakong. The strengths of the APSARA Authority's policies in Bakong were evaluated, as well as the perceived weaknesses in heritage management. Opportunities for enhancing heritage management practices were also identified, alongside potential threats to the sustainable management of the Bakong site.

1.3 Research Questions

The study seeks to answer the following research questions:

1. What is sustainable heritage management?
2. What is the socio-economic profile of the heritage site area?

3. What are the heritage management practices in the study area?
4. Are heritage management practices sustainable in the study area?
5. What are the gaps in heritage management practices in ensuring sustainability in the study area?

1.4 Hypotheses

The study tests the following hypotheses:

- **H0 1:** There is no benefit from sustainable heritage management practices in the study area.
- **H0 2:** The actions taken for sustainable heritage management in the study area are inadequate.

The study employs both quantitative and qualitative analyses. The quantitative analysis was conducted to address the objectives and test the hypotheses, relying heavily on both primary and secondary sources (see Chapter III for the research methodology). In contrast, the qualitative analysis aimed to understand the cultural, economic, socio-economic, and environmental lives of the local people. This analysis also explored the management practices of the responsible authorities, their perceptions of sustainability, and the challenges faced by the local communities at the Bakong heritage site.

The quantitative analysis further examined factors such as local professions, the benefits derived from the World Heritage site, and the regulations concerning construction, land

use, environmental issues, and cultural performances at the monument site. Data analysis was performed using SPSS, with the results presented in tables, figures, and pie charts

1.5 Objectives of the Study

The objectives of the study are as follows:

1. To understand sustainable heritage management.
2. To analyze the socio-economic profile of the heritage site.
3. To examine heritage management practices in the study area.
4. To assess the sustainability of heritage management practices in the study area.
5. To identify gaps in heritage management practices and their impact on sustainability.
6. To provide recommendations for improving sustainable heritage management practices in the study area.

1.6 Significance of the Study

This study aims to identify the gaps and weaknesses in heritage management by focusing on Bakong. Part of the Rolous group of monuments, Bakong was built in the 9th century and holds significance as one of the first monuments in the Angkor region. While Bakong attracts heritage tourists, it differs from the more well-known Angkor Wat and Angkor Thom sites due to its relative distance from Siem Reap City. The monuments themselves are smaller, and the surrounding area is less developed compared to the major tourist

sites. As a result, the local economy experiences only marginal impacts from heritage tourism.

The findings of this study will contribute to improving the livelihoods of local communities, enhancing socio-economic conditions, and refining the management practices for stakeholders involved in the Bakong World Heritage site. Moreover, it will provide valuable insights for both national and international researchers engaged in heritage management and sustainable development.

1.7 Scope and Limitations of the Study

This study specifically focuses on four villages within the Bakong commune: Aolaok, Lolei, Thnal Trang, and Stoeung. Researchers interested in exploring other areas near the monuments, which are not included in this study, may consider conducting further research to expand the scope.

The study is limited to examining the sustainability of heritage management practices within these four villages in the Bakong commune. Future research could investigate the broader impact of national and international organizations involved in planning, preservation, and cultural management within the World Heritage site of the Angkor Archaeological Park in Siem Reap.

The research was conducted in 2019 and included a survey of 315 families, alongside interviews with local leaders, monks, APSARA Authority staff, and other stakeholders involved in heritage management in the study area. This study is the first to examine

heritage management issues at Bakong using a mixed quantitative and qualitative methodology, addressing both the benefits of heritage tourism and the sustainability of heritage management from the perspectives of local communities and key stakeholders.

1.8 Layout of the Study

The study is divided into seven chapters as follows:

- **Chapter I:** Introduction, including the statement of the problem, research questions, study objectives, hypotheses, significance, scope, and limitations of the study.
- **Chapter II:** Literature review, discussing both conceptual and empirical studies on heritage management and sustainability. This chapter also examines heritage management practices and sustainability in different countries, with an emphasis on the four pillars (culture, socio-economy, society, and environment).
- **Chapter III:** Research methodology, covering both qualitative and quantitative methods, including Chi-square tests, in-depth interviews, surveys, and observations. This chapter also discusses data collection procedures, sample size, statistical tools, and data analysis techniques, including the use of SPSS and MS Excel programs.
- **Chapter IV:** History of heritage management activities in the study area.
- **Chapter V:** Socio-economic profile of the heritage site.

- **Chapter VI:** Data analysis, identifying gaps in heritage management practices and conducting a SWOT analysis to evaluate the sustainability of heritage management programs in the study area.
- **Chapter VII:** Conclusion, summarizing the main findings, providing recommendations for sustainable heritage management, and suggesting areas for future research.

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CHAPTER II
REVIEW OF LITERATURE

CHAPTER II

REVIEW OF LITERATURE

This chapter reviews the work of various researchers and authors relevant to the topic of "Sustainable Heritage Management: A Case Study in Bakong Commune, Siem Reap Province, Cambodia." It focuses on literature related to the definitions of key terms associated with heritage management and sustainability, along with other significant sources on the subject.

The materials reviewed include sources in English, French, and German, as well as Khmer texts translated into English. The documents span both recent and older works, offering a comprehensive understanding of the topic from various perspectives.

Sustainable Heritage Management is a conceptual paradigm with a rich intellectual history. This chapter reviews the literature that defines the key concepts of sustainable heritage management. It begins with definitions of the terms "heritage," "heritage management," and "sustainability." Following that, the background and significance of the sustainable heritage management paradigm are explored. In the empirical review section, examples of various types of heritage and their associated management practices from different countries are presented. This literature review provides the foundation for the key concepts utilized throughout the rest of the thesis.

2.1 Conceptual Review

2.1.1 Concept of Heritage

The term "heritage" is defined in various ways, reflecting its significance as a living tradition. In society, heritage serves as a communication tool that emotionally connects people, linking the past to the future through the present. Human history plays a key role in fostering these connections, helping to shape identities, build communities, promote economic prosperity, and adapt cultures. The loss of heritage can erode identity, as some nations have experienced through the neglect or destruction of their cultural heritage. Traces of past industries act as markers for exploring different cultures, and sharing these histories can create powerful connections that advance global culture and development. Additionally, heritage is crucial for transferring policy information, shaping places, and offering valuable insights both academically and practically.

Heritage includes monuments such as architectural works, monumental sculptures, paintings, archaeological sites, inscriptions, cave dwellings, and combinations of these features. These are often recognized for their outstanding universal value in history, art, science, and cultural significance. Heritage can be divided into tangible and intangible categories. Tangible heritage encompasses immovable resources like buildings, rivers, and natural areas, as well as movable resources such as museum objects and archived documents. Intangible heritage includes values, customs, ceremonies, lifestyles, and experiences such as festivals, arts, and cultural events (Timothy & Boyd, 2003).

According to UNESCO (1972), heritage is classified into cultural and natural heritage. In the context of a historic urban landscape, natural heritage refers to naturally occurring features, while cultural heritage includes human-made resources such as infrastructure, buildings, roads, parks, and other amenities.

Cultural heritage can be understood as “inherited properties recognized by people as a reflection of their evolving knowledge, beliefs, traditions, and their acceptance of these values” (Sjöholm, 2016). It plays a significant role in shaping human identity, loyalty, and behavior. Institutions like archives, libraries, museums, schools, and historic sites are responsible for preserving and interpreting cultural heritage, emphasizing its importance. Cultural heritage has legal, economic, and emotional implications, and it often intersects with conflicts and destruction worldwide. It forms the foundation for cultural identity, influencing how societies live, think, and feel (Michael, 2013).

According to ICOMOS-UK (2015), "Cultural Heritage" encompasses the ways of life developed by a community and passed down through generations, including customs, practices, places, objects, artistic expressions, and values. This heritage can be expressed as either tangible or intangible.

2.1.2 Concept of Sustainable Heritage Management

According to Peou et al. (2016), in the UNESCO convention concerning world heritage protection, heritage plays an important role in human culture and its conservation matters. From year to year, the list of heritage sites rises up and public funding. It is necessary to think about the sustainable management practices for heritage. More often than not, there is a difference in perspectives between stakeholders such as economists, historians, archeologists, art historians and all those people involved in heritage conservation.

According to Bandar in (2002), cultural and natural heritage sites around the world can only be protected if the continued degradation of the global environment is reversed,

while improving the lives of those living in poverty.

Heritage sites need to have their own unique attributes emphasized and the interpretation and presentation of the attraction must be such as to accommodate the needs of the visitors while the management of these sites has the responsibility of the preservation to the community and the site for posterity (Millar, 1989).

Richard and Sharon (2008) studied the contribution to the sustainable development of a given area that can have different potentials developed from heritage. In the sustainable development of heritage, these potentials must include social, environmental, or cultural aspects. Heritage must bring tangible benefits. For developing sustainability, the main task is to focus on the management of public stakeholders. The advance of management must fit a framework including social, economic and environmental aspects of sustainability. This approach draws a broad range of elements to improve the heritage site and living and working people in it, including those involved in traditional culture, urban development, heritage management and landscape change, archaeology and tourism.

Social phenomena appeared in the absent awareness of the urban tissue's value in its different dimensions (historical, cultural, social and economic), with the dense of population which drives to change the physical character of the heritage areas. As well as poverty, migration from the countryside to the city, individually or collectively creates problems to heritage areas. As the matter of heritage management has resulted in just restoration and registration and then stopped, ignoring sustainability, in addition to the existence of a lot of problems (administrative, economic, social, environment and urban)

which affect the cycle of development or any further actions for the city (Abdelalim & Fahmy, 2017).

Fang (2004) said that many world heritage sites in China are within ready reach of big cities and are clustered geographically in the more populated and developed regions. Tourism development at world heritage sites has been considered as an inevitable and reasonable choice in China and has experienced rapid development in recent decades. As argued by Fang, world heritage designation significantly promotes site development in China, particularly in newly recognized sites. Moreover, due to the large population and the rapid economic growth, world heritage sites in China potentially attract and serve a much higher number of domestic tourists than in other countries. These circumstances create many challenges on resource management to address the tension between preservation and development. As raised by many scholars like Zhang and Ma in 2006, the complication of the management structure and participation of local communities are among the major concerns related to world heritage resource management in China.

2.1.3 Sustainable Heritage Management

Sustainable heritage management is a holistic approach to preserving, protecting, and promoting cultural and natural heritage in a manner that ensures its longevity for future generations while also fostering sustainable development. It involves the careful balance between conservation efforts, community engagement, economic viability, and environmental stewardship. By integrating principles of sustainability into heritage management practices, it aims to safeguard significant sites, monuments, traditions, and

ecosystems, while also enhancing their social, economic, and environmental benefits for local communities and society at large.

For development to be sustainable, it needs four pillars: social justice (empowerment, participation, social mobility, social cohesion, institutional development); ecological balance (natural resource management, biodiversity, carrying capacity, ecosystem); cultural identity (cultural identities, tangible and intangible heritage, cultural industries, cultural pluralism, and geo-cultures); and self-reliance (balanced growth, fair trade, symmetry, and cooperation) (Nurse, 2006).

The new direction in heritage management focuses on economic development, human rights, poverty alleviation, sustainability, and education. It is believed that restoring identity and pride leads to better management of heritage, and that traditional management systems must be recognized. In Australia, the debate surrounding heritage and sustainable development has been limited. This may stem from the Federal Government's restricted definition of Ecologically Sustainable Development, which discounts the importance of the social and cultural environment in development and change. However, the social environment is crucial when considering political and cultural influences on decision-making, which impact all aspects of sustainability (NSW, 2004).

Capacity building is key to both heritage management and sustainability. Education is an essential component of heritage management and sustainable development, both in training and developing experts in the heritage field, and in generating awareness and action that leads to change among stakeholders and the wider community. It is the key to valuing heritage and minimizing impacts. Heritage conservation strongly contributes to the goals of sustainable development, enabling society to recognize and pass on heritage

to future generations. Sustainable development is often associated with the protection of the natural environment, rather than built heritage. However, the principles of sustainability have always been central to heritage conservation and management. Managing heritage assets to ensure they can be enjoyed by all, including future generations, means putting sustainability into practice. Heritage forms the backdrop of identity and seeks to understand and appreciate the influence of the past on current and future environments. Heritage reflects ongoing relationships with the environment and owes its present value and significance to people's perceptions and opinions, meaning their personal beliefs and values (English Heritage, 1997).

Identification and demarcation of areas for conserving world heritage sites and the sustainable development of broader regions must derive from an in-depth knowledge of people-environment relationships. The focus is now shifting toward addressing environmental, social, and economic challenges for the sustainable development of the broader landscape ecosystem (Peou et al., 2016).

Urban development and heritage management have often been positioned as opposing forces in urban management. Heritage is seen as one of the "usual suspects" of local grassroots opposition to urban development, while development pressures are perceived as endangering heritage. In heritage theory, the trend is to recommend a holistic, integrated, and multidisciplinary management of resources to overcome the dichotomy between conservation and development. The new approach is called the landscape approach (Bandarin & Van, 2015).

Previously, heritage management was more concentrated on the tangible and aesthetic dimensions of heritage. Newer approaches aim to be more holistic and development-

minded. Heritage management is no longer just about allowing (or disallowing) transformation, but about establishing and guiding the nature of the transformation (Dalglish, 2012; Veldpaus & Pereira, 2014).

According to Mateja S. et al. (2015), it is argued that sustainable heritage management is crucial for enforcing social, economic, and cultural development in local areas. There are different potential developments in participating in the sustainable development of a given area, which take the form of culture, economy, and society. Tangible heritage plays a key role in the benefits of managing heritage effectively. People are part of successful and effective management because they depend on it. First, they must understand the identification of heritage well. In addition, they need to connect with key participants and other issues, plan for proper use, and finally offer this optional service to the users.

Gabriel (2012) wrote that the topic of cultural resources is important to understand and discuss today because the proper growth of the economy depends on protecting and growing the global environment, preserving cultural identities across nations, and fulfilling responsible societal tasks, which contribute to overall economic development. The growing economy driven by tourism activities makes sustainable heritage management exceptional. It is true that the economy of a country is also dependent on the management of its heritage.

Each nation has the right to preserve its cultural heritage, which is crucial for the social development and evolution of the cultural community. The effectiveness of heritage management can be measured by observing the jobs created in the cultural sector. The action plan and the necessary structural work involved in heritage management provide the area with cultural significance such as historical, cultural, traditional, and emotional

uniqueness, as well as specialized workforce training. All of these factors must support the rehabilitation of heritage, maintaining its uniqueness, and ensuring proper management over time.

By observing the impact of heritage preservation, it becomes clear that it is tied to economic growth, such as the creation of appreciated jobs globally. The development of microeconomic industries and the growth of tourism, along with the economic value of heritage management, are interdependent.

For example, in Romania, there is a National Heritage Preservation System. At certain levels, ministries work together for the preservation and profit generation from heritage. In critical situations, relevant policy topics are discussed by the Ministry of Culture and National Heritage, the Ministry of Regional Development and Tourism, the Ministry of Labor, and the Ministry of Environment.

The strategy of coordination will guide sustainability through the regeneration of profit, requiring collaborative strength.

Sustainable Heritage Management presents a crucial framework for preserving our cultural and natural legacies while promoting sustainable development. By embracing principles of conservation, community involvement, economic viability, and environmental responsibility, it offers a balanced approach to safeguarding our heritage for future generations. Through collaboration between stakeholders, innovative strategies, and ongoing dedication, Sustainable Heritage Management not only protects our past but also ensures its continued relevance and benefits for present and future societies.

2.1.4 Background of Sustainable Heritage Management

The conceptualization of heritage as a valuable and vulnerable legacy item that needs special care and protection emerged in the context of rapid economic growth and perceptions about the 'cost' of development.

The idea of heritage gained prominence in the late 19th century in the context of rapid change in industrialization, and urbanization of the UK. People at the time thought mostly about progress, evolution, and development. Those were the number one goals for much of the century. Then some people such as John Ruskin and William Morris started to be concerned about the destruction of the roots, the fear that legacies remaining from the past would be destroyed (Harvey, 2008). They worried about the negative effects of industrialization and urbanization. There will be nothing left that tells people who they are, and where they come from. Everyone is just like a machine product or just a plastic dish or something like a paper plate. That is all we would do in an impersonal process. But we did become who we are. Usually, the first heritage was made by hand, not by machine and they first celebrated as things that the products of rural people, traditional people with knowledge pass inside the family from hand to hand, generation to generation. They began to think the idea that heritage is something tied to the place and the past it gives us the identity. It is almost completely the opposite of industrial products. It is worse in response to the rapid industrialization in England. William Morris began to study it, talk about it, give lectures, argue for the need to implement new policies that slow down development and recognize the value of the old.

Previously, most people valued only the new and never did value the old. They did think that the old had zero value very embarrassing, stupid, ugly, ignorant, and dangerous. They want to run away from the past into the future. The future is safe,

powerful, smarter, happy, and enlightened. The idea of heritage is trying to create more balance between the old and the new. And people try to give a bit of value to the old, that the old is not dirty, pure, simple, and weak, but peaceful, natural, organic, and stable, it gives human kinds of differences. The origin of the heritage is like the fight against the ideologies of progress in the tendency, that we should change everything and through them away from the past, we should keep going forward. Who is the winner between the old and new ones? In the modern time, now we only look at the modern time. It shows a lot that we have electricity, modern technologies, modern communications, roads, modern law, institutions, standards, modern architecture, nature ... etc., but on the

other hand, people try to preserve old, trees, buildings...etc. (Lowenthal, H. 2005)

At the beginning of the emergence of the heritage concept, it was general intellectual values placed on change, progress, and the new, and throwing the old. It was, the new hundred percent is good and the old is embarrassing, the old is dirty, poor, and weak. People felt only about that. The value is increased by awareness of the groups of industries of tourists, arts, anthropologists, and politicians, William Morris was founder of the heritage art in England, etc., and he tried to preserve the old. One of them did a good job. They value the tradition of everyone in every condition, it is very important to protect, not just one. We should try to protect the origin of the simple tradition of our ancestors as teachers. They did better than we did in the survey. For example, they have natural food, simple life, knowledge to survey, knowledge of medicine, economics, simple life...etc. They try to preserve traditional people in the world. The other group, like politicians, is very important in this case and pays attention to heritage management. At

the same time, there are other problems with vandalism, destruction of nature, and negative impact by industrial tourists.

Even though mass tourists often head for the established beach holiday resorts, heritage tourism is often a niche market with smaller numbers of generally more highly educated and higher-income tourists. Heritage tourism is still one of the most important products of the tourism industry given it meets both the demands of the tourists who want to learn about the history, culture, and lifestyle of the destinations and of the local people, and heritage preservation through economic value added. It is argued that heritage tourism is a key to improving human security through economic security, economic growth, and development.

Gabriel (2012) argued as resources of today are going to be decreased and valuable, there is a concerning problem for environmental protection, cultural identity preservation across nations, social responsibility, and all in the context of economic efficiency. Sustainability is very important for growing economic activities, they are most from the growth also.

Heritage management has an important role in the four pillars (culture, social, economic, and environment). The national heritage is more than preservation, as it is an important part of the social and cultural evolution of a community. Heritage management's effectiveness influences the economy and is proportionate to the number of workplaces offered at the heritage site. The effectiveness of heritage management can be measured through the economic impact of how many numbers of creating jobs in the area of heritage sites. This management involves both planning and necessary executive work in the structures. It will allow the heritage site: such as historical, cultural, traditional, and

emotional uniqueness, specialized workforce and training are needed for heritage rehabilitation, promotion, and for managing and taking care of it for a long time. By observation, heritage management indeed brings economic growth. For example in the USA, in the state of Georgia, millions of dollars of automobile production jobs are created; in the area of manufacturing millions of dollars benefited from factoring works, many new buildings were constructed and more jobs are offered and generated, at the same time, the rehabilitation of the building generate million dollars and offering the jobs, it the same like in Norway by performing analyze is shown that nearly 17 percent more workplaces offering higher than the new project of construction. It allows the simplest business to be alive in the area and around the heritage site parallel to the growth of tourism with the heritage management related to the size of the economy.

According to Gabriel (2012), it is well known for growing problems for environmental protection, cultural identity maintenance throughout nations, social obligation, and the financial performance of the context.

From the view of the social and cultural factors, sustainable control of the historical past brings the social community a sense of special, potential, and fundamental things. The community can accommodate the tourists for staying longer and financial benefits from the heritage site more than the general visitors.

Because locations of heritage, resorts, eating places, garments, souvenirs, and so on are related to each other, these create strong identification and it is good for potential growth for a free economic market. Cultural and environmental sustainability is determined by economic sustainability. Although cultural identification must be preserved, at the same time, the sustainability of the sources must be carefully used. On the other hand, it needs

to fund security for the ability and preservation of heritage to attract the tourist, at the same time, the best management is needed and limitation of tourist capacity for certain destinations. A mixed impact will appear on tourism development.

UNESCO (2020) noted, that there are increasing threats both in cultural heritage and natural heritage. The destruction is from the traditional decay, and changes of social and economic conditions. These cause damage situations with more and more critical and strange appearance of damaged form. Damaging or disappearing the cultural or natural heritage is a dangerous sign of the whole nation of world culture.

The reason for the protection of this national heritage is because of the size of the resources required, more often the work cannot be completed. These causes are from management of the scale of the resources, and insufficient economic, scientific, and technological resources of the country where the protection can be taken place. In the area of construction, there is concern about the policy of the providing organization such as keeping, increasing, and spreading knowledge, by assuring the conservation and protection of the outstanding heritage of the world, and proposing the national concern to the high-level international conventions.

The existing international conventions, proposals, and improvements concerning solutions for cultural and natural property have indicated the importance of sustainable heritage management for humankind and the whole world.

The cultural heritage with outstanding interest has the right to be preserved as another part of the world heritage of mankind as a whole. It is a new provision in a convection form to establish an effective system of collective protection of the cultural and natural

heritage that are categorized as outstanding worldwide value with modern scientific experiences.

Jokilehto (2005) argued, in the last decade, the deterioration of the cultural heritage has increased due to the development of modern time industries, growing construction so fast, spreading bad pollution in the atmosphere, changing factors influencing the climate, and especially damaging by unorganized overload of the tourist. In addition, many examples of tangible heritage are to disappear because the economic structures are disrupted and lifestyles are unexpectedly changed.

Awareness of people from day to day about the significance of cultural heritage has increased. This is an argument that there is a growing number of people from many countries visiting the monumental buildings and complexes of architecture, which improve a significant part of the cultural heritage.

It is a potential access of the establishment for defending heritage, also because of the increased interest in the tangible heritage, it gives the reflection for new life and cultural development. Generally, with an impact on economic activity, tourism, and policies related to cultural heritage, it creates a contributing effectiveness for development.

The taking action is dependent on the crisis of public finance, austerity measures, or policies of structural management and effects in the limitation of the capacity of the Member States especially in the developing countries. The best heritage management will ensure the development of the countries in available living situations in the present and in future generations.

According to Nevin, (2011), modern technologies have progressed, increasing aesthetic values, restoration techniques, preservation training, and protection, which is why the

concepts of preservation of monuments must be carried out. It was decided in the Athens Charter for the Restoration of Historic Monuments, dated 1931 about the regulation concerning the design issues in every country. After the Second World War of the 1950s, large-scale destruction was destroyed by wars, including rapid industrial developments, which influenced people to realize their living environments as part of their cultural identities. At this time, authenticity was a useful concept in making up the exploded physical environment for the development of cultural continuity.

At this time, authenticity became a useful concept in reconstructing the fragmented physical environment for the development of cultural continuity. UNESCO et al. (2013) argued that heritage has gained increasing significance in society due to the accelerating pace of modernization, building construction, and the numerous changes taking place in society. Modern societies and urbanization in the countries are obstacles in a rapidly changing world. Understanding the past can also be a great help for managing the problems of the present and the future to keep the important identity of heritage. This greatly increases the huge urbanization and landscapes are needed to be managed by heritage managers and require skills. The impact on heritage sites is from many increasing types of threats, some of these are direct threats to the components of itself especially of the development in the environment.

Sustainable heritage tourism offers harmony in competitiveness, nature, culture, history, architecture, heritage preservation, and the environment and also for the development of the next generations. Sustainable heritage tourism involves finding harmony between economics. A missed management and lack of equilibrium among heritage preservation and economic, social, and cultural aspects have often led to decaying and destroying

heritage assets with time. Sustainable heritage management will be responsible for preserving heritage in the framework of economic, social, cultural, and biological systems development. It gives the local communities a special opportunity to be in contact with special things, with a strong foundation, and share their community as an important income source. Because everything is connected to places of heritage with business places, it allows one to get a strong unique identity and consequently a higher market value. Every project of heritage management produces economic benefits for the local communities and of a nation implicitly. The advantages of heritage management projects bring the nation true economic benefits to the local people or to the whole nation. The heritage projects produce several workplaces, it create other economic areas of investments and local development of different levels of enterprises by offering them multiple services corresponding to heritage sites. Some heritage properties are very fragile. All presenting heritage including elements of architecture, archeology, pieces of science, art and culture, living people, traditions and craftsmanship, landscapes, and so on address the values of mankind, they all existed for mankind. Fang (2004) mentioned, that at the end of the year 2010, heritage sites in China were increased to 40 world heritage sites in the world heritage list, an increase of 28 cultural, 8 natural, and 4 mixed heritage sites. China was in the third place after Italy and Spain in the World Heritage Sites. In addition, 55 sites are prepared to be registered on the World Heritage list, and more and more may be selected. In the last decades, China has rapidly developed its economy to serve its population. Because of the increasing concern about the impact of the development, the heritage management for balancing the preservation of the resources site development. China is rich in culture and long history and has plentiful

heritage resources such as world heritages. These are the challenges for the management of resources at the World Heritage site of China. It is complicated for the structure of the management and stakeholders as the keys of the above management at the world heritage sites in China.

According to UNESCO (2018), heritage sites and buildings can stimulate good on different development strategies. Developing, housing, education, economic growth, and community and environmental concerns can be the best examples of the best solution that heritage can give hope to contribute to community life. The historic environment is a good condition of benefit to local socio-economies, especially, because tourism; is an attraction of heritage environment that helps in attracting investment from outside and also maintenance of existing businesses of various levels. It is a pride of people for their local history, but they should use the cultural heritage properly and reuse the old building in sufficient.

Heritage creates a special sense of the heritage place for local people and also for the stability of the communities. Heritage buildings and sites have great value in integrating the projects. The reuse of the newly built and made-up surroundings is an economic and environmental advantage. Heritage places can be a powerful guide for taking action in the community and increasing values for the community and better social involvement by focusing achievement on heritage matters. The heritage places are excellent places where different local people can have educational resources, learn about the history of a place, and bring the communities living together by sharing of understanding of their cultural identity heritage from places to the whole area.

Russo & Brog (2002) argued, that precious observation was shown that financial benefits from tourism visiting the heritage can be used in different ways to help the help places where there is a problem of fund for ungoverned heritage places. Opposing to such background, it is necessary to explore and studies on sustainably managing heritage tourism.

It is strongly committed to sustaining heritage management while heritage tourism is increased because it can have both positive and negative impacts.

According to the World Heritage Committee of UNESCO, a strategic commitment is called for the States Parties to enhance connections of heritage conservation and sustainable development. To fulfill this commitment, it will have the required integration of the conservation of sites. The sustainable use and management of natural resources must not decay the place and the surrounding sites.

2.1.5 Importance of Sustainable Heritage Management

Sustainable heritage management is crucial because it seeks to identify the components necessary to protect heritage. It must address all the components without neglecting any. It should involve all stakeholders in the heritage site, including even marginalized groups, as heritage belongs to all humankind. All these elements must be interconnected. Different components need to be addressed, and a management system is required, one that encompasses financial, environmental, social, and cultural considerations.

Olga (2014) stated that a vibrant and important culture plays a role in achieving sustainable development through its connection to the three pillars of sustainable development. Today, this is evident in scientific articles, policies, and objectives. For

example, issues such as CO₂ emissions and climate change are now linked to cultural heritage management, while investments are being made to manage cultural attractions. These conditions positively impact local activities, such as preservation, construction, food production, traditional therapies and pharmacies, and handicrafts and arts, all of which contribute to tourism. Sustainable development meets the needs of both national and local communities. It has two forms: one that does not deplete or hinder the growth of natural resources for future generations, and one that is responsible for the three well-known pillars of development (economy, social, and environmental factors). Cultural heritage can contribute to sustainable development in several ways: First, by managing cultural heritage, CO₂ emissions are reduced, and climate change is addressed. Second, environmental management attracts investments and stabilizes jobs. Third, it benefits society by providing fair access to cultural awareness and respect for others. The importance of heritage management and sustainable development can be realized through the interactive pillars of the economy, society, and environmental culture.

According to an internet source (2020), heritage preservation is crucial because preserving historical and cultural heritage is vital for urban planners and local communities. The five main reasons for preserving local heritage in cities are: First, the physical component of preserving local identity, including architecture, locations, and heritage buildings, which provide insight into the past and guide future directions. Second, the attraction of tourists through tangible heritage, which boosts the local economy. Heritage sites enhance the local economy, create job opportunities, and stimulate various types of skills. Third, the a need to live in an ecological city, with awareness of waste management and energy conservation. Lastly, the role of physical

sciences in advancement—preserving heritage contributes to the economy, environment, and society over the long term.

Gabriel (2012) argued that sustainable heritage management benefits all parties involved, as visitors gain unique enjoyment from the historical sites, while local communities benefit from social cohesion, investments, and economic growth. Sustainability involves caring for various forms of capital: First, natural capital—encompasses the environment and its resources that are essential for development. Second, society and culture—encompassing the values and systems that facilitate human interaction and tradition. Third, human capital—the skills and knowledge that contribute to human development. Fourth, built capital—including architecture, transport, machines, technology, and infrastructure. The four pillars of development bring harmony between economic competitiveness, nature, culture, history, and architecture, ensuring that heritage is preserved for future generations. The unique emotional connections that people feel to heritage sites can be transmitted through these places.

UNESCO (2017) emphasized that the heritage of humankind is protected globally as an instrument for conservation. It has raised awareness around the world and made heritage conservation and management an international concern, with significant economic potential.

Gheorghe (2015) argued that entrepreneurship plays an important role in sustainable heritage management. Cultural heritage entrepreneurship (CHE) contributes to economic recovery by addressing challenges such as financial constraints, intellectual property rights, market access, and capacity building through education and training. National and international markets, along with digital technologies, bring benefits to the cultural

heritage sector. CHE also contributes to GDP, labor market development, and export/import activities. National and international cultural heritage properties are of great importance due to their cultural, aesthetic, social, scientific, economic, and environmental values.

Indre (2006) argued that the preservation of cultural heritage enhances economic development. Environmental, social, cultural, and economic sustainability are integral to the concept of sustainable heritage development. Cultural heritage contributes to the well-being and quality of life of communities by reducing the negative impacts of cultural globalization and incentivizing sustainable economic growth. Preservation of cultural heritage can generate various economic benefits, such as increased income, job creation, and the revitalization of heritage sites. The reuse of historical buildings brings communities together and enhances quality of life.

In addressing the challenges of the twenty-first century, sustainability plays a crucial role. Adopting sustainable practices in heritage management can help conserve historical environments and address issues such as tourism, integrity, authenticity, and accessibility (Darlow, 2011).

Ewa et al. (2019) argued that cultural sustainable heritage management is rooted in cultural paths. It involves active participation from various stakeholders, including public institutions, entrepreneurs, and local communities. Culture, as a key pillar of sustainable development, is essential for building local identity and preserving heritage. Many organizations, at the international, national, and local levels, are dedicated to preserving cultural heritage and ensuring its sustainability.

According to Hung-Ming (2020), sustainable heritage development contributes to human satisfaction by exploring heritage tourism. Heritage regenerates the legacies of the past while adapting to the needs of modern society. Protecting heritage sites is essential for maintaining cultural identity and ensuring their financial sustainability. By reusing heritage sites, both tourism and conservation can be achieved, thus preserving heritage while benefiting from tourism.

The importance of Sustainable Heritage Management cannot be overstated. It is fundamental to preserving our collective identity, fostering community pride, and promoting sustainable development. By conserving cultural and natural treasures, engaging local communities, and balancing economic needs with environmental concerns, Sustainable Heritage Management ensures the continued enjoyment, understanding, and benefit of our heritage for generations to come. Its significance lies not only in safeguarding our past but also in shaping a more inclusive, resilient, and sustainable future for all.

2.1.6 Concept of Development

Rural development is crucial for fostering inclusive growth outside urban areas, focusing on enhancing infrastructure like transportation, healthcare, and education. However, enduring challenges such as limited access to services and economic disparities persist, compounded by climate change and demographic shifts. Robust indicators help assess progress, while initiatives like rural development programs emphasize collective commitment. The Paris 2030 memorandum underscores integrating environmental

sustainability into rural agendas. Despite progress, gender disparities persist, requiring targeted interventions to empower women as agents of change in rural development.

Definition of *development* from:

1. Oxford Advanced Learner's Dictionary (2023)

It means:

1. growth(noun) and
2. improve(verb)

The definition of *development* from:

1. Merriam-Webster Dictionary (2023)
2. The act, process, or result of developing
3. The state of being develop

Wikipedia (2023) mentions that development in rural areas aims to enhance the well-being of people in sparsely populated areas, often afflicted by rural poverty due to limited economic opportunities and infrastructure investment. Traditionally focused on agriculture and forestry, it now encompasses diverse sectors like tourism and entrepreneurship. Education, infrastructure, and community development are crucial, with a focus on locally tailored strategies. Unlike uniform urban areas, rural regions vary greatly, necessitating a wide array of development approaches. Jim (2001) wrote that rural community development, stresses local assets, cooperation, and passion. He

critiques current approaches for focusing solely on service delivery, advocating for a more inclusive strategy that nurtures local agency and innovation. Cavaye acknowledges challenges like balancing community values with external interventions and reconciling different forms of democracy. His solutions include enhanced community engagement and innovative accountability methods. Overall, he champions inclusive, participatory, and holistic rural development approaches to empower communities and tackle challenges effectively.

Hobart et al. (2022) wrote, that the meta-synthesis explores recent doctoral dissertations on rural community colleges' role in development. Analyzing 20 studies from 2009 to 2020, it uncovers recurring themes showing how these colleges contribute to rural vitality, economic growth, and workforce development. The synthesis offers insights and practical recommendations to enhance their impact and emphasizes the importance of ongoing research to inform policy and practice. Overall, it underscores the critical role of rural community colleges in driving development and calls for continued research to enhance their effectiveness. Top of Form

Maria (2017) wrote, that in rural development and prosperity, social capital plays a crucial role. The international community faces two major challenges in reducing rural poverty and hunger, with over 800 million poor residing in rural areas. Preparedness is key for these communities. Low social capital correlates with sluggish economic growth, while trust and cohesion spur development. Integrated rural development strategies prioritize social capital, emphasizing its interaction with various elements like innovation and governance. Social capital is seen as a cornerstone of a "rural network" essential for

addressing rural challenges and promoting sustainability. Attention is drawn to four key elements—trust, cooperation, community, and culture—that significantly impact interactions and development readiness.

Cheam (2009) wrote about the NGOs' rural community development in Cambodia, highlighting sustainable development challenges and trends. It stresses objectives like economic growth, environmental protection, and social progress. Despite stability and growth, rural unemployment and inequality persist. It examines international assistance since the 1980s, particularly NGOs' roles in healthcare, education, and governance. The research outlines Cambodia's National Strategic Development Plan (NSDP) 2006-2010, aiming at poverty reduction, rural development, and environmental sustainability. The NSDP aligns sector strategies and enhances cooperation for improved livelihoods in rural areas. ADB (2012) wrote that since 2012, the Asian Development Bank (ADB) has been instrumental in supporting Cambodia's rural development initiatives. With 85% of the population living in rural areas, Cambodia has prioritized rural development as essential for poverty reduction. ADB's involvement includes advocating for policies to enhance agricultural productivity and improve water resource management. Partnering with the government, ADB aligns its support with Cambodia's national development plans, focusing on empowering local communities and addressing core challenges such as stagnant agricultural productivity. Through targeted interventions in policy reform and infrastructure development, ADB is committed to fostering inclusive and sustainable growth, ultimately aiming to improve livelihoods and promote economic prosperity in rural Cambodia. Viseth and Vijit (2016) argued, that Cambodia's journey from strife to thriving

tourism is a testament to resilience. Once ravaged by war and genocide, the nation now shines as a gem in Southeast Asia's tourism crown. Its architectural wonders, steeped in history, beckon travelers from around the globe.

From the majestic Angkor temples, and relics of a glorious past, to the elegant French colonial buildings adorning Phnom Penh's streets, Cambodia's architectural tapestry tells a captivating tale. Siem Reap serves as the gateway to Angkor, captivating visitors with its ancient marvels and vibrant culture.

As tourism burgeons, Cambodia's economic landscape transforms. With strategic policies and international collaborations, the nation aims for sustainable growth, embracing its rich heritage while fostering modern development.

With each passing year, Cambodia's allure grows stronger, its architectural splendors serving as beacons of hope and symbols of a bright future. In this land where the past meets the present, every corner holds a story, inviting travelers to embark on a journey of discovery and wonder.

In the domain of rural development, progress is intertwined with a complex tapestry of challenges and opportunities. While infrastructure improvements and development programs offer promise for addressing enduring obstacles and responding to emerging dynamics, the journey toward rural prosperity remains multifaceted.

Robust indicators act as compasses, guiding stakeholders in making informed decisions and tracking progress effectively. Moreover, international agreements like the

MoU Paris 2030 underscore the global commitment to integrating sustainability into rural development agendas, signaling a collective effort towards shared goals.

However, amidst broader initiatives, addressing the unique challenges faced by women in rural areas is crucial. Gender disparities continue to pose significant barriers to inclusive development, emphasizing the importance of targeted interventions and policies that empower women as agents of change.

In conclusion, rural development is a collaborative endeavor that demands holistic approaches, innovation, and inclusivity. By leveraging comprehensive indicators, fostering partnerships, and prioritizing gender equality, we can aspire towards a future where rural communities thrive in resilience, sustainability, and equitable prosperity.

2.1.7 Concept of Sustainable Development and Goals(SDGs)

Sustainable development is a global paradigm aimed at meeting present needs without compromising the ability of future generations to meet their own. It integrates economic prosperity, social equity, and environmental protection, recognizing their interconnectedness. By promoting inclusive growth, reducing inequality, and conserving natural resources, sustainable development seeks to build a more resilient and equitable world. This concept embodies a multifaceted approach to addressing contemporary challenges while ensuring a sustainable future for all.

Mihai, F.-C., and Corneliu, Latu T. (2020) explored sustainable rural development within the framework of Agenda 2030, emphasizing the complexity of rural environments and the need for adaptable objectives and metrics. While Agenda 2030 sets ambitious goals,

effective implementation requires cohesive policy frameworks and region-specific approaches. The authors highlight the role of the 17 Sustainable Development Goals (SDGs) and the Paris Agreement in reducing rural-urban disparities and fostering inclusive development. They advocate for collaboration among academia, policymakers, and civil society to ensure sustainable rural development that integrates socio-economic, environmental, and cultural dimensions.

Mohsen (2021) examined the relationship between cultural heritage conservation and rural development in *Cultural Landscape and Rural Development*. He emphasized the significance of rural architectural heritage in shaping community identity and progress. While advocating for preservation, he acknowledged challenges such as public misconceptions and limited resources. Sartipipour proposed collaborative strategies involving governments, NGOs, and local communities, suggesting solutions such as building restoration and adaptive reuse. Ultimately, he urged collective efforts to safeguard rural heritage, framing it as essential for economic growth and community resilience.

Francesca, N. (2017) traced the evolution of the sustainable development (SD) concept from the 1970s to the present, emphasizing its three pillars: environmental, economic, and social. She discussed the definition provided by the Brundtland Report and subsequent efforts to operationalize SD through international conferences and action plans, including the 2030 Agenda for Sustainable Development and the New Urban Agenda. The role of cultural heritage in sustainable development was examined, with references to its inclusion in global frameworks. The text highlights the need for operational tools to assess the impact of cultural heritage conservation and emphasizes

the interconnectedness of economic, social, cultural, and environmental systems in achieving sustainable development.

Koenraad, V. B., and Aziliz, V. (2021) analyzed UNESCO's 2013 Hangzhou Declaration, which aimed to establish culture as the fourth pillar of sustainable development alongside society, environment, and economy. However, the 2015 Sustainable Development Goals (SDGs) did not fully integrate this perspective. The concept of culture as a fourth pillar was first introduced by Hawkes in 2001, stressing its importance in public planning. Despite ongoing advocacy, culture's integration into sustainable development frameworks remains limited. The *Cultural Heritage Counts for Europe* Consortium proposed a four-pillar approach to assess the impact of cultural heritage on sustainability. Their findings contributed to a shift in perspective known as the "upstream approach," influencing policy recommendations that promote cultural heritage in local development strategies.

According to ICOMOS (2022), *Heritage and the Sustainable Development Goals: Policy Guidance for Heritage and Development Actors* provides a crucial framework for integrating heritage conservation into sustainable development initiatives. The guidance recognizes cultural heritage's intrinsic value in achieving SDGs related to poverty alleviation, environmental sustainability, and social inclusion. It underscores heritage's role in fostering resilience, identity, and economic growth, urging policymakers and development actors to incorporate heritage considerations into their strategies. Through this holistic approach, sustainable development can be achieved while safeguarding diverse cultural legacies worldwide.

Mohanna (2023) explores the intersection of culture, spirituality, and sustainable cultural tourism at World Heritage Sites. As an Assistant Professor specializing in Tourism and

Sustainable Tourism Development, Nikbin's research provides valuable insights into heritage preservation and tourism growth. By synthesizing existing literature, the study offers a comprehensive understanding of strategies and best practices for ensuring the sustainable management of cultural heritage sites. This work contributes significantly to the discourse on sustainable development, emphasizing the need to balance economic growth with cultural and environmental preservation in tourism planning and management.

Puthearath (2023) argues that Cambodia is progressing toward a green economy through strong political commitment and strategic sustainable development initiatives. Led by the National Committee for Sustainable Development (NCSD), collaboration with subnational leaders ensures effective green growth efforts. The Department of Green Economy (DGE) plays a key role in policy formulation and resource mobilization, focusing on sustainable cities, energy efficiency, and the circular economy. Cambodia integrates green principles into its national strategies, prioritizing growth, equity, and sustainability in alignment with long-term development goals. This transition is expected to reduce environmental impact, enhance livelihoods, and preserve cultural heritage.

Richard and Sharon (2008) highlight the delicate balance between preserving cultural heritage and promoting sustainable development in the Angkor region. Their work underscores the importance of integrating conservation efforts with the socio-economic development of local communities. Sustainable development in this context requires initiatives that safeguard Angkor's historical and cultural significance while ensuring the well-being of present and future generations. These efforts include responsible tourism practices, community engagement, and environmental conservation to maintain a

balance between preservation and progress. Through collaborative efforts guided by such research, stakeholders can work towards a future where Angkor's heritage thrives in harmony with sustainable development principles.

The *Kingdom of Cambodia and UNESCO* (2010) emphasize the critical role of sustainable development in preserving the Angkor site. Sustainable development initiatives stemming from this decision focus on conserving the temple's architectural and cultural integrity while supporting the socio-economic needs of surrounding communities. Strategies include responsible tourism management, community engagement, and environmental conservation to ensure that the site's heritage is safeguarded for future generations. By adhering to these principles, stakeholders can work towards a sustainable future where Banteay Srei Temple continues to inspire and enrich both local communities and global visitors.

Brigitta (2017) explores how the preservation of sites like Angkor can serve as catalysts for sustainable development in the region. The study discusses strategies for leveraging UNESCO listings to promote responsible tourism, community empowerment, and environmental conservation. By emphasizing the importance of holistic approaches to heritage management, the document advocates for initiatives that balance heritage preservation with socio-economic progress. This ensures that Cambodia's cultural treasures benefit both present and future generations while fostering sustainable development on a broader scale.

The various perspectives on sustainable development presented here underscore the intricate relationship between heritage preservation, socio-economic progress, and environmental sustainability. Scholars such as Mihai and Corneliu stress the adaptability

required in rural development within Agenda 2030, advocating for cohesive policy frameworks that integrate the SDGs and the Paris Agreement. Mohsen highlights the significance of conserving cultural heritage in rural areas, emphasizing collaborative strategies for economic growth and community resilience.

Francesca's examination of sustainable development's evolution emphasizes the interconnectedness of economic, social, cultural, and environmental systems. Koenraad and Aziliz discuss UNESCO's efforts to integrate culture into sustainable development frameworks, while Puthearath showcases Cambodia's progress towards a green economy.

Richard and Sharon's focus on the delicate balance between heritage preservation and sustainable development in the Angkor region underscores the importance of community engagement and responsible tourism practices. Documents such as those from the Kingdom of Cambodia and UNESCO underscore the imperative of preserving cultural integrity while supporting local socio-economic needs.

Overall, these contributions highlight the need for holistic approaches to heritage management and sustainable development, ensuring that cultural treasures benefit present and future generations while fostering socio-economic progress and environmental conservation.

2.1.8. Relationship between Sustainable Development (Includes SDGs) and Sustainable Heritage Management (SHM)

In rural and heritage areas, sustainable development is closely intertwined with sustainable heritage management, as cultural and natural assets are integral to community identity, economic prosperity, and environmental conservation. Sustainable development aims to meet present needs without compromising the future, encompassing economic, social, and environmental dimensions. Sustainable heritage management involves conserving and promoting cultural and natural resources while contributing to local development and fostering resilience.

These areas rely on preserving and sustainably using their unique heritage sites, traditional knowledge, and landscapes, which hold significant cultural, historical, and economic value. Managing heritage in these contexts requires balancing conservation efforts with socio-economic development and environmental stewardship.

However, rural and heritage areas face specific challenges like depopulation, economic marginalization, and environmental degradation. Tailored approaches are needed, leveraging cultural heritage assets to address these challenges. By integrating heritage conservation into sustainable development, these areas can realize their potential as drivers of inclusive growth, environmental sustainability, and cultural vitality.

According to Ana and Ron (2014) wrote that the relationship between sustainable development and cultural heritage management is pivotal in today's society. Sustainable development, aiming for economic growth, environmental preservation, and social equity, increasingly acknowledges culture as a vital connector between community needs and development objectives. Organizations like the International Finance Corporation and UNESCO advocate for integrating cultural perspectives into sustainability strategies. Cultural heritage management involves preserving and interpreting tangible and

intangible cultural assets, guided by UNESCO conventions. These conventions highlight the interplay of cultural heritage with sustainable development, emphasizing innovative and inclusive management approaches. Moreover, the intrinsic value of cultural diversity in global discourse reinforces this relationship. Efforts to manage cultural heritage in a globalized context underscore the need for strategic focus, particularly on intangible cultural heritage, and its contribution to sustainable development. In summary, the bond between sustainable development and cultural heritage management is mutual, with both recognizing their significance in achieving environmental stewardship, social equity, and cultural preservation for present and future generations. Mateja et al., (2015) argued that the perception of heritage preservation has shifted from hindering economic progress to being recognized as a valuable asset for development. Scholars emphasize the synergy between heritage preservation and economic growth, acknowledging its multifaceted benefits. Cultural heritage, once valued solely for its cultural significance, is now appreciated for its economic, social, ecological, and cultural potential. Stakeholders recognize tangible and intangible elements of heritage as contributors to various developmental aspects. Assessing heritage's economic and social value involves factors like gross added value, tourist visits, community empowerment, and skill development. Sustainable heritage management practices also support ecosystem stability. Additionally, heritage preservation enhances personal creativity, satisfaction, and cultural vitality, leading to more sustainable and inclusive development practices for present and future generations. David et al. (2013) argued that the relationship between cultural values and rural development in "Cultural values and sustainable rural development: A brief introduction." They highlight rural areas' transition from traditional agriculture to activities

like tourism, which offer economic growth and cultural preservation. Tourism celebrates local culture and natural features, enriching communities and boosting competitiveness. Cultural heritage management, including initiatives like medicinal plant use and heritage preservation, contributes to rural development. Community involvement, political backing, and innovative marketing are crucial for effective cultural resource utilization. Integrating cultural values into rural development strategies requires creativity, local engagement, and a bottom-up approach for sustainable outcomes benefiting both visitors and communities. Peter and Eva (2017) wrote that the relationship between sustainable development and heritage management in Sweden has evolved. Initially, there was a division between nature conservation and heritage management, with nature conservation primarily linked to environmental politics. However, there has been a shift towards more integrated approaches under the umbrella of sustainable development. Forested areas, in particular, have been marginalized due to their association with nature, leading to the neglect of their cultural heritage. In the context of ecological modernization, both nature and cultural heritage are viewed as commodities, potentially exacerbating the urban-rural divide and marginalizing rural communities. Nonetheless, heritage sites can serve as boundary objects in local communities, fostering community pride and serving as meeting places. Therefore, there is a call for increased community participation and public communication within the heritage sector, especially in marginalized forested landscapes, to promote local heritage understanding and creative local processes. Tolina (2007) argued that cultural heritage and sustainable development, while historically treated as independent concepts, are increasingly recognized as interconnected. Cultural heritage, characterized by dynamism and complexity, holds

intrinsic value. Sustainable development, the prevailing paradigm, seeks to balance economic, environmental, and social goals. This paper explores the integration of these concepts through a trans-disciplinary approach, aiming to establish a unified theoretical framework and enhance practical applications. By identifying common principles, leveraging multidisciplinary perspectives, and innovatively addressing holistic concerns, the paper advocates for a comprehensive synthesis to bridge the gap between cultural heritage and sustainable development. Stefano (2014) wrote that Myanmar's transition towards political openness and engagement with the international community since 2011, leading to economic growth and socio-political development. It emphasizes the country's potential for further development, with a focus on utilizing its cultural heritage as an untapped asset. Cultural heritage is recognized as integral to Myanmar's economy and society, offering opportunities for economic growth, social cohesion, and environmental sustainability. It proposes a three-dimensional approach to analyzing how effective management of cultural heritage properties could contribute to achieving development goals. It also suggests the importance of international engagement, including potential benefits from the EU's involvement in cultural preservation projects in Myanmar. Overall, the text underscores the relationship between sustainable development and heritage management as crucial for Myanmar's future progress. Labadi et al., (2021) wrote that the "Heritage and the Sustainable Development Goals: Policy Guidance for Heritage and Development Actors" document, authored by Sophia Labadi, Francesca Giliberto, Ilaria Rosetti, Linda Shetabi, and Ege Yildirim in 2021, underscores the pivotal role of heritage in addressing the United Nations Sustainable Development Goals (SDGs). It outlines how heritage, both natural and cultural, tangible and intangible, can contribute to sustainable

development. The document comprises 17 policy sections, each focusing on a specific SDG, providing a baseline analysis, policy statements, and case studies to demonstrate practical implementation strategies. Emphasizing the interconnected nature of the SDGs, the document highlights heritage-based approaches as vital contributors to sustainable development. It concludes with recommendations for further refining the guidance and developing implementation strategies in alignment with the SDGs Working Group's strategy for the Decade of Action. The policy statements are grounded in the "5 Ps" underlying the 2030 Agenda, calling for the mobilization of knowledge and resources transmitted through heritage to achieve well-being, promote a 'Culture-Nature' approach for environmental sustainability, utilize shared heritage resources for community prosperity, and leverage heritage's connecting power for social cohesion and dialogue.

In the meanwhile, in the local communities, Thyl et al, (2006) wrote about the challenges and opportunities in achieving sustainable development in Angkor, Cambodia, focusing on social, environmental, and financial aspects related to conserving cultural heritage. With the exponential increase in tourism to Angkor since 1995, the neighboring city of Siem Reap has witnessed rapid growth, straining local infrastructure and services. While tourism provides significant foreign currency for Cambodia, it also intensifies pressure on Angkor's cultural and natural resources, including water supply. The study investigates the impacts of tourism on residents through face-to-face interviews with souvenir vendors and households residing in Angkor. It reveals that revenues from park entrance fees could be leveraged to revitalize Angkor and fund community development projects. This underscores the potential of sustainable tourism to contribute to both conservation and local economic development. The text highlights the importance of balancing economic

gains from tourism with the preservation of cultural heritage and environmental sustainability for the long-term well-being of Angkor and its communities. Chheang (2010) argued that sustainable development and heritage management using Angkor as a case study. It discusses the challenges posed by tourism growth at the World Heritage Site and its impact on sustainability. Perceptions from tourists, locals, and experts are integrated to assess tourism's effects on heritage conservation and sustainable development. While tourists generally report satisfaction with Angkor visits, local communities, especially the poor, receive marginal benefits, exacerbating socio-economic disparities. The widening rich-poor gap, driven by tourism-driven inflation and uneven benefit distribution, is emphasized. Jonathan (1995) wrote that sustainable development and heritage management are evident in the case of Angkor, a World Heritage Site. Jonathan Wager's paper discusses the need for a strategy to manage Angkor, which contains the remnants of the Khmer Empire. To ensure its preservation, a zoning plan and legal framework were required upon inscription. Tourism plays a significant role in the site's economy, prompting the need for sustainable development practices. The zoning plan aims to balance the protection of archaeological sites with the development of tourism and urban and rural areas. Government agencies are being established to oversee site management and regulate development, highlighting the importance of integrating heritage management with sustainable development strategies.

The symbiotic relationship between sustainable development and heritage management is crucial, championed by scholars like Ana P. R., Ron v. O., and others. They emphasize the pivotal role of culture in sustainable development, advocated by organizations like the International Finance Corporation and UNESCO. Mateja Š. H. et al. argue that heritage

preservation now serves as an asset for development, with Stefano F. highlighting Myanmar's cultural heritage's potential contributions. Labadi S. et al.'s document emphasizes heritage's role in addressing UN SDGs, while Thyl D. L. et al. and Chheang V. discuss challenges and opportunities in achieving sustainable development in Angkor, Cambodia. Together, these contributions underscore the essential link between sustainable development and heritage management in ensuring environmental stewardship, social equity, and cultural preservation for generations to come.

2.1.9 Poverty

Poverty remains one of the most pressing challenges facing humanity, transcending borders, cultures, and economies. Defined by a lack of access to necessities such as food, shelter, healthcare, and education, poverty not only hampers individual well-being but also undermines societal progress and stability. Despite global efforts to alleviate poverty, millions continue to grapple with its harsh realities, perpetuating cycles of deprivation and inequality. Understanding the multifaceted nature of poverty is crucial for developing effective strategies to combat it and foster a more equitable and sustainable future for all.

Wikipedia, (2023) has mentioned that rural poverty stems from economic, social, and political factors, causing financial scarcity and resource deficits in non-urban areas. Limited infrastructure and market access worsen economic disparities, particularly affecting marginalized groups like women who struggle to access land, education, and support. Policies such as rural electrification and gender equality initiatives aim to improve technology and credit access in rural areas. Scholars link rural poverty to spatial

inequality, especially in developing countries. Despite efforts, eradicating rural poverty remains a global challenge, worsened by climate change's impact on agriculture. Sustainable Development Goal 1: No Poverty emphasizes investing in sustainable food systems (Sustainable Development Goal 2: Zero Hunger) to uplift rural communities.

David and Andrew (2002) have mentioned the concept of chronic poverty, exploring its meaning and the factors contributing to its persistence. It examines who is chronically poor, why they remain in poverty, and what policies can address chronic poverty. Despite limited knowledge, it's evident that millions are affected, and addressing chronic poverty requires increased social protection financing. The paper also discusses recent advancements in conceptualizing and studying poverty dynamics. Overall, it underscores the importance of understanding and addressing chronic poverty to achieve meaningful reduction. And later David, H. and Andrew, S., (2003) also analyzed that poverty is a complex issue, with debates revolving around whether it's absolute or relative. It explored chronic poverty's enduring nature, while the work examined its intersection with ideology, governance, and historical contexts.

The synthesis of poverty line definitions highlights how different perspectives shape social policies. By considering both absolute and relative dimensions, it offers a framework for addressing poverty across diverse contexts.

Overall, poverty is dynamic and intertwined with social, economic, and political factors. Effective alleviation strategies require nuanced approaches that recognize their complexities and impacts on individuals, communities, and societies.

Siddiquir and ADB (2023) wrote about three key concepts in understanding poverty: capability, vulnerability, and social exclusion the first one is the capability approach: Poverty is viewed as the lack of essential capabilities for well-being, such as nutrition, shelter, and health, community participation, and dignity. This approach sees poverty as multidimensional, beyond just income.

Second is vulnerability: It refers to the risk of falling into poverty due to sudden shocks, whether economic or non-economic. Understanding vulnerability is crucial for effective poverty reduction policies.

The final is social exclusion: This concept involves individuals or groups being excluded from various social aspects like employment, education, and political participation. It extends beyond material well-being to include agency freedom.

These concepts offer a nuanced understanding of poverty, emphasizing capabilities, risks, and social dynamics in addressing deprivation effectively. According to Xuejun Duan, (2020): poverty is a complex multiple threads of deprivation, each strand unique to its context and community. Poverty speaks its own language, whispered in varied terminologies across cultures.

Within the folds of poverty lie financial pressure, economic tragedy, social isolation, environmental burdens, and seasonal hardships, each dimension connecting to reinforce the others.

Yet, poverty is not a monolith; it wears different faces shaped by individual circumstances and contextual realities. Gender, race, and age all leave their imprint, carving unique paths through the landscape of deprivation. Only by acknowledging these

variations can analysts paint a true picture of poverty, capturing its diverse manifestations across different demographics and locales.

To classify and confront poverty effectively, one must evaluate both its acute deprivations and its relative standings within society. Udaya (2002) has shown the multidimensional nature of poverty and critiques traditional approaches that narrowly define poverty solely based on economic indicators. Scholars argue that poverty encompasses factors such as individual capabilities and social exclusion.

The traditional economic well-being approach to poverty focuses on income, consumption, and welfare measures. However, scholars suggested that this approach fails to capture the complex interplay of factors that contribute to poverty. It was introduced also the capability approach, which emphasizes individuals' ability to achieve functioning and achieve a desirable quality of life.

Ganchimeg (2023) described the exploration of the relationship between sustainable livelihood outcomes and poverty reduction, particularly focusing on rural households in Mongolia. Livelihood outcomes, such as increased income and enhanced food security, contribute to poverty reduction. However, challenges persist, including ecological degradation and the limited understanding of pasture sustainability among herders. It emphasizes the need for analyzing household livelihood strategies to promote sustainable development and implement effective policy interventions. Additionally, it discusses evolving perspectives on poverty alleviation, highlighting the importance of strengthening local economies and fostering comprehensive skills to eradicate poverty in the long term.

Besides this the situation in Cambodia, especially in the Siem Reap province, where there are many tourists attracted by Angkor Heritage. According to Miller (2017): in Siem Reap, Cambodia, the education system still struggles with the tragedy of the Pol Pot regime, resulting in low educational attainment and barriers to schooling. Poor infrastructure, inadequate resources, and low teacher salaries contribute to absenteeism and compromised instruction. Additionally, informal fees and corruption further burden families, leading to widespread cheating and exam irregularities. As a result, marginalized children face significant hurdles in accessing consistent education, perpetuating the cycle of poverty and hindering their opportunities for advancement.

Kimchhin, S., (2019) wrote that in Cambodia, despite moderate economic growth, poverty remains a significant obstacle to development, particularly in areas near Tonle Sap Lake and Battambang Province. Rural communities, dependent on agriculture and fisheries, face limited access to education, healthcare, and infrastructure. Large households with young dependents struggle to find income beyond traditional sources, perpetuating inequality. Poor education and health struggle with the situation, with inadequate access to clean water leading to preventable diseases. Limited job opportunities further hinder economic progress, compounded by disputes over land ownership and resource privatization. These factors underscore the complexity of poverty in Cambodia's rural regions.

Nara (2015) mentioned the role of tourism in local economies, emphasizing its potential to alleviate poverty by providing employment opportunities and contributing to infrastructure development. Tourism generates employment, income, and indirect

benefits like improved education and health services. It's noted that tourism jobs often offer better working conditions. Furthermore, tourism tends to create employment opportunities for low-skilled and semi-skilled workers, especially benefiting poor, female, and younger workers.

Poverty is a multidimensional issue, encompassing various challenges such as health, education, unemployment, and natural disasters. Poverty is defined not only by income but also by factors like health, education, and access to basic services. Scholars propose different approaches to address poverty, highlighting the importance of understanding its causes and implementing targeted strategies.

Chheang (2010) argued that poverty in the context of tourism growth at Angkor, a World Heritage Site. Despite tourists expressing satisfaction with their visits, local communities, particularly the poor, receive minimal benefits, leading to widening socio-economic disparities. This poverty is worsened by tourism-driven inflation and the unequal distribution of benefits. The power struggle between heritage conservationists and tourism developers adds to the complexity, further marginalizing impoverished communities. To address this, the text advocates for sustainable heritage tourism, emphasizing the importance of positive tourist experiences, local participation, and collaboration among stakeholders. Fair economic distribution is identified as a crucial pillar in alleviating poverty and promoting balanced development in the region.

The above description indicates that poverty is a multifaceted issue with far-reaching implications for individuals, communities, and societies. In rural areas, economic, social, and political factors intertwine to perpetuate financial scarcity and

essential resource deficits. Despite efforts to address rural poverty through initiatives like rural electrification and gender equality policies, economic disparities persist, particularly affecting marginalized groups. Scholars highlight the complexities of poverty, exploring concepts like chronic poverty, capability, vulnerability, and social exclusion. Understanding poverty's multidimensional nature is crucial for developing effective strategies to combat deprivation and foster inclusive development. Moreover, in regions like Cambodia, tourism's impact on local economies presents both opportunities and challenges in poverty alleviation. Sustainable heritage tourism, with a focus on equitable economic distribution and community empowerment, emerges as a promising approach to address poverty while preserving cultural heritage. Overall, confronting poverty requires comprehensive, context-specific interventions that address its root causes and empower individuals and communities to build sustainable development, sustainable heritage management, and resilient futures.

2.1.10 Microfinance

Sustainable microfinance plays a crucial role in combating poverty and promoting inclusive development globally. It addresses various aspects of socio-economic well-being by connecting marginalized communities to financial services, enhancing financial literacy, and building resilience. Especially in rural areas, it ensures fair resource distribution and fosters community development. Additionally, it empowers women and contributes to gender equality by providing access to credit. Moreover, it promotes environmentally sustainable practices and supports economic engagement, laying the foundation for sustainable livelihoods and community empowerment. This document explores the

complex interactions between sustainable microfinance and its impact on poverty reduction, gender equality, climate resilience, and agricultural sustainability, highlighting its transformative potential in building resilient and prosperous communities worldwide. Philippe (2023) argued that sustainable microfinance offers vital financial services to low-income individuals or groups, fostering economic development and poverty reduction. It focuses on environmentally resilient businesses, such as renewable energy or organic farming, promoting both sustainability and entrepreneurship. Grameen Bank, exemplifying this model, provides small loans without collateral, empowering women and fostering community support through group lending. Apriani et al. (2023) mentioned that the sustainability of microfinance relies on theories like social capital, institutional, and human capital. The human capital theory emphasizes the skills and knowledge within microfinance institutions, which seek profit through credit and savings services, expanding access to finance. Loans aid business growth, empowering the economically disadvantaged. Managing financial challenges is vital to prevent mismanagement and fraud. Enhanced financial literacy, supported by software, improves both institutional and personal financial management, benefiting cooperative and industry performance. It enables leaders to navigate economic shifts and ensure long-term viability. Sustainable microfinance thrives on proper financial literacy and community involvement, including gender-targeted programs in rural areas. This presentation advocates for sustainable green microfinance, using evidence from Indonesia's financial literacy index.

Rupali and Namrata (2021) stated that microfinance is crucial for fighting poverty globally, affecting economic, social, political, cultural, and environmental spheres. To ensure sustainable living, microfinance should prioritize long-term community well-being,

empowering the poor beyond just financial aid. In the 1970s, microfinance evolved to integrate social and economic aspects, aiming for sustainability by reaching many poor individuals and establishing sustainable microfinance institutions. Access to microfinance increases income and resources for livelihoods, making it a practical tool for sustainable economic development. This study analyzes sustainable livelihood methods, assesses microfinance's impact on rural livelihoods, and suggests effective policies for sustainable outcomes. Frederick Affum (2020) emphasized that microfinance encompasses various financial services such as loans, deposits, insurance, and remittances provided to the poor, typically by institutions like NGOs, credit unions, or commercial banks. It includes both financial and non-financial services aimed at empowering individuals, particularly women, in society. In Ghana, microfinance is delivered through official, semi-formal, and informal channels. Studies show that microfinance positively impacts women's empowerment by providing access to capital and training, leading to increased economic productivity and household spending. Microfinance projects have significant effects on improving livelihoods, particularly among women and their families. To sustain these positive impacts, microfinance institutions should enhance marketing and education efforts targeting market women, providing them with financial literacy and management training to support their micro-enterprises.

Regarding global microfinance, FFTC (2023) has shown that microfinance is pivotal for global economic development and poverty reduction, offering accessible financial solutions to individuals and businesses, particularly those with low incomes. Achieving financial inclusion is crucial for meeting the UN's Sustainable Development Goals by 2030. Microfinance institutions (MFIs) have tailored products to address the needs of

underserved populations, improving livelihoods and empowering communities worldwide. Studies affirm microfinance's positive impact on poverty reduction, asset acquisition, education, health, women's empowerment, and societal cohesion. It diversifies household income, manages expenses, and builds resilience to economic shocks, notably benefiting urban and rural clients in countries like India, Uganda, and Zimbabwe. To further support vulnerable populations, microfinance should expand to include micro-insurance services, managed by professional insurance companies, ensuring quality services and enhancing risk resilience in disaster-prone areas.

For local microfinance in Cambodia, Izah and Siti (2015) studied the efficiency and productivity of Cambodian microfinance institutions from 2008 to 2011. Overall, these institutions showed 92% efficiency during this period, indicating an 8% input waste. The Cambodian economy during this time remained stable, with GDP growth averaging 6% to 7% annually, low unemployment, and stable inflation. However, there was a need for economic diversification, particularly in rural areas, to address low agricultural incomes. While there has been an increase in the number of financial institutions and active customers, there is still limited research on the effectiveness of microfinance. The study found that while microfinance institutions improved in technology and input management skills, there was little progress in overall productivity, except for certain institutions like ACLEDA. The findings contribute to policy-making and promote further research on microfinance effectiveness in Cambodia and the ASEAN region.

Moeung (2008) stated that the study examined the efficiency and productivity of Cambodian microfinance institutions from 2008 to 2011. Despite a stable economy with GDP growth and low unemployment, there's a need for rural economic diversification.

While there's been growth in financial institutions and customers, research on microfinance effectiveness remains limited. Although some institutions improved in technology and management skills, overall productivity saw little progress. The findings inform policy-making and encourage further research in Cambodia and the ASEAN region. Meanwhile, Phon and Bun (2022) wrote about the impact of loans on Cambodian households' livelihoods, including income, consumption, education, and wealth. Data from AMK in 2007, 2012, 2013, and 2014, surveyed in 18 provinces, highlight this impact. Loans, particularly from AMK, positively influence education and health expenses, increasing education costs by 12.39% annually and health expenditures by 1.03%. They also contribute to a 4% rise in household income and an improvement in total land use. However, most clients have lower education levels, indicating a need for increased access to credit, especially in agriculture, to enhance livelihoods nationwide.

2.2 Empirical Review

2.2.1. Types of Heritage and Heritage Management Practices in Different Countries

There are various types of heritage that define human civilization, shaped by different contexts, philosophies, and interpretations related to both tangible and intangible heritage. National and universally significant heritage sites must be conserved and managed to ensure cultural, social, economic, and environmental benefits for both present and future generations.

According to UNESCO (2020), the Convention proposed considering cultural heritage as encompassing monuments, including architectural works, sculptures, and historical paintings from different periods. It also includes elements or structures of archaeological

significance, ancient inscriptions, cave dwellings, and characteristic forms that hold unique historical, cultural, artistic, or scientific value.

Heritage is classified into three main categories:

- **Groups of Buildings:** These may be independent structures or groups of buildings that are linked through architectural design or their connection with the surrounding landscape.
- **Heritage Sites:** These include locations influenced by human activity or a combination of human and natural elements. They are recognized for their high cultural, historical, aesthetic, or scientific significance, encompassing fields such as ethnology and anthropology.
- **Natural Heritage:** This refers to exceptional natural features, both physical and biological, that hold unique scientific or aesthetic value. From a conservation standpoint, these include geological and physiographical formations, as well as areas critical for the preservation of animal and plant life (UNESCO, 1972).

Timothy & Boyd (2003) classify heritage into two broad categories: cultural and natural heritage. Cultural heritage results from human interaction with nature and includes infrastructures such as buildings, transportation networks, parks, and other urban developments. Both cultural and natural heritage can be further categorized into tangible and intangible heritage.

- **Tangible Heritage:** Includes immovable assets such as buildings, rivers, and natural landscapes, as well as movable objects.
- **Intangible Heritage:** Comprises values, customs, ceremonies, traditions, and experiences such as festivals, artistic expressions, and cultural events.

Heritage monuments represent one aspect of cultural heritage, while natural heritage includes landscapes, ecological zones, and environmental sites, which are formed through the dynamic relationship between nature and human civilization.

According to the Council of Europe Publishing (2001), landscapes are also an essential aspect of heritage. Landscape heritage plays a crucial role in ecology, environmental conservation, and society, as it contributes to cultural identity and creative endeavors. Natural heritage significantly impacts human life by influencing lifestyle and socio-economic development. For example, Slovenia's landscape regionalization follows specific criteria such as climate, geology, land cover, and ecological uniformity.

J. Resour. Ecol. (2014) highlighted that agricultural heritage is another vital aspect of heritage. The Food and Agriculture Organization (FAO) introduced the concept of dynamic global management concerning agricultural heritage systems, recognizing their historical and ecological importance. Agricultural heritage represents centuries of human adaptation and coexistence with nature. Examples include the Ifugao Rice Terraces in the Philippines, the European wine regions, Noto's Satoyama and Satoumi in Japan, and the Honghe Hani Rice Terraces in China. These sites reflect a unique blend of natural and human landscapes and house diverse biological resources.

In addition to natural landscapes, some heritage sites exist beneath the earth's surface, such as caves and underground tunnels. Nicholas R. (2015) reported that Karst landscapes, including cave systems, cover approximately 30,000 km² in Laos, spanning multiple provinces. These geological formations hold significant cultural and historical value, attracting tourism and supporting local economies. For instance, in Savannakhet province, caves have been used for religious and spiritual practices by Buddhist

communities and ethnic groups. These caves and Karst formations serve as essential cultural and economic resources for local populations.

Alberto (2013) discussed underwater cultural heritage, particularly shipwrecks, which represent a unique category of heritage. However, underwater heritage extends beyond shipwrecks to include submerged cities, religious sites, ancient harbors, prehistoric landscapes, and fish traps. Not all shipwrecks qualify as underwater cultural heritage; for instance, contemporary shipwrecks are generally excluded unless they meet specific historical or cultural criteria. To be classified as underwater cultural heritage, assets must have been submerged for a significant period and hold historical or archaeological importance.

The remnants of human civilization, preserved as cultural experiences, include artistic expressions and underwater heritage. These submerged sites may consist of structures, buildings, artifacts, and human remains, along with their archaeological and natural contexts. Additionally, wrecks such as vessels, aircraft, and other vehicles—or any of their parts, cargo, or contents—are also considered part of underwater heritage when associated with significant historical, archaeological, or environmental value.

2.2.2 Impact of Heritage Management Practices in Different Countries

In heritage management, there are most positive and small negative impacts. The negative impact is concerning the question of unexpected problems, technical issues, and lack of implementation according to the philosophy of associations or expertise.

According to Chheang (2009), more often the impacts of tourism in developing countries can be positive and negative, these are advocacy and cautionary.

The first one brings the benefits from tourism such as economic benefits, offering many jobs, earning money, promoting local products, generating resources and other activities; and especially sociocultural benefits, promoting the knowledge of capacity building, education, encouraging and preserving local cultural heritage, and creating a sense of pride on a global stage. On the other hand, the second platform brings negative impacts. It brings the problem of inflation, and decreasing unemployment with the dependency on different factors such as seasons, the spread of disease, economic crisis, obstacle development, declining resources, and polluting environment; and sociocultural problems are: conflict in leadership from misunderstanding, discrimination of race in humankind, fast westernization and overload of tourists creating the social pollution and damaged the local culture, especially the crime from human smuggling and prostitution.

According to Gnanapala and Sandaruwani (2016), an important industrial is tourism for Sri Lanka as an economic benefit. Sri Lanka is in the top fifth place in Asia, the largest source of foreign visitors. It earned the national economy in 2015. Sri Lanka as a developing country uses the strategies and goals for economic growth to achieve the development of tourism with effectiveness. In the year 2016, Sri Lanka attracted 2.5 million tourists. The result of the good impact is from heritage management. The findings displayed that when the positive impact had benefited from the economic and sociocultural advantages, some problems are concerned such as increasing number of tourists, conflicts of interests, unauthorized constructions and modifications, discrimination or misunderstanding of life conditions between poor and rich in the local communities, etc. World Bank Group & GFDRR (October, 2017) wrote, that the cultural historical past is easy to be influenced by the negative impacts of natural falling, and changing climate

including the pressure of planning work. The background of the cultural property can be lost because of some factors of lacking the traditional knowledge of the regional heritage of the world. Urbanization and the combination of interests can be effective power, for example, adjusting land use or zoning can expose cultural history to additional problems. When the damage of the infrastructure with additional disaster, preservation is still able to be carried out. However, it can be unchangeable and can affect the financial loss because of the need for the absence of living standards.

Gabriel (2012) wrote, that as heritage management involves planning and execution of the necessary structures that will give the place its historical, cultural, traditional, and emotional uniqueness, specialized workforce and training are needed for heritage rehabilitation, promotion, and for managing and taking care of it a long time. Heritage preservation impacts the economy, for example, past research shows that in the state of Georgia, the USA for every million dollars of automobile production jobs are created. Another analysis performed in Norway showed that heritage building rehabilitation creates nearly 17 percent more workplaces than a new construction project.

This kind of project can bring the plan of the economic effectiveness, the landscape and constructing and renovating buildings, including cultural performances and services. It will generate the growth of jobs and workplaces and attract activities for the potential economy in the area. At the same time, it is an opportunity for capacity building for the new employees that adapted to the future jobs for tourism facilities related to heritage sites. It will contribute to the development of providing services. Sustainability in terms of heritage, the sustainable development for the sustainability of strategy generates economic growth by using carefully natural resources while protecting the environment

and social responsibility. Sustainability heritage management takes care of mankind's capital to avoid negative impacts such as: the natural capital like the environment and its biodiversity, which are very important for human life and keeping the raw materials for development; for the social and cultural capital: taking care about the whole connections of rule and the significances of the interaction of human being in term of culture and tradition; the care about human capital: development in continuity of education, capacity building, soft and hard skills, spiritual needs of fulfilling human; and the last one of the built capital is an issue point can have the impact such as the services in the areas of architecture, transport, machines, technology and infrastructure. Heritage management can influence the harmony between economic competitiveness, nature, culture, history, architecture heritage preservation and the environment. It is significant for boosting development sustainable for the next generations and preservation and economic, social, and cultural aspects have often led to the irreversible decay and destruction of heritage assets over time.

McLoughlin et al. (2007) argued, assuming the frequent studies of impact research until now mostly looked for the affected size at the recent time. These studies assumed an enlarged effect because of the applied model of the historical analysis. By attempting to get the complication, impact from different natural dimensions, various impacted affects, and the offering examining direction to the certain impacts has to be done, it must be the real situations of areas of cultural heritage. Different possibilities of the dimensional impacts are embraced by the impact of the socio-economy, for example, such as economic, individual, social, environmental and so on, on impact possibilities of the applied methods can have advantages and disadvantages. The model of treating impact

has five components such as: the impact context of the cultural heritage site, delegation on site and objectives, relevant participants, the context of the organization and the management context of making decisions.

The holistic impact model consists of five elements: the cultural heritage site (CHS) impact context, the site mission and objectives, the site stakeholders, and the site organizational context/management and decision-making context. With these five components, a heritage site should have an influence and contribution to the potential socio-economic impacts.

2.2.3 Problems and Constraints in Heritage Management Practices in

Different Countries

Achieving effective heritage management requires understanding both its positive and negative impacts. Challenges and constraints are common issues in heritage management and must be thoroughly examined to develop sustainable solutions.

Khalid (2017) argued that urban conservation is an academic discipline that requires expert discussions, often conducted through observation and a flexible system-based approach. These discussions analyze processes for safeguarding urban heritage. One of the key constraints in sustainable conservation programs is the rehabilitation strategy, which involves historical buildings, social development, historic monuments, and urban environments with architectural heritage. Effective institutional practices require adequate financial and technical resources. For instance, ADER-Fez (the Agency for the Densification and Rehabilitation of Fez Medina) implemented structured rehabilitation programs, engaging stakeholders and focusing on the restoration of historical monuments

and housing units at risk of collapse. Infrastructure and urban development initiatives were also carried out while ensuring the safety of human lives. The two primary concerns for present and future generations are preserving cultural heritage and ensuring high-quality architectural construction that aligns with modern life and technology.

According to the World Bank Group and GFDRR (2017), heritage sites are highly vulnerable to environmental degradation and climate change. Urgent measures are needed to mitigate adverse impacts, as heritage destruction can lead to significant economic and cultural losses. Many heritage-related jobs and workplaces have been created to address these risks. Effective management practices must focus on enhancing heritage properties' resilience by preventing hazards and improving disaster recovery strategies.

Aleksandra et al. (2014) highlighted that Serbia faces ongoing challenges in cultural heritage preservation, largely due to economic crises that began in the 1990s and persist today. Weak governmental support, inadequate management strategies, and limited financing and fundraising alternatives exacerbate the situation. A lack of public engagement in cultural programs also affects the appeal of heritage sites. Moreover, uneducated local communities, low living standards, and insufficient awareness contribute to difficulties in heritage preservation.

Audax (2000) examined Africa's heritage management issues, identifying key obstacles such as weathering, erosion, and human activities like vandalism, looting, and illegal trade in valuable artifacts. Additional challenges include insufficient training for heritage professionals, unstable political conditions, inadequate funding, and a lack of research on

preservation techniques. Many governmental agencies struggle with weak heritage protection frameworks, further compromising the sustainability of cultural resources.

Lyndel (1991) emphasized the unintended consequences of policy decisions on cultural heritage conservation. Sharon Sullivan, Executive Director of the Australian Heritage Commission, provided examples of both successes and failures in heritage management, particularly in non-European contexts. She highlighted the crucial role of policy planning in ensuring effective heritage protection. In many cases, poor decision-making has led to the neglect and destruction of cultural heritage, underscoring the need for more responsible governance.

Several government-led infrastructure projects pose risks to cultural heritage. These include the construction of dams, roads, airports, industrial developments, mining, hydrological works, urban expansion, slum clearance, free trade policies, human rights legislation, administrative changes, taxation policies, and education reforms. Such projects can directly or indirectly impact heritage sites, requiring careful assessment and mitigation strategies.

Alberto (2013) explored the complexities of managing underwater cultural heritage, emphasizing its archaeological and historical significance. Risk management is critical, as both human activities and environmental factors threaten underwater heritage. Human-induced threats include direct physical disturbances, vandalism, and treasure hunting. Advanced technology has enabled deeper underwater exploration, increasing the risk of looting and destruction. UNESCO reported that over 160 major shipwrecks have been exploited in recent decades, with more than 50,000 artifacts recovered and sold illegally. Environmental factors such as physical, biological, and chemical changes also contribute

to the degradation of underwater heritage. Addressing these challenges requires stronger legal protections, advanced preservation techniques, and global cooperation in heritage management.

Heritage management faces numerous challenges worldwide, including economic instability, environmental threats, weak policy frameworks, and human activities that compromise preservation efforts. Effective strategies must integrate sustainable financing, education, community engagement, and technological advancements to ensure long-term heritage conservation. By addressing these constraints, stakeholders can develop more resilient and sustainable heritage management practices.

2.2.4 Past Heritage Management Practices in the Study Area

The heritage site of Bakong, as well as the entire Angkor heritage site, is globally renowned as an exceptional cultural landmark. It is the birthplace of the Khmer civilization's cultural, urban, and hydrological perceptions, dating back to the pre-Angkorian period.

According to UNESCO et al. (2013), the Angkor heritage site is a source of national pride for Cambodians. It is a place of extraordinary beauty, rich in history and cultural value for humanity. Cambodia bears the responsibility of conserving and presenting this site as a significant World Heritage property. The Angkor heritage site attracts both national and international visitors, contributing significantly to tourism growth. While this brings economic benefits, it also presents challenges, with negative impacts identified as threats to conservation. Thousands of people live within the Angkor heritage site, and the funds generated from tourism contribute to managing and conserving the site. Conservation efforts follow the four-pillar concept of sustainable heritage management, which includes

the tangible and intangible aspects of cultural, social, economic, and environmental heritage.

Angkor is a living cultural landscape, simultaneously a place of worship, an attraction, and a development zone. The Heritage Management Framework plays a crucial role in conserving the Angkor World Heritage site through collaborative efforts. These efforts are supported by the Royal Government of Cambodia, the Australian Government, and UNESCO, with key contributions from the APSARA National Authority, UNESCO, the International Coordination Committee (ICC), and Australian consultants from Godden Mackay Logan. Angkor remains an impressive symbol of Cambodia's past, present, and future. As part of the global community, we have a collective responsibility to conserve and transmit its Outstanding Universal Value to present and future generations.

Brigitta (2017) wrote that the French were the first to engage in the cultural heritage management of Angkor, recognizing its unique Khmer culture. The famed "discovery" of Angkor by French naturalist Henri Mouhot in 1860 led to its romanticized depiction as a lost civilization hidden in the jungle. The grandeur of Angkor was often used as a symbol of colonial power, reinforcing the narrative of restoring the nation's past glory. At that time, Angkor—particularly Angkor Wat—was regarded as a reservoir of monuments and cultural artifacts. Many artifacts were transported to France, either for exhibition in European museums or for preservation.

By the early 1900s, the French sought to establish cultural property regulations in Indochina. Under Article 13 of the Decree of May 9, 1900, art objects and monuments were restored, repaired, and sometimes sold as souvenirs. In 1907, Siem Reap was returned to Cambodia, and Angkor was designated an archaeological and architectural

study site under the management of the École Française d'Extrême-Orient (EFEO). The goal was to transform Angkor into an archaeological park or an open-air museum for visitors. By 1925, due to its exceptional value, Angkor was officially recognized as "Parc d'Angkor" (Angkor Park).

The Protection of Cultural Heritage Law (NS/RKM/0196/26), enacted in 1996, designated APSARA as the authority responsible for protecting, preserving, and enhancing Cambodia's national cultural heritage. Although APSARA oversees the site, EFEO has continued collaborating with APSARA for over two decades on conservation and management efforts, focusing on archaeological, cultural, and historical preservation.

During the French colonial period, inhabitants of Angkor's temple and city grounds were displaced to areas outside the main temple complex. Monks were allowed to remain in the monument area but were required to live at a distance from the ancient structures, while villagers were expelled and relocated beyond the vast heritage zone. Certain traditional practices, such as hunting, grazing animals on temple grounds, expanding agriculture, clearing forests, and constructing new buildings or roads, were strictly prohibited. However, activities like fishing, cattle grazing, and limited land use were permitted.

Cambodia's heritage properties gained international recognition following the 1972 World Heritage Convention. Since 1993, the Cambodian government and the international community, represented by the ICC, have pursued a conservation vision rooted in the heritage management strategies established during the French colonial era.

According to UNESCO et al. (2013), the Heritage Management Framework outlines strategies and priorities for ongoing and future conservation, management, and

transmission of Angkor's cultural and natural heritage. Angkor was first designated a protected area in 1925 and was added to the World Heritage List in 1992. Due to threats from political instability, civil war, destruction, and looting, Angkor was simultaneously placed on the List of World Heritage in Danger. In 2004, it was successfully removed from this list.

In collaboration with the Royal Cambodian Government and the Australian Government, UNESCO initiated the Heritage Management Framework Project, which includes key components such as a Tourism Management Plan and a Risk Map. These tools integrate environmental, structural, and social data into a Geographic Information System (GIS) to support management decision-making. Additional efforts include capacity-building programs for APSARA National Authority staff and pilot projects aimed at developing, testing, and demonstrating heritage conservation policies and strategies.

The key goals of the Heritage Management Framework are to:

- Establish a practical and effective framework for managing and conserving Angkor's natural and cultural heritage;
- Ensure sustainable development that balances the needs of current and future generations;
- Promote ethical and sustainable tourism;
- Enhance Angkor's contribution to Cambodia's economy, particularly by improving livelihoods in rural communities; and
- Strengthen governance, capacity, and collaboration within APSARA and among stakeholders.

Since Cambodia ratified the World Heritage Convention in 1991, over 70 major conservation projects have been implemented at Angkor. Today, conservation efforts face new challenges, including the rapid growth of tourism, environmental degradation, urban expansion, population growth, and poverty. These complex issues require strong leadership and effective management. Enhancing APSARA's governance, performance, and services is crucial for addressing these challenges. Additionally, improved resource allocation and capacity-building are essential to ensure the long-term sustainability of heritage conservation at Angkor.

Despite conservation efforts, significant challenges remain. There are four priority areas requiring focused action to ensure the effective and sustainable management of Angkor's heritage:

1. **Heritage Conservation** – Addressing risks through the Charter for Angkor, Risk Mapping, Landscape Assessment, Environmental Impact Assessment, and a Landscape Masterplan.
2. **Community Development** – Implementing community-based programs, education and training initiatives, and promoting traditional cultural practices.
3. **Sustainable Tourism** – Developing a Tourism Management Plan, Carrying Capacity Study, Visitor Services Plan, and Interpretation Programs.
4. **Governance and Capacity Building** – Strengthening corporate knowledge, professional development, strategic planning, communication, information management, and research agendas.

The management of Angkor's moveable heritage focuses primarily on the Bakong temple group and the central Angkor region, which receive the highest number of tourists. Most

conservation projects are led by foreign institutions, sometimes in collaboration with APSARA for training and capacity-building, under the supervision of the ICC and APSARA Authority. These initiatives will be further explored in Chapter IV.

Brigitta (2018) noted that Angkor has transformed from a sacred site into a destination for both religious worship and international tourism. It has also become a cultural production hub, where traditional and modern influences intersect. However, despite Angkor's international recognition and economic benefits, Siem Reap remains one of Cambodia's poorest provinces. The implementation of heritage policies continuously evolves based on national governance, international expert input, and political decision-making.

According to the European Council and Partners (2019), mapping initiatives led by Cambodian archaeologists have significantly advanced heritage documentation efforts. EFEO archaeologists, including Christophe Pottier, have contributed to mapping the Angkor region's topography, revealing ancient wooden structures, water management systems, and traces of past occupations. This research has provided new insights into Angkor's urban development and its decline in the 14th–15th centuries.

Chheang (2010) emphasized that Cambodia's transition to a free-market economy between 1989 and 1992 affected heritage management. Privatization of land brought economic opportunities but also posed challenges related to natural resource management and conservation. Poverty and lack of education contributed to vandalism, looting, and illegal trade in cultural artifacts. However, since the 1990s, increasing tourism has driven socio-economic development, reinforcing the need for robust heritage management practices.

To conclude, heritage management involves a process of problem-solving, reconciling conflicting values, and balancing complex factors. Effective management must provide benefits, address resource management challenges, coordinate diverse stakeholder interests, manage the tension between preservation and development, and consider the social, economic, and environmental aspects of sustainability. For heritage management to be truly sustainable, it must not only focus on the four pillars of sustainability—economic, environmental, social, and cultural—but also incorporate self-reliance, human rights, and education. Capacity building is fundamental to both heritage management and sustainability.

Key priorities for sustainable heritage management include ensuring that development does not damage valued cultural and natural legacies while also promoting growth and improvement. These priorities involve a commitment to humankind, nature, society, culture, human and built capital, and the well-being of past, present, and future generations. Cultural heritage properties hold significance for their cultural, aesthetic, social, scientific, economic, and environmental values. Sustainable heritage development plays a crucial role in enhancing human satisfaction.

Heritage management is necessary for both tangible and intangible heritage, including cultural heritage such as monuments and natural heritage sites. It is also essential for agricultural heritage, changes in landscapes shaped by human activities over centuries, and the preservation of tools, skills, techniques, and other remnants of human interactions with nature. National and outstanding universal heritage must be conserved

and managed to ensure cultural, social, economic, and environmental benefits for both present and future generations.

The impacts of heritage management practices can be both positive and negative. On the positive side, heritage tourism benefits individuals, communities, nations, and humanity as a whole. However, negative impacts may include damage to sites, artifacts, people, values, economic resources, or society due to weaknesses in the design and implementation of management strategies, insufficient education, or inadequate resource allocation. Adverse effects may also arise from an inability to balance economic, natural, social, cultural, and human values.

In terms of challenges and constraints in heritage management, two primary concerns for both present and future generations are the safety of cultural heritage and the quality of architectural conservation. Environmental and natural factors contribute to the deterioration of heritage sites. The primary issue often lies in the lack of responsibility among governmental institutions, as well as the absence of strategic management practices and alternative solutions for financing and fundraising. Other major issues include inadequate training, ineffective policies, and limited funding. Additionally, there is a lack of research on preservation techniques, insufficient awareness of cultural values, and a shortage of information and facilities.

Regarding constraints in heritage management practice, key challenges include ensuring the security and preservation of cultural heritage and maintaining the quality of architectural conservation. Attention must also be given to the relationships between human activities and the natural and built environments, as well as the balance between

the heritage economy and the needs of local communities. Persistent issues include holding governmental institutions accountable, improving management strategies, and identifying alternative financing and fundraising solutions. Other critical challenges include a lack of expertise and training in key heritage management disciplines, insufficient funding for research into preservation methods, inadequate public awareness of cultural values, and a shortage of information and infrastructure.

Heritage management practices at the Angkor Heritage Site have transformed sacred sites, natural landmarks, and places of worship into internationally recognized focal points for research, restoration, tourism, business, and museums. By the 1990s, Cambodia had returned to peace. In 1995, the APSARA Authority was established with the responsibility of protecting the site, guided by the EFEO in conservation and management efforts. Since Cambodia signed the World Heritage Convention in 1991, it has focused on four key priority areas: Heritage Conservation, Life in the Community, Sustainable Tourism, and Governance and Capacity Building. In 1992, Angkor was registered as a World Heritage Site and placed on the Danger List. In response, UNESCO, the Royal Cambodian Government, and the Australian Government collaborated to create the Heritage Management Framework Project. In 1998, this initiative expanded through a partnership between Roland Fletcher of the University of Sydney, the APSARA Authority, and the Greater Angkor Project (GAP), which mapped Angkor's urban landscape to better understand the period of Khmer decline in the 14th and 15th centuries. Cambodian archaeologists, along with Christophe Pottier of the EFEO, conducted extensive research on Angkor's landscape, revealing traces of past human occupation. These foreign-

supported projects have been supervised by the International Coordination Committee (ICC) and the APSARA Authority.

However, heritage management in the Angkor area still has room for improvement. Further efforts are needed to implement best practices in sustainable heritage management and to foster self-reliance by strengthening the four pillars of sustainability, education, capacity building, and human rights.

2.3 Conceptual Framework of the Research

The conceptual framework for this research on Sustainable Heritage Management in Bakong Commune, Siem Reap, Cambodia integrates core themes and relationships derived from the literature review, key findings, and theoretical underpinnings. It provides a structured representation of the interplay between heritage management practices, socio-economic conditions, community engagement, and sustainable development principles. The framework illustrates how these components influence and are influenced by each other, guiding the investigation into the gaps and opportunities for achieving sustainable heritage management in Bakong.

2.3.1 The Key Components of the Conceptual Framework are as below:

1. Sustainable Heritage Management Principles

- Cultural Preservation: Protecting and conserving heritage assets to retain their historical, cultural, and aesthetic value.
- Socio-Economic Benefits: Generating equitable economic opportunities and social benefits for the local community.

- Community Participation: Involving local communities in decision-making and management processes to ensure inclusivity and shared ownership.

2. Socio-Economic Profile of Bakong Commune

- Income distribution, employment patterns, and skill levels within the community.
- Infrastructure availability and access to essential services such as education and financial literacy programs.

3. Current Heritage Management Practices

- Conservation activities, regulatory frameworks, and policies implemented by heritage authorities.
- The degree of community involvement in heritage-related activities and decision-making.
- Tourism development initiatives and their impact on the local economy and environment.

4. Identified Gaps in Sustainability

- Economic Disparities: Uneven distribution of benefits from heritage tourism and related activities.
- Limited Community Engagement: Lack of inclusive participation in planning and decision-making processes.
- Underdeveloped Infrastructure: Poor connectivity and inadequate facilities for tourism and community livelihood enhancement.

- Weak Financial Literacy: Limited knowledge among locals to capitalize on economic opportunities arising from heritage management.

5. Proposed Interventions for Sustainability

- Inclusive policy-making to address socio-economic disparities.
- Education and training programs focused on financial literacy and skill development.
- Infrastructure development to enhance market connectivity and tourism potential.
- Strengthening community involvement in heritage management through consultation and collaboration.

2.3.2 The Conceptual Framework

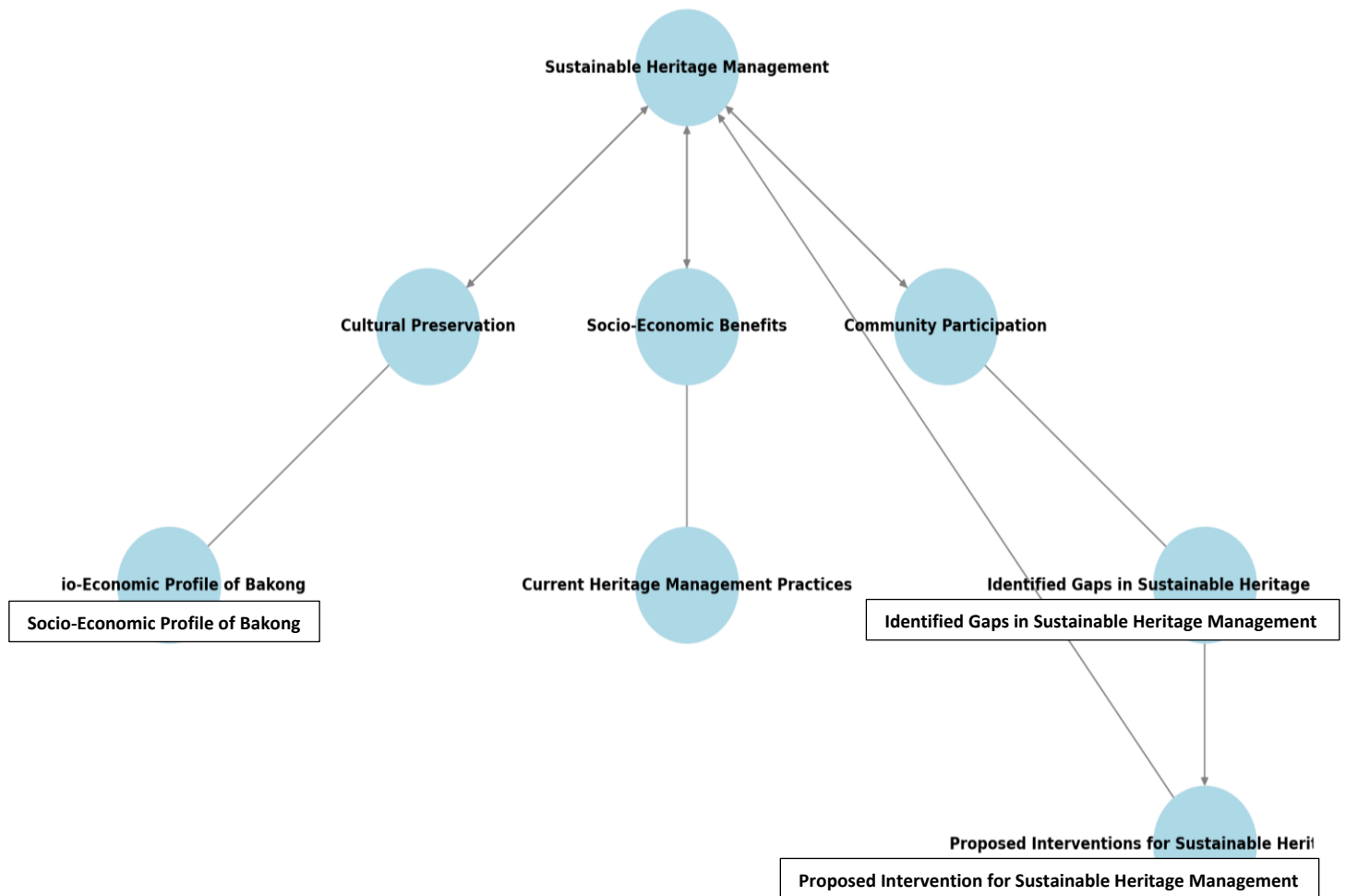
It is visually represented as a cyclical model with four interrelated dimensions:

1. Heritage Management Practices feed into and are influenced by Community Participation, ensuring inclusivity and alignment with local needs.
2. Socio-Economic Conditions shape and are shaped by heritage conservation and tourism activities, highlighting the importance of equitable benefit distribution.
3. Sustainability Gaps emerge when these interactions fail to align with sustainable development goals, emphasizing areas for improvement.
4. Interventions act as a feedback loop to address gaps and promote sustainable practices, ensuring that local communities benefit both culturally and economically.

The framework highlights the complexities of sustainable heritage management in Bakong Commune by demonstrating how the interplay of heritage management practices, community engagement, and socio-economic dynamics affects sustainability. It underscores the importance of addressing identified gaps—economic disparities, limited community participation, and infrastructure challenges—to foster a more inclusive and equitable heritage management approach.

By aligning heritage management with sustainable development principles, the framework provides a roadmap for strengthening community livelihoods, promoting cultural preservation, and achieving long-term socio-economic benefits for the people of Bakong.

2.1: Conceptual Framework for Sustainable Heritage Management in Bakong Commune



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CHAPTER III

RESEARCH METHODOLOGY

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RESEARCH METHODOLOGY

The research methodology is a key part of the study. This section describes the type of analysis, sources of data, types of respondents, sample size, how samples for interviews are selected, and how data will be collected, processed, and analyzed.

3.1 Type of Analysis

In the research, both quantitative and qualitative analyses were conducted according to the objectives of the study. The qualitative analysis was performed to understand sustainable heritage management, heritage management practices, and the sustainability of heritage management practices in the study area.

Both qualitative and quantitative analyses, including the Chi-Squared test, were carried out to analyze the socio-economic profile of the heritage site and identify gaps in heritage management practices that impact sustainability in the study area.

3.2 Type and Source of Data

The study used both primary and secondary data. The primary data were collected directly from the commune chief, the village chief, local institution authorities, and local people concerning the research study.

The secondary data were collected from published sources such as books, journals, magazines, websites, articles, and theses, as well as unpublished sources, including various offices dealing with sustainable heritage management of the Angkor site.

3.3 Sample Size

For the purpose of the study, four villages in Bakong Commune, Siem Reap Province, were selected: Aolaok, Lolei, Thnal Trang, and Stoeung. Out of the six villages, these four are located within the heritage protection site. The numbers of families living in the four villages are shown in the below table.

Table 3.1: Total and Sample Numbers of Families Living in the Four Villages of the Study Area

Sl. No.	Names of Villages	Number of Families	Sample Number of Families
1	Aolaok	574	85
2	Lolei	359	78
3	Thnal Trang	348	78
4	Stoeung	280	74
Total		1561	315

Source: Bakong Commune 2019

Based on Yamane's (1967) formula, the sample size for each village under study has been determined, resulting in a total of 315 families selected for the study. The formula to determine the sample size (number of families) of each village is as follows:

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

Where, n = the sample size

N = the size of population

E = the error of 10 percentage points

The necessary data related to sustainable heritage management were collected from the four village chiefs, one commune chief, 10 government officials (at district, provincial,

and national levels), five NGOs involved in heritage management, and 315 selected families living in the four villages of Bakong commune, Bakong district, Siem Reap province (heritage area).

3.4 Sampling/Census Method

A systematic random sampling method was used to select a sample of families from the four selected villages mentioned above. Before using this method, a complete list of all the families living in each of the four villages—Aolaok, Lolei, ThnalTrang, and Stoeung—was compiled, and sampling ratios (N/n) were estimated based on the number of families in the sample and the total number of families living in each of the four villages. The names of the heads of the families were arranged alphabetically for each selected village, and, using the sampling ratio, the first family was randomly selected using the lottery method. The remaining sample families in each village were selected at evenly spaced intervals. Additionally, census methods were used to select the village chiefs and commune chiefs in the study area.

Table 3.2: Table of Sampling Interval (N/n) of Selected Village

Sl.	Names of Villages	Number of Families	Number of Families	N/n
1	Aolaok	574	85	6
2	Lolei	359	78	4
3	Thnal Trang	348	78	4
4	Stoeung	280	74	4
Total		1561	315	

3.5 Procedure of Data Collection

The primary data were collected using well-structured questionnaires. The questions focused on heritage management practices in the study area. The opinions of villagers regarding heritage management in the area were gathered through individual and group discussions.

The questions were asked to the respondents in the ways as following:

- Interview with selected sample families directly.
- In-depth interview
- Focus group
- Personal observation
- Experiences
- Survey (Telephonic interview with the commune, village leaders and other stakeholders in the study area)
- Telephone directly checking information with experts
- Emails to the concerned government officials.

a- Definition of “In-depth interview”

In-depth interviewing is a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation. For example, participants, staff, and others associated with a program might be asked about their experiences and expectations related to the program, their thoughts on its operations, processes, and

outcomes, and any changes they perceive in themselves as a result of their involvement (Carolyn et al., 2006).

b- Definition of "Focus Group"

A focus group or focus group interview is a qualitative technique for data collection. A focus group is "a group comprised of individuals with certain characteristics who focus discussions on a given issue or topic. It consists of a small group of people, usually between six and nine in number, who are brought together by a trained moderator (the researcher) to explore attitudes, perceptions, feelings, and ideas about a topic." A focus group interview provides a setting for the relatively homogeneous group to reflect on the questions asked by the interviewer (Rana, 2013).

c- How to use the Methods

The secondary data were collected from various offices located at the village, commune, district, and provincial government levels, particularly from institutions, authorities, and stakeholders directly involved in the study area. Furthermore, the study relies on relevant documents for reviewing the related literature.

3.6 Statistical Tools

Both primary and secondary data were processed using SPSS and MS Excel programs. In addition, keeping the objectives of the study in mind, tabular and graphical analyses were conducted.

Statistical tools such as tables, graphs, averages, and percentages were employed in the study. Additionally, SWOT analysis was applied to assess the problems and effectiveness of heritage management through community empowerment, involving institutions, and

national and international authorities at the Angkor site. The Chi-square test was used to test the study's hypotheses.

The formula of the Chi-Squared test:

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

χ^2 = chi squared

O_i = observed value

E_i = expected value

- Chi-Square values (χ^2)
- Critical values (V_c)
- Degree of freedom (d.f.)
- Significance levels 5%
- if $\chi^2 < V_c$, it means that the H_0 cannot be rejected and
- if the $\chi^2 > V_c$, then the H_0 is rejected.

3.7 Coverage of the Study

The study was confined to four villages in Bakong commune, Bakong district, Siem Reap province. These four villages are Aolaok, Lolei, Thnal Trang, and Stoeung, and from these villages, 135 villagers were selected for the study. Additionally, in the study, a district governor, deputy governor, former district governor, chief of the commune, four village

chiefs, religious groups, staff of the APSARA Authority, active local leaders, businesswomen, tourism police, and ticket inspectors involved in heritage management were considered.

3.8 Procedure of Analyzing Data

Descriptive statistics were used to analyze the data. To do this, the relevant primary and secondary data were processed, and the necessary tables and graphs were created. Additionally, statistical calculations, such as averages and percentages, were performed for the data analysis. Finally, a SWOT analysis was conducted to identify the strengths, weaknesses, opportunities, and threats of the sustainable heritage management programs already implemented in the study area.

3.9 Reliability Test in the Research

Reliability testing is a critical component of research methodology, ensuring that data collection instruments, such as surveys and questionnaires, consistently produce stable and dependable results. It measures the extent to which a test yields consistent results over time and across various conditions. In the context of the study, reliability testing was conducted to validate the accuracy of responses gathered from interviews, surveys, and focus group discussions. Statistical tools such as Cronbach's alpha were used to assess internal consistency, ensuring that the various items within the questionnaire measured the same underlying concept. Moreover, inter-rater reliability was evaluated for qualitative responses to ensure consistency in data interpretation across different researchers. The use of statistical software like SPSS further facilitated the computation

of reliability coefficients, ensuring that the study maintained high methodological standards in sustainable heritage management research.

CHAPTER IV

HISTORY OF HERITAGE MANAGEMENT ACTIVITIES

IN THE STUDY AREA

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HISTORY OF HERITAGE MANAGEMENT ACTIVITIES IN THE STUDY AREA

The research focus of this chapter is on the history of heritage management practices in the Rolous area of the Angkor Archaeological Park (now part of Bakong District, Siem Reap Province). It traces developments from the construction of monuments under the rule of ancient kings to the formal implementation of modern heritage management in the post-Khmer Rouge peace period. This chapter also provides an overview of historical issues in the research site, including restoration activities at the three main temples of Preah Ko, Bakong, and Lolei in Rolous (Hariharalaya).

4.1 Historical Background of the Heritage Site

Geographically, Rolous is located in Bakong District, about 13 km east of Siem Reap City along National Highway 6 (Fig. 4.1) and (Fig. 4.2). Michel (2006) described the favorable natural conditions of the vicinity of Rolous and Angkor, situated between the Kulen mountain range (Phnom Kulen) and Tonle Lake (Tonle Sap) (Fig. 4.3). Rolous lies above historic artificial rice terraces that step down to Tonle Lake. A powerful and sophisticated water system, fed by rivers flowing from the Kulen mountains to the lake, provided the settlement with the crucial element for its rapidly growing population and agricultural viability: water. Rolous is the site of a historic middle Khmer civilization - home to Harihara, a Hindu deity who is half Shiva and half Vishnu. Today, this area lies within the Angkor Archaeological Park, connecting to other heritage sites, including the famed

Angkor Wat, as well as approximately ten other large temples. It also includes natural features such as forests, wetlands, rivers, villages, rice fields, and physical infrastructure.

In the twelve centuries since its founding, the heritage site in Bakong District—and the wider Angkor area—has undergone profound historical changes. Over time, the monuments have been abandoned and suffered various material blows, including invasion by armies, weathering, drastic vegetation encroachment, theft and disfigurement of statues, partitioning of temple sites, extensive digging and undermining of monuments in search of treasures, vandalism, dismantling of structures for use in new buildings or renovations, and the collapse and scarring of monuments during wars.

Map 4.1: Location of Angkor WHA within south-east Asia



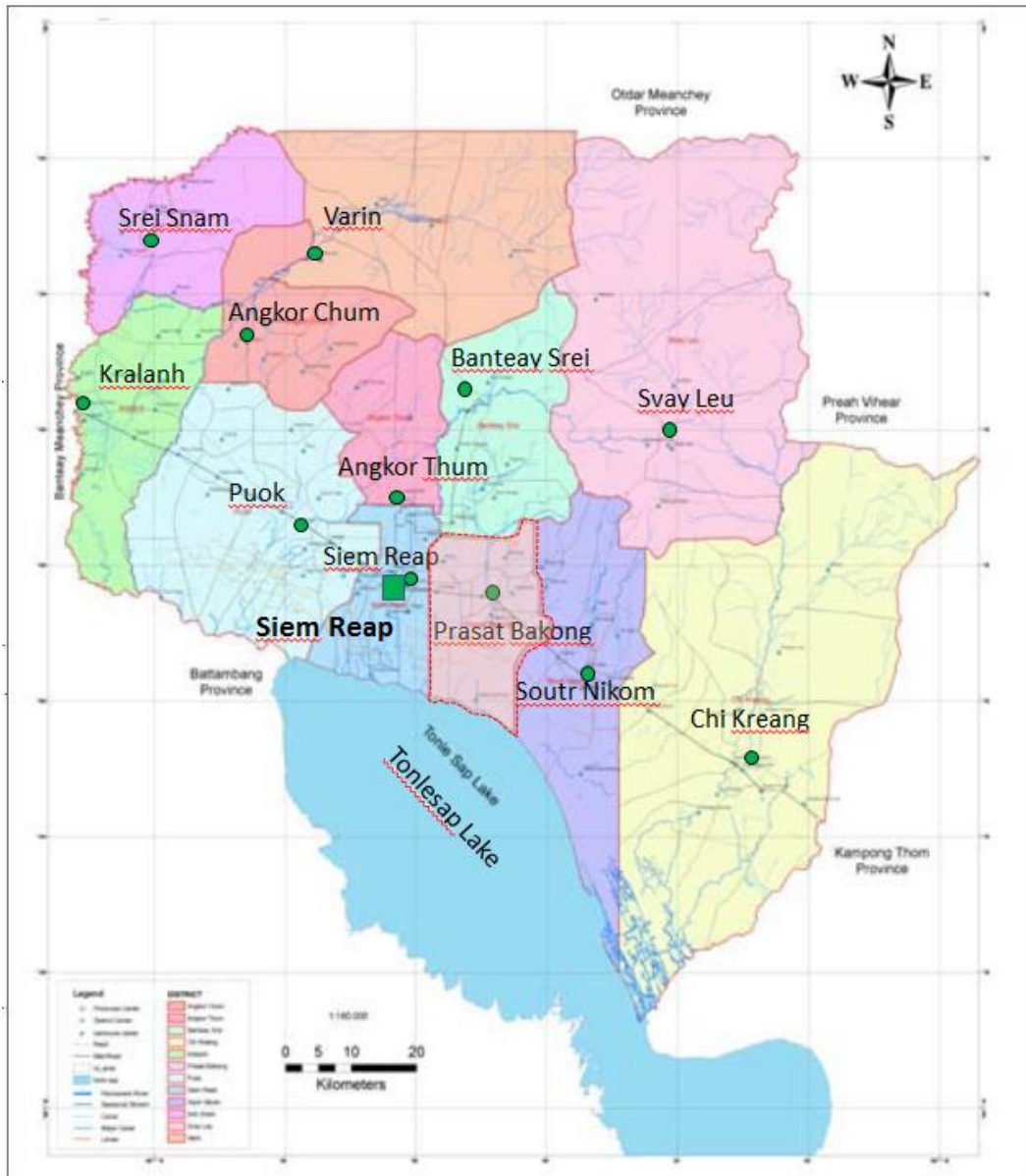
Source: GML, 2013.

Map 4.2: Angkor World Heritage Area



Source: GML, 2013.

Map 4.3: Map of Siem Reap province,



Source: Internet, 2018.

4.2 Management Practices During the Rule of Kings in Rolous

4.2.1 The Beginnings of the Angkorian Period: Hariharālaya

Prior to the founding of the royal line in the Angkor area in the late eighth century, settlements and religious sites existed in and around Rolous; however, the structures were of limited size (Fig. 4.4). Three regions of excavation within the present-day

floodplain of the Tonle Sap revealed evidence of proto-historic settlements, one of which, known as Trapeang Phong, is near Rolous. These early structures were cellular in form and were located on small earthen mounds surrounded by moats. The surrounding land became flooded each year due to the rising water levels of the Tonle Sap and the Rolous and Puok rivers.

Present-day Rolous corresponds to the historic town of Hariharālaya, where King Jayavarman II (r. 790-835) resided twice after his sojourn in the Kulen Mountains. Some temple structures, in poor condition, are still located in the Kulen area. The suffix "-ālaya" means "house" or "metropolis"; in this context, it refers to the house of the Hindu god Hariharā, a double-god of both Śiva and Viṣṇu. Jayavarman II, a descendant of the princes of Anindapura, was crowned king in 790 AD. He was sanctified on Phnom Kulen as cakravartin (lit. "Ruler of the Earth") and founded the devarāja cult in 802. This non-secular ritual symbolically liberated him from the tutelage of "the kings of Java" and gave him the status of a Khmer god or divine being. Later, the kingdom came under the patronage of the god Śiva. The worship site was consecrated with the symbolic linga altar, representing the material form of Śiva. Originally well-positioned in a sanctuary atop Phnom Kulen, the linga may have also been enshrined in the new form of temple design: the terraced "mountain-temple."

After the death of Jayavarman II in 835 AD, his son, Jayavarman III, reigned until 877, when his rival, Indravarman, came to power. According to specialist literature, Indravarman built three essential structures in Rolous: the giant water tank Baray Indrataṭāka and the temples of Preah Ko and Lolei. Recent studies suggest that these

structures were at least planned or initiated before Indravarman's reign. It is assumed that the temple foundations of Preah Ko, Lolei, and Bakong, along with the urban development of Hariharālaya, are key to understanding early Khmer city planning (Michel, 2006).

Map 4.4: Map of the Khmer ruins

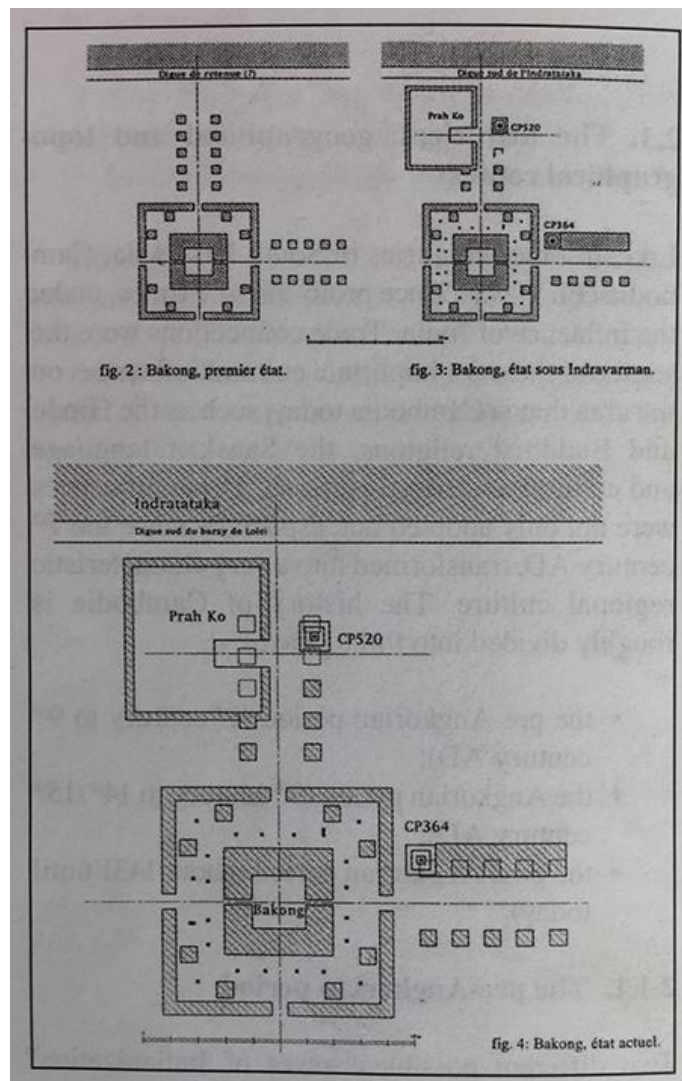


Source: Jessup/Zéphir, 1997.

No inscriptions about Jayavarman II and Jayavarman III have been uncovered, but it is assumed that the former initiated a new program of town planning. Bakong was the primary mountain temple at Rolous and presumably the center of the metropolis. An important factor allowing the development of Hariharālaya was the surrounding system

of water basins. To the east and north of the Bakong temple, a complex system of overlapping axial and concentric water basins was constructed (Fig. 4.5). The city palace was built within the geometric enclosure of Prasat Prei Monti, located slightly outside the axes of the main Rolous temples, similar to the positioning of the royal palace in the later-constructed Angkor Thom (Michel, 2006).

Fig. 4.1: City Plan of Rolous



Source: Potier, 1996.

No inscriptions about Jayavarman II and Jayavarman III have been uncovered, but it is assumed that the former initiated a new program of town planning. Bakong was the primary mountain temple at Rolous and presumably the center of the metropolis. An important factor allowing the development of Hariharālaya was the surrounding system of water basins. To the east and north of the Bakong temple, a complex system of overlapping axial and concentric water basins was constructed (Fig. 4.5). The city palace was built within the geometric enclosure of Prasat Prei Monti, located slightly outside the axes of the main Rolous temples, similar to the positioning of the royal palace in the later-constructed Angkor Thom (Michel, 2006).

Table 4.1: Chronology of the Kings at Angkor

King	Reign	Temples begun, rebuilt or added to
Jayavarman II	790 – 835	Rong Chen on Phnom Kulen, earlier shrine on the site of Kutisvara
Jayavarman III	835 – 877	Prei Monti, Trapeang Phnong, Bakong
Indravarman I	877 - c.886	Preah Ko, sandstone cladding of Bakong, Indratataka <i>baray</i>
Yasovarman I	889 - c.915	Lolei, Bakheng, Prasat Bei, Thma Bay Kaek, earlier shrine on the site of Phumeanakas, Phnom Krom, Phnom Bok, East Baray
Harshavarman I	c.915 - 923	Baksei Chamkrong, Prasat Kravan
Isanavarman II	923 - c.928	
Jayavarman IV	c.928 – c.941	Koh Ker site
Harshavarman II	c.941 - 944	
Rajendravarman	944 - 968	Pre Rup, East Mebon, Bat Chum, Kutisvara, Banteay Srei, earlier temple on the site of Banteay Kdei, Srah Srang, Baksei Chamkrong
Jayavarman V	968 - c.1000	Ta Keo
Udayadityavarman I	1001 - 1002	

Jayaviravarman	1002 -1010	North Khleang, continuation of Takeo
Suryavarman I	1002 -1049	South Khleang, Preah Vihear in the Dangrek Mountains, Phimeanakas and the Royal Palace, Suryapavata at Phnom Chisor, Preah Khan at Kompong Svay, West Baray, Wat Phu
Udayadityavarman II	1050 -1066	Bapuon, West Mebon
Harshavarman III	1066/7 -1080	
Jayavarman VI	1080 –c.1107	Phimai in present-day Thailand
Dharanindravarman I	1107 -1112	
Suryavarman II	1113 –c.1150	Angkor Wat, Thommanon, Chao Say Tevoda, Banteay Samré, Phnom Rung in present-day Thailand, Beng Mealea
Yasovarman II	c.1150 -1165	Beng Mealea, Chao Say Tevoda, Banteay Samré, Bakong
Tribhuvanadityavarman	c.1165 -1177	
Jayavarman VII	1181 –c.1220	Ta Prohm, Preah Khan, Jayatataka baray, Neak Pean, Ta Som, Ta Nei, Banteay Chhmar in NW Cambodia, Angkor Thom, Prasats Chrung, Bayon, Elephant Terrace, Ta Prohm Kel, Hospital Chapel, Krol Ko, Srah Srang, Royal Palace
Indravarman II	c.1220 -1243	Prasats Suor Prat, Ta Prohm, Banteay Kdei, Ta Som, Ta Nei
Jayavarman VIII	c.1243 -1295	Mangalartha, Preah Palilay?, Bayon, Ta Prohm, Preah Khan, Prasats Chrung, Angkor Wat, Bapuon, Chao Say Tevoda, Banteay Samre', Beng Mealea, Terrace of the Leper King, Elephant Terrace, Preah Pithu,

		Royal Palace
Srindravarman	1295 -1307	Ta Prohm, Preah Pithu, Preah Palilay
Srindrajayavarman	1307 -1327	
Jayavarman Paramesvara	1327 -	

Source: adapted from Freeman and Jaques, 2003:12).

The construction of Angkor Wat, the most famous temple in Khmer history, was ordered by Suryavarman II (1113-1145). The Khmer kingdom reached its peak under the reign of Jayavarman VII (1181-1219), the last great Khmer king. As a devout Mahayana Buddhist, Jayavarman VII built the city of Angkor Thom, with the renowned Bayon temple at its center, enclosed by a rectangular town wall (Fig. 4.6). The eventful 13th century marks an important turning point in the history of Asia. The Mongols, under Kublai Khan, conquered China and threatened neighboring kingdoms. The Thai state liberated itself from Khmer hegemony. Hinduism and Mahayana Buddhism, with their long-standing hierarchical cultural systems, were replaced by Theravāda Buddhism, which came from Sri Lanka.

The seeds for the demise of Angkor were sown early. According to Chheang (2009), between 1145 and 1150, after the death of Suryavarman II, the Khmer Kingdom fell into turmoil, allowing the Kingdom of Champa to attack in 1177. From that point, the two kingdoms engaged in recurrent battles, which are vividly represented in the bas-reliefs of Angkor Wat and Bayon. The Thai began encroaching and expanding their sovereignty over the territory of the former Khmer Empire. In 1352, Thai forces began attacking the

town of Angkor. Eventually, they took the town in 1431. The Khmers abandoned the town in 1432.

4.3 The Period of Abandonment (15th Century to 19th Century)

According to Chheang, in the fifteenth century, attacks by Champa, using Vietnamese forces from the north, gradually led to the destruction of the Khmer kingdom. Jayavarman VII's greatest architectural accomplishment was the construction of the capital of Angkor Thom, which is laid out in a square with the Bayon temple situated at its center. After his death, the Khmer Empire began to decline, and the Khmer forces were gradually pushed out by foreign conquests.

As noted by Michel (2006), the new state of Ayutthaya – a successor state to Sukhothai and predecessor to Siam – rose to prominence in what is now central Thailand and sacked Angkor in 1431. The Khmer Kingdom shifted its center of power to more secure areas in the southwest, ultimately settling in the region of the four branches of the Mekong River in present-day Phnom Penh. After Angkor's rapid decline, Theravāda Buddhism sparked a small religious revival in the area. Structural alterations and even restorations of ancient temples are visible at Preah Ko. Cambodia remained an important strategic area in the struggle between Thailand and Vietnam until the nineteenth century. According to Chheang, from the mid-15th century, the Khmer Empire, along with other "Indianized" or "Hinduized" kingdoms in Southeast Asia, began to decline. Not long after, the first of a series of "rediscoveries" occurred. According to a report in 1599 by Portuguese author Diego do Couto, approximately 40 years earlier (from 1550 to 1551), a Cambodian king observed ruins during an elephant hunt. Inscriptions at Angkor, dated to the 1560s,

alternatively suggest that Angkor was rediscovered during an army campaign, rather than during a hunt, when the Angkor region became a logistical staging ground for Cambodian armies preparing to invade Siam. The king went to the site and, seeing the extent and height of the exterior walls, wanted to explore the interior as well. He ordered people to cut and burn the undergrowth, and he remained there beside a beautiful river while this was accomplished by five or six thousand men working for a few days. When everything had been carefully cleaned, the king went inside and was filled with admiration for the extensive structures (Chandler, 2000).

Chandler (2000) wrote that the least-documented period in Cambodian history falls between Zhou Daguan's visit to Angkor in 1296-7 and the recovery of some of Angkor's temples by Khmer King Chan in the 1550s and 1560s. From the sixteenth century on, Khmer civilization faced peril from invasions by its more powerful neighbors, Thailand and Vietnam. However, despite the fact that the city had become partially deserted in the 15th century, Angkor was restored as a royal metropolis in the 1570s. More critically, one of its essential temples, Angkor Wat, was likely never abandoned by the Khmer, as it contains Buddhist statuary dating from each century from the fifteenth to the nineteenth, and inscriptions on its walls as late as 1747.

4.4. During the French Protectorate

Chheang (2010) writes that Angkor first became known to Europeans through visits by Portuguese and Spanish explorers in the sixteenth century. They believed the temples had been constructed by Indians and did not imagine that the Khmer built them. Three centuries later, French traveler and herbal historian Henri Mouhot, in 1860, brought news

of his "discovery" of Angkor to the attention of Europe. Mouhot, followed by Delaporte, painted a romantic image of the ruins of Angkor. It was only after 1863, when Cambodia became a French protectorate, that France began to focus on researching and conserving the monuments at Angkor.

In 1898, colonial Governor-General Paul Doumer resolved to coordinate all studies of the monuments and provide them with the scientific basis they lacked. "He consequently charged the École Française d'Extrême-Orient (EFEO), under the control of the Académie des Inscriptions et Belles-Lettres, with a mission to study the countries of the Indo-Chinese Union from a historical and linguistic perspective, assure protection of archaeological heritage sites, and prepare a comprehensive account of the temples." Under the enlightened supervision of Louis Finot and Alfred Foucher, Lunet de Lajonquière, Henri Parmentier, Dufour, and Carpeaux began the methodical exploration of the Cambodian monuments. Intensive studies and restoration activities by the French have continued ever since.

Research and conservation efforts began with the establishment of the École Française d'Extrême-Orient (EFEO) in 1901. The goals of the organization were: first, to provide France with records of the people it dominated, including language, social values, culture, and lifestyle; second, to foster a sense of responsibility for preserving historical monuments; and finally, to expand French understanding and scholarship of the Orient. The EFEO's first project was to document and photograph the bas-reliefs of the Bayon. As a result, Angkor slowly emerged into the twentieth century. Angkor soon became part of the French national imagination, seen as an example of the "Orient mystique" and a

showcase for the "mission civilisatrice." In 1907, Siem Reap and other provinces were returned to Cambodia from Siam under the Franco-Siamese Treaty. Although Angkor would never again serve as the capital of Cambodia, it was revered as the center of Khmer civilization and a source of constant archaeological surprises. The findings of researchers, the testimonies of those who worked at Angkor, and photographs of the heritage site brought Angkor back to life and freed it from the jungle. Angkor not only attracted archaeologists and historians but also tourists. In the fall of 1907, more than two hundred travelers visited Angkor.

According to some archaeologists (Belwood & Glover, 2004), the authenticity of the monuments is not always clear. However, some order and transparency were introduced to conservation and restoration interventions in 1907 when the monuments came under the supervision of the École Française d'Extrême-Orient (EFEO). During the initial phase of EFEO intervention (1907-1931), conservation work focused on erecting strengthening and support systems for the most at-risk buildings, improving site access, and clearing vegetation. The initial wooden shoring was found to provide little resistance to humidity and termite damage, so it was replaced with reinforced concrete, which was also used for missing structural features such as lintels. Steel bars, plates, and bands were also introduced for bracing and strengthening purposes. In 1931, Henri Marchal, a leading figure in conservation at Angkor, visited Java to observe the method of anastylosis (a minimalist restoration technique using original materials) employed by the Dutch authorities. His visit led to the adoption of this principle in conservation efforts at Angkor (ICOMOS, 1992).

The monuments of the Roluos group began to receive serious attention in the 1920s. According to the January 1925 report from EFEO about Lolei and Preah Ko, conservation authorities began to collect statues and search for inscriptions on the ground near these two monuments, which proved challenging. It was decided to prevent monks in a modern pagoda from building near the ancient temple remains. This delimitation of a restricted area around each monument had to be at least 60 to 80 meters. The July 1927 report on Lolei and Preah Ko mentioned that stamp impressions Nos. 321-323 and 332, requested by Mr. Finot, were to be published in the next corpus dedicated to the Roluos group. During this work, Kruoch discovered an unpublished fragment of an inscription on a stone used by the monks in a low wall to the west of the towers: 189 characters with very clear lines. At that time, consolidation work was also being done on a stone lion between the east row of towers and on the south side of the upper terrace where it was found.

The newly recovered and restored ancient monuments generated great interest among tourists. Chheang (2010) observed that to meet the needs of travelers, the *École Française d'Extrême-Orient* proposed improving traffic access, accommodation services, and preservation of ancient buildings. Tour services and advertising began in 1912. By the early 1920s, heritage tourism at Angkor was well established. International tourism also transformed the landscape of Angkor, stimulating the development of Cambodian arts and crafts, initiated and supervised by French expert George Groslier. Conservation of the paintings continued at Angkor through the Second World War, independence, and civil conflict. During the Second World War, Indochina was occupied by the Japanese; in 1941, France was occupied by Germany and ruled by the Vichy regime. French rule in

Indochina effectively ceased until the summer of 1945, meaning that conservation and restoration efforts were either halted or significantly delayed. With the cessation of hostilities in 1945, Cambodia fell back under French protection, and conservation resumed. However, it was a new era for Cambodia, which was on a path to nationhood that would lead to independence after the Indochina War, which ended in 1954.

As discussed by Chheang (2010), for centuries after the collapse of the Khmer Empire in the early 14th century, the Khmer people searched for a common identity. The rediscovery of Angkor was the moment when the Khmer people began to unite around a shared understanding of their history and way of life. The French arrival in Cambodia in the early 19th century helped Cambodians learn more about themselves. Almost all research on Angkor and Cambodian history has been conducted by foreign experts and scholars, mainly from France. Their views on Khmer identity vary, but the most common view is that Angkor represents the quintessential symbol of Khmer identity and the greatest achievement of the Khmer Empire. This path to self-knowledge through the eyes of foreigners has a long lineage in Cambodia, starting with Chou Ta-Kuan's thirteenth-century account of his visit to Angkor. Chou's observations on the agricultural cycle are cited in MacDonald (1937: 66-67) and Chandler (2000: 72).

...in this country it rains for half of the year; in the other half, it hardly rains at all. From the fourth to the ninth month, it rains every afternoon, and the water level of the Great Lake can reach seven or eight fathoms...People who live on the shores all go away to the mountains. Later, from the tenth month to the third [of the

following year], not a drop of rain falls, and the Great Lake can be navigated only by small boats...The people come back down at this point and plant their rice.

The capital of Angkor was the most important urban location in the Khmer Kingdom and its center. The people there were wealthy. All supplies in the capital came via roads and canals. Forests were cleared or burned down to make space for agricultural development, as it was considered the primary means for the kingdom to feed and protect itself. The irrigation system surrounding the capital was well-developed. The Western and Eastern Water Reservoirs (Baray in Khmer) still exist today, even though other smaller canals have either been significantly damaged or disappeared. The urban and agricultural history adds more value to the ruins of Angkor. Michel (2006) notes that after the sixteenth century, Christian missionaries were the ones who brought reports about Angkor to Europe. Chheang notes that Bruno Dagens (1995) rightly argued, "For outsiders, Angkor is a dream of ruins within the jungle... For Cambodians, Angkor Wat is the symbol of nationhood." In 1949, Cambodia gained self-government as a member of the French Union and, in 1953, obtained full independence from France. The newly independent and neutral country, Cambodia, adopted Angkor as a symbol of the nation: the focus of nationalism and national pride. Conservation work at Angkor continued. From the 1960s, Angkor was preserved under the authority of the rd-Philippe Groslier, had established the School of Cambodian Arts in 1917-1918 to teaCambodian government, with assistance from France. George Groslier, the father of Bernach archaeology to young Cambodians, specifically for the conservation of the Angkor site. In the 1960s, the name of the school was changed to the Royal University of Fine Arts.

4.5 Period of the War and Genocide

Michel (2006) wrote that during the Khmer Rouge era: "Glittering red blood blankets the earth—blood given up to liberate the people: the blood of men, peasants, and intellectuals; the blood of young men, Buddhist priests, and women. The blood swirls away and flows upward, lightly, into the sky, turning into a red, modern flag." Under the slogans of the communist Khmer Rouge leader, Pol Pot, a radical social transformation took place, leading to the creation of an agricultural-communist state, the enslavement of the urban population for work in the fields, the abolition of money, the destruction of cultural and non-secular institutions, and the loss of more than two million lives in a mere three years. The front line between the "new people" and their enemies was near the city of Siem Reap, which fell in 1973, two years before Phnom Penh. The temple of Preah Ko was barely affected, as were all the temples in Roluos and Angkor. Most of the staff of the "Conservation d'Angkor" were deported to the Roluos region.

For the next 15 years, Prince Norodom Sihanouk ruled Cambodian politics. In 1970, due to his erratic and repressive policies, Sihanouk was overthrown by the military and went into exile in Beijing. South Vietnamese troops, backed by the Americans, had been involved in the Vietnam War since 1969 to root out suspected (Northern) Vietnamese communist troops. They failed but pushed Cambodia's indigenous rebels, the "Khmer Rouge" (French for "Red Khmer"), into the interior of the U.S.A. The Maoist-communist Khmer Rouge occupied Phnom Penh in 1975 and established the "Democratic Republic of Kampuchea" (Chheang, 2010). In the first half of 1973, America delayed a Communist victory by conducting a bombing campaign on Cambodia, which, in its intensity, was as

brutal as any conducted during World War II. Over one hundred thousand tons of bombs fell on the Cambodian countryside before the U.S. Congress prohibited further bombing. The end came in early 1975 when the Communists mined the riverine routes to Phnom Penh, blocking shipments of rice and ammunition from reaching the capital. On April 17, 1975, the Communist troops took control. From that point, the entire Cambodian nation fell under the Communist and genocidal Khmer Rouge regime (Chandler, 2000).

After attacks on Vietnam by the Pol Pot regime, Vietnamese troops responded and, supported by defectors from the Khmer Rouge, ultimately occupied Cambodia in 1978/79. The Khmer Rouge lost their stronghold, their military was divided by rivalries, and they eventually withdrew to the north-western provinces near Thailand. The Khmer Rouge guerrillas retreated to the jungle in the north-west of Cambodia near the Thai border, where they occupied Anlong Veng as their "capital." ICOMOS (1992) wrote: from then until 1989, no conservation actions took place at Angkor. The monuments suffered from drastic vegetational invasion, and there was some damage from military operations, largely limited to bullet holes.

In 1989, the Archaeological Survey of India began a three-year campaign at Angkor Wat. This consisted of removing vegetation (using fire), reconstruction, and stone cleaning by abrasion with stiff bamboo brushes and water. Some work was also done by the Polish conservation body PKZ, and a clearance and recording project at the temple of Preah Khan, funded by the World Monuments Fund and supervised by British experts, began in November 1992 (Falser, 2006).

4.6 Peace Period and Formal Implementation of Heritage Management Practices (1992 - Present)

Roluos is located in Siem Reap province, the capital of which is Siem Reap city. The temples of Roluos are reached by dual carriageway National 6. Siem Reap has grown to be a vital city, specifically for the quickly-developing tourist economy related to the temples of Angkor (Fig. 7). Under the title: "Angkor- the archaeological parks of Angkor, Roluos and Banteay Srei", the set of monuments became incorporated in UNESCO's World Heritage List and is legally under worldwide protection. Between 1992 and 1994, a Zoning and Environmental Management Plan (ZEMP) was worked out. In 1995, a national administration for the protection of the Angkor ruins, referred to as the APSARA Authority (Authority for the Protection and Management of Angkor and the Region of Siem Reap), was instituted (Michel, 2006). As depicted in a useful chronological table compiled by Cheang (2009), the 1992 international heritage listing of the monuments of Angkor and the 1995 creation of the national APSARA authority were the culmination of a ninety-year modern heritage history (see Table 4.2):

In the 2013, Angkor Heritage Management Framework, which guides the activities of the APSARA authority, we read the following: Angkor is an internationally renowned icon and landmark, one that has cultural and natural significance of global importance. Many of the cultural heritage values of Angkor extend into or are located in the broader landscape, beyond the extent of the Angkor World Heritage Area (Angkor Heritage Management Framework, 2013, p 22).

The framework document makes clear that the Angkor World Heritage Area is managed and conserved within a complex framework of conventions and worldwide charters, and

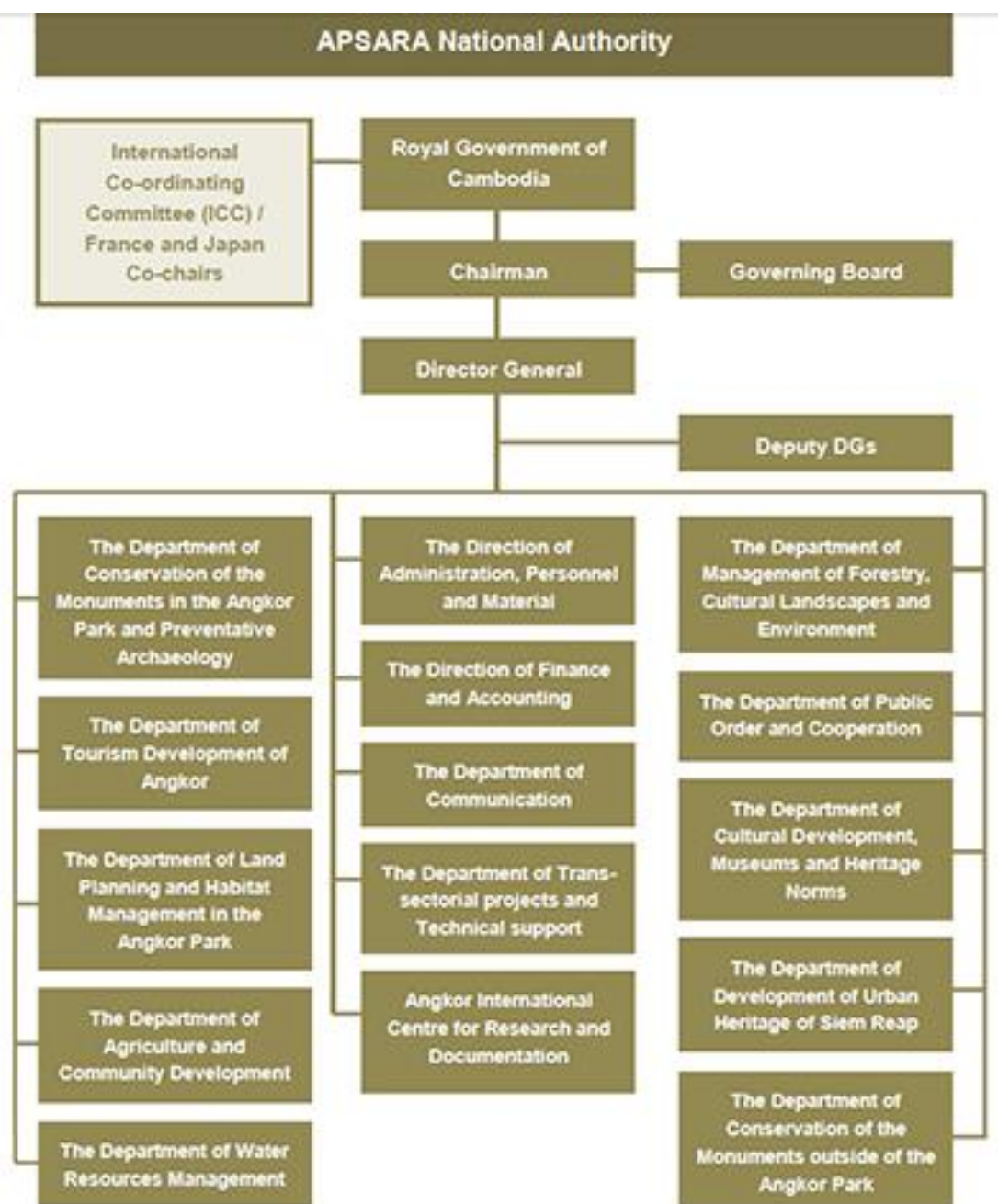
supported via the Constitution of Cambodia, countrywide and provincial laws, orders, selections, strategies, policies and global legal guidelines (Chart 4.1 and 4.2).

Table 4.2: Timeline of Modern Angkor Development

1907	Under Franco-Siamese Treaty, Angkor was returned to Cambodia
1912	Tourism services started in Angkor
1917	Establishment of the School of Cambodian Arts in Phnom Penh
1925	Angkor Park was created to conserve the site
1929	Opening of the <i>Grand Hotel d'Angkor</i> marked the beginning of luxury tourism
1953	Cambodia got independence from France
1960s	Re-organization of the School of Cambodia Art as Royal University of Fine Arts to conduct research on Cambodian culture and arts and train Cambodian students
1970s, 1980s	War period in Cambodia and the neglect of Angkor conservation
1991	Paris Peace Agreement to settle armed conflict and civil war in Cambodia
1992	Angkor inscribed as World Heritage Property by World Heritage Committee
1993	Creation of the International Coordinating Committee (ICC) for the safeguarding and development of Angkor
1993	General Election with support from the United Nations took place in Cambodia
1995	Creation of APSARA Authority in charges of Angkor Heritage Site Conservation and Management
1997	Factional armed conflict in Phnom Penh and the spread of SARS

Source: Chheang, 2009.

Chart. 4.1: The structure of the APSRA National Authority and ICC

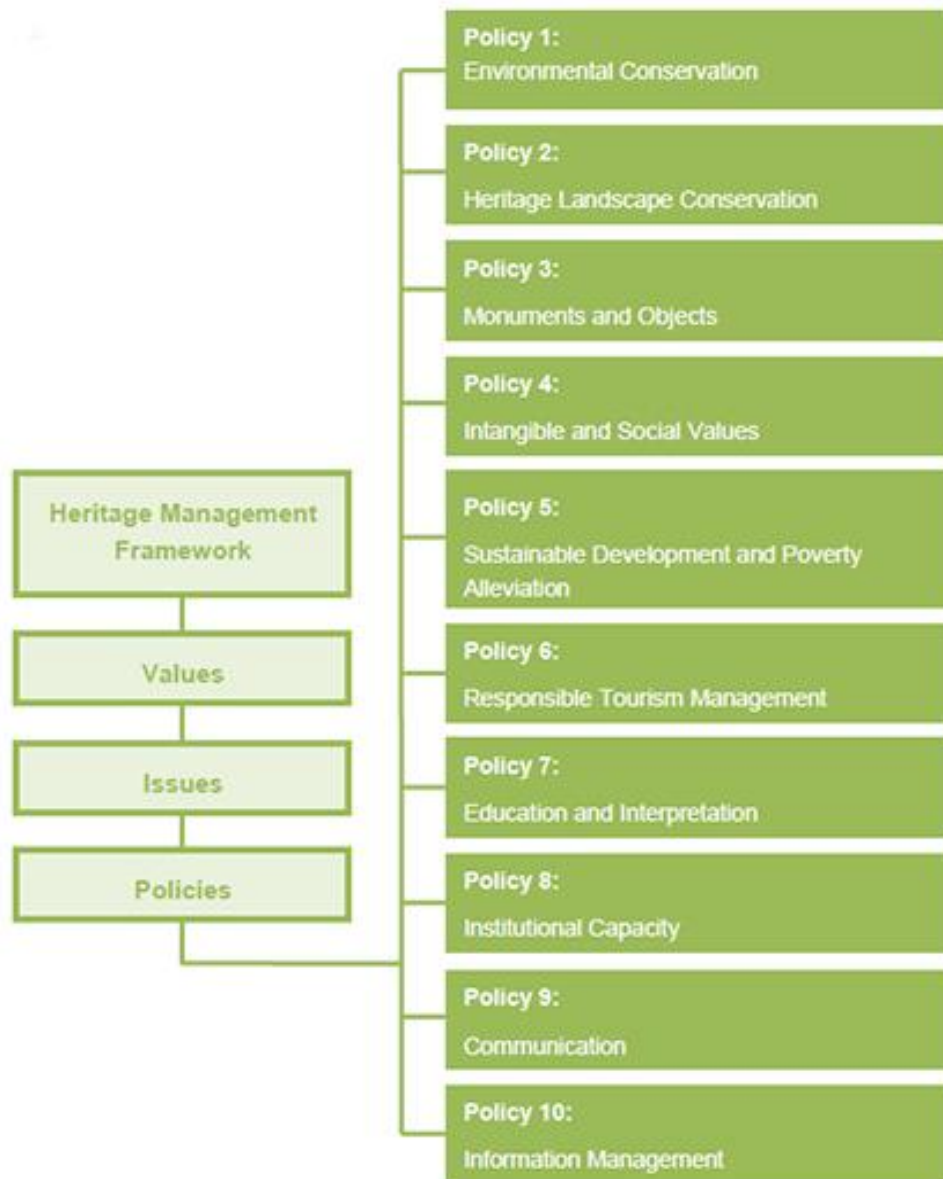


Source: Angkor, Heritage Management Framework, 2013.

Chart 4.1: The structure of the APSRA National Authority showing the relationship between the ICC, Chairman, Board, Director General and Deputy DGs, as well as the

various APSARA departments. The royal government cooperates with international teams. All the implementations and interventions on the world heritage site at Angkor Park must be discussed through the coordinating committee ICC.

Chart 4.2: Relationship between the Heritage Management Framework and the ten Individual policies



Source: Angkor, Heritage Management Framework, 2013.

The above chart (4.2) shows the management strategies of the APSARA National Authority, based on its values, issues, and policies. There are ten policies in this authority for implementing work within the World Heritage Site of Angkor Park.

Table 4.3 illustrates the initial steps of achievement from 1992 to 2018, highlighting how heritage conservation at the site was managed and how the government, national, and international experts have cooperated for the safeguarding of the World Heritage Site of Angkor Park. All teams have worked diligently, reaching the 2018 celebration of the 25th anniversary of the establishment of the International Coordinating Committee for the Safeguarding and Development of the Historic Site of Angkor (ICC-Angkor).

Table 4.3: Achievement of the World Heritage Site of Angkor Park

Angkor – Chronological Landmarks	
1992	Inscription of the Angkor site on UNESCO's World Heritage list as well as on the list of World Heritage in danger
1993	1 st intergovernmental conference for the safeguarding and development of Angkor site, held in Tokyo.
1993	Establishment of the international coordinating committee for the safeguarding and development of the historic site of Angkor (ICC-Angkor), under the co-chairmanship of France and Japan, with UNESCO providing the services of
1994	Law defining the zoning of Angkor (zones 1 to 5).
1995	Establishment of the APSARA National Authority, during the 19 th session of the
1996	Enactment of the law on the protection of cultural heritage.
1997	Open sky policy (air access for international flights).
1998	Enactment of the win-win policy. [official demobilization and peace policy]
2003	2 nd intergovernmental conference for the safeguarding and development of the Angkor site, held in Paris.
2004	Angkor was taken off the list of world heritage in danger and put on the world heritage list.
2006	Creation of the ICC-Angkor ad hoc experts group for sustainable development of the Angkor site.
2012	Enactment of charter for Angkor.
2013	Cambodia chaired the 37 th World Heritage Committee session in Phnom Penh and in Siem Reap.

2013	3 rd intergovernmental conference for the safeguarding and development of the Angkor site, was held in Cambodia.
2013	Creation of the tourism management plan group (tmp).
2015	Cambodia hosted the UNWTO conference (World Tourism Organization).
2017	25 th year anniversary of the inscription of Angkor on the world heritage list.
2018	25 th year anniversary of the establishment of the international coordinating committee for the safeguarding and development of the historic site of Angkor (ICC-Angkor).
2012	Enactment of charter for Angkor.
2013	Cambodia chaired the 37 th World Heritage Committee session in Phnom Penh and Siem Reap.
2013	3 rd intergovernmental conference for the safeguarding and development of the Angkor site, was held in Cambodia.
2013	Creation of the tourism management plan group (tmp).
2012	Enactment of charter for Angkor.
2013	Creation of the tourism management plan group (tmp).
2015	Cambodia hosted the UNWTO conference (World Tourism Organization).

2017	20 th anniversary of the inscription of Angkor on the World Heritage list.
2018	25 th year anniversary of the establishment of the international coordinating committee for the safeguarding and development of the historic site of Angkor (ICC-Angkor).

Source: Angkor ICC, 2018.

Eleven years after the establishment of the national APSARA Authority, which holds comprehensive national responsibility for managing heritage at Angkor, an international consultative body called ICC-Angkor was created. Its role is to coordinate the activities of various international organizations that contribute to heritage protection at Angkor. ICC-Angkor stands for the International Coordination Committee for the Safeguarding and Development of the Historic Site of Angkor. It was instituted following the first worldwide conference on Angkor, held in Tokyo, Japan, at the request of the World Heritage Committee, as part of its 1993 decision to inscribe Angkor as a World Heritage Site. The creation of ICC-Angkor was one of the five conditions that the Cambodian authorities were required to fulfill within three years (1993-1996).

Some 37 countries from five continents and 13 international organizations participated in this founding conference of ICC-Angkor, including: Belgium, Brunei, Cambodia, Canada, China, Denmark, Egypt, France, Greece, Germany, Great Britain, Hungary, India, Indonesia, Italy, Japan, Laos, Luxembourg, Malaysia, Mexico, Northern Ireland, Netherlands, Norway, New Zealand, Poland, Philippines, Russia, Republic of Korea, Spain, Singapore, Sri Lanka, Sweden, Switzerland, Thailand, Tunisia, and Vietnam, as well as

the EU, ADB, FAO, IMF, ECROM, ECOM, ICOMOS, UNWTO, SEAMEO / SPAFA, UNESCO, UNDP, UNV, and WMF (Angkor Heritage Management Framework, October 2013).

On 28 May 1994, a Royal Decree (No. 001/NS) established a set of 'Protected Cultural Zones' within the Siem Reap and Angkor region and specified guidelines for their management (Zoning Law). It laid out the Zoning and Environmental Management Plan (ZEMP), which established five zones of protection for the Angkor WHA and the province of Siem Reap (Fig. 10). The five zones, described in Articles 3 to 7 of the decree, are:

- **Zone 1:** Monumental Sites (Core Zone)
- **Zone 2:** Protected Reserves (Buffer Zone)
- **Zone 3:** Protected Cultural Landscapes (along rivers)
- **Zone 4:** Sites of Archaeological, Anthropological, or Historic Interest (heritage sites not protected in Zones 1 or 2)
- **Zone 5:** The Socio-Economic and Cultural Development Zone of the Siem Reap Region (areas outside the Park)

Map 4.5 The Angkor zoning and environmental plan zones, APSARA, 2021



Source: Internet, 2021.

The Supreme Council on National Culture (SCNC) and APSARA together head the Cambodian delegation to the International Coordinating Committee for the Safeguarding of Angkor (ICC) and its Technical Committee (TC). Created at the Tokyo Intergovernmental Conference on the Safeguarding and Development of the Historic Site of Angkor in October 1993, the ICC and its subcommittee, the TC, provide the international framework within which the SCNC and APSARA develop management plans for Angkor. Through the Technical Committee, the SCNC and APSARA review proposals for intervention and report on ongoing conservation efforts. In each session of ICC-Angkor, ambassadors, senior diplomats, or government officials from France and Japan co-chair the assembly. The UNESCO Office in Phnom Penh hosts the Secretariat and covers some of the expenses associated with the missions of ad hoc specialists, even though, since 2006, the APSARA Authority has contributed to supporting ICC-Angkor. The rules of ICC-Angkor include receiving reports on scientific or development projects to be implemented in the region and verifying the consistency and technical standards of all projects. ICC-Angkor has its own guidelines, receives reviews on scientific or development projects to be implemented in the area, and verifies consistency and technical requirements for all projects (UNESCO et al., 2013).

As noted, in 1992, the Cambodian government created APSARA, the Authority for the Protection and Management of Angkor and the Region of Siem Reap. APSARA's jurisdiction extends across 10,000 square kilometers in the province of Siem Reap, an area encompassing a significant portion of the nation's historical heritage, incomparable environmental treasures, and the bountiful and diverse natural food resources provided

by the lower plains and Tonle Sap Lake. Exercising financial and operational autonomy, yet mandated by the highest-level national authorities, APSARA guarantees the protection, development, and sustainable exploitation of these national assets within the framework of detailed zoning regulations. It is no secret that APSARA has taken on these responsibilities during a promising yet challenging time for Cambodia, dealing with numerous issues and competing demands in the post-conflict context. Pressure is high on all fronts, and a strong, balanced vision is essential to effectively address these challenges. This is particularly true in dealing with the problem of looting and vandalism, which requires prompt and coordinated efforts in surveillance and policing, regulation and punishment, international coordination, scientific research, and socio-economic development for the local population, including basic infrastructural investments.

The Cambodian authorities designed APSARA for maximal operational efficiency. Financial autonomy, made possible by a centralized high-level political mandate, aims to allow the Authority to set and implement priorities in direct response to needs identified through expert studies and monitoring. Local developments and advances are intended to contribute directly to national prosperity, as APSARA's very structure serves to align regional, national, and international interests.

According to Ang et al. (1998), the APSARA Authority's administrative board is composed of the seven ministers most involved in the development of the Angkor cultural heritage area (Public Works and Transport, Economy and Finance, Culture and Fine Arts, Foreign Affairs and International Cooperation, Tourism, Environment, Planning); a representative of the Cambodian Development Council; a representative of the Council of Ministers; and

the Governor of Siem Reap province. The board is presided over by the Prime Minister. Bringing a global perspective on the diverse but integrated technical aspects required for heritage management, the Minister of State for Culture and Fine Arts, Territorial Management, Urban Planning and Construction, in his role as Vice-President of the Administrative Board, closely monitors the Authority in its responsibilities for comprehensive management. The Supreme Council on National Culture, a separate national body of the same composition, determines the overall line of government policy for cultural heritage protection across Cambodia, with the exception of the Angkor area. APSARA is responsible for implementing local (Angkor-specific) policy in alignment with that established at the national level. The Law on the Protection of Cultural Heritage assigns this duty to these bodies within their respective jurisdictions (Ang et al., 1998).

According to Ang et al. (1998), the institutional context for cultural heritage management has changed significantly since the pre-war period. Of particular note is the new status of the Angkor Conservation Office, now a central authority body financed from the national budget and controlled by Khmer nationals. Unfortunately, a lack of scientific personnel and professional laborers, alongside the absence of comprehensive coverage for the management of Angkor, has prevented the Conservation Office from assuming its rightful role as the national counterpart to international institutions. The seeds of a cultural heritage management policy and implementation framework, planted by the transitional authorities in the early 1990s, have gradually taken root over the following decades. The Siem Reap/Angkor region is now protected by a newly formulated series of zoning regulations specifically designed to safeguard the national cultural heritage and

adopted by the Council of Ministers in 1994. In keeping with its role as a national inter-ministerial authority overseeing various related areas of development and protection activities in the province of Siem Reap, APSARA, created by law in 1995, has begun to take responsibility for cultural heritage management in collaboration with national and international bodies.

According to Ang et al. (1998), in 1989, the Archaeological Survey of India became the first international research group to return to Angkor after the fall of the Khmer Rouge. While the work of this group at Angkor Wat, begun under the post-1979 authorities and without coordinated national or international collaboration in mission formulation, was completed in the early 1990s, other teams have continued to assist in establishing coordination mechanisms. Masako M. (2019) argued that in 1991, Sophia University of Tokyo began a comprehensive examination of the Banteay Kdei temple as part of the Sophia University Angkor International Mission (Archaeological Research at Banteay Kdei Temple: Overview of Investigations over the Past Ten Years). The first project to take such a holistic approach, Sophia's excavation, soundings, photogrammetric readings, and emergency maintenance measures have recently expanded to include a socio-economic development project in the adjacent village of Srah Srang. The technical assistance of Sophia University has also supported the Angkor Conservation Office in preserving the northern part of the western causeway of Angkor Wat.

The Ecole Française d'Extrême-Orient, undeniably the foreign organization most familiar with Angkor, has re-established operations inside the Park. Rebuilding its pre-conflict headquarters, the Ecole quickly resumed restoration work on a section of the Royal

Terraces of Angkor Thom, which had been partially restored prior to the war. Upon completion of that first project, the team began work on a second section of the Terrace. After an interruption of more than 20 years, this French organization also resumed the crucial and highly ambitious restoration of the Baphuon, inside Angkor Thom. Another research mission on urban planning within the ancient city of Angkor Thom is currently underway. The Ecole Française d'Extrême-Orient is also working to establish a descriptive inventory of artisanal tools stored in the Conservation reserves.

The Japanese Government Team for Safeguarding Angkor has conducted a major and sophisticated research project on the Suor Proat group with a view toward eventual restoration. Additionally, the Japanese team has begun work on the northern "library" of this temple. The World Monuments Fund (WMF) is working to conserve the imposing monument of Preah Khan, which has been cleared of vegetation and is regularly maintained. Emergency measures, such as propping up sections of the monument at risk of collapse, have also been implemented, and certain structures are being restored. The Royal Angkor Foundation, a joint Hungarian and German initiative, is currently carrying out restoration work on the Preah Ko temple in Roluos. The latest group to begin work at Angkor is particularly noteworthy: The Royal Angkor Foundation, born from a Hungarian and German combined initiative, is currently restoring carvings at Preah Ko temple in Roluos. A notable new addition is the Indonesian Team for Safeguarding Angkor. Modest in ambition, the Indonesian initiative is admirable for its cooperative philosophy. Over a period of four years, the project aims to restore each of the doorway gates to the Royal Palace, progressively transferring technical capacities and project

management responsibilities to Khmer national partners. Additionally, with the help of UNESCO, an Italian team has conducted a preliminary study for structural stabilization of the Pre Rup complex. The most recent addition to the scientific community working at Angkor is a team funded by the Federal Republic of Germany. Composed mainly of German researchers, this team is conducting intensive research on the causes of decay in the apsara reliefs at Angkor Wat, with a focus on preserving them. Finally, the People's Republic of China has also contributed to the restoration of several structures, including the Takeo temple mountain and the royal palace.

4.7 Conservation Efforts in the Rolous Group: 1992 – Present

Briefly listed here are the restoration projects implemented in the three main sites of the Rolous group in the contemporary era.

4.7.1 Preah Ko Temple: 1992 – 2010

a) Funding: Ministry of Foreign Affairs of Germany, UNESCO,
NASA/JPL, Ministry of Foreign Affairs of Hungary, CIDA

Total budget: USD 1,216,000

Number of Cambodians trained and/or working on the project: 3 archaeologists,
18 teachers, 52 workers

Total project staff: 108 staff members

4.7.2 Lolei Management Project, 2012

b) Conservation work for stucco on the temple walls by GACP

- c) Conservation work in preparing the conservation of the form, and elements and reinforcing the structure of the temple towers, APSARA, 2019
- d) Move the new buildings on the plate form of the temple to the ground in the north-east far from the temple (fig. 30)

4.7.3 Bakong Project, 2012

- a) Conservation work in stucco on the temple walls by GACP
- b) Bakong Conservation Project (brick towers), 2019
- c) Tan S. et Saray K. 2009 report that conservation work in preparing the conservation form, and elements, restored the staircase at the east entrance and reinforced the structure of the temple towers, Between the years 2013 and 2014 there were conservation works carried out such as restoration the east gate, northeast brick towers of the temple.
- d) Project Linking Restoration and Sustainable Development APSARA National Authority (Cambodia) and HOLCIM Group of Companies (Switzerland)
Restoration of the Vihear of Wat Bakong and its Mural Paintings

4.7.4 Preah Ko

The Preah Ko temple, located in the Roluos group near Angkor, has a fascinating and complex history that spans several centuries. Initially constructed in the 9th century AD as part of the first Khmer capital, Hariharālaya, the temple stands as an early representation of the Kingdom of the Khmer God-Kings. It is distinguished by its six brick towers, which are decorated with stuccoes, many of which have survived to this day. The

temple's history has been shaped by numerous restorations and interventions, particularly after the French rediscovered it in the early 20th century.

During the Vietnamese occupation of Cambodia, Preah Ko was repurposed as a military base, leading to modifications and damage to the temple complex. The local inhabitants of Roluos were involved in dismantling the stone slabs of the platform to fortify the perimeter defenses, only later to help rediscover these elements in the forest. This incident highlights the temple's continued connection with local communities, which also helped identify and document the historical aspects of the site, such as burial holes and construction features like vertical timbers used for storing salt.

Efforts to restore the temple began in the early 20th century, with the Hungarian Royal Angkor Foundation leading significant restoration work from 1994 to 1996, under the support of the German government. This initiative contributed to the development of the first Geographic Information System (GIS) for Angkor and assisted in the establishment of the Zoning and Environmental Management Plan (ZEMP) for the site. When the Hungarian project concluded, the German Apsara Conservation Project (GACP) continued the restoration efforts, training local Cambodian conservators and strengthening their expertise in conservation. The collaboration between international teams and local experts was a critical part of the project's success, and in 2000, Preah Ko's restoration was completed.

The work at Preah Ko became a model for future international conservation projects in Cambodia. The conservation efforts, particularly the reconstitution of the temple's

platform and stabilization of the towers, were executed with precision, using traditional techniques like subtle drainage systems to preserve the site's integrity. By 2000, the temple was handed over to the APSARA Authority, and the Cambodian conservation team, trained by GACP, continued to oversee its maintenance.

In addition to Preah Ko, other temples in the Roluos group, like Bakong and Lolei, have also undergone restoration with the assistance of various international organizations, such as the Royal Angkor Foundation, the University of Sydney, and the HOLCIM Group. These efforts have focused on preventive maintenance, emergency interventions, and the restoration of decorative reliefs, murals, and other artistic elements. For example, the murals in the Buddhist temple Wat Bakong were restored by the team from Restaurateurs Sans Frontières in collaboration with the Cambodian teams, marking a significant milestone in post-Angkorian monument restoration.

The restoration and conservation of these temples highlight the ongoing challenges and successes in preserving Cambodia's rich cultural heritage, particularly at Angkor, which continues to attract global attention for its historical and cultural significance.

The temple of Preah Ko served as a Vietnamese military base during the Vietnamese occupation, leading to some changes and adjustments to the temple complex. It is interesting to note that the inhabitants of Roluos helped the Vietnamese forces dismantle the stone slabs of the temple platform to fortify perimeter defenses. Later, as members of the German Apsara Conservation Project (GACP) conservation team, they helped recover the slabs in the forest. They were also able to identify holes in the platform as

either burial holes for ancestors or holes made to house vertical timbers used in the construction of a salt storage room for the Vietnamese forces.

The temple of Preah Ko is an early example of the structure of the Kingdom of the Khmer God-Kings in what is now Cambodia. It lies to the southeast of the famous Angkor heritage site and was once part of the first acknowledged Khmer capital in the Angkor region: Hariharālaya. Its six brick towers from the 9th century AD are positioned on a strong platform and are decorated with stuccoes, components of which have survived to the present day. The temple's condition has raised many challenges since its 'discovery' with the aid of the French around 1900. The Hungarian Royal Angkor Foundation began restoration work there in the early 1990s, becoming one of the first global restoration initiatives after Cambodia's civil war.

The Royal Angkor Foundation (RAF) of Hungary carried out intervention work on the Preah Ko temple from 1994 to 1996 with funding assistance from the German Government. The RAF was among the founders of the International Coordinating Committee for Safeguarding and Development of the Historic Site of Angkor. The first GIS of Angkor was developed by the RAF, which, together with UNESCO, devised part of the Zoning and Environmental Management Plan (ZEMP, 1993-1996). The foundation carried out joint research with NASA/Jet Propulsion Laboratory and the World Monuments Fund (WMF, 1995-1996) to collect and analyze sensor data on Angkor for conducting restoration. When the project concluded in 1996, some work remained unfinished, including the consolidation of the still-open platform. The Cambodian restoration team remained on-site, and all work facilities were still in place. Since the funding for the

Hungarian mission, in addition to the GACP, had been provided by the Republic of Germany, it was considered logical that the final consolidation work on the temple of Preah Ko be overseen by the GACP.

The German Apsara Conservation Project (GACPD), which commenced in the mid-1990s and was funded by the German Foreign Office, had three main objectives: documentation and scientific investigation; real conservation work; and the education of Khmer conservators and professionals, as well as students from the University of Applied Science at Cologne and other universities. In this way, it integrated substantial scientific and technical practice with the creation of a highly skilled Cambodian team of conservators who became an important resource for staffing the Cambodian conservation authority, APSARA. All conservation measures were completed in close cooperation with APSARA and UNESCO. The Cambodian conservators, with their eagerness to analyze and their dedication to quality work, along with their reliability and craftsmanship, helped the project achieve a high standard. Many European colleagues and students who contributed to the tasks pro bono should also be acknowledged here.

In 1999, with the help of the Cambodian conservators and new trainees under GACP supervision, the overlaying of the platform and stabilization of the towers began, with careful attention to water drainage. The platform was reconstituted to include as many original stone slabs as possible, and the drainage was executed with a unique technique of shallow inclination and small channels. In these regards, the Cambodian team demonstrated its competence in knowledge, ability, and expertise. By 2000, the work on the platform was completed, and the temple of Preah Ko entered a new chapter in its

thousand-year history. As the first global project, Preah Ko was handed directly to the APSARA authorities. The entire Cambodian team, previously funded by GACP, was then hired by APSARA, and the trained conservators were tasked with overseeing the project. Parts of the running costs, scientific advice, and expertise continued to be provided by Germany. In this way, all contributors to the project were able to gradually adjust to their new responsibilities. Preah Ko later became a model for future international projects handed over to local authorities.

4.7.5 Lolei and Bakong

According to the WMF (1992), restoration projects were undertaken by King Satha in 1576. King Satha invested considerable energy in restoring existing hydraulic irrigation systems and the restoration of Angkor Wat. In 1908, the Conservation d'Angkor was established.

EFEO's restoration efforts began with a series of directors, starting with Jean Commaille. Later, in the late 19th century, luminaries such as Henri Marchal, Maurice Glaize, and Bernard Philippe Groslier carried on the work until 1976, with continued assistance from French archaeologists and restorers.

Since that time, the French team and conservation authorities began working on the EFEO to conserve the Lolei and Preah Ko monuments of the Roluos group in Bakong in the 1920s, continuing until the civil war in 1976 (EFEO Report, 1925). The initial projects undertaken by the EFEO and the Conservation d'Angkor were archaeological, but after 1930, they increasingly focused on conservation activities, with both minor and major

projects. Between 1931 and 1932, the excavation and clearing of the temple of Preah Ko in the Roluos group was carried out by George Trouvé (WMF, 1992).

Today, all APSARA authority, as a national institution, is being restored by the Cambodian government with the assistance of various international organizations working at Angkor. The teams involved in Bakong include APSARA National Authority (Cambodia), the German Apsara Conservation Project (Germany), the Royal Angkor Foundation (Hungary), the University of Sydney (Australia), and the HOLCIM Group of Companies (Switzerland).

According to the 19th Plenary Session Report of 2012, after inspecting several temple structures, such as the Bakong and Lolei brick towers, preventive maintenance of the decorative reliefs was carried out. The monitoring showed that the guardian relief at Lolei, which was conserved by GACP in 2004, was still in very good and stable condition. However, other stone elements, especially at Bakong, were in a precarious state, requiring immediate emergency interventions. For all examined temples, a short report was prepared for APSARA National Authority (ANA) with proposals for necessary immediate interventions.

Conservation activities at Prasat Bakong began in August 2012, with GACP starting a conservation campaign at the tower of the West Central North brick shrine. For these measures, scaffolding had to be erected. Documentation and research were conducted on stone elements like lintels, doorjambs, and columns, as well as the highly endangered stucco decoration, with preliminary emergency interventions being carried out.

Cultural vestiges from the more recent past were also restored. Painted in the 1940s by a small crew of local painters and fortunately left undamaged by the Khmer Rouge, the galleries of the prayer hall at the Buddhist temple Wat Bakong contain remarkable scenes from Buddha's life and a variety of rare images. The restoration respected the strict protocols for interventions in a World Heritage area. For the first time in the history of post-Angkorian monuments, a deteriorating Buddhist monument was no longer demolished and rebuilt with the aid of monks. Instead, the structure was entirely restored to its original condition, while the mural paintings were extracted and restored by the team from Restaurateurs Sans Frontières (RSF), in collaboration with Cambodian teams from APSARA National Authority and the Royal University of Fine Arts (RUFA), as well as a monk from Wat Bakong (Angkor Heritage Management Framework, October 2013).

From 2007 to 2011, funding for the project came from APSARA National Authority, HOLCIM Group of Companies, and others. The total budget was USD 460,000. The project employed 2 students from RUFA, 1 Buddhist monk, and 1 APSARA staff member, with a total project staff of 13 APSARA staff members and 20 international staff members from Restaurateurs Sans Frontières.



Fig. 4.2: View south east, before clearance
by Trouvé 1932, EFEO



Fig.4.3: Restoration, south east view,
Trouvé 1932, EFEO



Fig.4.4: south-east view, Trouvé1932



Fig.4.5: South east view, Chhim, 2020



Fig.4.6: Restoration at angle north-west



Fig.4.7: North-west view, Restoration

Restoration before 1932 by Trouvé 1932.

in 1999, By Chhim.

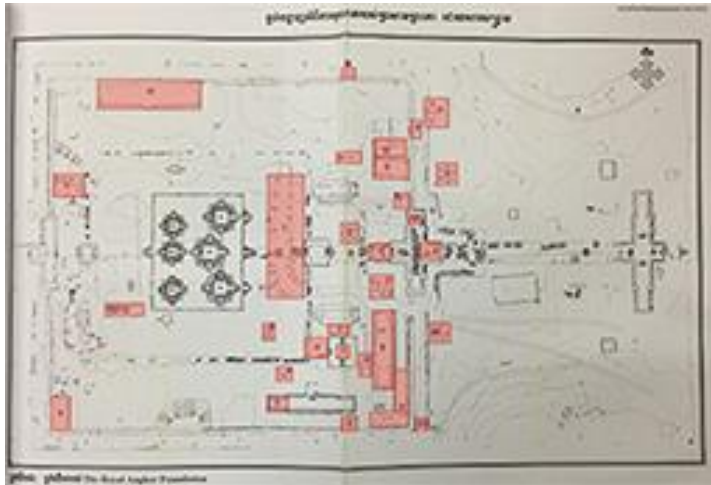


Fig.4.8:

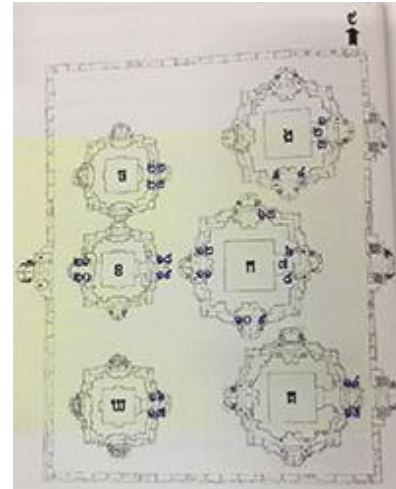


Fig.4.9:

Fig. 4.8 and Fig.4.9 site plans of the Royal Angkor Foundation, from the report of APSARA by Tan and Saray, 2009, showing the damaged by the war.



Fig. 4.10: View of ruins of the central pyramid of Bakong (Photograph Pestel), EFEO, 1896.



Fig. 4.11: A view of the central pyramid of Bakong (Photograph Chhim).2020



Fig. 4.12: A view of North-East, restoration, by Chhim 2008.



Fig. 4.13: A view of South-East, after restoration, by Chhim 2011.



Fig. 4.14: A view East gate, before restoration, APSARA 2013.



Fig.4.15: A view East gate, after restoration, APSARA 2014



Fig.4.16: East view, in 1966
EFEO_cam_14224_a01.



Fig. 4.17: East view, January 2020
Chhim 2020.

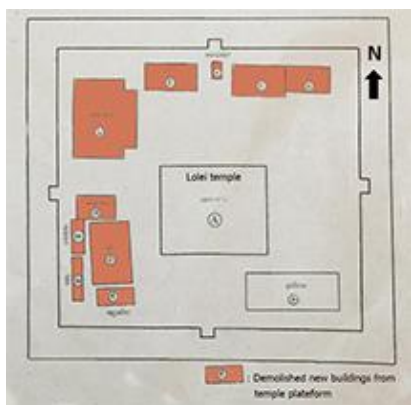


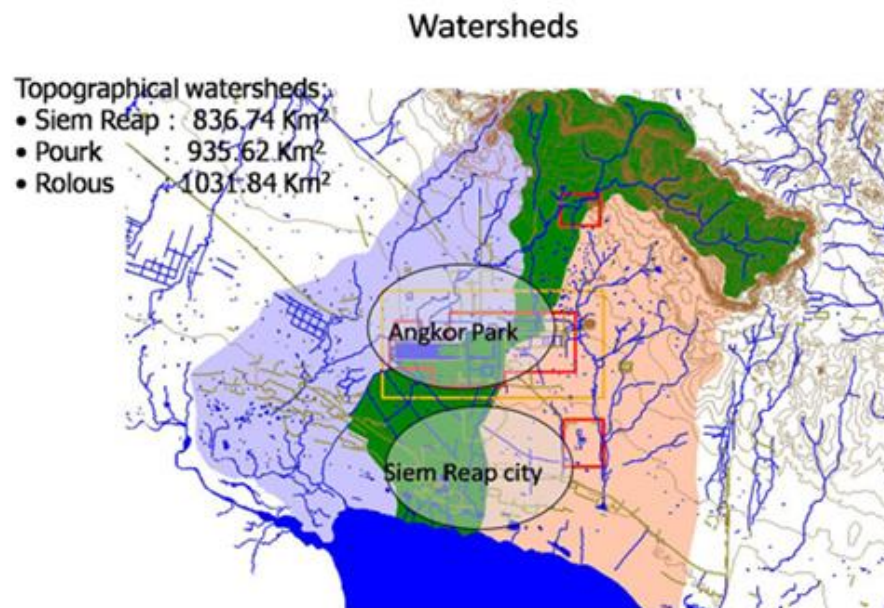
Fig. 4.18: From official letter,
monk committee, November 2019.
Demolished building site near Lolei temple, Own source, 2020.



Fig. 4.19: Demolished site, Nov. 2019.
View from West to East, Chhim 2020.

4.7.6 Watershed and Environmental Management

Map 4.6: Topographical Watersheds for Angkor Ecological Development



Source: Hang, P. et al. (2016).

The World Heritage Committee of UNESCO has called for a strategic commitment from its State Parties to strengthen links between heritage conservation and sustainable development (Peou et al., 2016). Fulfillment of this commitment will require the integration of the conservation of sites with the sustainable use and control of a wide range of resources (cultural, environmental, economic, and human) across a broad area beyond the boundaries of heritage sites. The identification and demarcation of areas for conserving World Heritage sites and promoting sustainable development must be based on an understanding of human-environment relationships.

The management of Angkor—an iconic World Heritage site—has traditionally focused on architectural conservation and material restoration of monuments and art forms within the boundaries of the heritage site. However, that focus is now shifting toward addressing

environmental, social, and economic challenges for sustainable development in Angkor and the wider area defined in this thesis. This includes sustainably managing the environment, society, economy, and culture in and around the heritage sites of Bakong District.

The entire Angkor area in ancient times was a site for major hydraulic, environmental, and population management policies that were closely tied to the construction and significance of the ancient monuments themselves. In the modern era, alongside material and aesthetic conservation of monuments, the APSARA Authority of Angkor has the potential to demonstrate the application of an integrated ecosystem approach to sustainable development, as advocated under the UN Convention on Biological Diversity. The Roluos area, for instance, could serve as a laboratory for new research on cultural ecosystem services, community forestry, community tourism, and communal water resource conservation, contributing to the sustainable development of the people and environment in the area where the ancient monuments are located.

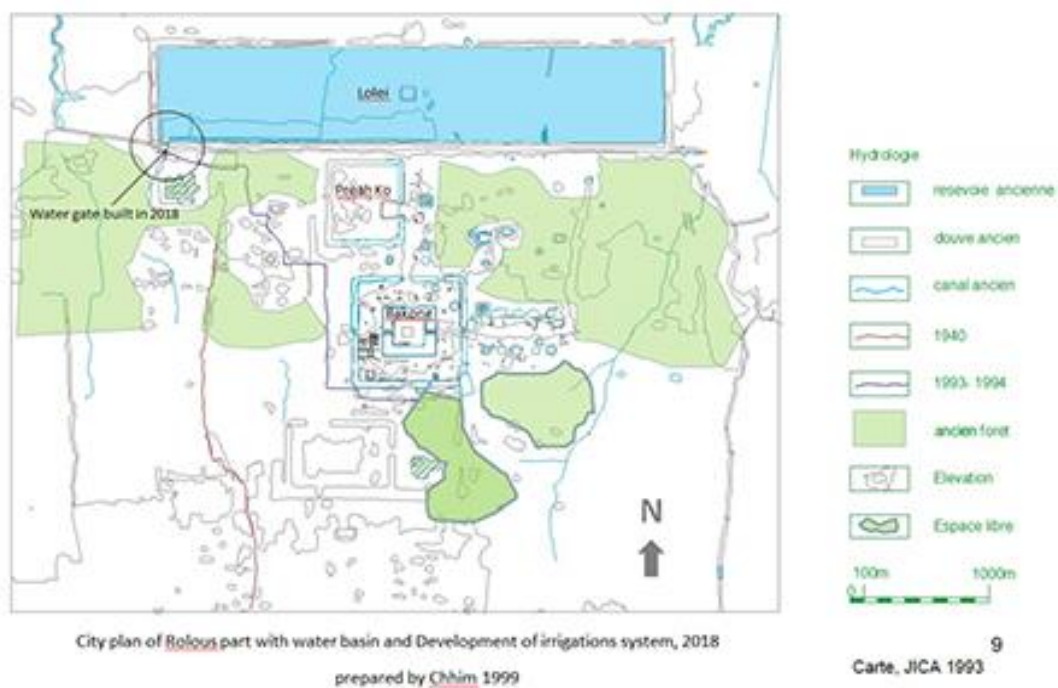
The Angkor ecosystem, including the World Heritage site comprising Angkor Wat (the central rectangle), Banteay Srei (the square north of Angkor Wat), and Roluos (the square south of Angkor Wat), along with the three watersheds central to Angkor hydraulics and the modern Siem Reap city that has developed south of the Angkor World Heritage site, is of critical importance.

The figure below (Fig. 4.18) shows the development of an irrigation system in Bakong for the ecosystem, environment, and biological diversity of the water reservoir of Lolei in the southwest corner, built by APSARA in 2018.

Fig. 4.20: Development of Irrigations System in Bakong



Source: Chhim, 2020.



Map 4.7: Water basin of Rolous and Development of irrigation systems, 2018 by APSARA. Prepare by CHHIM 2020, JICA Map 1993

4.8 Conclusion

The geographic area of Rolous was an ideal location for agriculture and human settlement, and it was selected by the founding kings of Angkor for the development of the first royal temple complex of the Angkorian era. Here, extraordinary kings built the first of a series of vast cities, temples, and massive water reservoirs that would come to define the Angkor civilization. This expansion eventually moved beyond the Rolous area to develop new centers at Phnom Bakheng, Angkor Wat, and Angkor Thom to the northwest.

Vast in scope and of remarkable design, the temples of the Rolous area reflected the religious worldview of the ancient Khmers and symbolized the prestige and power of the royal line. However, the Khmer Empire came under assault, the brilliance of Angkor was eclipsed, and most of the monuments were abandoned from the 15th to 19th centuries, with only some ongoing activities at Angkor Wat. After the decline of the Khmer Empire, the heritage site was degraded by human activities, overtaken by vegetation, weathered by the tropical climate, and used as a site for military campaigns.

The monuments of the Angkor area underwent dramatic restoration after Cambodia came under the French Protectorate in 1863. The École Française d'Extrême-Orient (EFEO) assumed responsibility for researching, restoring, and providing access to the ancient monuments, effectively reinventing Angkor as a center for archaeology, conservation, heritage management, and heritage tourism. The heritage management efforts were once again disrupted during the civil war and the Khmer Rouge regime of the 1970s.

Heritage management activities at Angkor only resumed after Cambodia was liberated from the genocide of the Khmer Rouge and peace was established in the 1990s. Foreign and national teams began surveying the terrain and once again carrying out conservation work at Angkor's heritage sites and temples. The Royal Cambodian government, with assistance from foreign organizations and countries, established modern administrative systems and mechanisms for formal heritage management. Frameworks were created to regulate, finance, and manage conservation efforts, ensuring that heritage management would be sustainable.

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CHAPTER V

SOCIO-ECONOMIC PROFILE OF THE HERITAGE SITE

CHAPTER V

SOCIO-ECONOMIC PROFILE OF THE HERITAGE SITE

The present chapter has analyzed the socio-economic profile of the Bakong commune of the Bakong district in Siem Reap of the Kingdom of Cambodia. All of these include geographical setting, demographic factors, economic benefits of the heritage tourism to residents of the study area in Bakong commune such as Siem Reap-Bakong comparison, direct benefits from tourism in Bakong (Salaried employment in heritage management in Bakong and commercial services provides directly to tourists) and indirect benefits from heritage tourism.

5.1 Location, Geographical, and Features

The study area, Bakong Commune, is situated 300 kilometers northwest of the Cambodian capital, Phnom Penh, in Siem Reap Province, northwestern Cambodia. Siem Reap is one of Cambodia's 25 provinces and is best known for being home to the ancient temples and royal cities of the Khmer Empire, located within the Angkor Archaeological Park, where the study area is also situated.

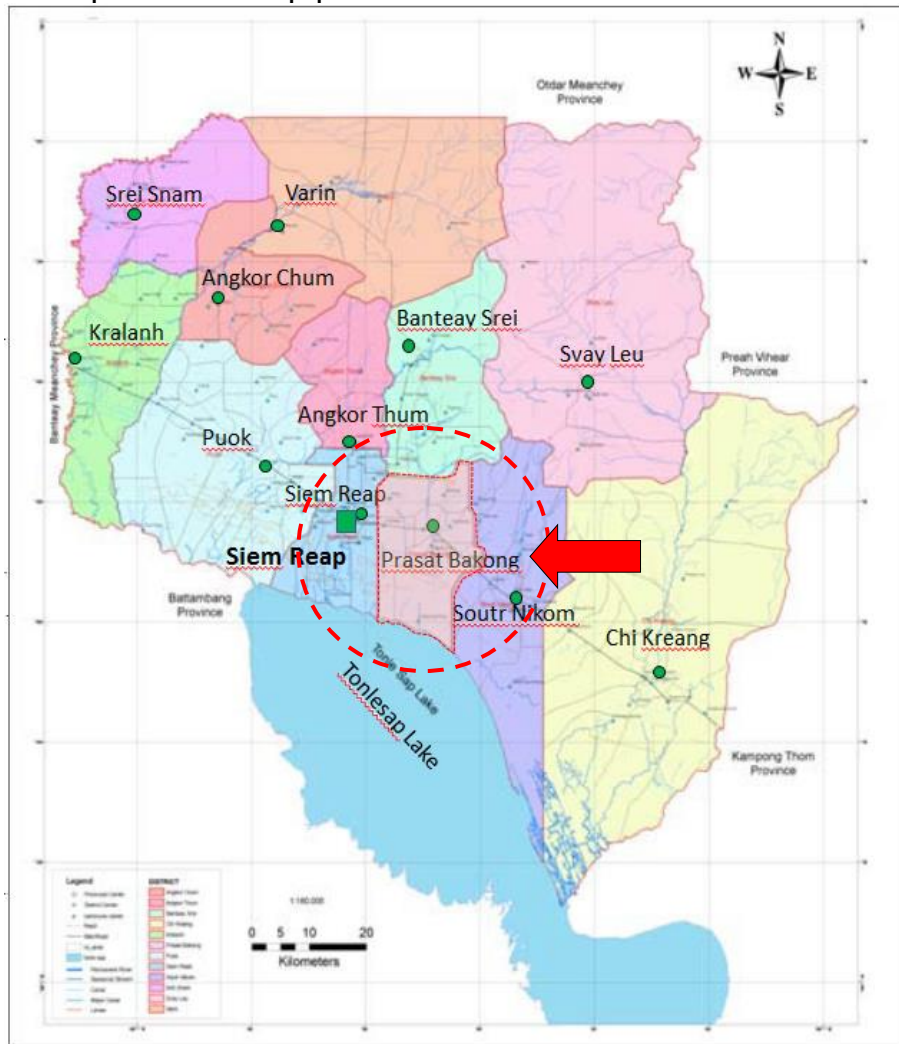
The province is bordered to the north by Udor Meanchey and Preah Vihear provinces, to the east by Kampong Thom and Preah Vihear, to the south by Battambang and the Tonle Sap Great Lake, and to the west by Banteay Meanchey. The total land area of Siem Reap Province is 10,229 square kilometers.

This area is divided into 12 districts, 100 communes, and 907 villages. In 2019 (GPC, June 2019), the population of Siem Reap Province was 1,006,512, with an average

population density of 98 per square kilometer (GPC, 2019), and a total of 218,659 households.

Siem Reap Municipality—the economic and cultural center of Siem Reap Province—is one of the 12 districts within the province. This city, which has an international airport, bus stations, and a river port, serves as the gateway for tourists visiting the temples of Angkor, most of which are located north of the city.

Map 5.1: Map of Siem Reap province



Source: Department of Planning, Siem Reap 2019

Prasat Bakong, the district that includes the villages of the study area, lies 13 kilometers east of Siem Reap City. The district is bordered to the north by Banteay Srei District, to

the east by Sotr Nikom, to the south by Tonle Sap Lake, and to the west by Siem Reap City.

The district's main claim to fame is the Roluos temple group—three early 9th-century Hindu temples established by the founding dynasty of the Khmer Empire. As a result, the district is highly attractive to tourists, who typically travel from Siem Reap City on day trips to visit the temple complex and nearby villages. There are also opportunities for tourists to visit the fishing villages and a bird sanctuary in the southern part of the district, on the northern shore of Tonle Sap Lake, where they can relax and watch the sunset on the horizon.

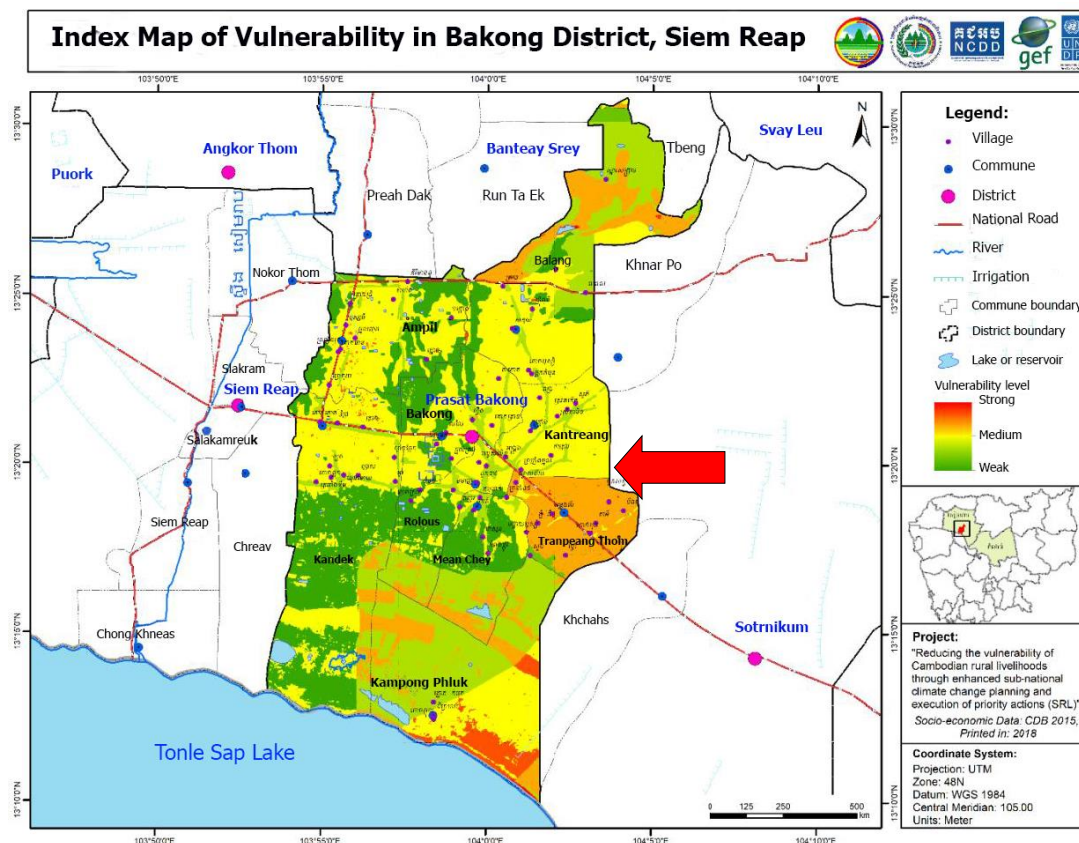
Although the district is a popular tourist destination, attracting a large number of visitors, it has relatively few hotels, resorts, restaurants, and tourism-related businesses. Most of these services are concentrated in Siem Reap City.

Bakong Commune is home to the temples of the Roluos group and the four villages of the study area. In total, the commune consists of six villages with a population of 8,706 (as of December 2019, according to the district police administration). Centrally located within Prasat Bakong District, the commune is served by National Highway 6, which connects Siem Reap City to Phnom Penh. This highway divides Bakong Commune into two halves: north and south.

Lolei Temple is situated in the northern half of the commune, along with two of the study villages, Lolei and Stoeung. In the southern half of the commune, south of Highway 6, lie Prasat Preah Ko, Bakong, and Prei Monti temples, as well as the other two study villages, Ao Laok and Thnal Trang. The southern half is the most populous and also

receives the highest number of visitors, as it is home to the two most-visited temples: Prasat Preah Ko and Prasat Bakong.

Map 5.2: Map of Bakong district



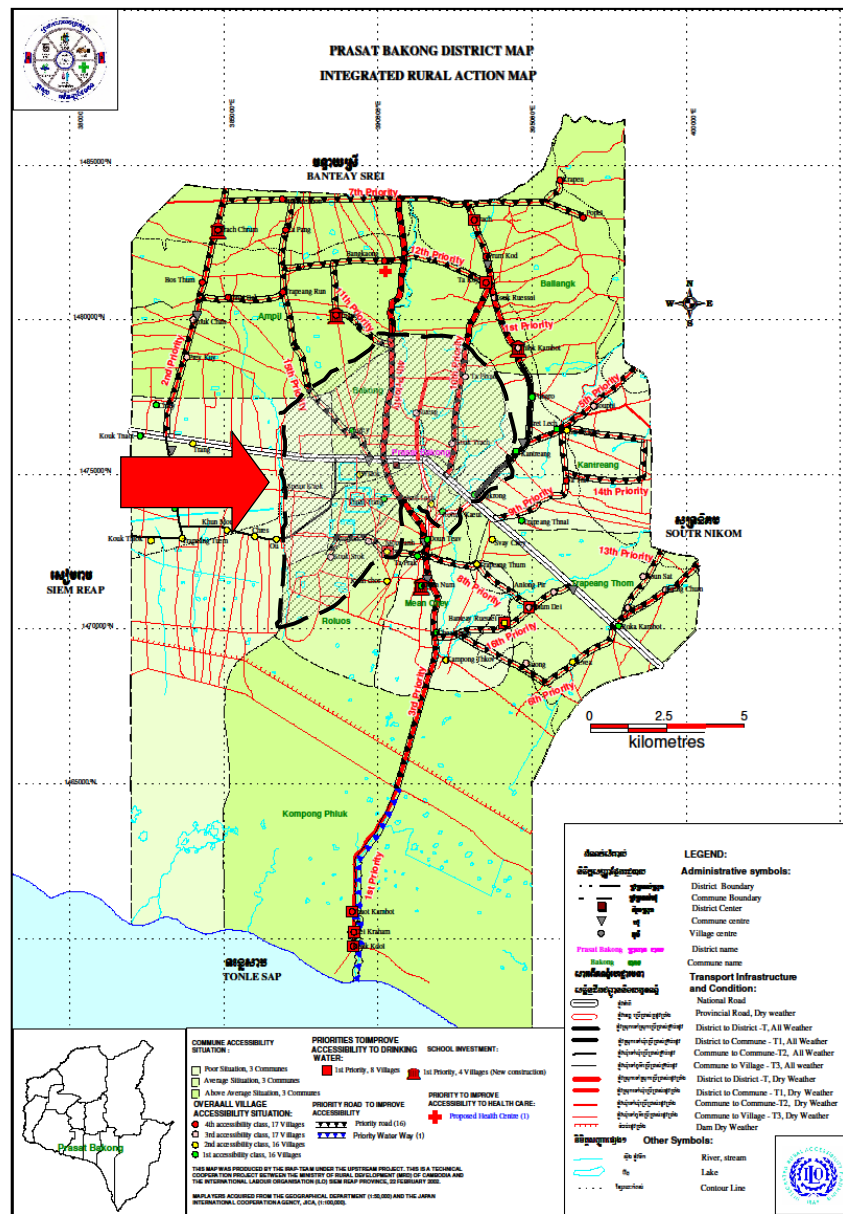
Source: Bakong commune, 2019.

The commune's main market and the majority of commercial establishments that serve tourists are also situated in the southern part of the commune, close to Highway 6 and the tourist sites of Prasat Preah Ko and Prasat Bakong. Road connections in the southern half of the commune are more abundant than in the north. In August 2021, the 2.5-kilometer road from Highway 6 to Prasat Bakong was sealed, providing residents with their only paved road. The commune's administrative offices, schools, police station, and health clinic are all located south of Highway 6. Additionally, the commune hosts some of the district's administrative offices.

The four villages in the study area—Stoeung, Lolei, Ao Laok, and Thnal Trang—are in close proximity to the temples of the Roluos group. Stoeung village (population 1,318 in 2019) is situated about two kilometers east of the temples. The village has a linear layout, running north to south along the banks of the Roluos River, from which it derives its name ("Stoeung" means "river" in Khmer). Being close to the river, the village benefits from a reliable year-round supply of fresh water and is well-irrigated. It is densely covered with fruit trees, with most households growing them within their compounds. The majority of villagers engage in agriculture, and rice fields are located to the east and west of the residential area.

Stoeung village is accessible via National Highway 6, the main route from Siem Reap to Phnom Penh. A few tourist restaurants are favorably located in the southern part of the village near the highway. However, the village center, where the primary school, Buddhist pagoda, and grocery shops are situated, lies about one kilometer north of the highway and is accessible only by an unpaved road. As a result, the village attracts few tourists due to its remote location, its distance from the temples (four kilometers from Bakong Temple), and its isolation from the flow of vehicles along the national highway.

Map 5.3: Map of Transport System in Bakong commune



Source: MRD, ILO, GD and JICA, 2002

Lolei village (population: 1,678 in 2019) is also located north of National Highway 6. Most residences and public buildings, such as the village primary school and Buddhist temple, cluster around Prasat Lolei, the northernmost temple of the Roluos Group. The village is

somewhat remote, with its center lying about a kilometer north of Highway 6, surrounded by rice fields. The access road from Highway 6 to the village is unsealed.

The village is shaped like a cross, formed by the intersection of the access road to the temple with another unsealed road that runs east-west parallel to Highway 6. The main part of the village does not receive much through traffic, and the primary visitors are tourists stopping at Lolei temple as part of a tour of the Roluos Group. However, some households are more favorably located along Highway 6 in a linear pattern. These households benefit from the heavy traffic, including visitors to the heritage site and, more significantly, long-distance travelers on the interprovincial highway. Businesses operated by these villagers include restaurants, cafés, grilled meat and takeaway food stalls, service stations, and mechanic shops.

Aolaok village (population: 2,286 in 2019) is the most populous in the study area and the closest to Preah Ko and Bakong, the two largest and most-visited temples of the Roluos Group. The village settlement wraps tightly around these two temples, with most residences concentrated along the two-kilometer access road leading from National Highway 6 and on the eastern side of the temple complex. The settled area is densely wooded, and many small, ancient brick temples—mostly in poor condition—are scattered among the houses in the southern part of the village.

Most of the commercial establishments serving tourists are situated along the main access road to the temples. Villager-operated businesses along this road include restaurants; cafés; meat, vegetable, and grocery stalls; shops selling construction materials, clothing, and wedding costumes; grilled meat and takeaway food stalls; mechanic shops and

service stations; a stone carving workshop; and shops selling drinks, souvenirs, leather art, scarves, handicrafts, and pottery. A ticket booth and public toilets are also located along this road. Some food, grocery, and souvenir outlets can also be found along the east-west road that extends from Bakong temple.

The village has a state kindergarten, a primary school, and a Buddhist pagoda within the grounds of Bakong temple. The Bakong commune offices, health center, and district buildings—including the district school, hall, police station, and funeral center—are also located in this village. However, these official buildings are situated along Highway 6, far from the temples and the residential area.

Thnal Trang village (population: 1,530 in 2019) neighbors Aolaok village and lies directly southeast of Bakong temple. The name Thnal Trang means "straight road," which accurately describes the village's location along a two-kilometer road stretching southeast from Bakong temple's moat to Roluos market—the largest and busiest commercial center in Prasat Bakong district. This road also provides access to the floating village of Kampong Phluk and Tonle Sap Lake, both popular tourist destinations.

Thnal Trang village has more public and commercial facilities than the other villages in the study area, including both primary and junior high schools, a community building (known as a "dama" building), NGO schools, and a market area with numerous grocery shops, service outlets, cafés, and food stalls. The Thnal Trang market, located close to the Bakong temple moat, serves as a morning marketplace for surrounding villages. It is also frequented by tourists and day-trippers.

Thnal Trang is home to two resorts catering to affluent tourists: one is a Vipassana meditation center that attracts many international visitors, while the other is an upscale outdoor gourmet restaurant where customers dine in traditional huts arranged around a beautifully landscaped garden and lake.

Bakong commune also includes two other villages, Or and Kok Srok, located to the south and west of the temple complex, respectively. Their economies are primarily based on agriculture, with some involvement in industry and commercial services. However, these villages are not included in the study area due to their distance from the temples and lack of participation in heritage management activities or the tourism economy associated with the Roluos temple group.

5.2 Demography

With a population of 1,007,000 in 2019, Siem Reap is Cambodia's second most visited province by tourists. Over the last two decades, thanks to the economic boost from tourism, Siem Reap has experienced the third-fastest population growth rate in the country.

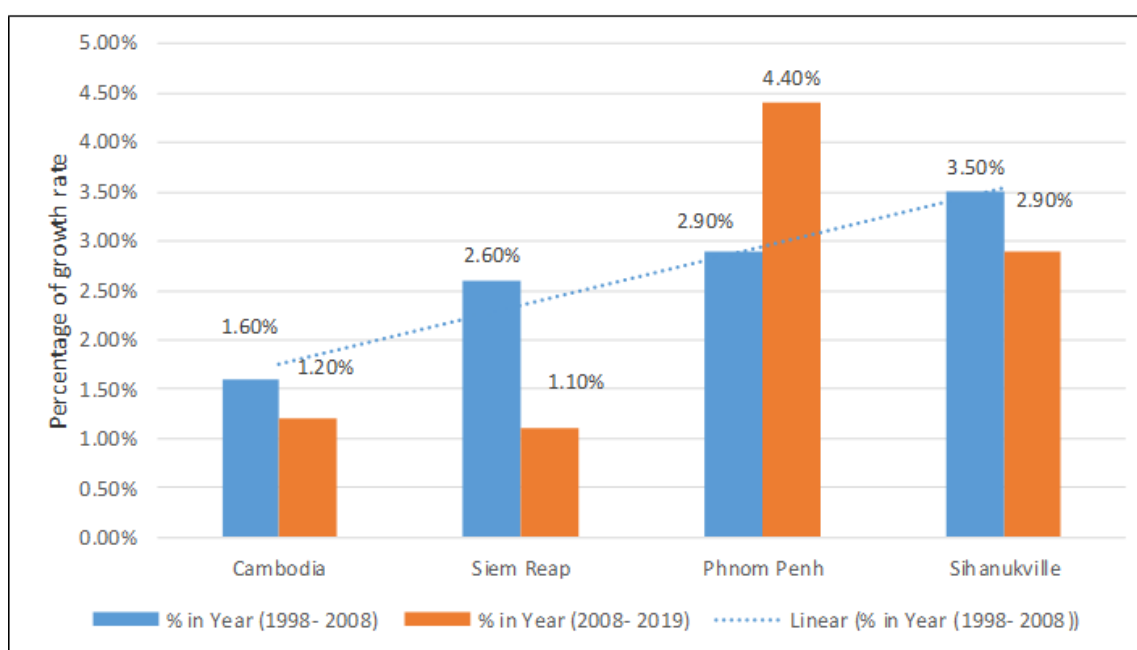
Table 5.1 and Figure 1 compare the population growth rates of Cambodia's three fastest-growing localities from 1998 to 2019. The data indicate that growth was particularly high from 1998 to 2008, especially in Sihanoukville, which had a growth rate of 3.5%, higher than Phnom Penh's 2.9% and Siem Reap's 2.6%. In contrast, Cambodia's overall national growth rate during this period was 1.6%.

After 2008, the population growth rate declined across most regions, with the exception of Phnom Penh, which continued to grow at a steady pace. Between 2008 and 2019, Siem Reap's growth rate declined to less than half of its 2008 level.

Table 5.1: Population Growth in 1998, 2008 and 2019 (2019, Knight Frank)

Locality	Population in 1000			Year	Year
	1998	2008	2019	(1998- 2008)	(1008- 2019)
Cambodia	11,438	11,396	15,288	1.6%	1.2%
Siem Reap	696	896	1,007	2.6%	1.1%
Phnom Penh	1,000	1,328	2,129	2.9%	4.4%
Sihanouk Ville	156	221	303	3.5%	2.9%

Figure 5.1: Growth rate in four different locations



Source: Knight Frank, 2019.

Bakong district includes nine communes and covers an area of 342 square kilometers, with a population of 8,331 in 2017 (Planning Department, 2017). According to the population census of March 3, 1998, the average population density was 179.7 persons per square kilometer (PC 1998). There were a total of 1,983 families, of which 16.59 percent were headed by females (4,246 individuals). The average family size was 4.2 persons (PC 1998).

Bakong commune is classified as a rural area, as most families rely on farming for their livelihood. According to the Bakong Commune Report (2018), the total land area is 355 square kilometers, with 2.92 square kilometers designated as residential land and 12.66 square kilometers used for agriculture. The average population density was 230.48 persons per square kilometer. Of the total population, 12.7 percent were female, and the average household size was five persons.

Of these, 12.7 percent were females, and the average household size was five persons.

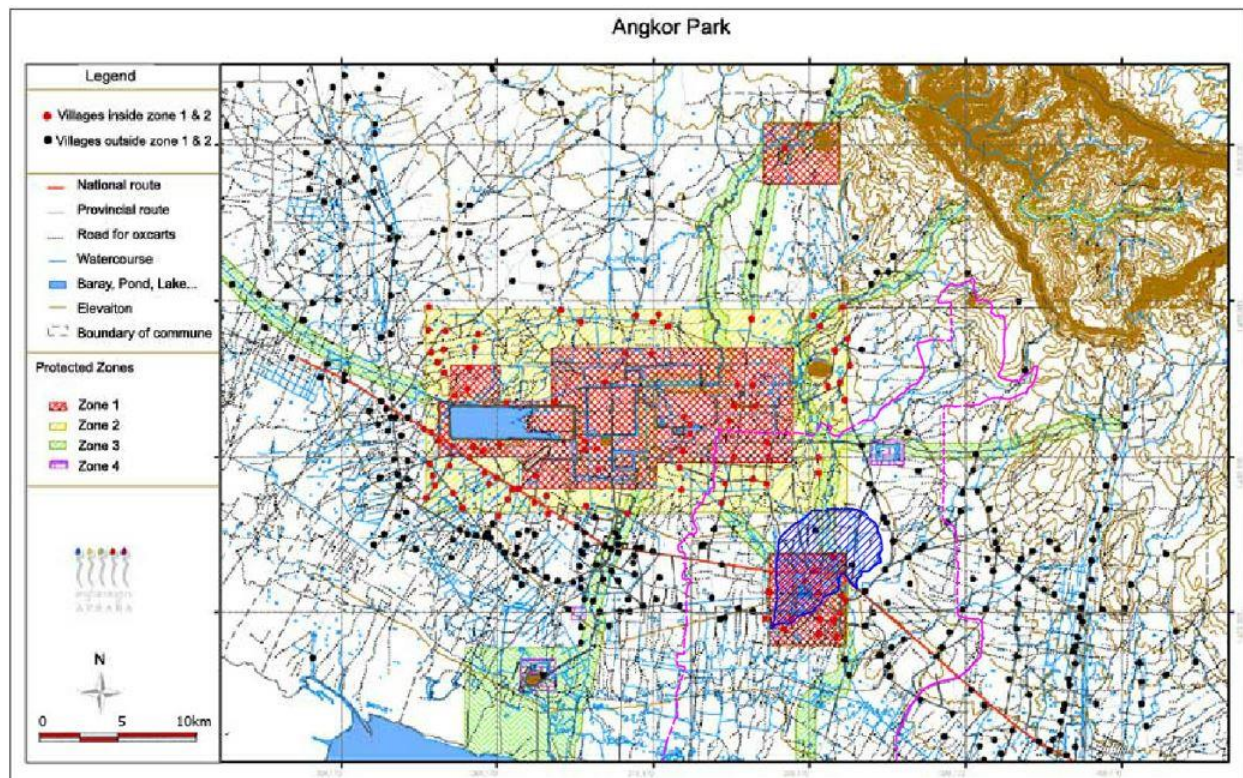
Table 5.2: Population in Bakong commune from 2016 to 2019

No	Village	2016		2017		2018		2019	
		Total	Female	Total	Female	Total	Female	Total	Female
1	Aolaok	1805	994	2284	1161	2295	1131	2321	1144
2	Lolei	1534	737	1677	820	1689	865	1712	872
3	Stoeung	1509	759	1541	751	1541	790	1325	687
4	Thnal Trang	1319	735	1310	628	1315	684	1556	804
5	Ta Phok	773	440	825	396	825	429	826	427
6	Kok Trach	1010	501	1094	560	1100	538	1174	565
Total Population		7950	4166	8731	4316	8765	4437	8914	4499

Source: Bakong Commune, December 2019.

Table 5.2 summarizes the total population of all the villages in the Bakong commune including females from the year 2016 to 2019. It can be noted that Aolaok village, close to the two main temples of the Roulous group, has a higher population than the other three villages, with Lolei village (next to Lolei temple) in distant second place. Remarkably, the population of Stoeung decreased in 2019 while the population increased in the other three villages.

Map 5.4: Zone in Angkor Park



Source: Angkor Park, Chheang, V. 2009.

5.3 Economic Benefits of Heritage Tourism to Residents of Bakong Commune

The final component of this socio-economic profile is to discuss the heritage tourism economy in Bakong and its benefits to residents of the four study villages. It commences with an account of the overall numbers and estimated income from heritage tourism in

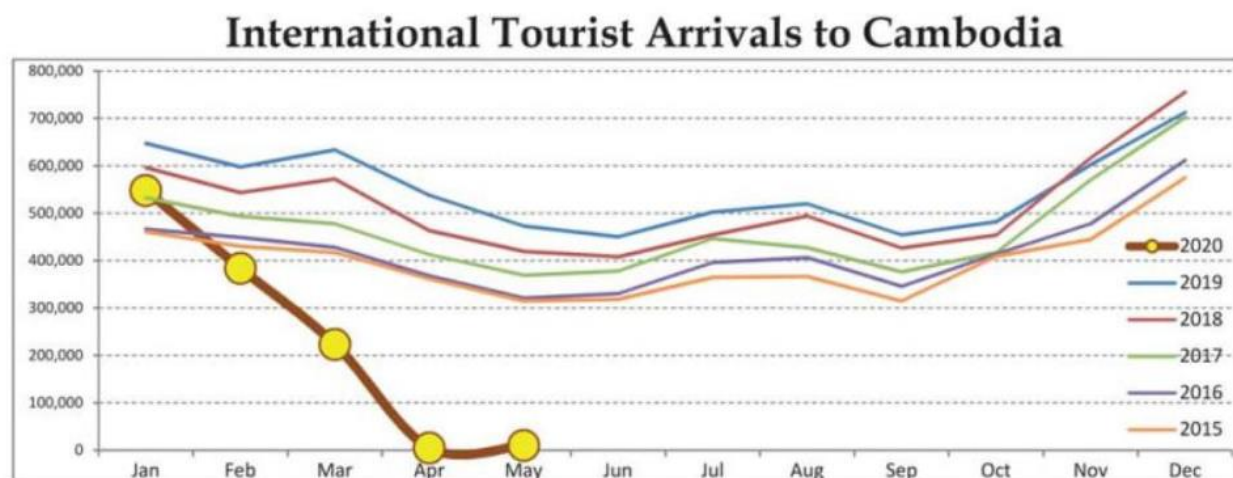
Siem Reap as a whole. It then compares the benefits from the heritage tourist economy derived by residents and businesses in the provincial capital of Siem Reap City with those derived by the residents of Bakong, showing a large discrepancy. It then focuses on the specific benefits residents in Bakong do gain from working in the heritage tourism economy. It describes the direct benefits locals gain from two sources: formal employment in heritage management organizations and companies in Bakong and their own private commercial services they offer to heritage tourists visiting their area. The section concludes with a description of the indirect benefits locals gain from the heritage tourism economy by indirectly servicing that economy in various occupations, ranking them in rough order of importance.

5.3.1 Benefits from Tourism: Siem Reap - Bakong Comparison

a. Siem Reap receives a lot of tourists annually who come to visit Angkor Park.

Siem Reap tourism arrivals, ticket sales and trends; and estimated total economic value to Siem Reap province of heritage tourism.

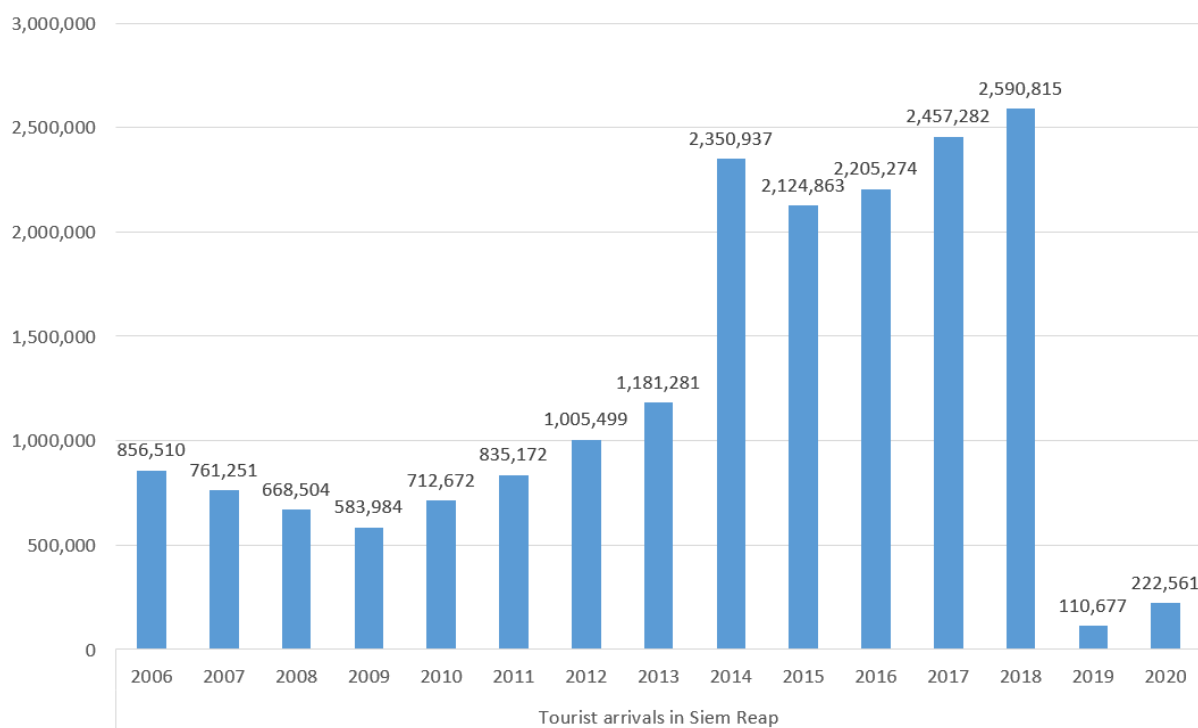
Figure 5.2: Growth in Cambodian Tourism 2015 – 2020



Source: Tourism Statistics Department, MOT

Source: Department Ministry of Tourism, 2020.

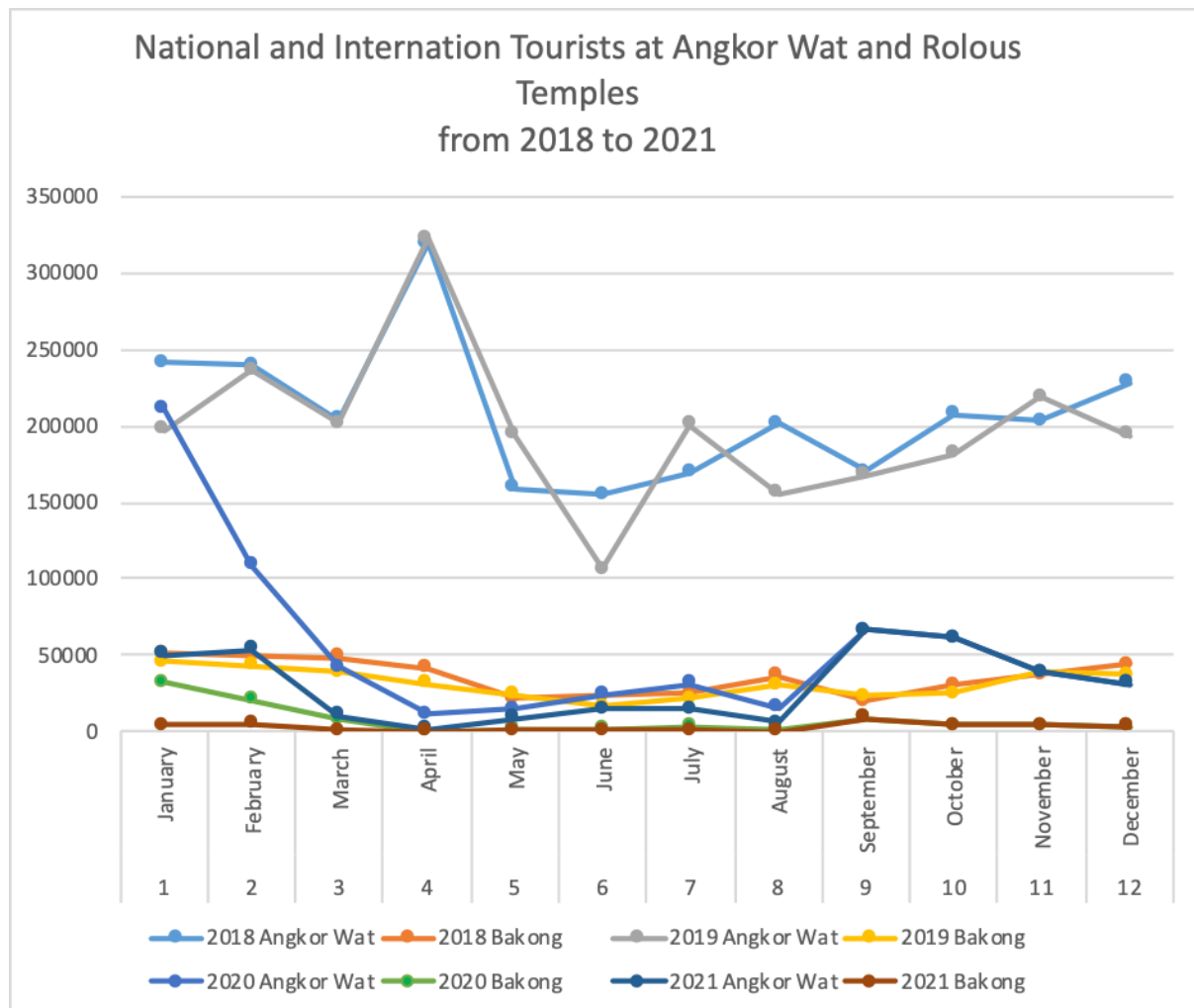
Figure 5.3: Tourist arrivals in Siem Reap from 2006 to 2020.



Source: MOT, 2006 to 2020.

b. Bakong is not the most important destination for heritage tourism to the Angkor Archaeological Park. The monuments of the Rolous group are not as well known or as frequently visited as the more famous monuments such as Angkor Wat, Angkor Thom, Ta Prohm, and Bakheng. Those monuments are closely clustered together and tourists will often confine their visits to just these monuments and others in close proximity for reasons of convenience, costs and time limitations. The monuments of the Rolous group lie far away in a separate cluster, some 13 kilometres from the group of monuments around Angkor Wat. Visits to the Rolous group may entail an extra day trip or half day trip and many tourists do not have the time or money to include the group in their itinerary while in Siem Reap. Hence the monuments of the Rolous group in Bakong commune receive only a small proportion of the total number of visitors who come to the Angkor Archaeological Park. Analysis of visitor numbers shows that the heritage site in Bakong receives between just 5 percent to 10 percent of the tourist arrivals for the whole of Siem Reap province. This can be seen in the following graph:

Figure 5.4: National and International Tourists at Angkor Wat and Rolous from 2018 to 2021.

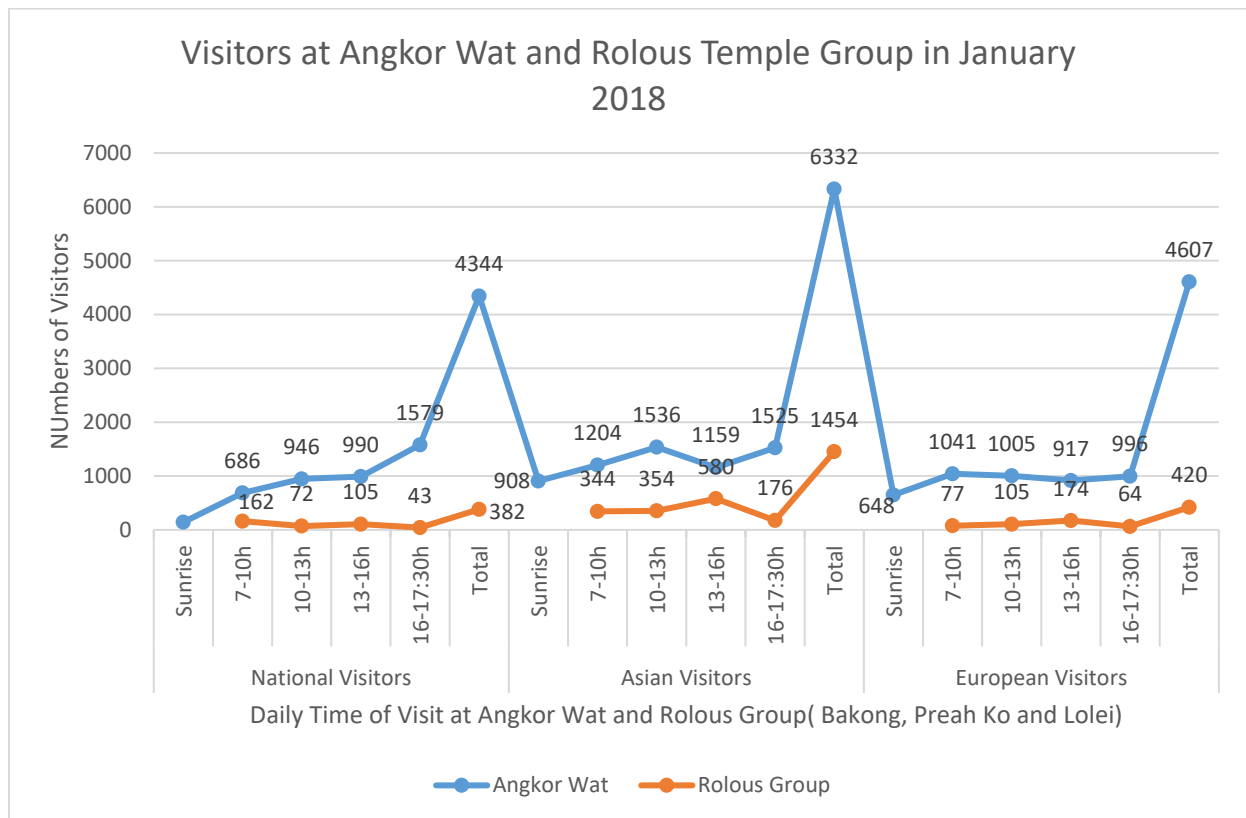


Source: Angkor Enterprise, 2021.

To illustrate this further, one can compare the statistics for the entries of tourists in Angkor Wat and the Roulous group). Whereas ticketing data shows that Angkor Wat receives about the number of tourists per year Bakong received only 428 013 tourists in the last top of 2018, or just 17 percent of the numbers visiting Angkor Wat (AK 2496 896 tourists in 2018 last jumping number before COVID 19) and while the whole numbers of tourists visiting the archaeological Park in 2018 were 267647. When we compare tourist

visits with the number of tourists visiting the whole of Angkor Park, Rolous group of temples, the number of tourists visiting the Rolous temples are 9.6 percent less than 10 percent. Most of the tourists come to visit the Rolous temples in the afternoon.

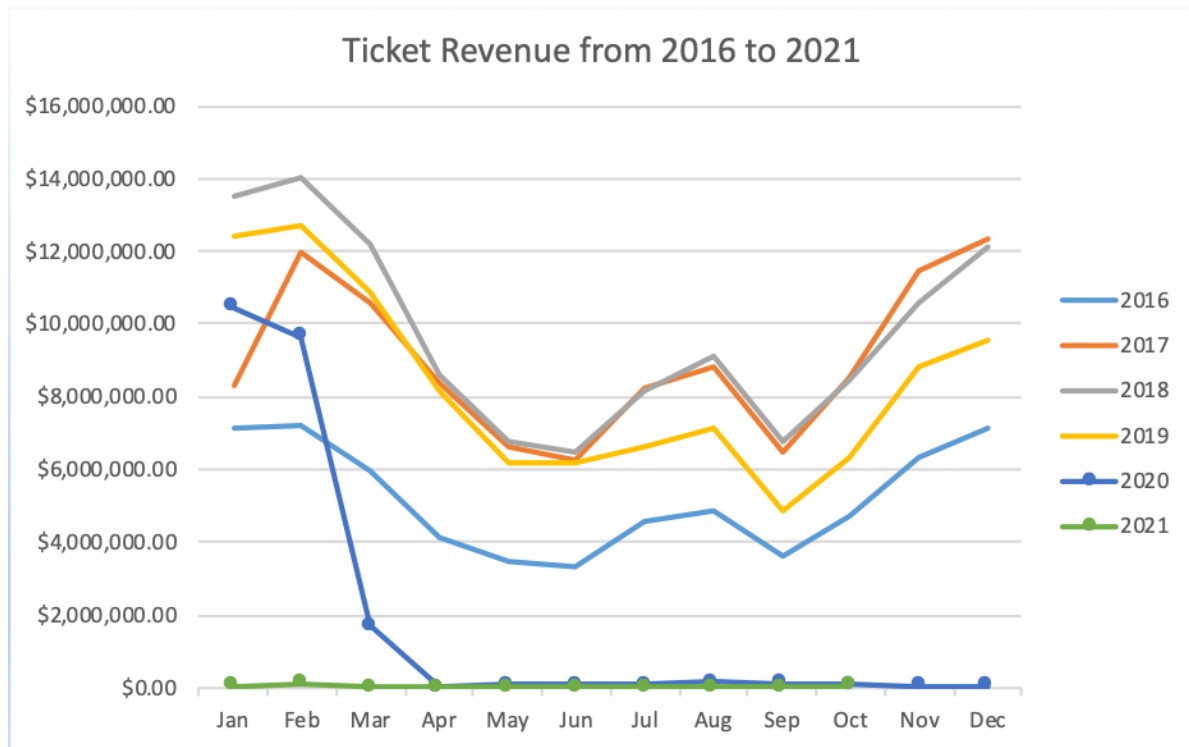
Figure 5.5: Tourists visiting Bakong



Source: Angkor Enterprise, 2018.

According to JICA 2004, wrote that the economic impact is not big, because the tourists stay too short and their expenses are limited to under \$40 per day, and especially they do not go out to rural area, even though there are tourism resources (inconvenient transport leading to the rural area and also lack of promotions and lack of necessary).

Figure 5.6: Ticket Revenue in Angkor Park, Siem Reap from 2006 to 2020



Source: Angkor Enterprise, 2021.

c. Bakong also derives relatively little by way of income from heritage tourism as compared to Siem Reap city itself. Siem Reap city is the gateway for tourism to the Angkor archaeological park and almost all tourists who visit the monuments of Angkor and the Rolous group will spend the bulk of their time and money during their visit in Siem Reap town itself. Most of the services and companies that provide jobs for local people are located in this town. Most tourists will reside in hotels in Siem Reap town for the duration of their visit. They will eat breakfasts and dinners in Siem Reap, while possibly eating a picnic lunch or at restaurants. There are other main jobs to offer to the tourists such as: transport, guides and souvenir sector.

Most expenditures on tourist goods and services will be made in Siem Reap and by contrast, Bakong will derive very little. An estimate of the proportion of income from tourist expenditures in Siem Reap town compared with Bakong. It is guessed that the great majority of expenditures on tourist goods and services in sectors such as hotel accommodation, transport services, dining and shopping will be made in Siem Reap city - possibly 95 percent of expenditures - while Bakong might get at most five percent. This is what can be seen after observation and analysis. The heritage site of Bakong of the study area receives the international tourists just small amount and especially in the critical time at noon after lunch time. This shows that the local people living in the heritage site of Bakong cannot benefit as much as people in Angkor Wat or Angkor Thom.

One possible way to illustrate this is by tracing a *theoretical* international tourist family visit to Siem Reap lasting five days, with half day spent in Bakong. One can tally the amount this family would spend for accommodation (e.g., 5 x 200 USD); transport (5 x 50); guides (5 x 30); meals (5 x 50), souvenirs (100) and other services spent in Siem Reap during those five days. That amounts to in total 1,750 USD for a family's five-day visit. Compare that to the amount that the family hypothetically spent in Bakong - maybe just five dollars in total for the family. That is based on the observations of the amount of time tour groups typically spend in the Bakong area, which is normally just an afternoon. They arrive after lunch meaning they do not even consume their lunch in Bakong and they depart before dinner. It means the most they would spend would be something small on refreshments like coconut juice, water, or some small souvenirs, so expenditures in Siem Reap city would be 350 times more than those in Bakong in other

words that family's expenditures in Bakong would be just 0.3 percent of those in Siem Reap city.

In Bakong commune there are different sectors such as: APSARA Authority, Home Collection Centre in Angkor (HCC), local government, selling private, employees of private business, construction and migrant levels in foreign countries.

5.3.2 Direct Benefits from Tourism in Bakong

Despite the very low expenditures by heritage tourists visiting the Bakong area compared with what is spent in Siem Reap, the Bakong area does receive some direct benefits from cultural heritage tourism. It includes i. salaried employment in heritage management positions in Bakong and ii. commercial goods and services that locals provide directly to tourists.

i. Salaried Employment in Heritage Management in Bakong

The first type of direct benefit discussed is the income earned by people from Bakong who serve in formal employment in various capacities for the APSARA authority or in the departments and companies who service the heritage management sector in Bakong.

The APSARA authority is the biggest employer in the heritage management sector in Siem Reap. In total, it employs 2900 people from the administration of the APSARA Authority. In the Bakong area, APSARA employees in Bakong work in five jobs. The first is the park ranger (Chmam Utiean Angkor: 7 people) [They wear a khaki uniform]. Their duties are taking care of the grounds of the archaeological park and making sure tourists obey traffic rules, do not litter and respect the environment and landscape. The second group is the

forestry ranger group (Barethan Prei Chheu Angkor: seven people) [They wear a light dark green khaki uniform]. Their duties are protecting the environmental forest in Angkor Park. Also employed by Apsara are tourism agents or temple guardians (Pneak Ngear Tescahr or Neak Yiem Prasat: 33 people) [light blue uniform]. Their task is to protect the monuments from damage caused by tourists and to ensure that tourists dress properly and observe respectful and orderly behavior while visiting the monuments. Apsara also employs the building teams who restore and repair the physical monuments (Neak Chuoschuol Prasat – 48 people) [dark blue uniform]; and teams of workers who climb the monuments and clear vegetation from the monuments [also dark blue uniforms]. Finally, it employs on a casual or part-time basis worker to cut grass, transport dirt or help with occasional landscaping activities as needed [local villagers who wear ordinary daily clothes].

Other important tasks in heritage management are conducted by sub-contracting companies. HCC Angkor (Neak Samat Utiean Angkor: 30 people) [They wear a green uniform] is a company that subcontracts to APSARA to clean the grounds of the Roulous temples and surrounding archaeological park areas. It employs workers throughout the Angkor Archaeological Park to cut the grass, clear debris from the ground, clear the waterways and pick up and dispose of rubbish. These workers wear green uniforms. Many residents of Bakong commune work for this company. The tickets to the heritage sites in Bakong are inspected by people who work for Angkor Enterprises. Their uniforms are lilac (white for supervisors). The other significant group of salaried employees taking care of heritage tourism in Bakong is the police. There are two groups of police. The tourist police

take care of tourists visiting the heritage area. They have a uniform composed of grey shirts, dark blue pants with red stripes and a braided cap and ride powerful motorbikes. The second group of police are heritage police. The heritage police protect the monuments from theft and damage. Both sets of police are a branch of the national police and are employed by the government.

It should be added that APSARA also has a sizeable number of managers and specialized employees in various departments in the central offices of the authority, mostly based in Siem Reap town and in a complex north of Bakong commune. These latter employees are not included in this survey. The total number of APSARA employees in Siem Reap in 2021 was 2,900 (Source: administration of APSARA authority).

The number of Bakong residents working in these salaried heritage positions in Bakong commune is given in Table 5.3 as follows:

Table 5.3: Number of employees in heritage management positions in Bakong

Occupation	Number	Institution
Archaeological Park rangers	7	APSARA Authority
Environmental Forestry	7	APSARA Authority
Tourism Agents or Guardian of temples	33	APSARA Authority
Monument restoration workers	48	APSARA Authority
Clearer vegetation on monuments	5	APSARA Authority
Grounds cleaners	30	HCC –Angkor

Ticket Inspector	9	Angkor Enterprises
Tourist and heritage police	1	Police Department

Source: Author's interviews, observations, October-November 2021.

Table 5.4: Salaries of Employees in Heritage Management Positions in Bakong

Occupation	Monthly Income (USD)	Institution
Archaeological Park rangers	\$180 - \$200	APSARA Authority
Monument security guards	\$190	APSARA Authority
Monument restoration workers	\$154	APSARA Authority
Clearer vegetation on monuments: \$4.5 to \$5/day	\$110	APSARA Authority
Grounds cleaners	\$150	HCC
Ticket Inspector	\$180 - \$300	Angkor Enterprises
Tourist police	\$355\$ - \$450	Police Department

Source: Author's interviews, observations, October-November 2021.

Some additional comments can be made on the sufficiency, conditions and attractiveness of these jobs in heritage management. Compared with the average national income for salaried work in Cambodia which is \$210 per month, the income from these jobs is quite low. However, by comparison, factory workers make on average over \$200 per month

(direct interviewed). The official recommended minimum wage for an unskilled factory worker in Phnom Penh is 192 per month (Simon Glover, 2020) [Bibl. Simon Glover, 2020, "Cambodia Sets New Minimum Wage for Garment Workers", *Careers in Textiles*, 11 September 2020, URL: <http://...internet address> (accessed 7/11/2021)]. Local people like these jobs because they provide a stable income. The salary is acceptable for it covers the comparatively low cost of living in the Bakong area. The work is in the local area, so people do not to travel far from home for work. Qualifications for the different jobs vary from job to job, however, the skill level is not extremely high so these jobs are accessible to locals who do not necessarily have a high level of education.

ii. Commercial Services provided Directly to Tourists

The second type of direct benefit from tourism to Bakong residents comes from the sales of goods and services to tourists.

The businesses that service tourists in the Bakong area include: souvenir shops, refreshment stalls, picnic outlets, cafes, mobile drinks sellers, and restaurants. The total number of such businesses in the Bakong area is around 50. The number of such outlets can be listed per village. For example, Lolei village has just 12 stalls selling refreshments and souvenirs to tourists. The stalls are situated at the entrance to the Lolei temple. Stoeng village has only two enterprises: Stoeng Trorcheak and Hut Phum Stoeng. Both are restaurants directly selling to tourists. A lot more tourist businesses are found in the villages of Aolaok and Thnal Trang because these villages are where most tourists congregate and pass their time.

A special group of enterprises are the barbeque restaurants and picnic outlets along National Highway 6 where it runs through Bakong. They are almost all located within the administrative boundaries of Lolei village. The name of the neighbourhood is Rolum. There are about 20 of such outlets in total and they are usually busy with people eating meals or buying grilled takeaway meals. However, they are only marginally connected to the Bakong heritage tourism economy because the majority of their customers are travelers using the national highway between Siem Reap and Phnom Penh. Most clients of these enterprises are travelers who stop for a rest or for food supplies for their trip and then continue their journey.

The businesses that serve tourists in Bakong commune in general are not large. Most are run and staffed by individuals or family members. Less than ten businesses are large enough to have employees. These larger businesses ranked in order of size from large to small are:

1. Bakong Phum Khgnom
2. Hariharalaya Vipassana Retreat Centre
3. Sister Café and Restaurant
4. Preah Ko Stone Carving Workshop
5. Hut Phum Stoeng Restaurant
6. Stoeng Trocheak Restaurant
7. Aaolaok Petrol station

The total number of employees employed by these seven largest businesses in Bakong is not much more than 50 persons. This illustrates the relatively modest role played by the commercial sector in the heritage tourism economy in Bakong.

Finally, a description of income amounts provided by sellers is presented. The income derived by residents of Bakong in a range of occupations that directly serve the heritage tourism economy can be compared. This is indicated in Table 5.5 as follows:

Table 5. 5: Income of Professions in Bakong directly serving the Heritage Tourism Economy

Occupation	Monthly Income	Institution
Food Seller (10\$ to 15\$/ day)	\$300 -\$450	Private
Souvenir Seller	\$300	Private
Staff of Souvenir Seller in Siem Reap	\$140\$	Private
Server in a tourist restaurant	\$150 -\$200	Private
Service in hotel (in Siem Reap)	\$120 -\$150	Private
Stone carver (7.5\$, 10\$, 12\$ and 14.5\$)	\$300 -\$350	Private

Source: Own Survey.

5.3.3 Indirect Benefits from Heritage Tourism

The businesses and economic activities that derive indirect benefits from heritage tourism can be grouped into three tiers, according to the amount of benefit derived. The industry that derives more indirect benefits from heritage tourism than any other is

construction. Construction work is an important occupation in the Bakong district; knowledgeable locals consider it the second most widely practiced occupation after farming. According to the locals, this trend is true in all the study villages in Bakong commune.

People from Bakong who work in the construction industry gain most of their income indirectly from heritage tourism because nearly all of the companies and clients that employ them are connected to the tourist industry. People from Bakong commune do most of their construction work in Siem Reap town. They are well known in that town as builders. They do this work as day labourers. They go to the construction site during the day and return home at night. A lot of construction work is available for them locally because of the growth of Siem Reap as a tourist town with many hotels, resorts, restaurants, cafes, tour companies, and boarding houses built in the last decades. Much of this building has been done by Bakong workers. Their work in construction therefore can be seen as an indirect benefit of heritage tourism. With an average monthly salary for construction workers in Siem Reap of 200-300 USD in 2019, this occupation counts significantly to household incomes in the study area.

Knowledgeable locals reported that unlike people living in other districts of Siem Reap, very few people in Prasat Bakong district go overseas to other countries as labour migrants; they prefer to work closer to home. A reason locals give for this preference is that they can make more money by staying at home. Although salaries overseas are much higher than in Cambodia, a fact that motivates close to a million Cambodians to work overseas in countries such as Korea, Malaysia and Thailand, the costs of traveling abroad

are also very high and labour migrants frequently incur large debts and expenditures which makes it hard for them to save. That is why people who work locally can earn as much if not more than labour migrants because their costs and risks of indebtedness are lower. In Bakong the option of staying at home is available and popular because the heritage tourism economy in nearby Siem Reap generates a lot of income-generating and labour opportunities which they take up.

Many people in the Bakong area can work in Siem Reap as day labourers and day traders and return home to Bakong at night because it is close and the road connection along Route 6 is exceptionally good. The situation of these residents of Bakong district contrasts to people in more remote districts of Siem Reap such as Puok, Damdek and Chi Kreng who live further away from Siem Reap and less frequently work there. According to local observers, a higher proportion of people from those outlying districts tend to take the option of migrating overseas or to Phnom Penh for work.

In 'second-tier' position, are economic activities that derive moderate benefits from heritage tourism because they have a modest indirect connection to the heritage tourism economy. An example of this is the small businesses that supply locals in the four villages with their daily needs. For example, Lolei village has about four small grocery shops selling vegetables and meat to locals. The same number can be found in Stoeung village. These businesses and others like them such as hairdressers, mechanics, and breakfast noodle stalls have almost no connection to heritage tourism, for tourists do not use those stalls or services. Customers are almost exclusively locals and workers in the local area. However, the income these businesses earn should be considered among the indirect

sources of income from heritage tourism because some of their best customers are locals who work in the heritage tourist industry and therefore a proportion of the income that locals earn from heritage services goes back into those stores. The amount of indirect income such businesses receive from heritage tourism is small but it is not insignificant.

Other 'second-tier' indirect beneficiaries of the heritage tourism economy include local level state (and quasi-state) employees such as police, traffic police, transport workers, infrastructure builders, garbage collectors, plumbers and environmental inspectors. The connection such staff have to heritage tourism is not direct and nor is it great for such positions are routinely filled in all local administrations in Cambodia (not just in heritage sites) in a way not connected to the heritage tourism economy. However, there is an increased need for staff to perform those services in Bakong owing to the build-up of the area for tourism and the high amount of people, traffic and businesses in the vicinity of the heritage sites. Hence such positions in the Bakong area do have an indirect connection to the heritage tourism economy. Furthermore, it should be remembered that the provincial and district budgets in Siem Reap are substantially funded out of receipts from heritage tourism so the salaries for workers in those positions, along with those of state school-teachers and health clinic workers are funded by the proceeds of heritage tourism.

The sector that possibly has the least connection to heritage tourism, whether that connection is direct or indirect is farming. A lot of what farmers produced is consumed by them, not sold. The plots are small, farmers engage mostly in subsistence agriculture in the three key crop groups of rice, fruit and vegetables. Many farms have no more than

what they need for their own use. Many farmers do sell on the market but generally not for tourists. It is probable that the huge demand for foodstuffs from the large number of tourists to Siem Reap positively influences demand and prices for the farmers in Bakong, but this relationship is hard to quantify. The only observable connections I could establish between farming and the heritage tourism economy were that a number of farmers might sell their surplus coconuts, oranges, custard apples, bananas, or some traditional cakes to tourists in temporary stalls along the road during the fruit season.

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CHAPTER VI

DATA PRESENTATION AND ANALYSIS

CHAPTER VI

DATA PRESENTATION AND ANALYSIS

This chapter documents local assessments of sustainable heritage management in the Bakong heritage conservation area. It focuses on the experiences of locals living in the conservation area and explores, from their perspective, the meanings and impacts of heritage management on their lives. Through various methods, it investigates how locals understand and evaluate the sustainability of heritage management practices implemented in their area. It examines the economic, environmental, cultural, and social impacts of various heritage management initiatives on locals and how they assess the effectiveness or shortcomings of these initiatives. It explores these issues by gathering a range of local perspectives and concerns and collecting feedback from respondents representing diverse occupations and social backgrounds. The objective of this chapter is to document locals' experiences with heritage management in the study area and identify gaps in heritage management practices to better ensure sustainability.

The chapter is divided into five sections. The first section (6.1) presents the results of a survey conducted among local residents in Bakong Commune regarding their perceptions of heritage management in their area. Subsequent sections analyze their perceptions of the benefits and programs of heritage management (6.2) and further break down responses based on respondents' socio-economic status (6.3). The fourth section presents and analyzes the opinions of key stakeholders from in-depth interviews conducted in the Bakong study area, utilizing a SWOT framework.

The final section (6.5) provides an in-depth examination of the key heritage management problems identified by locals in the study area.

6.1 Profile of the Respondents

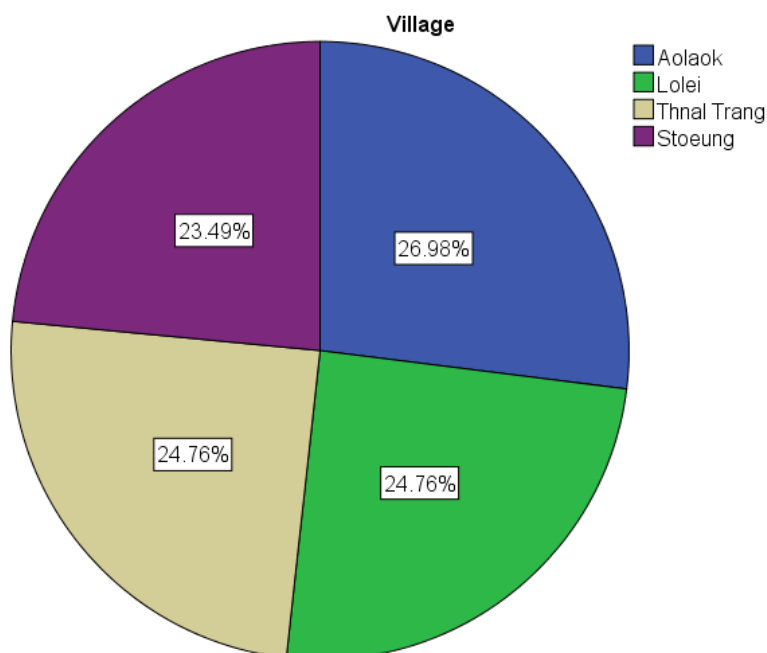
The study shows that 315 respondents were surveyed across four villages in the heritage site study area in Bakong. As shown in Table 6.1, 26.98 percent of respondents were from Aolaok Village, followed by Thnal Trang and Lolei Villages, each with 24.76 percent. Meanwhile, 23.49 percent of respondents were from Stoeung Village.

Table 6.1: Distribution of the Respondents as per Villages in the Study Area

Name of the Village	No. of Families	Percent
Aolaok	85	26.98
Thnal Trang	78	23.49
Stoeung	74	24.76
Lolei	78	23.49
Total	315	100.0

Source: Own Survey, Bakong Commune, 2022.

Figure 6.1: Percentage of Respondents in the four Villages of the Study Area



6.1.1 Gender

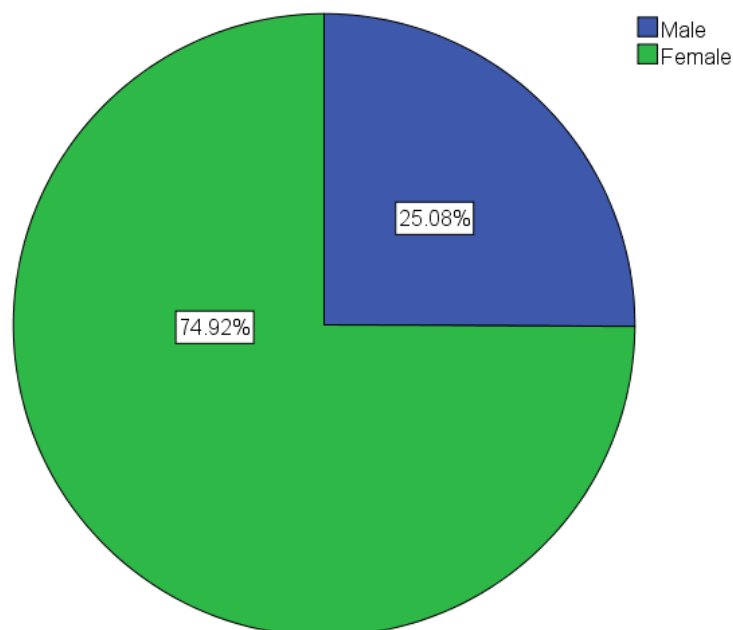
Among 315 selected respondents, 74.92 percent were found to be females and the remaining 25.08 percent were males. This indicated that among the sample respondents, there was dominance of female respondents.

Table 6.2: Distribution of Sample Respondents as per Gender

Age-Group (in Year)	No. of Respondents	Percent
Male	79	25.08
Female	236	74.92
Total	315	100.0

Source: Own Survey.

Figure 6.2: Percentage Distribution of respondents as per Gender



6.1.2 Age-Group

The age-group classification of the surveyed respondents shows that among 315 selected respondents, about 33.7 percent were aged 31-40 years, followed by 24.1 percent in the age-group of 41-50. The age group of 51-60 comprised about 16 percent of respondents. 14 percent of respondents were in the age group 18-30 and 12 percent were above 60 years old of age.

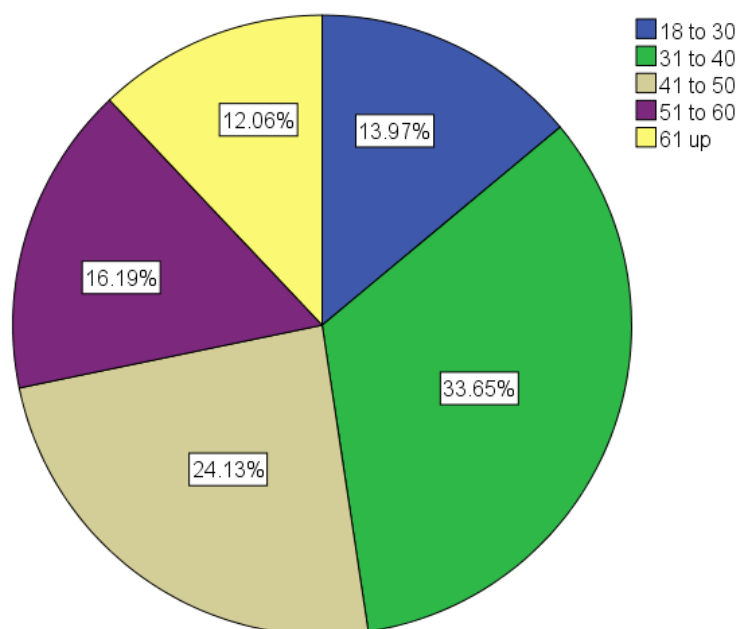
Table 6.3: Distribution of Sample Respondents as per Age-Group

Age Group (in Year)	No. of local People	Percent
18-30	44	13.97
31-40	106	33.7
41-50	76	24.13

51-60	51	16.2
60 up	38	12.06
Total	315	100.0

Source: Own Survey.

Figure 6.3: Percentage Distribution of Respondents as per Age-Group



6.1.3 Length of Residence in Bakong

It is revealed that 82.86 percent of the respondents have been living in the study area since 1979, followed by 6.98 percent since 1990, 6.35 since 2000, 2.36 since 2010 and nearly one percent since 2020.

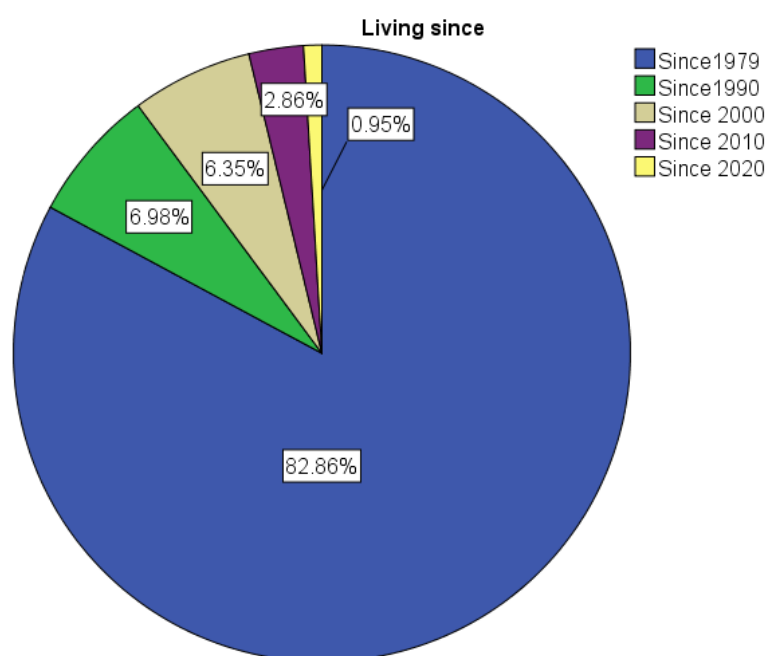
Table 6.4: Distribution of Respondents as per Periods of Living in Bakong

Living in Bakong Since	No. of local Respondents	Percent
1979	261	82.86
1990	22	6.98

2000	20	6.35
2010	9	2.86
2020	3	0.95
Total	315	100.0

Source: Own Survey.

Figure 6.4: Percentage Distribution of Respondents as per Periods of Living in Bakong



6.1.4 Profession

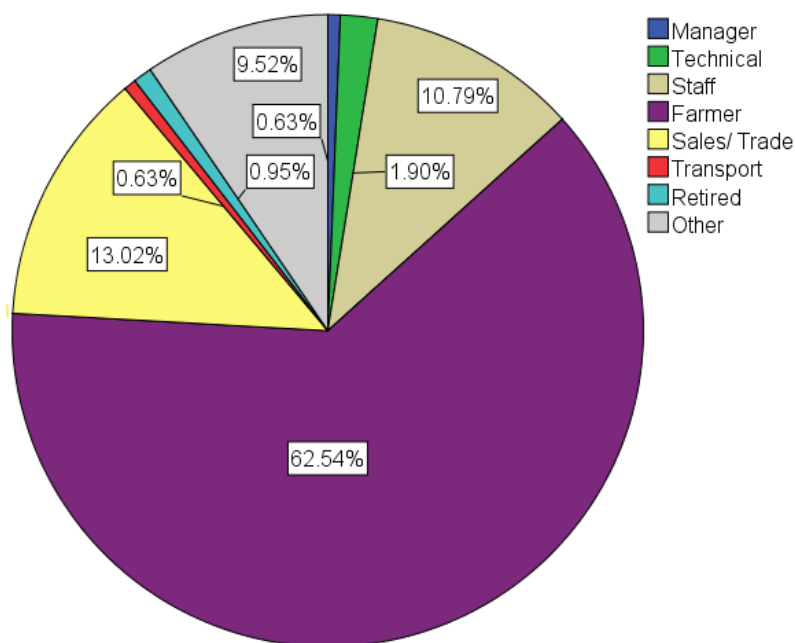
It is found from the surveyed respondents that 62.54 percent were farmers, 13.02 percent of respondents were sellers or traders, 10.79 percent of respondents were staff of organizations/companies, 9.52 percent of respondents were in other professions, 1.90 percent of respondents were technicians, 0.95 percent of respondents were transporters and the two remaining respondents made up the final 0.63 percent.

Table 6.5: Distribution of the local Respondents as per Professions

Profession	No. of Respondents	Percent
Manager	2	0.63
Technical	6	1.90
Staff	34	10.79
Farmer	197	62.54
Sales/Trade	41	13.02
Transport	2	0.95
Retired	3	0.63
Other	30	9.52
Total	315	100.0

Source: Own Survey.

Figure 6.5: Percentage Distribution of Respondents as per Professions



6.1.5 Education Levels

The education level of respondents shows that 85.08 percent of total respondents had at most completed primary school or never went to school. 11.45 percent had studied up to

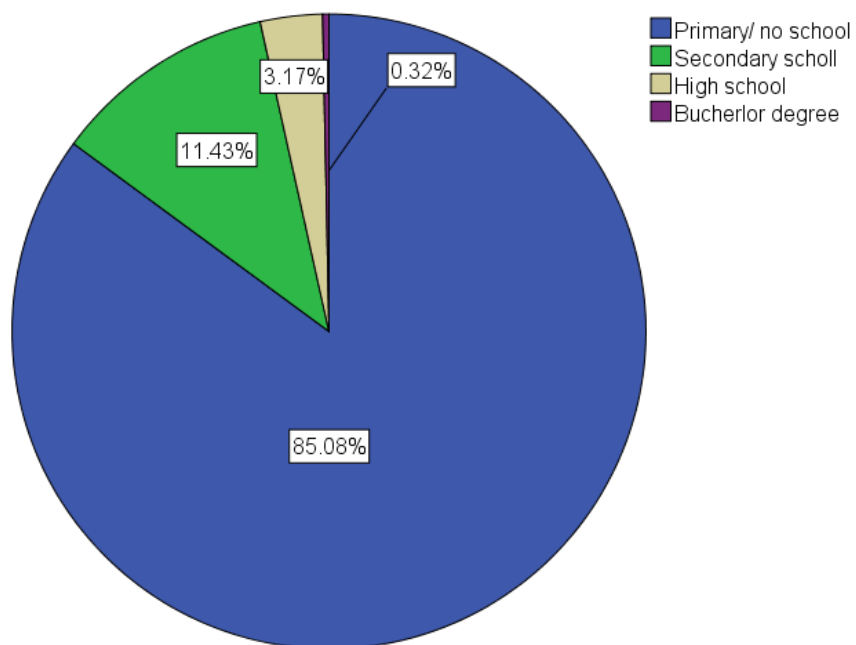
the secondary school level. The remaining 3.2 percent had finished high school and just one respondent, or 0.3% of the sample, had reached the level of the bachelor's degree.

Table 6.6: Distribution of Respondents as per their Education Levels

Level of Education	No. of local Respondents	Percent
Primary / no School	268	85.08
Secondary School	36	11.43
High School	10	3.17
Bachelor Degree	1	0.32
Total	315	100.0

Source: Own Survey.

Figure 6.6: Percentage Distribution of Respondents as per Education Levels



6.2 Heritage Management Practices and Their Influences at Bakong

This section analyses data drawn from a large-scale survey of residents of four villages living close to the Bakong heritage site. It documents and discusses the perceptions of these locals on the heritage management practices and their influences on the heritage site.

6.2.1 Benefits from APSARA's Heritage Management

Respondents were asked a number of questions about the benefits they may have derived from APSARA's management of heritage in the Bakong area.

6.2.1.1 *Pride of Respondents about Cultural Heritage*

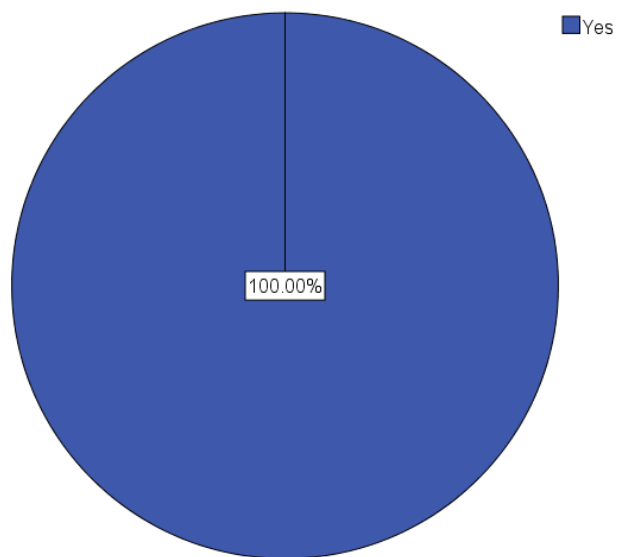
The one benefit of APSARA's management of cultural heritage that respondents were in complete agreement with was the feeling of pride they had in the monuments under APSARA's management. The survey results show that 100 percent of respondents were proud of the cultural heritage managed by APSARA in the study area.

Table 6.7: Respondents' Pride at Cultural Heritage

Respondents	No. of Respondents	Percent
Yes	315	100
No	0	0
Total	315	100.0

Source: Own Survey.

Figure 6.7: Percentage of Respondents having pride at Cultural Heritage



6.2.1.2 *Work in Heritage Maintenance*

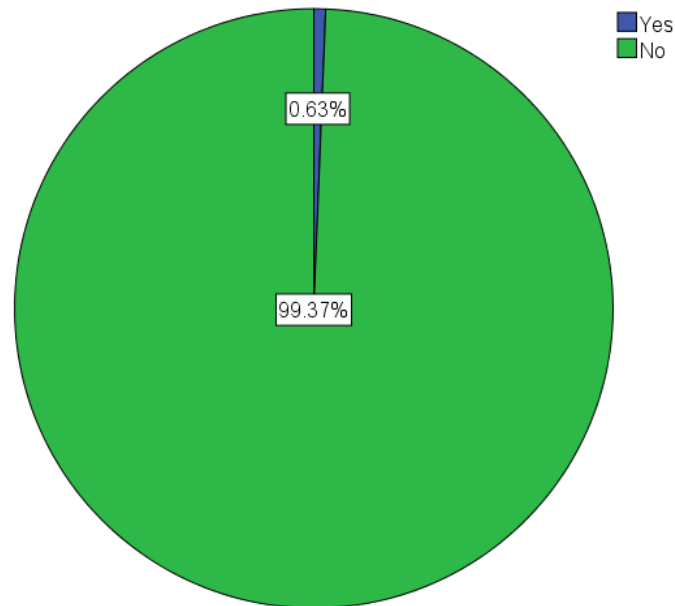
In many localities within the Angkor Archaeological Park, locals gain opportunities to work in heritage maintenance by maintaining and cleaning the grounds or keeping the monuments free of vegetation. This work is suitable for locals who lack high education or specialized skills. However, the survey results show that just 0.6 percent of villagers in the study area reported that they were involved in the work of heritage maintenance while the overwhelming majority, 99.4 percent of respondents, were not involved in the work of heritage maintenance.

Table 6.8: Distribution of Respondents as per their Views on Heritage Maintenance

Respondents	No. of Respondents	Percent
Yes	2	0.63
No	313	99.37
Total	315	100.0

Source: Own Survey.

Figure 6.8: Distribution of Respondents as per their Views on Heritage Maintenance



6.2.1.3 Increasing Business Customers as Benefit for Villagers Living in the Heritage Site

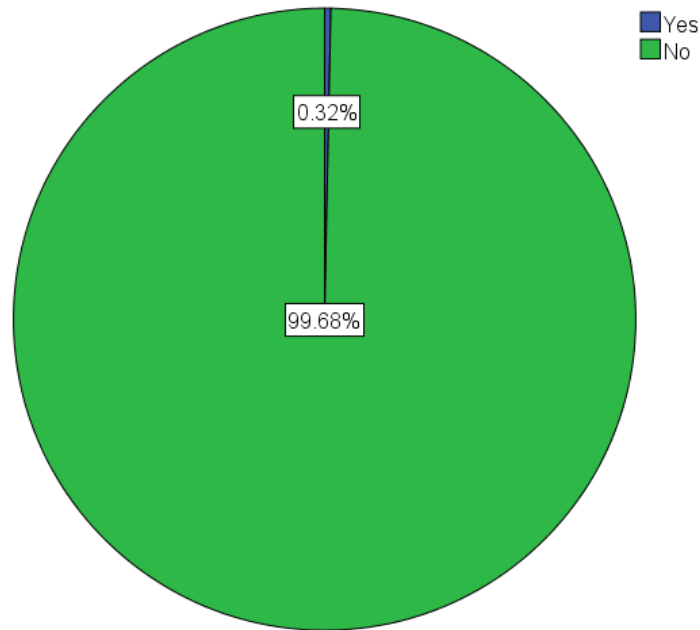
Among the survey respondents, 99.68 percent did not receive the benefit of an increase in customers in the business at the heritage site during the seasons of tourist visits.

Table 6.9: Distribution of Respondents as per their Views on Increasing Business Customers

Respondents	No. of Respondents	Percent
Yes	1	0.32
No	314	99.68
Total	315	100.0

Source: Own Survey.

Figure 6.9: Percentage of Respondents as per their Views on Increasing Business



6.2.1.4 Increasing Business for Local People in Heritage Sites During Tourist Visits

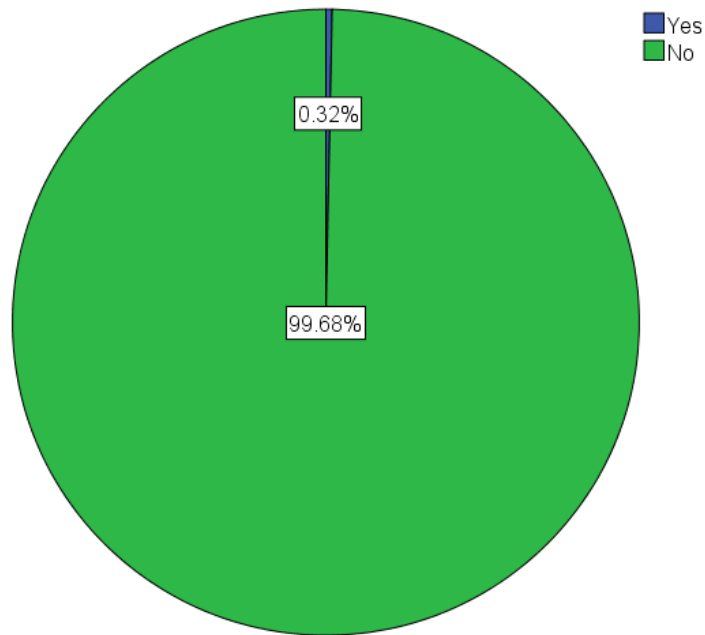
Concerning the increase in business inside the study area, more than 99.68 percent of respondents didn't have an increase in business, followed by 0.32 percent of business respondents who said that they had an increase in business in the local area during the tourist season.

Table 6.10: Distribution Respondents as per their Views on Increase in Business

Type of Response	No. of Respondents	Percent
Yes	1	0.32
No	314	99.68
Total	315	100.0

Source: Own Survey.

Figure 6.10: Percentage Distribution of Respondents as per their Views on Increase in Business



6.2.1.5 Increasing Property and Liveliness of Local Villagers in Heritage Site

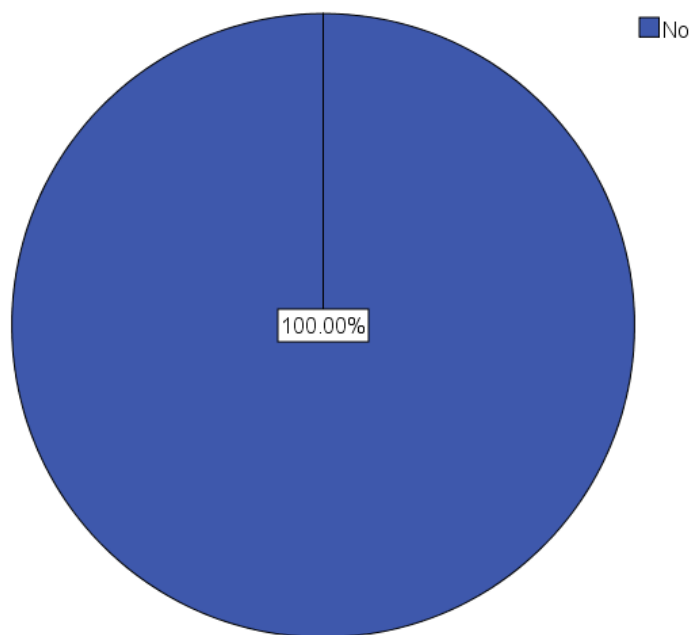
The total survey of respondents shows that 100 percent were not in property and liveliness in the study area.

Table 6.11: Distribution of Respondents as per their Views on Benefit of Property Liveliness

Respondents	No. of Respondents	Percent
Yes	0	0
No	315	100.0
Total	315	100.0

Source: Own Source.

Figure 6.11: Percentage of Respondents as per their Views on Benefit of Property Liveliness



6.2.1.6 *New Social Economic and Cultural Opportunity*

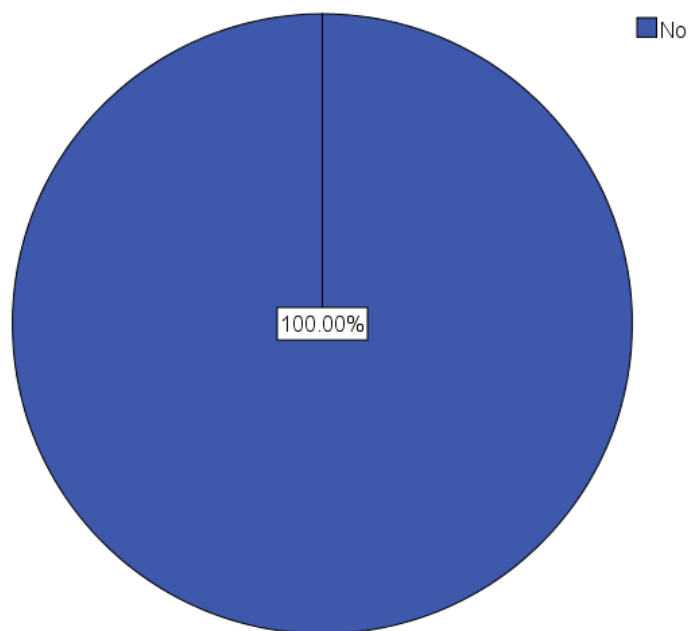
This research aims to find out if the local villagers have social, economic, and cultural opportunities at the heritage site. According to the survey study, it is revealed that 100 percent of the respondents didn't get the new social, economic, and cultural opportunities from the study area.

Table 6.12: Distribution of Respondents as per Views on New Social Educational and Cultural Opportunity

Type of Response	No. of Respondents	Percent
Yes	0	0
No	315	100
Total	315	100.0

Source: Own Survey.

Figure 6.12: Percentage Distribution of Respondents as per their Views on new Social Educational and Cultural Opportunity



6.2.2 Participation in APSARA Programs

As part of its heritage management responsibilities, APSARA is tasked with offering programs such as workshops, training, and pilot initiatives to enhance the local community's economic, social, and cultural standing. These efforts aim to empower locals, enabling them to understand heritage management objectives and participate inclusively in the benefits of heritage conservation.

Thus, this survey investigates whether locals were aware of or had participated in such programs. The findings are as follows:

6.2.2.1 *Occasional Participation in Any Program Offered by APSARA*

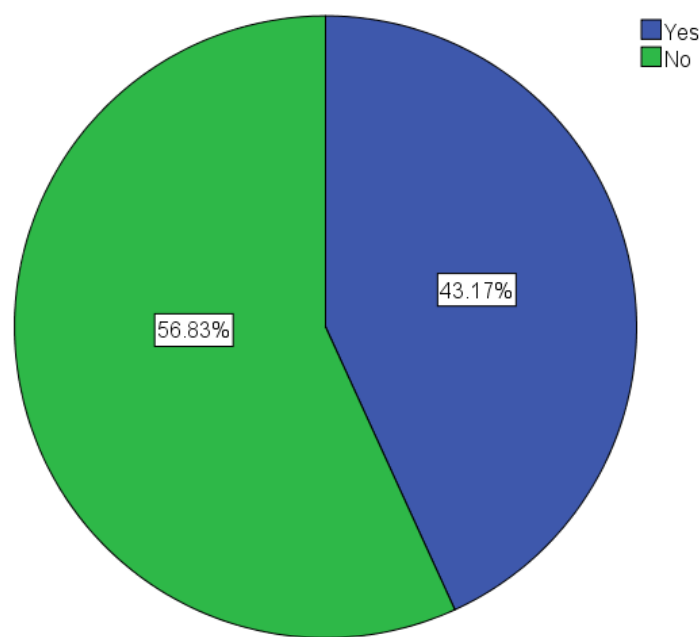
Among 315 selected respondents, 56.83 percent did not know about programs offered by APSARA, and only 43.17 percent were offered the information.

Table 6.13: Distribution of Respondents about their Knowledge of Apsara Programs

Response Type	No. of Respondents	Percent
Yes	136	43.17
No	179	56.83
Total	315	100.0

Source: Own Survey.

Figure 6.13: Distribution of Respondents about their Knowledge about APSARA Programs



6.2.2.2 Providing Cultural Program by APSARA

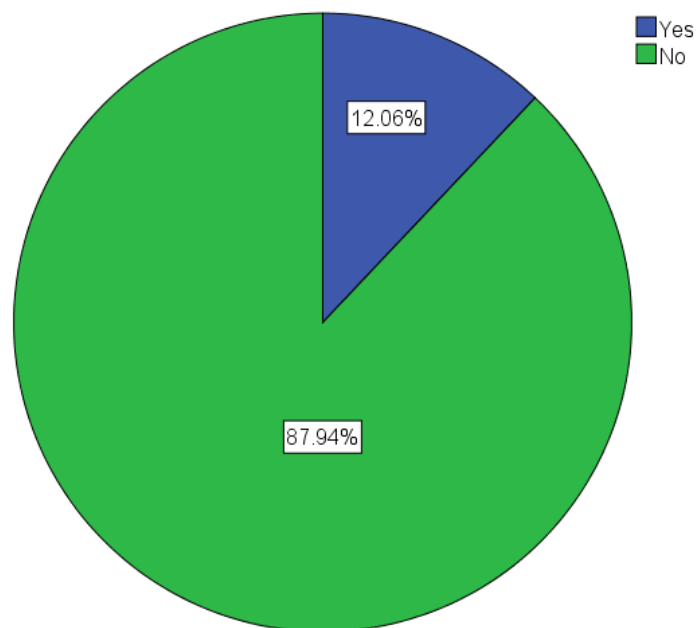
It is revealed that among the indicators the highest percentage of respondents (87.84) were not provided cultural programs by APSAR, while 12.06 percent of the respondents were informed of the above programs.

Table 6.14: Distribution of Respondents as per their Views on Cultural Programs

Response Type	No. of Respondents	Percent
Yes	38	12.06
No	277	87.94
Total	315	100.0

Source: Own Survey.

Figure 6.14: Percentage of Respondents Having Views on Cultural Programs



6.2.2.3 Opinion of the Respondents on the Economic Programs Provided by

APSARA

The study aimed to reveal if APSARA had provided economic programs to the local villagers in the study area of the heritage site. It is revealed that among the indicators the highest percentage of respondents (99.10) had not received benefits from the

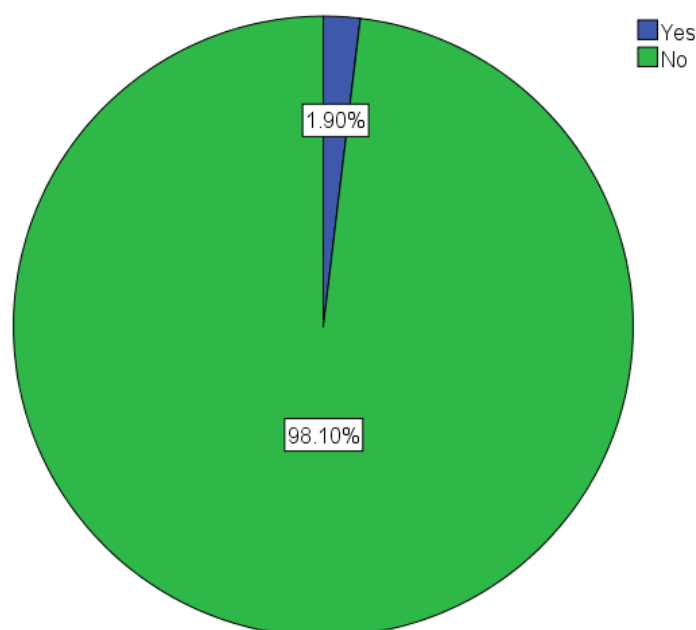
economic programs provided by APSARA in the study area, and about 1.9 percent of respondents about it in the study area.

Table 6.15: Distribution of Respondents as per their Views on Economic Programs

Response Type	No. of Respondents	Percent
Yes	6	1.90
No	309	98.10
Total	315	100.0

Source: Own Survey.

Figure 6.15: Distribution of Respondents as per their Views on Economic Programs



6.2.2.4 Providing Social Program by APSARA

The survey reveals that more than 87.94 percent of selected respondents had answered that they were not provided any social programs provided by APSARA. While 11.43

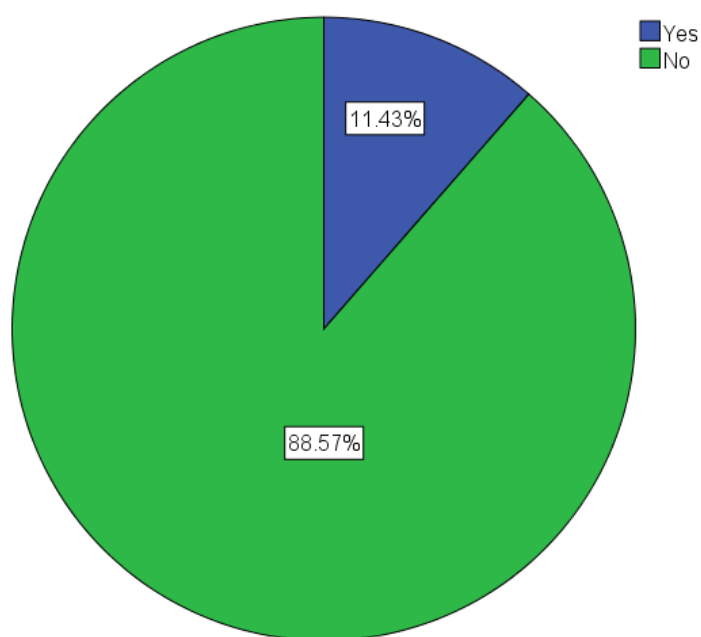
percent of the respondents were informed of the above programs.

Table 6.16: Distribution of Respondents as per their Views on Social Programs

Type of Response	No. of Respondents	Percent
Yes	36	11.43
No	276	88.57
Total	315	100.0

Source: Own Survey.

Figure 6.16: Distribution of Respondents as per their Views on Social Programs



6.2.2.5 Providing Environment Program by APSARA

The survey seeks to reveal the opinions about APSARA and if it has adequately provided information about the environmental programs to the local villagers. As shown in the survey, 58.73 percent of 315 selected respondents said that they were not provided

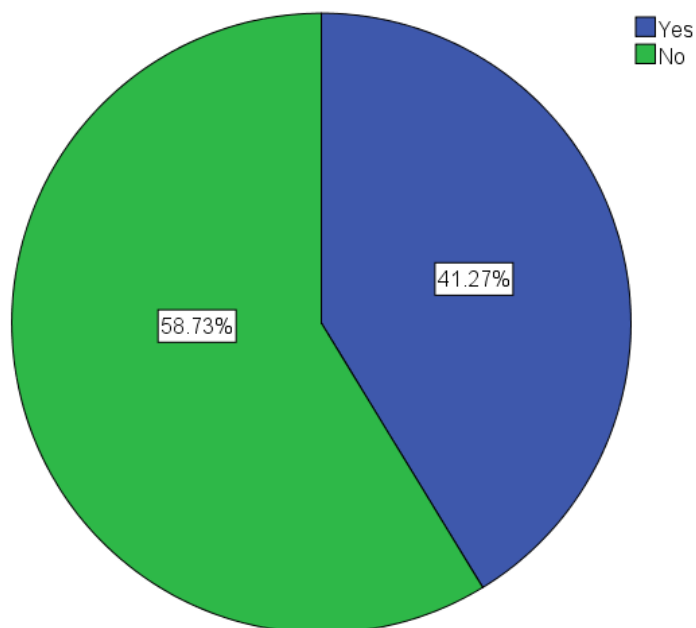
information about the environmental programs, while 41.27 percent of the respondents were informed of the above programs.

Table 6.17: Distribution of Respondents as per their Views on Environmental Programs

Respondents	No. of Respondents	Percent
Yes	130	41.27
No	185	58.73
Total	315	100.0

Source: Own Survey.

Figure 6.17: Percentage Distribution of Respondents as per their Views on Environmental Programs



6.2.3 Being Informed and Consulted about Heritage Management

6.2.3.1 Monuments in Bakong were registered in the World Heritage List

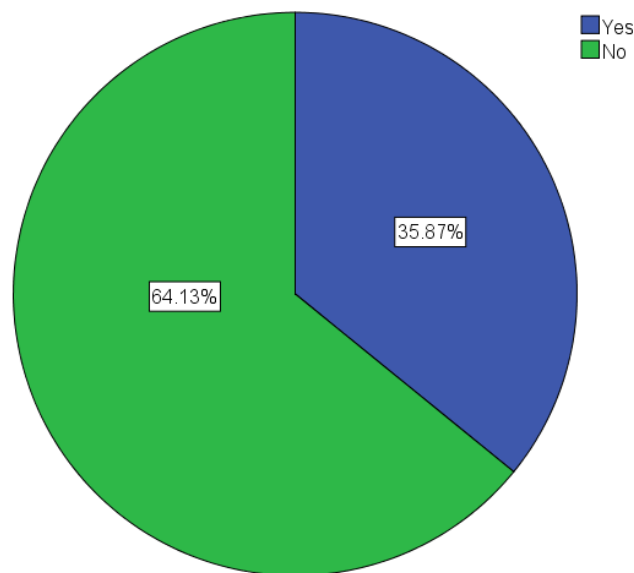
It is very interesting to know how informed locals were about heritage management activities and regulations in their local area. One way of testing this was to ask locals if they were aware that the monuments in the Bakong area were registered as world heritage. The table below shows that only 64.13 percent of the respondents said that they knew about the registration of monuments in Bakong, while 37.97 percent did not know about it.

Table 6.18: Distribution of Respondents about Monuments' Word Heritage Listing

Respondents	No. of Respondents	Percent
Yes	113	35.87
No	202	64.13
Total	315	100.0

Source: Own Survey.

Figure 6.18: Percentage of Respondents informed about Registration in World Heritage



6.2.3.2 Local People Received Information from APSARA

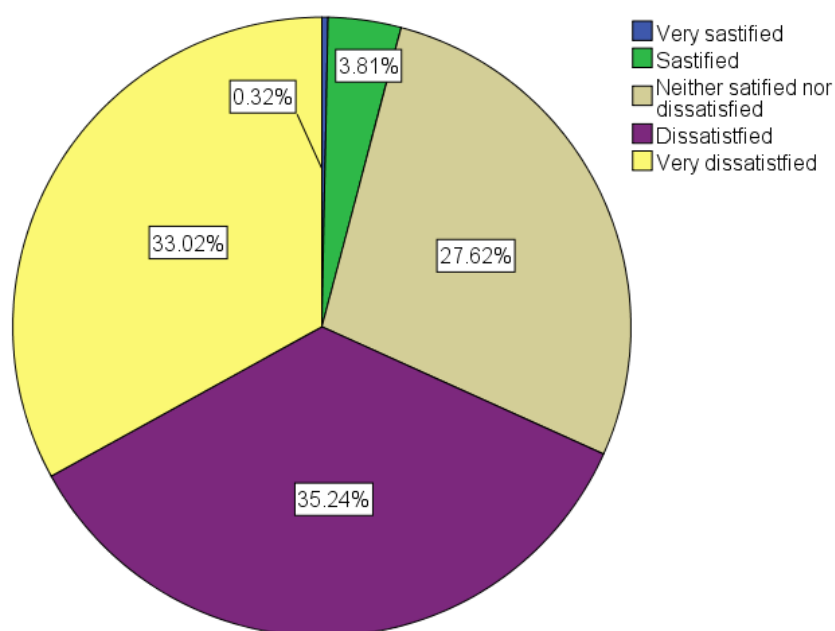
The degrees of satisfaction regarding information provided by APSARA to the local villagers were different. It was found that 35.24 percent of the respondents were dissatisfied, followed by 33.02 percent that were very dissatisfied, 27.62 percent were neither dissatisfied nor satisfied, 3.81 were satisfied and the smallest amount were very satisfied 0.32 percent.

Table 6.19: Distribution of Respondents as per their Views on the Information Received from APSARA

Response Type	No. of Respondents	Percent
Very Satisfied	1	3.02
Satisfied	12	3.81
Neither Satisfied nor Dissatisfied	87	27.62
Dissatisfied	111	35.24
Very Dissatisfied	104	33.02
Total	315	100.0

Source: Own Survey.

Figure 6.19: Percentage Distribution of Respondents as per their Views on the Information Received from APSARA



6.2.4 Problems in Heritage Management Regulations

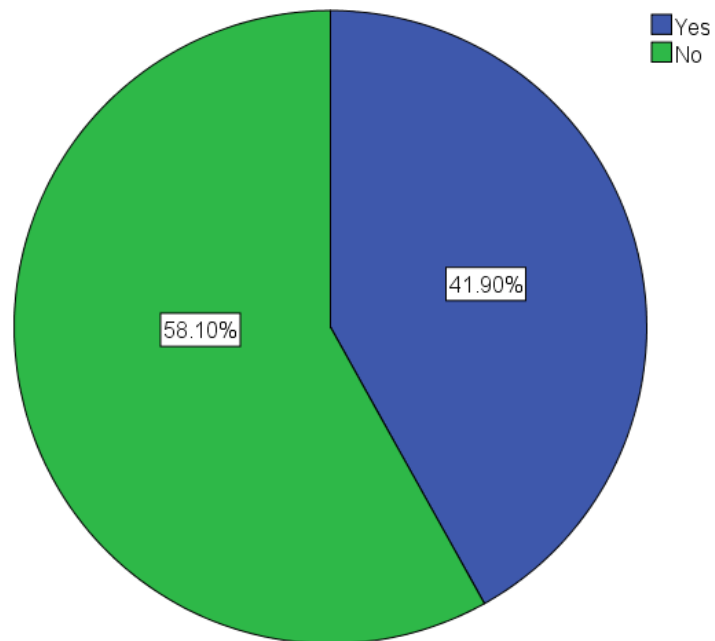
The study reveals that 58.10 percent of the surveyed villagers have not had problems (poor local people don't have money for business activities) in the regulation of heritage management, and the remaining 41.90 percent of respondents had experienced problems in the regulation of heritage management.

Table 6.20: Distribution of Respondents as per their Views on Regulation of Heritage Management

Type of Response	No. of Respondents	Percent
Yes	132	41.90
No	183	58.10
Total	315	100.0

Source: Own Survey.

Figure 6.20 Percentage of Respondents as per their Views on Regulation of Heritage Management



6.2.4.1 Problem with Residence

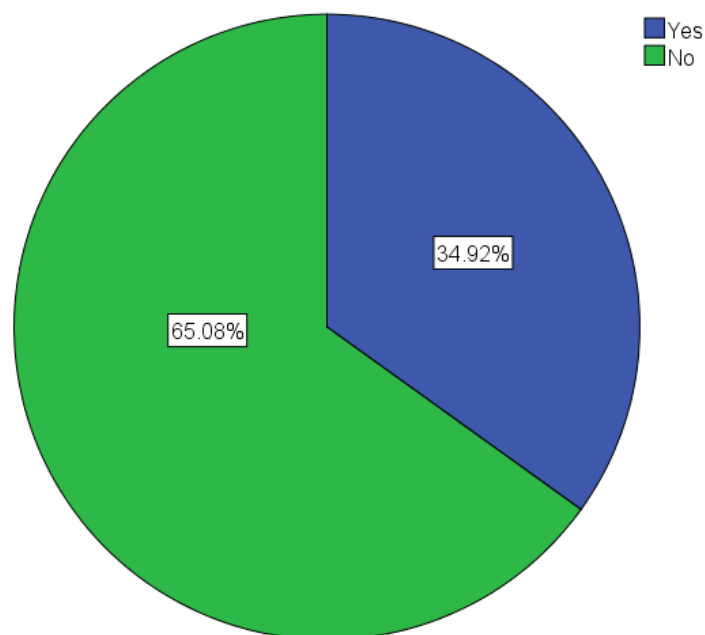
The table below shows that 65.08 percent of respondents had no problem with residences because of the regulation of heritage management, while 34.92 percent of the respondents did have problems.

Table 6.21: Distribution of Respondents as per their Views on Regulation of Residence

Type of Response	No. of Respondents	Percent
Yes	110	34.92
No	205	65.08
Total	315	100.0

Source: Own Survey.

Figure 6.21: Percentage Distribution of Respondents as per their Views on Regulation of Residence



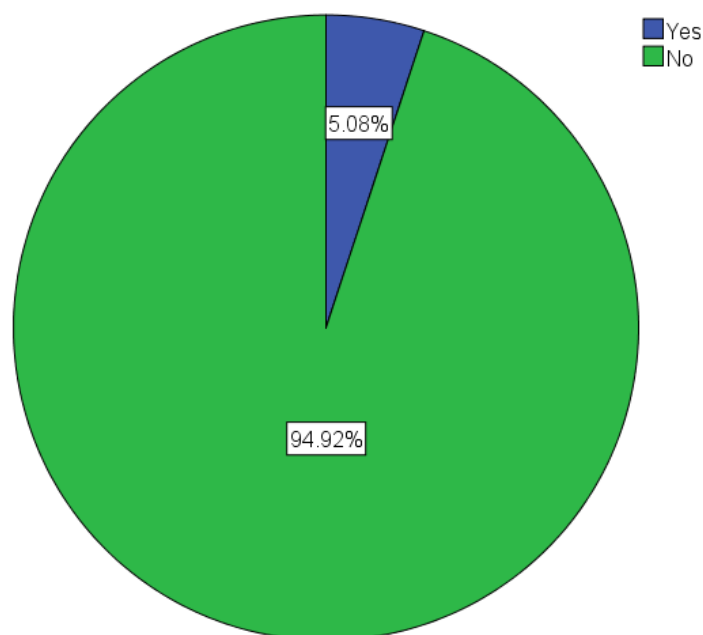
6.2.4.2 Problem of Business in the Heritage Site

The aim of the study is to know if there were any problems with the business for local villagers living in the heritage site. It can be seen through the survey that the majority of surveyed villagers, 94.92 percent, have problems with business because of the regulation of heritage management. Table 6.22: Distribution of Respondents as per their Views on Problems of in Business Regulation

Type of Response	No. of Respondents	Percent
Yes	16	5.08
No	299	94.92
Total	315	100.0

Source: Own Source.

Figure 6.22: Percentage Distribution of Respondents as per their Views on Problems in Business Regulation



6.2.4.3 Problem of Respondents in Land Use Regulation

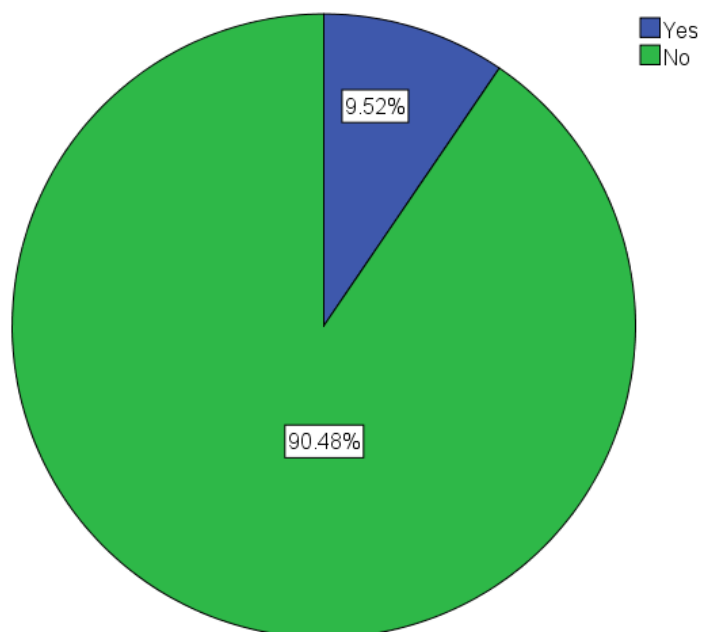
The survey shows that the majority of the local villagers had no problem with land use in the regulation of heritage management. It was found that 90.48 percent of the respondents didn't have problems with land use, while about 9.52 percent did.

Table 6.23: Distribution of Respondents as per their Views on Problems in Land Use Regulation

Type of Response	No. of Respondents	Percent
Yes	30	9.52
No	285	90.48
Total	315	100.0

Source: Own Survey.

Figure 6.23: Percentage Distribution of Respondents as per their Views on Problems in Land Use Regulation



6.2.4.4 Problem of Forest Access

The study seeks to reveal if local villagers had problems accessing the forest to collect traditional medicine, forestry products or collecting dead wood... etc. It shows that 100 percent of the surveyed villagers did not have problems accessing the forest under the regulation of heritage management.

Table 6.24: Distribution of Respondents as per their Views on Problems in Forest Access

Type of Response	No. of Respondents	Percent
Yes	0	0
No	315	100.0
Total	315	100.0

Source: Own Survey.

6.2.4.5 Problem with Cultural Activities

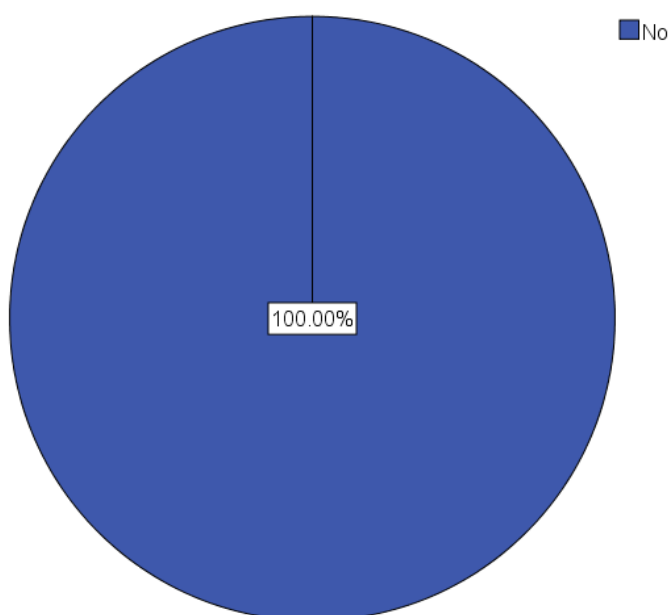
The research study seeks to find out if local villagers had problems with the cultural activities at the heritage site. In the same survey as the forest access above, the study showed that 100 percent of the surveyed villagers did not have problems with cultural activities related to the regulation of heritage management.

Table 6.25: Distribution of Respondents as per their Views on Problems in Cultural Activities

Type of Response	No. of Respondents	Percent
Yes	0	0
No	315	100
Total	315	100.0

Source: Own Source.

Figure 6.24: Percentage of Respondents as per their Views on Problems in Cultural Activities



6.2.4.6 Problem with Social Activities

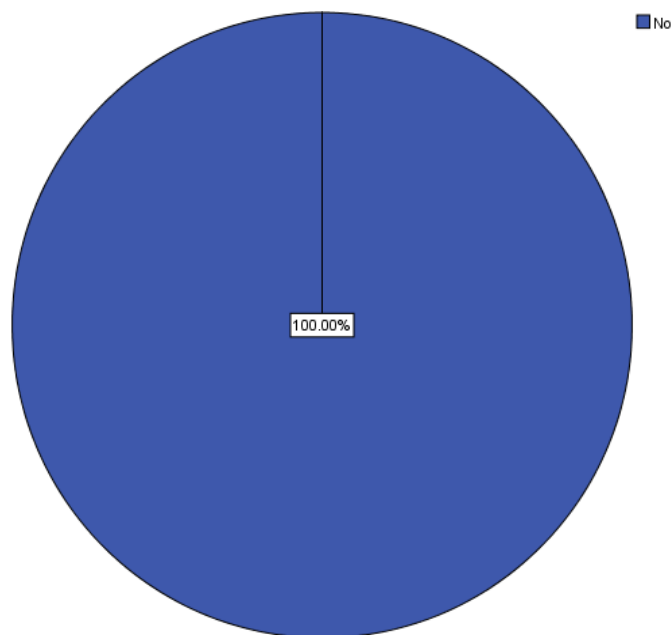
From the survey respondents, it is found that completely 100 percent of the respondents did not have problems with the social activities in the heritage site related to heritage management like the two above activities of forest access and cultural activities.

Table 6.26: Distribution of Respondents as per their Views on Problems with Social Activities

Type of Response	No. of Respondents	Percent
Yes	0	0
No	315	100
Total	315	100.0

Source: Own Survey.

Figure 6.25: Percentage of Respondents as per their Views on Problems with Cultural Activities



6.2.4.7 Problem of Religion Activities

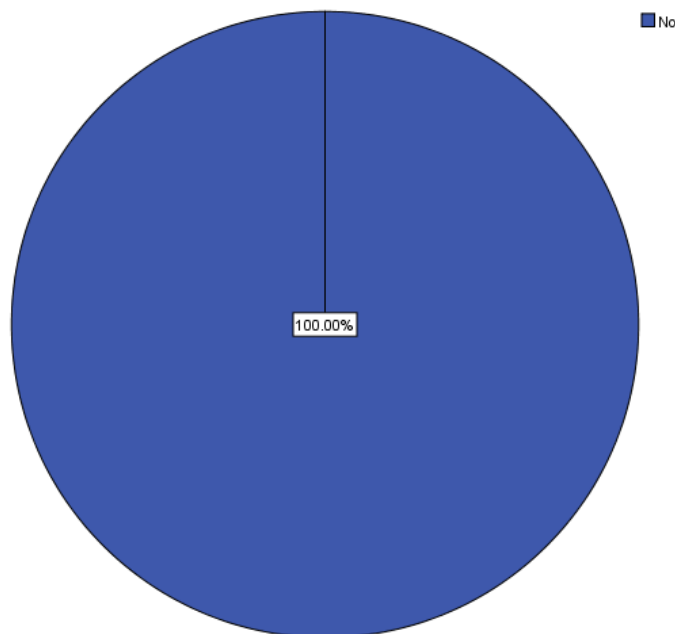
The study shows that 100 percent of the respondents had no problems with religious activities according to the regulation of heritage management.

Table 6.27: Distribution of Respondents as per their Views on Problems with Religion Activities

Respondents	No. of Respondents	Percent
Yes	0	0
No	315	100
Total	315	100.0

Source: Own Survey.

Figure 6.26: Percentage of Respondents as per their Views on Problems with Religion Activities



6.2.5 Regulation of Heritage Management Affecting Local Life

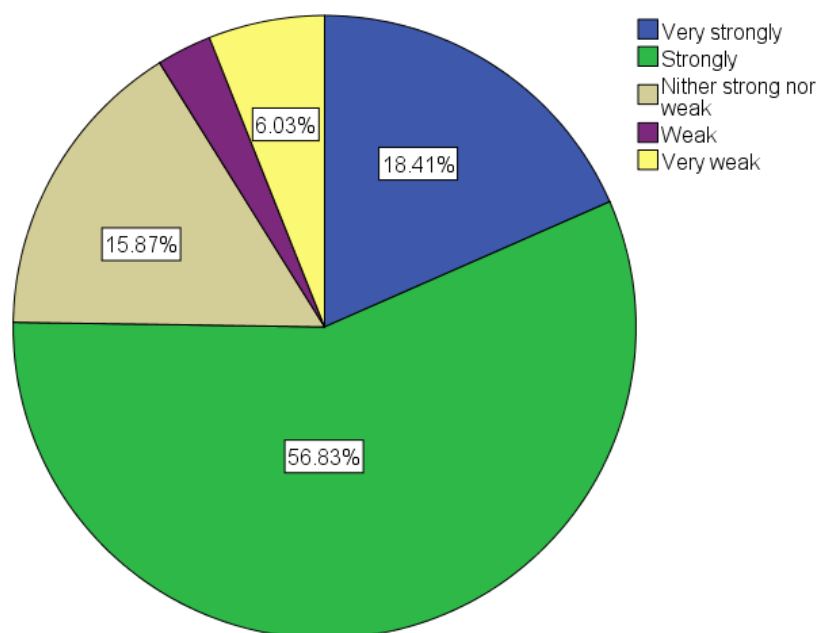
It is illustrated in the pie chart of the survey that 56.83 percent of the respondents were strongly affected by the regulation of heritage management followed by 18.41 percent who were very strongly affected, 15.87 percent were neither strong nor weak, while 2.86 percent were weak and 6.03 percent were very weak.

Table 6.28: Distribution Respondents as per their Views on the Effect of Regulation of Heritage Management

Type of Response	No. of Respondents	Percent
Very Strongly	58	18.41
Strongly	179	56.83
Neither Strongly nor Weak	50	15.87
Weak	9	2.86
Very Weak	19	6.03
Total	315	100.0

Source: Own Survey.

Figure 6.27: Percentage of Respondents as per their Views on the Effect of the Regulation of Heritage Management



6.2.5.1 Ease in Construction of Houses

The survey showed that 40.32 percent of the respondents opined that, it is very difficult to construct the houses in the study area of the heritage site followed by 40.32 percent difficult, 8.57 neither easy nor difficult, 5.40 percent easy and the last 2.54 percent very easy.

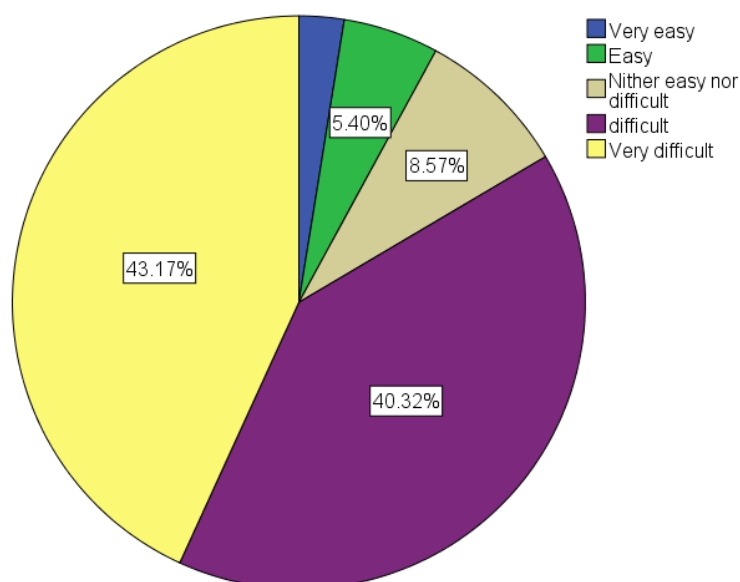
Table 6.29: Distribution of Respondents as per their Views on Regulation of House Construction

Type of Response	No. of Respondents	Percent
Very Easy	8	2.54
Easy	17	5.40
Neither Easy nor Difficult	27	8.57

Difficult	127	40.32
Very Difficult	136	43.17
Total	315	100.0

Source: Own Survey.

Figure 6.28: Percentage of Respondents as per their Views on Regulation of House Construction



6.2.5.2 Protecting Regulation Affected Local Life

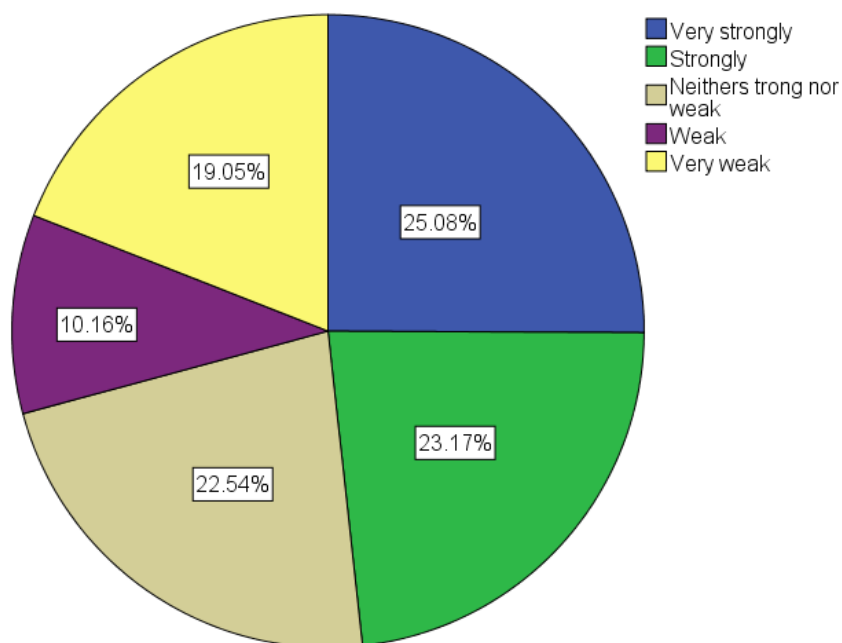
In the survey in the heritage site of Bakong, 25.08 percent of 315 selected respondents opined that the protecting regulation affected them strongly while, 23.17 strongly, 22.54 neither strong nor weak and 19.05 percent weak.

Table 6.30: Distribution of Respondents as per their Views on Protecting Regulation Affected Local Life

Type of Response	No. of Respondents	Percent
Very Easy	79	19.05
Easy	73	19.05
Neither Easy nor Easy	71	22.54
Difficult	32	23.17
Very Difficult	60	25.08
Total	315	100.0

Source: Own Survey.

Figure 6.29: Percentage of Distribution of Respondents in Construction Regulation



6.2.6 Infrastructure and Maintenance

One criticism raised by many locals in the four study villages was that there was very poor road infrastructure in the local area and inadequacy in APSARA's resolution to

resolve this issue. Questions were asked to the respondents about infrastructure maintenance generally, and the findings were as follows:

6.2.6.1 APSARA Adequately Preserves Monument and Environment

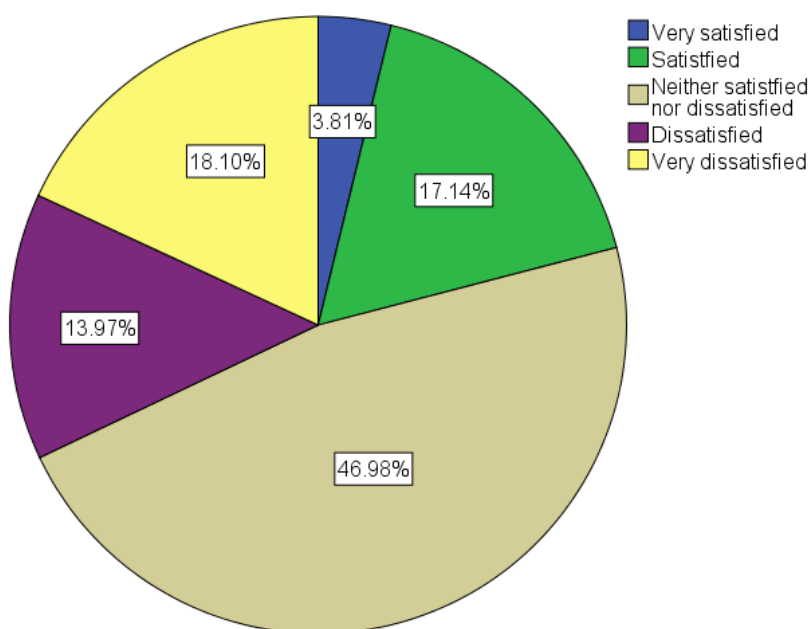
The below table shows that 46.98 percent of respondents were neither satisfied nor dissatisfied with the work of preservation of monuments in the heritage site. Besides this 18.10 percent of the respondents were very satisfied followed by 17.14 satisfied, 13.97 dissatisfied and 3.81 very satisfied.

Table 6.31: Distribution of Respondents as per their Views on Adequacy in Preservation of Monuments by APSARA

Type of Response	No. of Respondents	Percent
Very Satisfied	12	3.81
Satisfied	54	17.14
Neither Satisfied nor Dissatisfied	148	46.98
Dissatisfied	44	13.97
Very Dissatisfied	57	18.10
Total	315	100.0

Source: Own Survey.

Figure 6.30: Percentage of Respondents as per their Views on Preservation of Monument and Environment by APSARA



6.2.6.2 Opinion about Infrastructure in Heritage Site

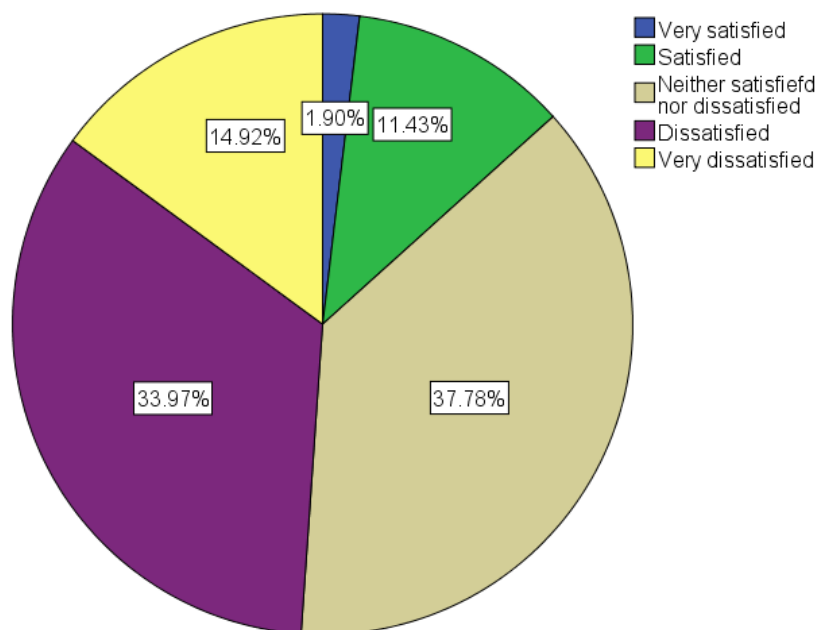
In the study 37.78 percent of respondents were neither satisfied nor dissatisfied with the infrastructure in the heritage site, followed by 33.97 percent were dissatisfied, 14.92 were very satisfied, 11.43 percent were satisfied and 1.90 percent were very satisfied.

Table 6.32: Distribution of Respondents as per their Opinion about Infrastructure in Heritage Site

Type of Response	No. of Respondents	Percent
Very Satisfied	6	1.90
Satisfied	36	11.43
Neither Satisfied nor Dissatisfied	119	37.78
Dissatisfied	107	33.97
Very Dissatisfied	47	14.92
Total	315	100.0

Source: Own Survey.

Figure 6.31: Percentage of Respondents as per their Opinion about Infrastructure in Heritage Site



6.2.6.3 How regularly APSARA maintains Roads

It is revealed that 80.95 percent of respondents had never seen APSARA maintain the roads in the study area followed by 12.70 percent who had rarely seen them, 4.44 percent neither often nor rarely, and 1.37 percent were extremely often.

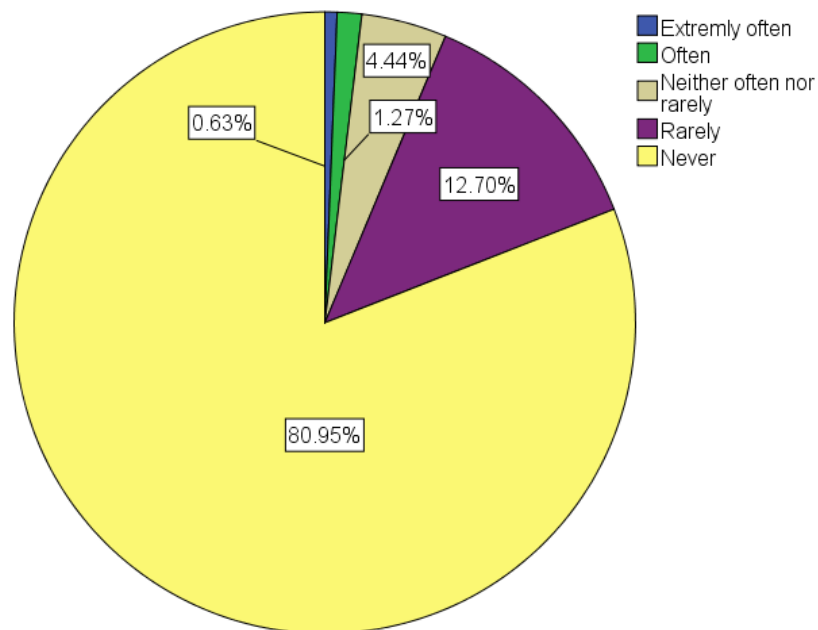
Table 6.33: Distribution of Respondents as per their Opinion about Maintenance of Roads by APSARA

Type of Response	No. of Respondents	Percent
Extremely often	2	0.63
Often	4	1.27
Neither often nor never	14	4.44

Rarely	40	12.70
Never	255	80.95
Total	315	100.0

Source: Own Survey

Figure 6.32: Percentage of Respondents as per their Opinion about Maintenance of Roads by APSARA



6.2.7 Comparison of Rich and Poor Villagers' Experiences of Heritage Management

To know better in the research, the comparing opinions between the rich and poor local villagers in the study area are discussed, if there are any different opinions living with regulation of heritage management in the explanations and SWOT.

6.2.8 Experiences in Heritage Management Regulations

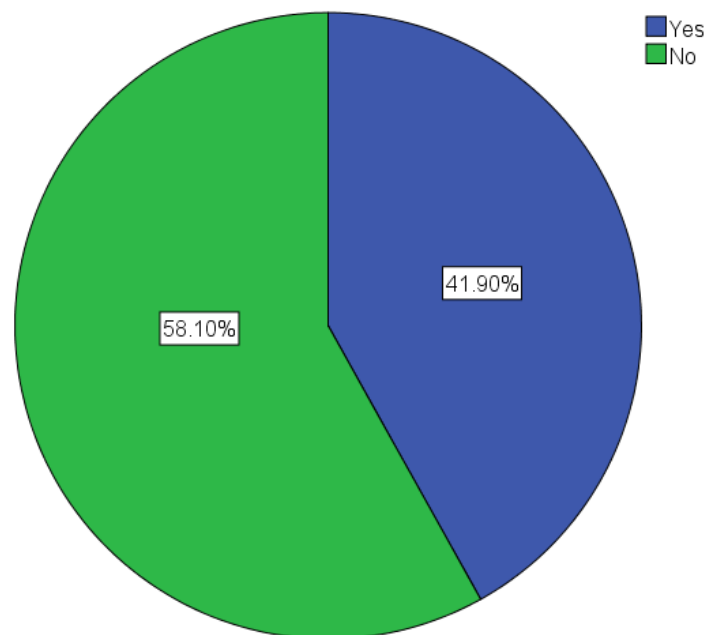
In the study, it was found that 53.85 percent of respondents had experience with the regulation of APSARA authority, while 41.49 percent of the not poor people had no problem with the above regulation.

Table 6.34: Distribution of Experience in Regulation of Heritage Management

Sl. No.	Type of Respondent	Experience in the Regulation of Heritage Management
1	Rich Respondents	53.85%
2	Not poor Respondents	41.49%
All		100.00%

Source: Own Survey.

Figure 6.33: Percentage of Respondents having Experience in Regulation of Heritage



6.2.9 Infrastructure and Environment in the Heritage Site

It was revealed that 45 percent of wealthy individuals were neither satisfied nor dissatisfied, followed by 37 percent of poor villagers. Additionally, 38.46 percent of the wealthy villagers were dissatisfied, followed by 33.77 percent of the poor villagers. The study also showed that 7.69 percent of the wealthy villagers were satisfied (or very satisfied), followed by 11.59 percent of the poor villagers. Furthermore, 7.69 percent of the wealthy villagers were very satisfied, compared to 15.23 percent of the poor villagers. In terms of high satisfaction, a greater percentage of wealthy villagers expressed satisfaction, while only 1.99 percent of the poor villagers reported being very satisfied.

Table 6.35: Percentage of Respondents Having Opinion on the Infrastructure and Environment in the Heritage Site

No.	Type of Respondent	Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied
1	Rich Villagers	0.00	7.69	46.15	38.46	7.69
2	Not poor Villagers	1.99	11.59	37.42	33.37	15.23

Source: Own Survey.

Figure 6.34 and Figure 6.35: Percentage of Respondents Having Opinion on the Infrastructure and Environment in the Heritage Site

Figure 6.34: Rich Villagers

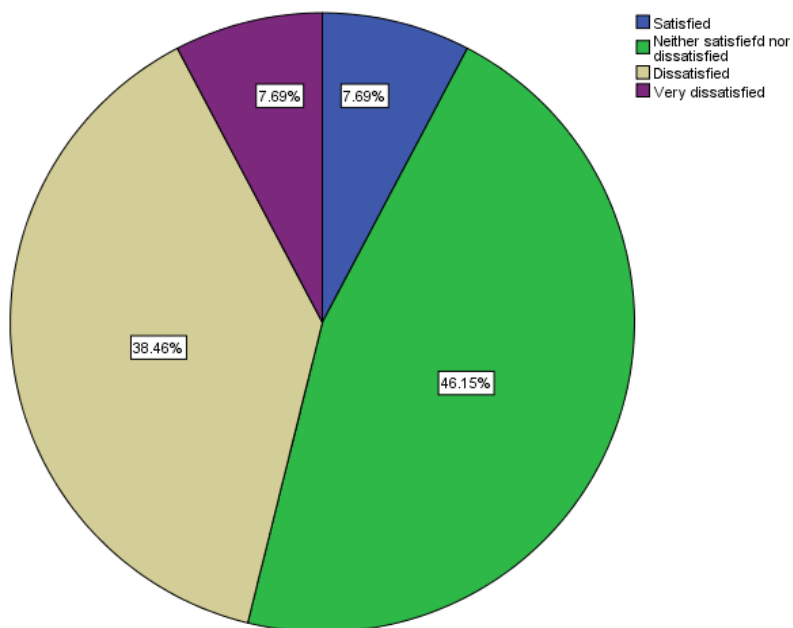
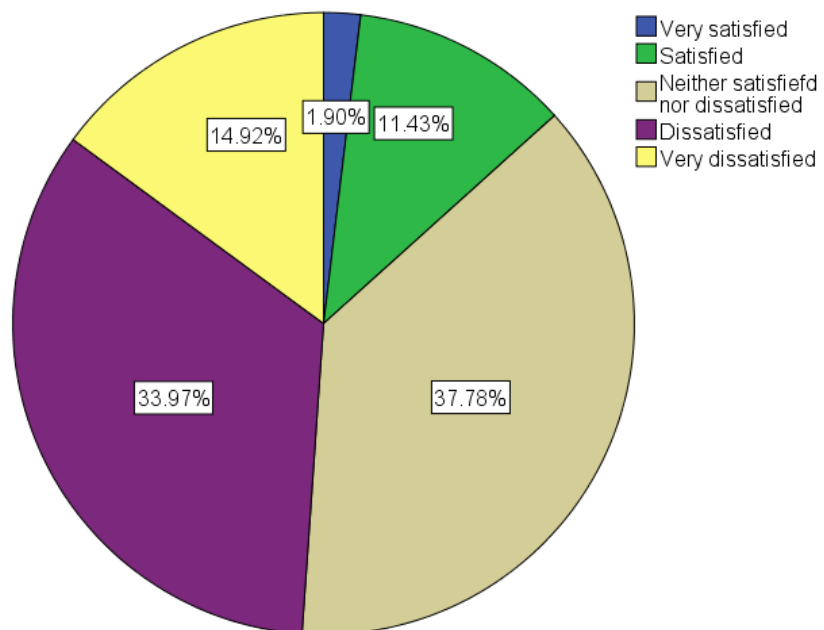


Figure 6.35: Poor Villagers



6.3 Direct Benefit from Heritage Site Management

In the table below, it is revealed that 7.28 percent not poor villagers had the benefit from the heritage site, whereas, all the rich villagers were found to have benefits benefit. The rich villagers had indirect benefits from the heritage site such as selling or renting the land for tourism or selling the land to private Korean golf companies and running the transport for tourists.

Table 6.36: Respondents having direct Benefits from Heritage Site

No.	Type of Respondent	Percentage of Benefits from Heritage Site
1	Rich Respondents	100.0%
2	Not poor Respondents	7.28%

Source: Own Survey.

Figures 6.35a and 6.35.b: Percentage of Rich and Poor Respondents directly Benefit from Heritage Site

Figure 6.35a: Rich Villagers

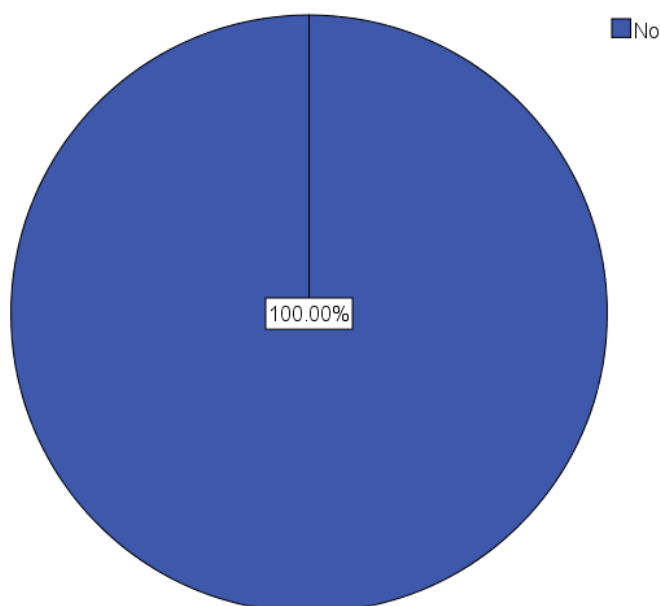
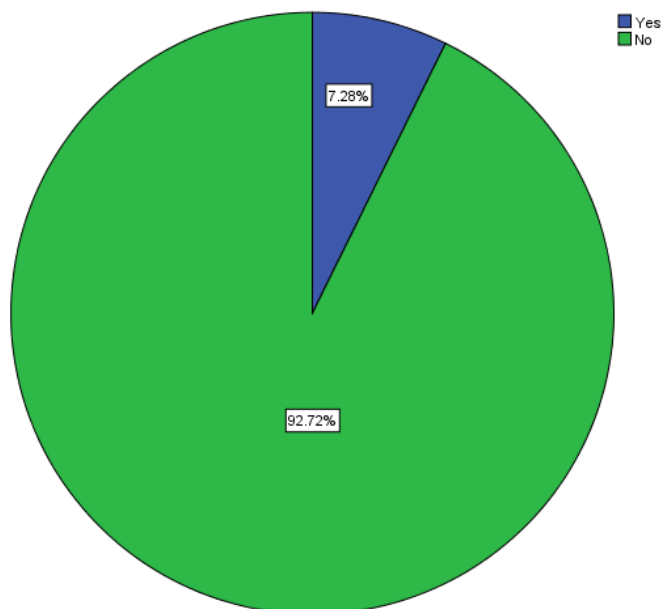


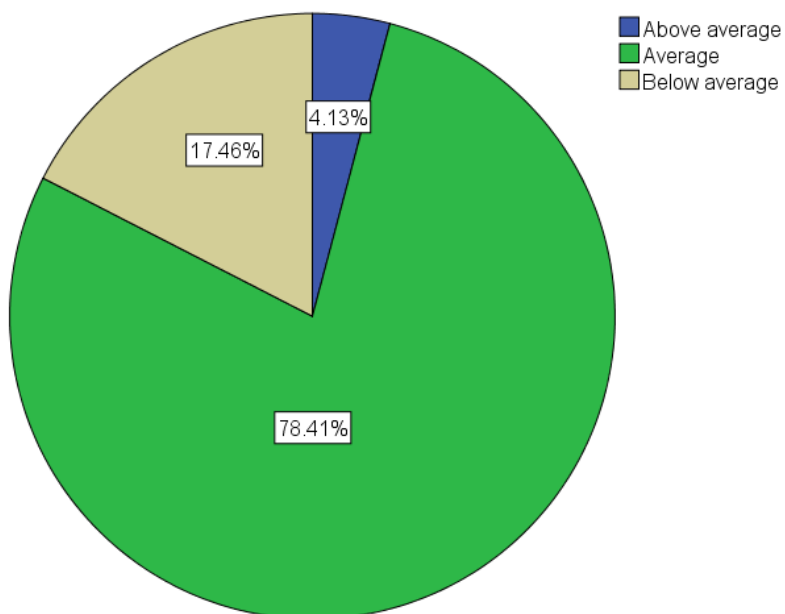
Figure 6.35b: Poor Villagers



6.4 Respondents in different Economic Levels

It is revealed that 78.41 percent of respondents were average followed by 17.46 percent were below average, and 4.27 percent were above average.

Figure 6.38: Percentage of Respondents in different Economic Levels



6.5 Respondents in Education Related to the Economical Levels

It is revealed that 85.08 percent of respondents had visited primary school followed by 11.43 percent had visited secondary school, 3.175 percent had visited high school, and 0.31 percent had a bachelor's degree.

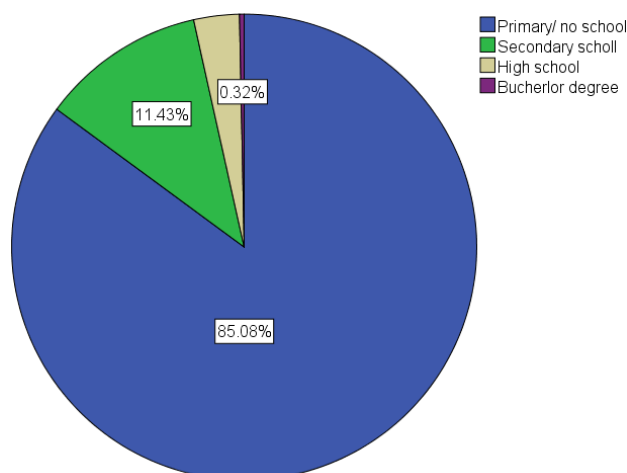
Table 6.37: Percentage of Respondents in Education related to Economical Levels

		Education				Total
		Primary School	Secondary School	High School	Bachelor Degree	
Economic level	Above average	10	2	9	1	13
	Average	208	29	10	0	247
	Below average	50	5	0	0	55
Percent %		85.08	11.43	3.175	0.31	100
Total		268	36	10	1	315

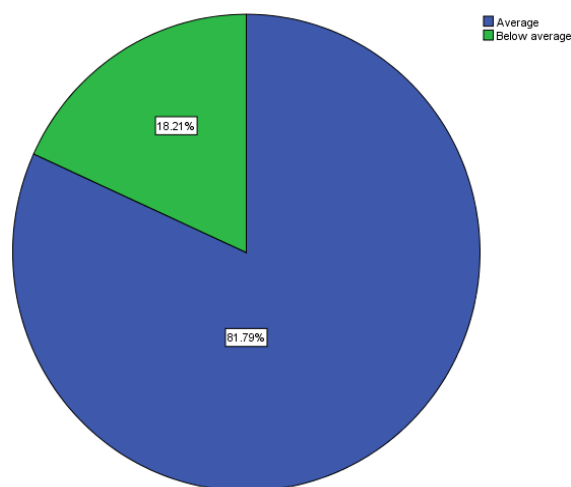
Source: Own Survey.

Figure 6.39 & 6.40: Percentage of Respondents in Education related to Economical Levels

Education level of rich villagers



Education level of poor villagers



6.6 Infrastructure and Environment in the Heritage Site

It was revealed that 45 percent of wealthy individuals were neither satisfied nor dissatisfied, followed by 37 percent of poor villagers. Additionally, 38.46 percent of the wealthy villagers were dissatisfied, followed by 33.77 percent of the poor villagers. The study also showed that 7.69 percent of the wealthy villagers were satisfied (or very satisfied), followed by 11.59 percent of the poor villagers. Furthermore, 7.69 percent of the wealthy villagers were very satisfied, while 15.23 percent of the poor villagers shared this sentiment. In terms of high satisfaction, a greater percentage of wealthy villagers expressed satisfaction, while only 1.99 percent of the poor villagers reported being very satisfied. Table 6.38: Percentage of Respondents having Opinion on the Infrastructure and Environment in the Heritage Site

Sl. No.	Type of Respondent	Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied
1	Rich Villagers	0.00	7.69	46.15	38.46	7.69
2	Poor Villagers	1.99	11.59	37.42	33.37	15.23

Source: Own Survey.

Figure 6.41 and Figure 6.42: Percentage of Respondents Having Opinion on the Infrastructure and Environment in the Heritage Site

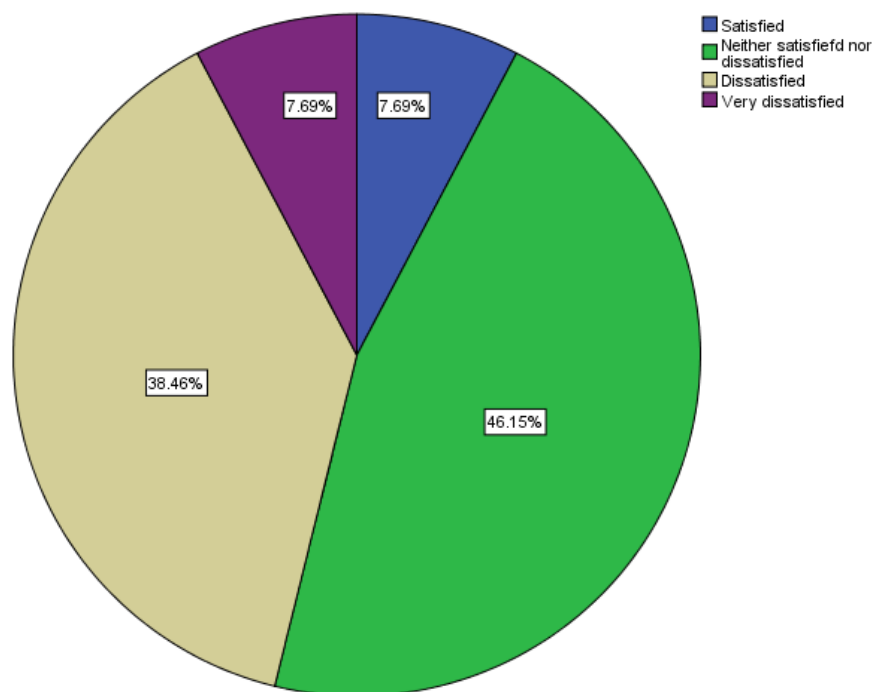


Figure 6.41: Rich Villagers

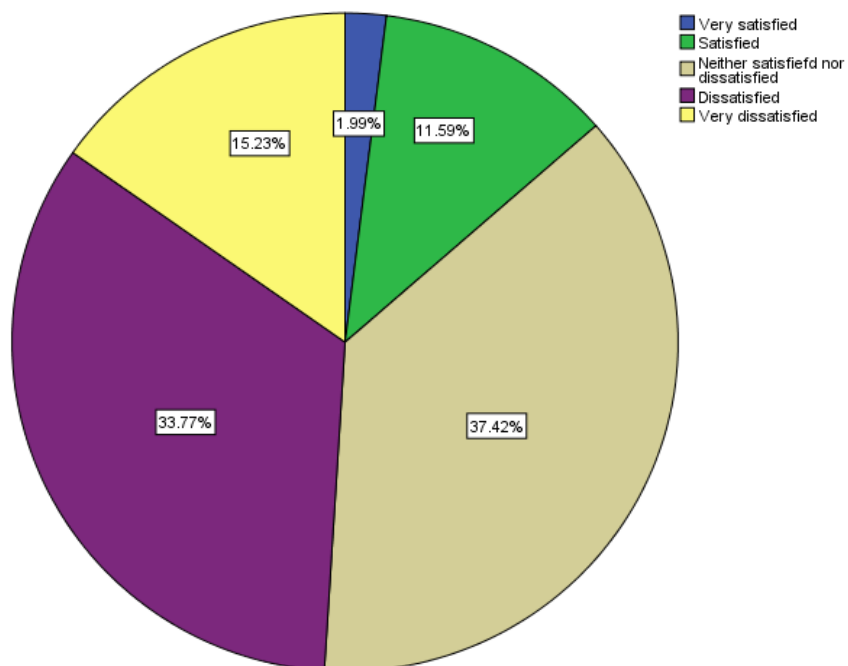


Figure 6.42: Poor Villagers

6.7 SWOT Analysis on Sustainable Heritage Management

This section discusses the perceptions of local leaders regarding heritage management at Bakong. It is based on in-depth qualitative interviews conducted with key respondents, including the district governor, commune chief, APSARA staff members, and local leaders from all villages in the study area of Bakong.

The purpose of these interviews was to:

- Understand the leaders' perceptions and experiences of sustainable heritage management and its importance.
- Examine heritage management practices in the study area.
- Assess sustainable heritage management efforts in the study area.
- Identify gaps in heritage management practices in ensuring sustainability.
- Provide recommendations for sustainable heritage management.
- Determine whether there are benefits from sustainable heritage management and whether adequate actions have been taken in the study area.

The questions and the resulting analysis of these local leaders' perceptions have been organized using a SWOT framework, as described in the methodology chapter of this thesis.

This section discusses the perceptions held by local leaders about heritage management at Bakong. It is based on in-depth qualitative interviews conducted with key respondents such as the governor of the district, chief of the commune, APSARA staff members and local leaders of all the villages in the study area of Bakong. The purpose of the interviews was to learn about these leader's perceptions and experiences of sustainable heritage management and its importance; to know the heritage management practices in the

study area; to examine the sustainable heritage management in the study area; to find out the gaps in heritage management practices in ensuring sustainability in the study area; to provide recommendation for the sustainable heritage management in the study area; and to find out if there are no benefits for sustainable heritage management and inadequate actions taken in the study area. The questions and the resulting analysis of these local leaders' perceptions have been organized according to a SWOT framework, as described in the methodology chapter of this thesis.

6.7.1 Type of Local Leaders Interviewed in the Study Area

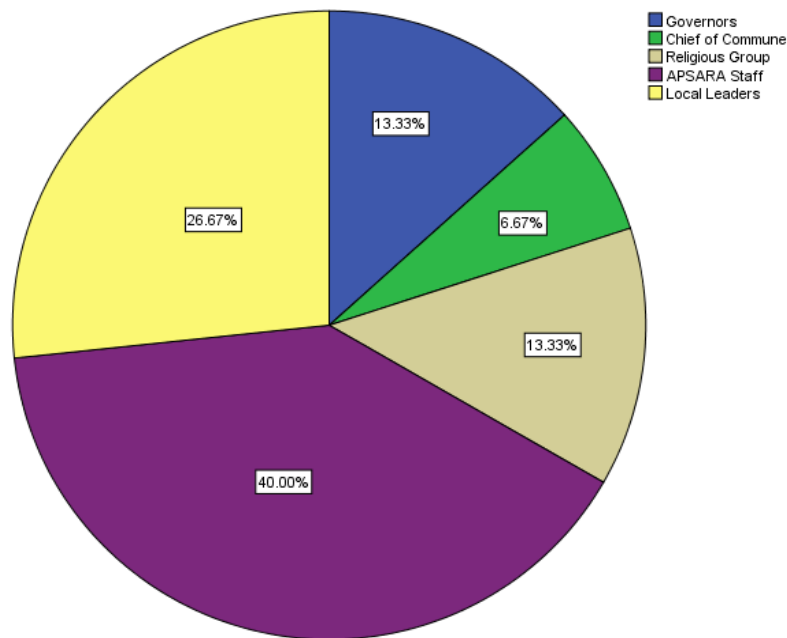
The data on respondents show the percentages of the APSRA staff were 40 percent, local leaders 26.6 percent, religious about 13 percent as well representatives of the governor and the remaining mall percent were 6.6 percent.

Table 6.39: Distribution of Respondents as per Representatives

Key Respondents	No. of Representatives	Percent
Governors	2	13.33
Chief of Commune	1	6.67
Religious Group	2	13.33
Staff of APSARA	6	40.00
Active Local Leaders	4	26.67
Total	15	100.0

Source: Own Survey.

Figure 6.43: Percentage of Important Representatives



6.7.2 Perceptions of Local Community Leaders

The first set of local leaders interviewed were local community leaders representing the four villages of the study area. They resided in and were active in their villages but they did not necessarily work for the state or for local organizations. They were selected for interviews because they were respected by their fellow residents as knowledgeable about, active in and concerned about heritage management in the local area and because they were thought to be concerned about the village and the impacts of heritage management on villager's lives. These local leaders included men and women and were all above thirty years of age; some were in their sixties.

a)- SWOT Analysis 1 (Interview with Local Leaders in Lolei Village)

The village leader interviewed in Lolei Village acknowledged that the APSARA Authority had employed local people and was actively engaged in the conservation and protection

of the heritage site. However, APSARA is very strict in regulating villagers' activities, even for minor matters such as small-scale construction, agriculture, and cultural activities within the monument's enclosure.

Regarding opportunities, the local area has monuments, cultural heritage, and natural conditions that attract tourists, potentially creating job opportunities. However, villagers are concerned about their future, fearing job losses, strict regulations affecting their livelihoods, and an increasing number of migrants leaving the village for Thailand.

For this, details are mentioned through SWOT analysis in Table 6.45.

Table 6.40: SWOT Analysis of Interviews with Local Leaders in LoLei Village

S	W
<ul style="list-style-type: none"> -APSARA conserves the monument and protects the environment - APSARA has employed local people -APSARA has stopped the illegal construction on the heritage site 	<ul style="list-style-type: none"> -APSAR is very strict in construction or renovation works even small thing like protecting net for the vegetable farm is forbidden -agricultural in the new land is not allowed -there is no justice for poor and weak local people in construction, some can do it, but some cannot do it -no providing types of models for locals to install directly in the village

	<ul style="list-style-type: none"> -it is too strict to perform the traditional ceremony in the monument complex -cleaning vegetation is forbidden -all the tree product belongs to the APSARA authority
<p>O</p> <ul style="list-style-type: none"> -there are enough places for tourists such as monuments, nature, landscapes, rivers, small island, water, lakes and forests Daun Ev in Lolei 	<p>T</p> <ul style="list-style-type: none"> -worry about losing jobs, because most job leaders are from the outside of the heritage site -APSARA is too much bureaucracy -regulations of APSARA in real life is very strict in small things such as: in small businesses, doing fences protecting their farm or land -local people feel so lonely during problems with regulations of APSARA -APSAR is very strict in construction - many local people go to find jobs in Thailand

- traditional ceremonies are strict to do in the compound of monuments during the work
- local intangible heritage will be disappeared

b)- SWOT Analysis 2 (Interview with Aolaok Local Leaders)

APSARA enforces strict protection regulations for the heritage site; however, it has not taken action regarding the construction of a new road in front of the monuments. At the same time, APSARA is perceived as weak due to its rigid enforcement of regulations controlling the construction of houses and fences—even simple nets surrounding homes or farms. Additionally, APSARA has not implemented programs for cultural or economic education, workshop training, or capacity building for local people. It also did not provide standardized construction models for villagers to follow. As a result, villagers are concerned about their younger generation losing cultural identity, access to education, and facing increasing poverty. It is unfortunate that such a culturally rich area with a well-preserved environment lacks adequate support for sustainable local development.

For details, see the SWOT analysis in Table 6.46, as follows:

Table 6.41: SWOT Analysis of Interview with Aolaok Local Leaders

S

W

<ul style="list-style-type: none"> -the community has natural resources for tourists for attracting the tourists -the village is safer than before -the commune has enough land for tourists -their many types of local and national ceremonies for interacting with the local culture on site -forbidden newcomers buying the land on the heritage site -there are employment for local people -constructed the roads around the monument in Bakong temple and in front of the PrahKo temples 	<ul style="list-style-type: none"> - installing the net or fences around their farm is not allowed -people have no idea about the conservation of APSARA - APSARA share seldom information to the local people -there is no education or training for people about money problems or financial planning -knowledge of the construction, is from being the monk from the past -local authority has no right to confront or talk to local people -villagers have no right to use forest products
<p style="text-align: center;">O</p> <ul style="list-style-type: none"> -explore the tangible and intangible heritage of tourists -facilitating access to the rest of the monuments in the village of the heritage site 	<p style="text-align: center;">T</p> <ul style="list-style-type: none"> -APSARA didn't care, people catching fishes anarchy by using the electrical shocking instruments in the natural ponds -local people cannot use fences or nets for their farm

-the village is quite safe	-local people are not daring to express their
Land and agriculture	opinion in public, because afraid of losing
-Cultural activities to offer to the tourist	their job
-the village has a good environment with	-worry about losing their professions as
natural ponds and artificial ponds from	farmers and their feed animals
Angkor time	-no education program
	-young generation losing their identity
	, because there are no cultural training
	programs to offer regularly
	-losing tangible and intangible heritages
	-there are no training or workshop
	programs of cultural, economic, and
	financial planning for the local people
	-worry about losing the worship buildings
	in the compound of monuments
	-losing the collaboration between local
	people and the authorities
	-losing the rice field

c) SWOT Analysis 3 (Interview with Local Leader of Thnal Trang Village)

APSARA has made significant contributions to the heritage site by attracting tourists, ensuring safety, promoting cultural activities, and preventing illegal construction and

deforestation. The local village leader acknowledged that APSARA is effective in enforcing heritage site protection in the study area. Additionally, the APSARA Authority has created job opportunities for local villagers.

However, there are several weaknesses that have caused frustration among the local people. These include difficulties in obtaining construction permits, the lack of models or guidelines for construction in the village, and the fact that all tree products belong to APSARA, which has been a point of dissatisfaction for villagers. The local leader also expressed concerns about increasing migration, as mentioned earlier by the village leader in Lolei.

All these factors have led to significant distress among local people, making them anxious about their future, as highlighted by two local leaders under the category of threats. The local leader also recognized the opportunities available to the village, similar to those mentioned by another village leader. Furthermore, he emphasized the importance of the 'one-window office' facility for local villagers, which helps reduce both time and financial burdens.

For details, see the SWOT analysis in Table 6.47, as follows:

Table 6.42: SWOT from Interview with of Local Leader of Thnal Trang Village

S

W

<ul style="list-style-type: none"> -APSARA enforces the regulation for protection of the Angkor Park including the environment -creating employment for the local people - living in the study area is safe 	<ul style="list-style-type: none"> -For all the constructions, the local authority must ask permission from APSARA, but not sure 100% if it is allowed, and most of the administration works were or are delayed -no providing models for locals -it is too strict to perform the traditional ceremony in the monument complex -cleaning vegetation is forbidden -all the tree product belongs to the APSARA authority -APSAR is very strict in construction - many local people went to find jobs in Thailand
<p style="text-align: center;">O</p> <ul style="list-style-type: none"> -planting more trees to attract tourists -authority can offer the existing culture, human and natural resources to the tourists and modernization for the agriculture 	<p style="text-align: center;">T</p> <ul style="list-style-type: none"> -worry about separating members of the family by APSARA, and they will be sent to away to Run Taek far away from their grandparents -worry about losing their culture -worry about poverty in the future

-the local community can have one window office for facilitating all kinds of administrative works

-regulations of APSAR will be increased and more strict in the study area

d) SWOT Analysis 4 (Interview with of Local Leaders of Stoeung Village)

Weakness

In addition to the strengths of APSARA, there are some criticisms of the authority. The local leaders of the four villages share a common view regarding the weaknesses of APSARA in its heritage management practices. It was found that APSARA was too strict in controlling construction and land use in the study area. This included restrictions on light structures, fences made of netting, house constructions, land use, and the planting of fruit trees in newly allocated land. These regulations were perceived as unfair to poorer villagers, who were unable to make these changes, while wealthier villagers could. Furthermore, the local leaders mentioned that APSARA and local authorities seldom provided information related to heritage management, socio-economics, culture, and the environment to the local villagers in the study area.

APSARA also did not allow local villagers to use forest products, even in small quantities for traditional and cultural activities, as expressed by the local leaders of Aolaok and Thnal Trang villages. Additionally, the local leaders in Aolaok and Lolei villages expressed regret about the destruction of many community buildings in Lolei and Bakong, which occurred without prior consultation with community stakeholders. This was a significant blow to the local people, as these buildings represented their hard-earned money from daily labor.

The final weak point of APSARA was its inability to effectively negotiate with local people when problems arose regarding heritage management regulations.

Opportunity

Regarding opportunities, the local people shared similar views on the treasures found in their villages. The local leaders of the four villages were proud of their natural resources, environment, and cultural properties, including both tangible and intangible heritage, such as monuments dating back to the beginnings of Khmer culture in prehistory. Additionally, the local leader of Thnal Trang village proposed creating a one-stop facility to serve the administrative needs of poor and illiterate villagers. There was also a proposal for modernizing agriculture to generate a micro-economy in the rural area of the heritage site.

Threat

Alongside the described strengths, weaknesses, and opportunities, several threats to the livelihoods of villagers were identified. These include concerns about bureaucracy and the increasing strictness of heritage management regulations in the future, particularly regarding land use for agriculture and construction for younger generations. Villagers fear that by sending their children away, intangible heritage will disappear from the heritage site, and they will lose their cultural activities in the monument compound, as these are restricted during tourist visits.

Additionally, local leaders in Lolei village are concerned that local villagers will lose their jobs due to the influx of jobseekers from outside the village, and there will be increased immigration from local villages abroad.

According to the SWOT analysis, it is clear that many actions need to be implemented to ensure that heritage management practices align with the four pillars: culture, socio-economy, society, and the environment.

e) SWOT Analysis of Interviews with Representatives of the Monks

The strengths of APSARA, as mentioned by the monks, were consistent with the opinions of the village leaders in the study area. On the other hand, some weaknesses were also noted, particularly the need for better relationships and participation in decision-making processes. APSARA made decisions in the community without consulting stakeholders. The village also has opportunities to explore tourism and further develop its community.

For details, see Table 6.48:

Table 6.43: SWOT analysis of interviews with local leaders of Stoeung Village

S	W
<ul style="list-style-type: none"> -better situation for constructing small structures such as cages of the animals, just need permission from the community -the village is safe -local people understand more about the 	<ul style="list-style-type: none"> - relationship in the community is so bad because APSARA has destroyed the religion building -APSARA is strong only in controlling the illegal constructions in the heritage site

<ul style="list-style-type: none"> -the authority of APSARA visiting the village -APSARA created jobs for local people in the community -protecting the heritage site from illegal construction, or digging the Heritage site -APSARA comes to meet local people on site when there is a problem related to the regulation of heritage management in the study area -APSARA solves the problems 	<ul style="list-style-type: none"> -lack of training program of education, agriculture and business for local people -many local people immigrated to work abroad -APSARA has promised to construct the road in the village but never realized and stopped people when they arranged the poor condition of the road -some of the APSARA staff are unfriendly in solving problems -regulation is too strict, even for planting fruit trees or bananas even installing protecting nets for their farm is forbidden -destroying the religious buildings of village without informing the local people and compensation -many roads are still bad – there is no harmonious management in front of the local people
O	T

-the relationship between the local people is still limited	-worry about the increasing illiteracy in the local village
-there are natural resources for attracting tourists to visit the community forest,	-local people will immigrate to work abroad or somewhere else in the country
-a good environment for tourists water places	-increasing regulation of heritage management
-cultural activities	-education of local children will be decreased
-handcraft work	-disappearing the religious buildings
-offer natural resort for tourists	-worry about losing the collaboration between local people in the community
	-decreasing the natural resources
	-increasing the immigration abroad
	-increasing the losing job

SWOT Analysis 5 (All Local Leaders in the four Villages)

Throughout the research study, the SWOT analysis of the four villages in the study area was conducted and is presented below for discussion.

Strength

APSARA has done a great job in the heritage site in terms of heritage management, except for the people who have a negative attitude and a short-term vision. APSARA has accomplished the following tasks, which are highlighted in the SWOT analysis.

The local leaders of the four villages share the same vision, recognizing that APSARA is strong in the conservation of monuments, controlling illegal construction, and regulating land use within the heritage site.

The study found that APSARA has employed local villagers at the heritage site, halted illegal constructions in the study area, and constructed roads in front of Preah Ko and around the Bakong monument. While the local leader in Thnal Trang had no comments, the local leader in Stoeung village stated that APSARA was very friendly with the local villagers, especially in solving problems related to the heritage management regulations. They were even allowed to build small and light structures, such as animal cages.

Weakness

In addition to the strengths of APSARA, there are some opinions against the authority. The local leaders of the four villages share the same vision regarding the weaknesses of APSARA in its heritage management practices. It was found that APSARA was too strict in controlling construction and land use in the study area. This included restrictions on light structures, fences made of netting, house constructions, land use, and the planting of fruit trees in new land. Such regulations were perceived as unfair to poor villagers, who were unable to make these changes, while wealthier villagers could. Furthermore, the local leaders mentioned that APSARA and local authorities seldom provided information related to heritage management, socio-economics, culture, and the environment to the local villagers in the study area.

APSARA also did not allow local villagers to use forest products, even in small quantities for traditional and cultural activities, as expressed by the local leaders of Aolaok and Thnal Trang villages. Additionally, the local leaders in Aolaok and Lolei villages expressed regret

about the destruction of many community buildings in Lolei and Bakong without prior consultation with community stakeholders. This was a significant blow to the local people, as these buildings represented the hard-earned money from their daily lives. The final weak point of APSARA was its inability to effectively negotiate with local people when problems arose regarding heritage management regulations.

Opportunity

Regarding opportunities, the local people shared similar views on the treasures found in their villages. The local leaders of the four villages were proud of their natural resources, environment, and cultural properties, including both tangible and intangible heritage, such as monuments dating back to the beginnings of Khmer culture in prehistory. Additionally, the local leader of Thnal Trang village proposed creating a one-stop facility to serve administrative needs for poor and illiterate villagers, as well as modernizing agriculture to generate a micro-economy in the rural area of the heritage site.

Threat

Alongside the described strengths, weaknesses, and opportunities, several threats to the livelihoods of villagers were identified. These include concerns about bureaucracy and the increasing strictness of heritage management regulations in the future, particularly regarding land use for agriculture and construction for the younger generation. Villagers fear that by sending their children away, the intangible heritage will disappear from the heritage site, and they will lose their cultural activities in the monument compound, as these are not allowed during tourist visits.

Additionally, local leaders in Lolei village are concerned that local villagers will lose their jobs due to the influx of jobseekers from outside the village, and there will be more immigration from the local villages abroad.

According to the SWOT analysis, it is clear that many actions need to be implemented to ensure that heritage management practices align with the four pillars of culture, socio-economy, society, and the environment.

SWOT Analysis of Interviews with Representatives of the Monks

The strengths of APSARA, as mentioned by the monks, were similar to the opinions of the village leaders in the study area. On the other hand, some weaknesses were also noted, particularly the need for better relationships and participation in decision-making processes. APSARA made decisions in the community without consulting stakeholders. The village also has opportunities to explore tourism and further develop its community.

Table 6.44: SWOT Analysis of Interview with Representative of the Monks

S	W
<ul style="list-style-type: none"> - in controlling the illegal construction and land use - creating jobs for local people - kinds allow local people to build provisional light roof for cultural activities 	<ul style="list-style-type: none"> - Working relationships more than administrative - Destroyed the religious building without asking the stakeholders and without compensation - Local people lose respect to the

	<ul style="list-style-type: none"> - Doing landscape in the compound of the monument without discussing with the community
<p style="text-align: center;">O</p> <ul style="list-style-type: none"> - Creating humanity for community near the monuments - Sharing religion perception to local people 	<p style="text-align: center;">T</p> <ul style="list-style-type: none"> - Worry about the disappearing religious building in the future - Law of living in the monument site will be strict

f) SWOT Analysis 6 (Interview with APASRA Staff)

The APSARA Authority has played a positive role in promotion, reporting, and job creation, employing about 10 percent of the local population. It has also contributed to monument maintenance, forest and landscape protection, human resource development, and agricultural support. Additionally, APSARA has helped increase commercial opportunities through tourism and has contributed to the national budget for education, healthcare, infrastructure, and law enforcement.

However, APSARA has been criticized for exaggerating reports of its achievements to international organizations. It has faced widespread criticism due to issues such as the misallocation of human resources, conflicts with residents, financial mismanagement, and failure to implement planned projects. The administration is often seen as overly bureaucratic, with inefficient processes and a lack of adherence to the Angkor Charter.

Furthermore, there is no comprehensive landscape management plan, and the staff has limited vision, failing to learn from past mistakes. The organization also lacks effective strategies for improving the livelihoods of local residents, as its management decisions are frequently influenced by leadership changes rather than long-term planning. APSARA operates without strategic thinking, relying on subjective decision-making, and there is little to no cooperation between APSARA and local authorities.

Poverty in the area is partly a result of failed or ineffective relationships between APSARA and the local villagers. Many locals do not feel encouraged to collaborate with APSARA, as problem-solving is often based on personal connections rather than fair governance, creating inequality. Additionally, there is a lack of effort in preserving traditional culture, and nepotism appears to be an issue, particularly regarding the strict enforcement of regulations and ineffective engagement with the community.

Despite these challenges, APSARA has significant opportunities. It has the privilege of leading planning efforts, setting priorities, and making key decisions. The authority has access to international expertise for training local people, managing the heritage site, and improving conservation efforts. It can also share valuable information with local communities, authorities, and the tourism sector while enhancing landscape management and heritage preservation within the study area and Angkor Park.

However, several threats undermine these opportunities. Poor management, including a lack of knowledgeable leadership, can negatively impact operations. The employment of inexperienced personnel, combined with inadequate research and planning, threatens the success of new projects. The mismanagement of landscape preservation, particularly due

to APSARA's failure to involve experts in landscape planning, poses a serious risk to the heritage site.

If these issues persist, they may lead to increased poverty around the monuments. The loss of cultural identity and heritage significance could become more pronounced. Excessive bureaucracy may further alienate local communities, worsening poverty and deepening ineffective relationships between APSARA and the villagers.

Table 6.45: SWOT Analysis of Interview with PASRA Staff

S	W
-Self-promotion/enlarging the reports	-Reports to the international organization so
-create employment for local people	exaggerate achievement
(about 10% of local people are employed	-APSARA is criticized everywhere
by the APSARA)	-misallocation of human resources conflict
-enrichment of people	with residents
-maintain the monuments	-poverty is based on failed/ ineffective
-protect the forest and landscape the	relations of villagers
agriculture within the limited zone	-misappropriate of finance
-increasing the human resources by	-nepotism
collecting the skilled people from outside	-sometimes plans are not realized or failed
to work in APSARA	

-create commercial opportunities from tourism	-many local people are poor because of the strict regulations in practice or failure of ineffective relation
-contribute to the state budget (for education, health, infrastructure, police, etc.	-APSAR has complicated administrative work
-good in collecting people from different places to work for the APSARA	-local people do not realize to collaborate with APSARA
	-lack of preserving the traditional culture
	-some problems are solved because a relationship
	-connections create inequality
	-there is no cooperation between APSARA and local authority
	-short vision (no strategies thinking
	- do not respect the Angkor charter
	-working according to the feeling
	-The vision of the staff is limited, they can learn after mistakes
	-no planning study of landscape management
	-lack of management of facilitating local life

	<p>-management is according to the mandate or change of the leaders</p>
<p>O</p> <p>-APSARA has the privilege in planning/ priority to propose and can make each decision</p> <p>-APSAR has the opportunity to learn from international experts</p> <p>-opportunity to develop/ manage the heritage site</p> <p>-can train local people and can be trained by international experts</p> <p>- Share information to local people, authorities, and tourism</p> <p>-manage the landscape and do the best conservation</p>	<p>T</p> <p>-mismanagement means a guide to lose their position</p> <p>-many poor people are around monuments of heritage site</p> <p>-mismanagemnt is a threat to the monuments</p> <p>-losing identity and significance</p> <p>-managers have poor knowledge and will affect all kinds of works</p> <p>-too much bureaucracy will create many problems for the local people</p> <p>-landscape will disappear or degrade because APSARAS does not use experts for landscape</p> <p>-increasing employment of people with fewer experiences (not the right people used for the job)</p>

- lack of study with discussion before starting the new projects
- poverty may be based of failed/ ineffective relations of villagers

g) SWOT Analysis 7 (Interview with Representative of Chief of Commune)

The chief of the commune, like the other interviewed representatives, argued that the APSARA Authority conserves the monument, protects the environment, and employs local villagers to prevent illegal construction. This was considered a positive effort by APSARA. However, aside from these benefits, the APSARA Authority has complex administrative regulations regarding construction related to daily life.

As the local leaders commented above, there are no clear construction models provided for local villagers. While all constructions must be approved by the APSARA Authority, there is uncertainty about whether permission will be granted or not. Furthermore, the commune is concerned about the potential decline of traditional and cultural performances, as these activities may be restricted within the monument compound during tourist visits.

Additionally, many outsiders are moving into the commune, taking job opportunities away from local people. As a result, many locals are forced to leave their villages to seek work elsewhere, including in towns, other provinces, or even abroad, where wages are higher. Unfortunately, this situation leads some individuals to take risks as undocumented workers, facing dangers both during their journey and while staying in foreign countries.

Table 6.46: SWOT Analysis of the Opinion of the Chief of Bakong Commune

S	W
<ul style="list-style-type: none"> -APSAR gives the employment to the local people in the study area -stop the illegal construction in the heritage site of the study area -conserve the monuments -protects the environments 	<ul style="list-style-type: none"> -complicated administrative regulation for asking permission to install the fences, animal cages, farm or house construction -there are no exact models to offer in the villages -construction of the roads must be permitted by APSARA, but it is not sure if it is allowed or not
O	T
<ul style="list-style-type: none"> -There are cultures, historical works such as monuments, ancient dam, river, natural and artificial resources, 	<ul style="list-style-type: none"> -traditional or cultural performances are limited in the compound of the monuments during the time of tourist visit -people immigrate to find jobs in abroad

h) SWOT Analysis 8 (Governors of District)

As the representative of the authority in the district, he stated that APSARA provides employment to local people in the study area, similar to what other interviewed groups

have mentioned. He also said that APSARA had stopped illegal construction in the heritage site and prevented newcomers from building houses there.

Furthermore, APSARA has conserved and protected monuments, the environment, and the landscape. The APSARA authority is one of the most powerful institutions in Cambodia and has carried out significant work in Angkor Park. However, some weaknesses remain, such as a lack of collaboration between stakeholders in the heritage site and a disconnect between APSARA and the local people. Additionally, the legal framework is still disorganized and weak.

In Angkor Park, there are too many institutions operating within the heritage site. APSARA faces challenges such as inadequate project planning and mismanagement of human resources. Moreover, there is a lack of well-developed roads connecting rural areas to the city.

To support district development, the region's cultural heritage, monuments, and natural and artificial attractions should be leveraged to promote tourism. Cultural activities with strong promotional efforts could enhance visitor engagement. Additionally, certain agricultural areas could be modernized to reinforce sustainability in heritage management.

Table 6.47: SWOT Analysis of the opinion of district Governors in Bakong

S	W
-APSAR gives employment to the local people in the study area	-lacks the collaboration between stakeholders in the heritage site

<ul style="list-style-type: none"> -stop the illegal construction in the heritage site of the study area -stop the newcomers from constructing the houses in the heritage site -conserve the monuments -protects the environments 	<ul style="list-style-type: none"> -there is a distance between APSARA and local people -the laws are still not in order and weak -there are too many institutions inside of the heritage site -lacks project planning -mismanagement in using human resources -lack of best roads to connect between the city and rural area
<p style="text-align: center;">O</p> <ul style="list-style-type: none"> - culture and monuments - natural resorts a good environment 	<p style="text-align: center;">T</p> <ul style="list-style-type: none"> -losing the identity of local culture -uncontrolled backfill in and around the monument sites - the development and conservation are not in harmony -regulations of heritage management are too strict and complicated - disappearing heritage traces because of new business and new house -immigrants in the local village are increased

i. SWOT Analysis 9 (Monks, APSARA Staff, Commune Chief, Former Governor, and Present Governor)

This section presents a SWOT analysis summarizing the opinions of monks, APSARA staff, the commune chief, the former governor, and the present governor.

Strengths

The group of monks mentioned that the APSARA Authority has done a great job in controlling illegal construction and land use within the heritage site. Many local villagers have been employed by APSARA. Additionally, APSARA allows religious groups to build light structures for cultural activities.

A group of APSARA technical staff shared a similar perspective, stating that APSARA has provided employment opportunities, conserved monuments, and protected the landscape and environment in the heritage site. They also highlighted that APSARA has recruited human resources from outside to work within the institution. Furthermore, APSARA has created commercial opportunities through tourism and contributed to the state budget for education, healthcare, infrastructure, and heritage police in the study area.

The commune chief and governors also acknowledged that APSARA has provided employment for local villagers, stopped illegal construction, and preserved monuments and the environment. While APSARA has achieved many positive outcomes, there are also several weaknesses, which will be discussed below.

Weaknesses

APSARA faces numerous weaknesses in managing the heritage site and has been widely criticized both within the heritage site and in the city.

APSARA prioritizes relationships over proper administration. It has removed fruit trees near monuments without informing local residents and demolished religious structures without consultation or compensation, causing distress among villagers.

APSARA's management is influenced by leadership changes, leading to mismanagement of human resources and finances. It operates without a long-term vision or strategic planning, resulting in failed or unrealized projects. Some issues are resolved based on personal relationships, creating inequality. Additionally, APSARA has been accused of exaggerating reports of its achievements.

The organization has not placed enough emphasis on preserving traditional culture and lacks a strong relationship with local villagers, many of whom remain in poverty. The commune chief echoed concerns about APSARA's administrative approach, noting that there are no clear guidelines for structural construction in villages. Moreover, responsibility for road construction in the study area remains unclear—whenever the local authority attempts to build roads, APSARA often opposes the initiative.

There is a lack of collaboration between APSARA, local authorities, and villagers. The laws governing the site are unclear and weak, and too many institutions operate within the heritage site. Additionally, there is inadequate connectivity between rural areas and the city. Despite these issues, APSARA and local communities have opportunities to offer tourists access to natural resources, human resources, and local culture.

Opportunities

The religious group emphasized the potential for APSARA to build a stronger community by sharing its vision with local villagers and tourists.

APSARA staff identified several opportunities, including the privilege of planning, proposing, and making decisions related to heritage management in Angkor Park. APSARA has the chance to learn from international experts to improve heritage site management and development. Additionally, it can share information with local villagers, authorities, and tourism stakeholders, manage the landscape, and enhance conservation efforts.

The commune chief and governors noted that Bakong has a rich cultural and historical heritage, including monuments, ancient dams, rivers, and both natural and artificial resources. However, they also expressed concerns about the future due to various threats.

Threats

The religious community is concerned about the disappearance of cultural and religious buildings due to strict regulations governing life in the heritage site.

APSARA staff are more worried about mismanagement that threatens monuments. They fear that managers with poor knowledge will negatively impact all areas of work, leading to an increase in unskilled staff and a lack of planning in archaeological research and landscape management, ultimately damaging the environment and natural resources. Excessive bureaucracy within APSARA also poses challenges, creating difficulties for impoverished villagers living in the heritage site. This, in turn, contributes to poverty, which is often linked to failed or ineffective relationships among villagers.

The commune chief expressed concerns about limitations on cultural activities within the heritage site and the potential increase in immigrant populations within the commune.

Governors highlighted that development and conservation efforts are not well-balanced, as heritage management regulations are overly strict. There is also a risk that heritage traces and monuments may disappear due to newcomers and business leaders from outside the district filling in land and constructing shops and residences.

6.8 Local Experiences of Key Heritage Management Problems

This final section draws on data from in-depth interviews and focus groups to illustrate key heritage management challenges raised in surveys of local villagers and interviews with local leaders. The aim is to contextualize and provide concrete examples of the main concerns expressed by respondents.

Data was collected using qualitative methods, including interviews with local key informants, focus group discussions with individuals from diverse socio-economic backgrounds, and personal observations of local heritage management activities. Interviewees included elderly locals, farmers, traders, technicians, civil servants, and religious specialists, representing a mix of genders, ages, and education levels. Topics explored included:

- Community consultation and stakeholder inclusion
- Housing, land use, and livelihood restrictions
- Infrastructure adequacy
- Professionalism and efficiency of management staff
- Fair distribution of opportunities and benefits
- Cultural preservation concerns

6.8.1 Community Consultation

Villagers in the study area expressed pride in living near ancient monuments, which they regard as symbols of the national soul. However, not all residents are satisfied with how the Angkor heritage site is managed. In Bakong district, there is ongoing conflict between APSARA and the local community's needs and aspirations.

According to a respected elder, the heritage site should be kept orderly and clean while allowing locals to observe traditional practices and sustain their livelihoods in harmony. However, concerns remain about the effectiveness of APSARA's consultations with the community in its heritage management efforts.

One example of poor planning is road construction. APSARA recently upgraded the road in front of Preah Ko temple without conducting proper archaeological studies. The new sealed road, made of gravel and bitumen, now runs over the entrance to the temple's front terrace. Additionally, the construction process generated significant dust, affecting the health of local residents.

Residents near the Roluos group temples are also dissatisfied with the poor condition of roads around the temples. While APSARA constructed a new road leading to Bakong temple, all village roads remain unsealed and in poor condition despite their frequent use by locals and tourists. Villagers feel they do not benefit from tourism revenue, as ticket sales from the heritage site are not used to improve local infrastructure. Instead, they bear the negative impacts of tourism, such as dust pollution and road congestion.

APSARA is perceived as unfriendly, inflexible, and ineffective in managing community relations. Tourist vehicles are often parked too close to temples, yet there is no designated parking area organized by APSARA. There are also no designated parking spaces behind shops or in other locations to regulate vehicle flow. APSARA should take a

more comprehensive approach to managing the area surrounding temples, including residential and commercial zones, to ensure that all activities and land uses are harmonized.

6.8.2 Managing Local Residents' Housing

Some local people feel that the APSARA Authority acts like a dictator in the heritage site when making decisions about their houses. The APSARA Authority frequently questions and often forbids any home renovation or construction, based on the idea that nothing should disturb the soil underneath the houses. This justification is also used to deny building permissions, even when local people modify their homes without affecting the soil around or beneath the site. Many residents find such rigid regulations unreasonable. They believe they should be allowed to renovate their houses as long as they do not disturb the soil. They are not even permitted to build a fence around their homes.

If someone wants to modify their house, they must seek approval from the APSARA Authority, which often rejects requests, stating that locals cannot use materials or methods that do not harmonize with the traditional site. However, traditional materials and methods (such as wooden stilt houses) are generally more expensive than modern alternatives and are financially out of reach for many locals. At the same time, contradictorily, many houses in the area already use modern materials and construction methods. While people are prohibited from using non-traditional materials, they observe that there is no real harmony in the site's architecture. Locals consider it illogical and unreasonable for the APSARA Authority to enforce regulations in such an inconsistent and rigid manner.

This situation has created significant problems for local people. Even after many years of living there, they are unable to renovate or upgrade their houses. They feel betrayed and treated unfairly. The reasons given by the APSARA Authority for its strict regulations are not logical, and some even seem absurd. The rules for housing construction are neither clearly outlined nor applied consistently. Furthermore, the relevant officials are inaccessible, making it difficult for local people to obtain permits or file complaints. As a result, residents struggle to communicate and negotiate with the authorities. The excessive control APSARA exercises over their daily lives has made life difficult and unbearable. Many people are frustrated and angry about the APSARA Authority's arbitrary restrictions on their rights and well-being.

The way the authority deals with illegal construction in the heritage site is also an example of mismanagement and inefficiency. Most of the buildings deemed illegal by the APSARA Authority were constructed openly and in public view, despite the presence of hundreds of APSARA guards patrolling the area. These guards should have been able to monitor developments throughout the heritage site. In many cases, houses were declared illegal only after they were fully constructed, at which point the authorities ordered their demolition. This pattern of handling illegal construction has been widely criticized as cruel and wasteful, as it disregards the enormous time, cost, and effort invested in building these homes. The destruction of newly built houses has severely impacted local people, who are already struggling in a poor rural community around the heritage site in Bakong.

Many residents believe that the APSARA Authority should change its approach by improving public awareness of regulations, monitoring construction more effectively, and

intervening at an early stage to prevent illegal buildings from being erected in the first place.

6.8.3 Working with Commercial Stakeholders

Commercial stakeholders are also dissatisfied with the dusty roads around the temples in the Bakong area. For example, one woman who owns a café on a red laterite road experiences persistent dust covering the roof and furniture inside. She stated that the dust annoys customers, making tourists uncomfortable when sitting in the café or visiting the heritage site. She urged the authorities to find solutions and improve the infrastructure within the heritage site.

Additionally, the APSARA authority appears inflexible in negotiations with local business stakeholders. While the authority is actively engaged in controlling tourist conduct, illegal construction, and forest use, it is not proactive in facilitating opportunities for local businesses. A key issue for businesses near Bakong temple is the disorganized circulation and parking of tourist vehicles. These vehicles often park so close to the temple entrance that they obstruct tourists' view of and access to nearby shops and local businesses. A better-organized parking system would alleviate congestion, allowing tourists to pass by the shops on their way to the temple, thereby increasing the likelihood of purchases of food, drinks, and souvenirs. The current unregulated approach benefits only a few local vendors who have close ties to temple guards, granting them privileged access to prime selling spots near the temples. APSARA should implement a more equitable and rational system for managing parking and commercial access.

Regarding fair access to local business opportunities, some residents believe that wealthier business owners with strong connections to decision-makers, greater business

experience, higher education, or other advantages disproportionately benefit from the heritage tourism economy in the Bakong area. A handful of companies and affluent individuals have purchased large tracts of land near the monuments and were granted permission to clear, landscape, and develop these areas, constructing substantial commercial structures. These businesses—detailed in Chapter 5—are the largest enterprises in the region, including golf courses, restaurants, food resorts, and retreats. Some locals have questioned the fairness, legality, and transparency of these arrangements, which appear to contradict the strict regulations on land use, development, and construction within the archaeological park. There is speculation that these businesses have used undisclosed or possibly illicit means to secure official approval and circumvent development restrictions.

Many residents believe that these larger businesses are owned by outsiders—non-locals or non-residents—who have come to the area solely to exploit profitable commercial opportunities. By contrast, local residents struggle to make even minor modifications to their own land, such as building a toilet outhouse, digging a mechanic's pit for car repairs, putting up an advertising banner, or erecting an umbrella or awning for shade in front of their stalls. This strict enforcement of minor restrictions on locals starkly contrasts with the apparent freedom enjoyed by larger enterprises. The disparity in business permissions is attributed to unequal, irregular, and improper influence over decision-makers, representing a clear example of weak heritage management that negatively impacts local economic opportunities.

A third concern regarding business management is that many locals lack the experience, funds, and financial literacy necessary to establish small businesses in the tourism sector.

As discussed in Chapter 5, most residents come from farming backgrounds and have limited formal education. In conversations with locals, it became evident that many were unfamiliar with essential business concepts, such as securing a bank loan, managing accounts, developing a budget, or setting up a savings plan. The majority had no prior business experience or financial literacy, and even basic literacy levels were often low. Locals also noted that APSARA had never provided financial or business training, workshops, study tours, or internship/apprenticeship opportunities to equip them with the fundamental knowledge needed to start a small tourism-related business. As a result, they felt excluded from the tourism economy and unable to compete on equal footing with the few individuals in the area who had high levels of education or business expertise. Locals believed that APSARA had a responsibility to support livelihood development by fostering business opportunities, yet the authority had not taken proactive steps to do so.

6.9 Conflicts between Heritage Management and Religious Culture

Culture is one of the four pillars of sustainable heritage management. The ancient Hindu monuments of the Roluos group, dating back to the founding of the Angkor Empire, are well-preserved. However, aspects of local religious culture from more recent periods, which hold contemporary significance for the local community, are not always treated with the same level of care.

At Lolei temple, the APSARA Authority has demolished some buildings associated with the religious practices of the local people. These structures, which were part of a Buddhist Wat built on the grounds of the ancient Hindu temple in recent centuries, served as places of worship for the predominantly Buddhist local community. While they were removed for

being deemed incompatible with the heritage values of the site, they held immense cultural and religious significance for the locals. Additionally, traditional religious practices such as spirit mediumship are restricted during the daytime. They are only permitted after public working hours—when tourists have left the site, and it is dark. However, some locals believe that mediumship should be allowed during the day, not only to fulfill their spiritual needs but also as a cultural experience for tourists. Allowing visitors to witness these rituals would enable them to appreciate both the tangible heritage of the ancient structures and the intangible heritage of local spiritual traditions.

In Bakong, locals have also expressed concerns that the APSARA Authority devotes far less attention to preserving and supporting the contemporary religious culture of the community than it does to conserving the ancient monuments. A notable case is the large mural painting on the wall of the Buddhist monastery within the Bakong temple compound. The mural, along with the entire building, had suffered long-term deterioration due to bat infestations, harsh climatic conditions, and structural weaknesses. Despite repeated requests from locals for support in restoring the mural, the APSARA Authority took no action. It was only when a private institution, HOLCIM, stepped forward with financial assistance for the restoration that the authority finally took notice. At that point, it presented itself as a champion of the mural's restoration, despite its earlier inaction.

6.10 Environmental Management Practices

People have lived in the heritage site for a very long time and have traditionally relied on its heavily wooded environment for their livelihood. They have long used the forest surrounding the temples as both a source of protection and a means of sustaining their

daily lives, such as collecting resin and firewood. However, they are no longer allowed to enter the forest or engage in these activities as they once did. Even gathering fallen trees or small branches for house repairs is now prohibited.

Local people view these practices as a continuation of their ancestors' traditional way of life. On the other hand, the APSARA Authority has implemented strict regulations and policies to protect the forest from illegal logging and environmental damage. They argue that trees need resin to survive longer and that resin collection poses a fire hazard to the entire heritage site in Bakong.

6.11 Benefit from Heritage Site through the Survey

The study has found that the local people in the heritage area of the study in Bakong don't have so much benefit from the world heritage site or don't have direct benefit from the tourists. Their living condition is still like in the rural area. There are many immigrants to Bakong to opportunity over the local people. Besides this, some local people immigrate to abroad or other places of their village.

From table 5.6, it is revealed that the majority of respondents about 93 percent didn't benefit from the heritage site, and the remaining group 7 per cent was the smallest group.

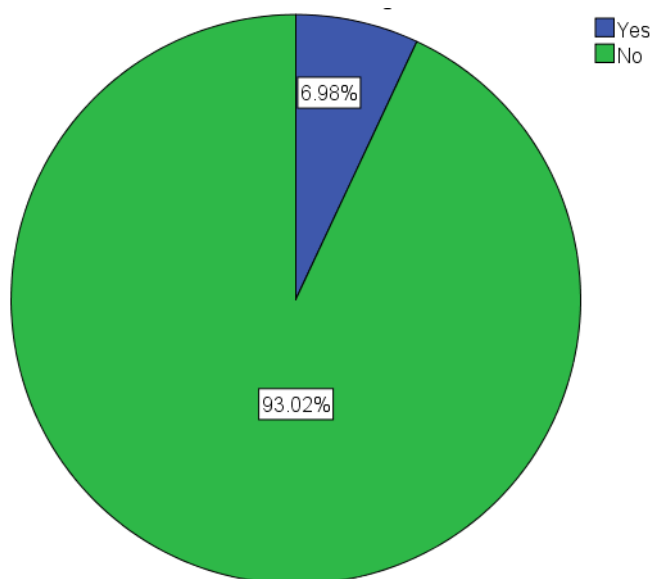
Table 6.48: Distribution of Respondents as per Benefit in Heritage Site of Study Area

Respondents	No. of Respondents	Percent
Yes	22	6.98
No	293	93.02

Total	315	100.0
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Source: Own Survey

Figure 6.44: Distribution of Respondents as per Benefit in Heritage Site



6.11.1 APSARA Employment for Local Village

It is revealed from the survey that only 3.5 percent of the respondents were employed by APSARA and the rest remaining 96.5 percent were employed by private, or governmental institutions and self-employed.

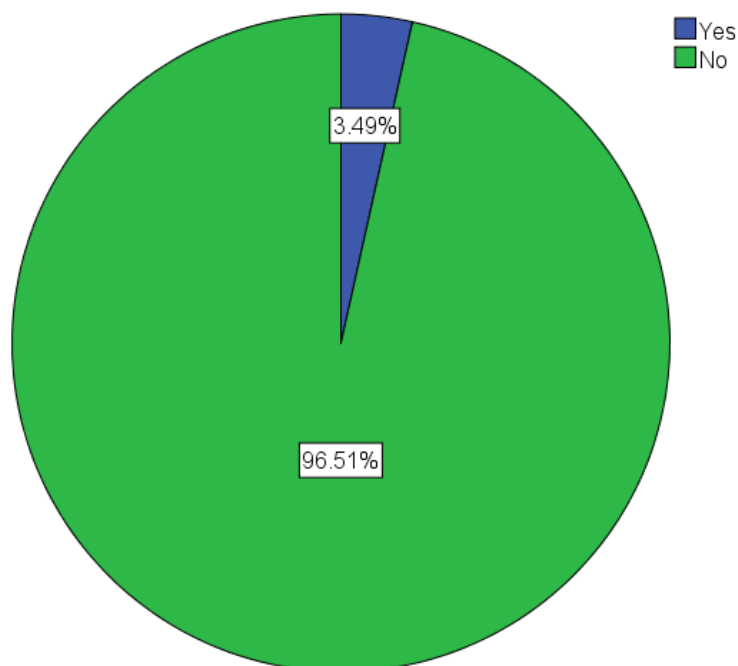
Table 6.49: Distribution of the APSARA Employment to Respondents

Respondents	No. of Respondents	Percent
Yes	11	3.49
No	304	96.51

Total	315	100.0
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Source: Own Survey

Figure 6.45: Distribution of the APSARA Employment to Respondents



6.11.2 Selling Food in the Heritage Site

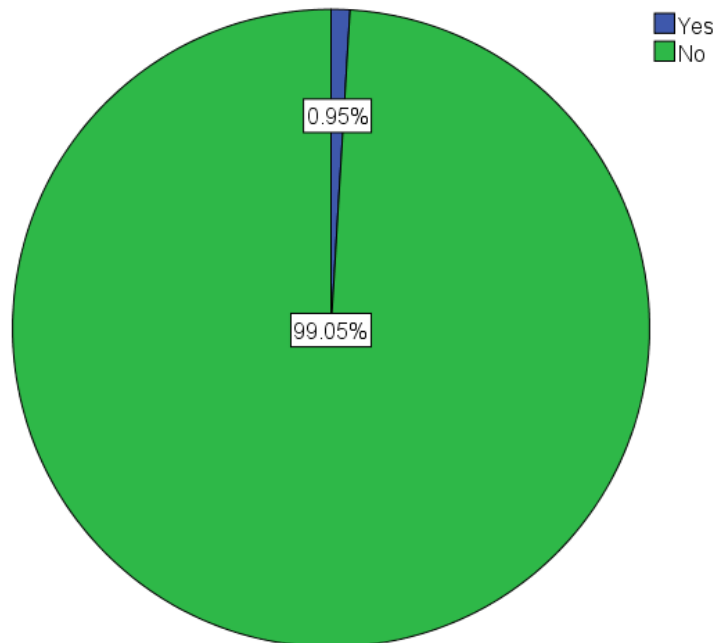
The study reveals that only 1% of survey respondents sell food to tourists within the monument compounds, while the remaining 99% have no opportunity to do so. Table

6.50: Distribution of Respondents Selling Food in the Heritage Site

Respondents	No. of Respondents	Percent
Yes	3	0.95
No	312	99.05
Total	315	100.0

Source: Own Survey

Figure 6.46: Distribution of Respondents selling Food in the Heritage Site



6.11.3 Transport Service

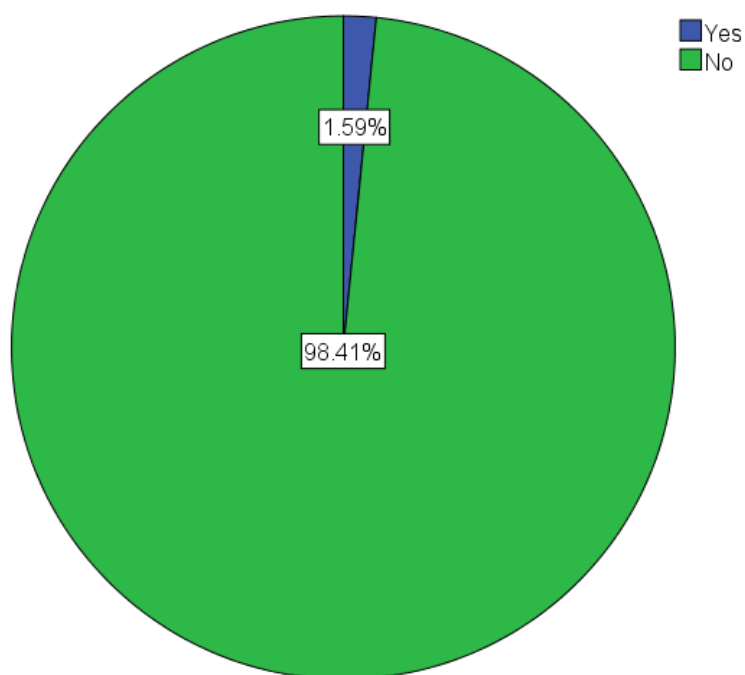
From the surveyed respondents, only a small proportion (1.59%) received transportation services within the heritage site, while the majority did not.

Table 6.51: Distribution of Transport Service for Respondents

Respondents	No. of Respondents	Percent
Yes	5	1.59
No	310	98.41
Total	315	100.0

Source: Own Survey

Figure 6.47: Distribution of Transport Service for Respondents



6.11.4 Tourist Services

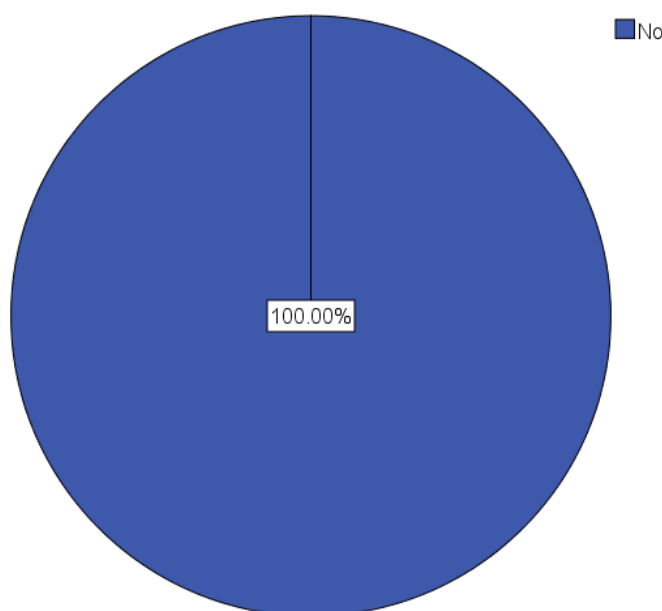
The total number of the surveyed respondents was 0 percent working for tourist services.

Table 6.52: Distribution of Tourist Services for Respondents in the Study Area

Respondents	No. of Respondents	Percent
Yes	0	0
No	100	100
Total	315	100.0

Source: Own Survey

Figure 6.48: Distribution of Tourist Services for Respondents in Study Area



6.11.5 Respondents Working for Heritage Maintenance

The surveyed results show that 99.4 percent of respondents were not involved in the work of heritage maintenance, and 0.6 percent were in the work of heritage maintenance.

Table 6.53: Distribution of Heritage Maintenance to Respondents

Respondents	No. of Respondents	Percent
Yes	2	0.63
No	313	99.37
Total	315	100.0

Source: Own Survey

6.11.6 Increasing Business Customers for Respondents

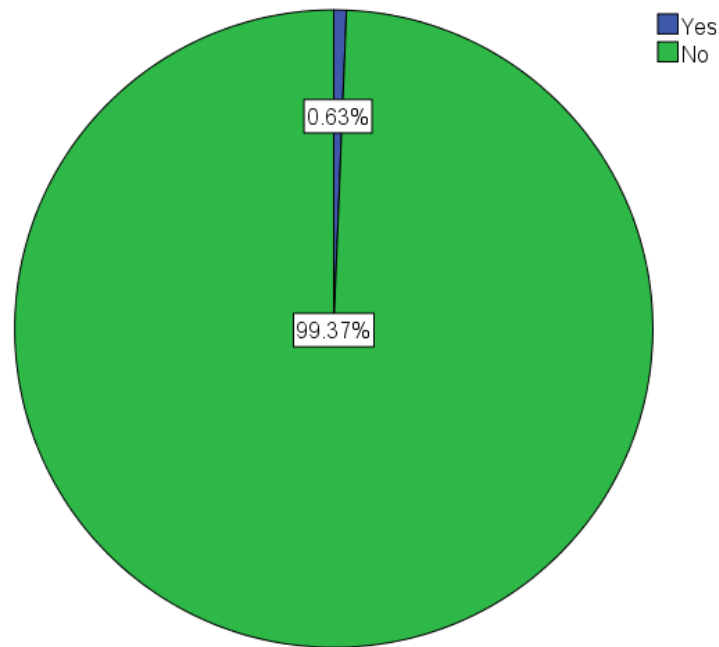
Of the survey respondents, 99.68 percent had no increasing customers in the business, and only a small amount 0.32 percent got increasing business from customers.

Table 6.54: Distribution of Increasing Business Customers for Respondents

Respondents	No. of Respondents	Percent
Yes	1	0.32
No	314	99.68
Total	315	100.0

Source: Own Survey

Figure 6.49: Distribution of Increasing Business Customers.



6.11.7 Increasing Business for Local People

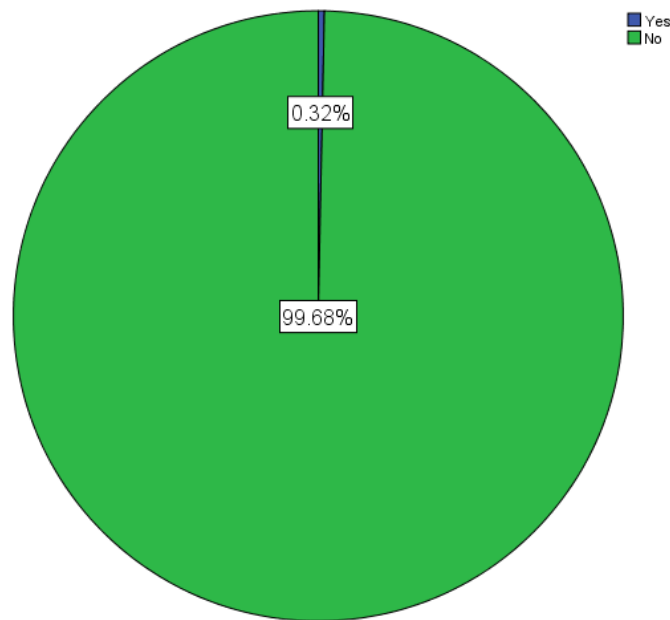
About the increasing business inside the study area, more than 99.68 percent of respondents didn't have the increasing business, followed by 0.32 percent in increasing business in the local area.

Table 6.55: Distribution Respondents as per Increasing Business

Respondents	No. of Respondents	Percent
Yes	1	0.32
No	314	99.68
Total	315	100.0

Source: Own Survey

Figure 6.50: Increasing business benefit in heritage site. Source: Own survey



6.12. Testing Hypotheses Ho 1 and Ho 2

This chapter presents the results of statistical tests conducted to evaluate the hypotheses related to sustainable heritage management in Bakong Commune. Using the Chi-Square test as the primary statistical method, the analysis examines whether heritage management practices benefit the local community (H01) and whether the actions taken

for sustainable heritage management are adequate (H02). The tests are based on data collected from primary sources, including responses to a set of 13 questions divided across the two hypotheses. These questions cover key areas such as the economic benefits to local residents, the effectiveness of management regulations, community awareness, and the involvement of the APSARA Authority in maintaining and preserving the heritage site.

The results of the Chi-Square tests are analyzed to compare the observed and critical values, with decisions on the hypotheses based on the following criteria:

- If $X^2 < V_c$, the null hypothesis (H0) is supported.
- If $X^2 > V_c$, the null hypothesis (H0) is rejected.

The study has tested the hypotheses which are as follows:

Hypothesis 1 (**H01**): There are no benefits of the heritage management practices in the study area.

Hypothesis 2 (**H02**): The actions taken for sustainable heritage management in the study area are inadequate.

I-Testing research questions of the hypothesis1 (H01)

First, the study has found that the Chi-Square $X^2 = 0.133$, d.f.=1 and the critical value $V_c = 3.84$ while the significant level=5% percent. It is shown that $X^2 < V_c$, it presents the H2 is supported. That means the main source of income is not from the study area in the world heritage site of Bakong.

Second, the study has found that the Chi-Square $X^2 = 0.430$, d.f.=1 and the critical value $V_c = 3.84$ while the significant level=5% percent. It is shown that $X^2 < V_c$, it presents the H_2 is supported. This indicates that the economic level of local people living within the World Heritage site in Bakong is lower compared to those residing outside the heritage site in the study area.

Third, the study has also found that the Chi-Square test result is $X^2 = 3.154$, $X^2 = 3.154$, with $df = 1$ and a critical value $V_c = 3.84$, at a significance level of 5%. It is shown that $X^2 < V_c$, it presents the H_2 is supported. That means the local people have not derived benefits from the study area.

Fourth, the study has found that the Chi-Square $X^2 = 0.306$, d.f.=1 and the critical value $V_c = 3.84$ while the significant level=5%percent. It is shown that $X^2 < V_c$, it presents the H_2 is supported. It is shown that the H_{01} is accepted, in other words, to say that there are no benefits of the heritage management practices in the study area.

II-Testing Research Questions of the Hypothesis2 (H02)

Fifth, the study has found that the Chi-Square $X^2 = 3.300$, d.f.=1 and the critical value $V_c = 3.84$ while the significant level=5%percent. It is shown that $X^2 < V_c$, it presents the H_2 is supported. It presents that local people didn't have experience with the protection regulation of the authorities in the study area, because most of them are poor and have no financial support for constructing their houses.

Sixth, the study has found that the Chi-Square $X^2 = 3.258$, d.f.=1 and the critical value $V_c = 3.84$ while the significant level=5%percent. It is shown that $X^2 < V_c$, it presents

the H2 is supported. This means that the local people were unaware that the study area in Bakong was registered as a World Heritage Site. This highlights a significant issue with information dissemination in the study area.

Seventh, the study has found that the Chi-Square $X^2 = 1.914$, d.f.=4, and the critical value $V_c = 3.84$ while the significant level=5%percent. It is shown that $X^2 < V_c$, it presents the H2 is supported. It is shown that the APSARA authority did not have adequate management in sharing their policies in the local area. That is meant, the local people didn't receive the information in the study area in baking.

Eighth, the study has found that the Chi-Square $X^2 = 0.105$, d.f.=4, and the critical value $V_c = 9.49$ while the significant level=5%percent. It is shown that $X^2 < V_c$, it presents the H2 is supported. It means that the regulations to manage heritage in Bakong were so strict in the construction of the houses in the study area in the heritage site of Bakong.

Ninth, the study has found that the Chi-Square $X^2 = 1.119$, d.f.=4, and the critical value $V_c = 9.49$ while the significant level=5%percent. It is shown that $X^2 < V_c$, it presents the H2 is supported. That is meant, the local people didn't receive the information in the study area in Bakong.

Tenth, the study has found that Chi-Square $X^2 = 3.485$, d.f.=4, and the critical value $V_c = 9.49$ while the significant level=5% percent. It is shown that $X^2 < V_c$, it presents the H2 is supported. That means that the APSARA Authority does an adequate job caring for the preservation of temples and natural environments in the world heritage site of Bakong.

Tenth, the study has found that Chi-Square $X^2 = 3.485$, d.f.=4, and the critical value $V_c = 9.49$ while the significant level=5% percent. It is shown that $X^2 < V_c$, it presents the H_2 is supported. That means that the APSARA Authority does an adequate job caring for the preservation of temples and natural environments in the world heritage site of Bakong.

Eleventh, the study has found that Chi-Square $X^2 = 3.915$, d.f.=4 and the critical value $V_c = 9.49$ while the significant level=5% percent. It is shown that $X^2 > V_c$, presents the hypothesis that H_2 is rejected. This means that the local people accept the management of the APSARA Authority and its work on infrastructure within the heritage site in the study area of Bakong.

Twelfth, the study has found, Chi-Square $X^2 = 4.915$, d.f.=4, and the critical value $V_c = 9.49$ while the significant level=5% percent. It is shown that $X^2 < V_c$ presents the hypothesis that H_2 is supported. This means that the local people accept the management of the APSARA Authority in maintaining the roads within the heritage site.

In this test H_{02} : shows that in general, the majority of the tests show that the management of the management of the APSARA Authority in the heritage site are still not adequate, even though there are three tests in the tendencies to reject the hypothesis.

Throughout the qualitative research with percentages of respondents, it shows that the APSARA Authority does not take action adequately in the study area. And when we analyze and think more critically, we found that there are small indirect benefits for the local people, especially getting jobs from Siem Reap city as workers in construction tourist buildings or tourist services in the tourism area.

The study finally concludes that the local people living within the World Heritage site of Bakong in the study area have not received significant benefits, with only minimal gains through indirect employment from a distant connection. Meanwhile, the actions taken for sustainable heritage management in the study area were not adequate including the four pillars of sustainable heritage management: culture, economic, socio-economic, and environment, and the fifth pillar should be suggested as the pillar of science to develop and boost the management more active and flexible to be sustainable, so that sustainable heritage management in the heritage site in Bakong as well in the whole world heritage site of Angkor Park can be successful.

The statistical analysis conducted using the Chi-Square test provides significant insights into the hypotheses related to sustainable heritage management in the Bakong commune. The results indicate that:

1. **Hypothesis H01:** The study concludes that there are limited benefits of heritage management practices in the study area. Most tests show that the local community does not derive significant economic or social advantages from the management practices, highlighting a gap between the heritage site's potential and its impact on the livelihoods of local people.
2. **Hypothesis H02:** The actions taken for sustainable heritage management in the Bakong commune are found to be inadequate. While there are some positive efforts, such as infrastructure maintenance and preservation of natural environments, the majority of the tests reveal shortcomings in communication,

community engagement, and regulatory enforcement by the responsible authorities, particularly the APSARA Authority.

These findings underscore the need for improved strategies to enhance the socio-economic benefits for local residents and ensure more effective management practices in the heritage site. Strengthened community involvement, transparent communication, and well-implemented regulations are critical for achieving sustainable heritage management.

The insights from this chapter provide a foundation for discussions in subsequent chapters on policy recommendations and strategic approaches to address the identified challenges.

6.13 Discussion of the Findings

According to the findings of this study reveal that sustainable heritage management in Bakong faces several challenges, including the exclusion of local communities, uneven economic benefits, and regulatory conflicts. These challenges are not unique to Bakong and have been explored in broader academic discussions. Dragouni, Fouseki, and Georgantzis (2018) emphasize the critical role of community participation tailored to local capacities and expectations, aligning with the need for culturally sensitive approaches in Bakong. Similarly, Sukanya (2017) highlights the economic benefits of engaging communities in heritage activities, which parallels the potential observed in Bakong, though issues of inequitable distribution persist. Li (2015) underscores the importance of dialogue and inclusion in heritage planning, reinforcing the necessity for improved communication between APSARA and local communities.

This alignment with existing literature underscores the broader relevance of the findings and emphasizes the need for inclusive, participatory heritage management strategies. The research highlights that sustainable heritage management must integrate cultural, socio-economic, environmental, and educational aspects, alongside poverty alleviation and the recognition of traditional management systems.

Despite these theoretical frameworks, heritage management practices in Bakong remain weak, particularly in administration, human resources, financial planning, and communication. While the heritage site boasts a rich legacy of management dating back to the King's period, excluding the genocidal era, current practices are inadequate in maintaining monuments, protecting landscapes and the environment, utilizing human resources effectively, and fostering meaningful social engagement with local villagers.

The benefits received by local villagers from the heritage site remain minimal. Additionally, approximately 50 percent of villagers face challenges with heritage management regulations. Interestingly, poorer villagers encounter fewer issues than wealthier ones, as their limited financial means prevent them from engaging in activities such as constructing structures or farming, which are often restricted by regulations.

These findings emphasize the urgent need for a balanced approach to heritage management that addresses both the preservation of cultural and environmental assets and the socio-economic well-being of the local community.

6.14 Conclusion

The research shows the results that, sustainable heritage management must include culture, socio-economic, social, environmental or cultural, poverty alleviation, sustainability, education aspects, and the traditional management systems had to be

recognized. The management practices are so weak such as in administration, human resources, financial planning and communication. The heritage management practices have been starting in the heritage site since the creation of the King period, except in the genocidal times, nowadays they are inadequate in the maintenance of the monuments, protection of landscape and environment, in using human resources and in socialization with the local villagers. The local villagers in the heritage site got just a small amount of benefit from the heritage site. Moreover, on average, about 50 percent of villagers have problems with the regulations of heritage management, it is noticed that the poor have fewer problems than the rich because they don't have any financial possibility to construct a structure or farm.

CHAPTER VII

MAIN FINDINGS, CONCLUSION, AND RECOMMENDATIONS

CHAPTER VII

MAIN FINDINGS, CONCLUSION, AND RECOMMENDATIONS

This chapter presents the main findings of the study, along with its conclusion and recommendations. It begins by outlining the objectives of the study, the conceptual framework, and the methodology. It then summarizes and discusses the key results, which include the historical background of heritage management at Angkor, the socioeconomic profile of the study area in Bakong commune, and local perceptions and experiences of heritage management in Bakong. The following section offers recommendations based on the findings of this study. Finally, the scope for further research is discussed in the last section.

7.1 Main Findings of the Study

The study area is the Bakong commune of Siem Reap Province, home to the World Heritage-listed complex of monuments known as the Roluos group and part of the greater Angkor Archaeological Park. The restored ancient temples in this province are very attractive to visitors. Angkor is one of the most popular heritage sites in the world. The management of heritage tourism at this site contributes greatly to the national economy and has had significant impacts related to the four pillars of heritage management. Since the establishment of the Angkor Area Heritage Management Organization, known as APSARA, in 1993, the number of international visitors has increased rapidly, especially from 2009 to 2018, when there were about two and a half million visitors. In the meantime, sustainable heritage management has been introduced and carried out, with

actions taken for balanced and long-term sustainability. The objectives of the research are as follows:

- i. To describe sustainable heritage management and its importance.
- ii. To analyze the socio-economic profile of the heritage site.
- iii. To know the heritage management practices in the study area.
- iv. To examine the sustainability of heritage management practices in the study area.
- v. To find out the gaps in the heritage management practices in ensuring sustainability in the study area.
- vi. To provide recommendations for sustainable heritage management in the study area.

The study sought to answer the five research questions as follows:

- i. What is sustainable heritage management and its importance?
- ii. What is the socio-economic profile of the heritage site area?
- iii. What are the heritage management practices in the study area?
- iv. Are heritage management practices sustainable in the study area?
- v. What are the gaps in the heritage management practices in ensuring sustainability in the study area?

Chapter 2 puts together a conceptual framework based on reviews of scholarly literature relating to the research questions. There are many different definitions of heritage

management in terms of cultural heritage management which are written in different studies, definitions and books as demonstrated in the literature review.

The term "heritage" is defined in different positions but what is of importance is the understanding of history as a living tradition and connection between relationships and identity; it is a part of community-building, economic prosperity and cultural adaptation. Two types of heritage discussed in this study are tangible and intangible heritage (cultural heritage and natural heritage). Cultural heritage can have an enormous influence on the sense of identity, loyalty, and human behavior and affects living knowledge of human beings, belief ways, and emotions. It was felt that identity and restoration of pride lead to better management of heritage and that traditional management systems had to be recognized. The new direction of heritage management is focused on economic development, human rights, poverty alleviation, sustainability, and education, and the traditional management systems had to be recognized. Managing heritage assets to ensure they can be enjoyed by all, including future generations, means putting sustainability into practice. Management must seek to understand and appreciate the influence of the past on current and future environments. Heritage reflects on the ongoing relationships with the environment and owes its present value and significance to people's perceptions and opinions, meaning their personal beliefs and values.

The research methodologies of the study used both quantitative and qualitative analysis to approach the above study objectives. The centerpiece of the quantitative approach is a large survey of residents living in the vicinity of the heritage site at Bakong which aimed to gather information about their socio-economic background and to describe their

experiences and evaluations of heritage management practices carried out in the study area in a range of key areas such as housing, livelihoods, environment, culture, social infrastructure and local consultation, and participation in heritage management. These results were collated, tabulated and analyzed using the SPSS statistical research tool. In addition, qualitative analysis was carried out on responses gathered from in-depth interviews, focus groups and on-site observations to analyze local experiences of sustainable heritage management practices at the heritage site related to culture, society, socio-economy and environment. Both methods – quantitative and qualitative –were deemed relevant to answering the research questions and were undertaken to complement each other in order to gain broad and deep insights into perceptions and experiences of heritage management in the study area. Statistical and non-statistical methods were used to describe, evaluate, compare and interpret the results of the research and various graphs, diagrams, maps, and tables were used to lay out the key findings. The analysis also utilized the SWOT framework to present and interpret the findings from the interviews with local stakeholders.

Chapter 4 presents the background of sustainable heritage management at Bakong, starting with the founding of the site in the eighth century as the starting point of a new historical stage of Khmer civilization. The management practices were in different periods of the Rule of Kings in Roluos until the time Angkor was abandoned. During the height of their rule, the kings built many immense water reservoirs and monuments. Centuries later, the French Ecole Française d'Extrême-Orient (EFEO) carried out heritage management in Angkor Park, commencing in 1907 with the cooperation of Cambodia's

national government until the Khmer Rouge regime. During the time of the Khmer Rouge, there was no heritage management at all. After this period, Angkor was taken care of by La Conservation d' Angkor with assistance from a few international groups. Since the creation of the APSARA authority in 1993, the Heritage management in Angkor Park has been controlled and has been taken care of by APSARA.

Chapter 5 describes the socio-economic profile of the four study villages in the Bakong commune. Based on existing reports, official data, interviews, observations, and surveys, the chapter looks at population, age structure, schooling, health, income level, livelihoods, occupations, infrastructure, and tourist numbers.

The specific benefits residents in Bakong gain from working in the heritage tourism economy come from two sources: formal employment in heritage management or organizations and companies in Bakong, and the private commercial services they offer to heritage tourists visiting their area. Some villagers in the Bakong area receive direct benefits from cultural heritage tourism, in the form of salaried employment from heritage management organizations. There are different groups working in the heritage site working in governmental institutions. The approximate income is between \$110 to \$450 per month according to their experiences. All of them are employed by a governmental institution.

The study shows that the second type of direct benefit from tourism to Bakong residents comes from the sales of goods and services to tourists. In Bakong, it was found that the common businesses and tourism services were souvenir shops, refreshment stalls, picnic outlets, cafes, mobile drinks sellers, and restaurants. There are different occupations.

They had earned from \$110 to \$450 per month. However, Bakong is not the most important destination for heritage tourism in the Angkor Archaeological Park. The monuments of the Roulous group are not as well known or as frequently visited as those around Angkor Wat. Analysis of visitor numbers shows that the heritage site in Bakong receives between just 5 percent to 10 percent of the tourist arrivals for the whole of Siem Reap province. The tourists do not go out to the rural area, even when there are tourism resources (inconvenient transport leading to the rural area and also lack promotions and lack of necessary). Bakong also derives relatively little by way of income from heritage tourism as compared to Siem Reap city itself. Most expenditures on tourist goods and services are made in Siem Reap and by contrast, Bakong derives very little.

There are businesses and economic activities that derive indirect benefits from heritage tourism, and there is a group of three tiers related to the amount of derived benefit. One of the main indirect benefits of heritage tourism is construction which is an important occupation of derived industry in the Bakong district. Builders, they are well-known in Siem Reap town as day labourers. Construction workers in Siem Reap earned between 200-300 USD in 2019, meaning that this occupation counts significantly to household incomes in the study area.

It has been found that few people in PrasatBakong district go overseas to other countries as labour migrants because they have large debts and expenditures which makes it hard for them to save. The option to stay at home is available, because there are a lot of income-generating and labour opportunities in the heritage tourism economy in nearby Siem Reap. There are economic activities in 'second-tier' position, that derive moderate

benefits from heritage tourism by the modest indirect connection to the heritage tourism economy.

More than this, there are other 'second-tier' indirect beneficiaries of the heritage tourism economy including local level state (and quasi-state) employees such as police, traffic police, transport workers, infrastructure builders, garbage collectors, plumbers and environmental inspectors. Besides this, there are farmers who produce enough rice for their daily needs but it is sometimes not enough.

Chapter 6 describes perceptions of sustainable heritage management in Bakong from the perspective of local residents and key leaders. It provides information about heritage management practices in the study area and describes local experiences and evaluations of sustainable heritage management in the study area from a range of perspectives. It aims to find out if there are benefits to sustainable heritage management, identify any gaps in heritage management practices in ensuring sustainability in the study area, and provide recommendations for sustainable heritage management in the study area.

The study shows that 315 respondents were surveyed in the four villages in the study area of the heritage site in Bakong.

The study found out that just about 10 percent of the respondents had benefits from the world heritage site in Bakong and they had no proper livelihoods in the study area, while the rich people had indirect benefits from the outside such as: selling or renting the land in the tourism business or selling the land. They didn't get the new social economic and cultural opportunities from the heritage site of the study area.

In general, the minority of the respondents in the study area had some involvement in heritage tourism-related employment, such as selling food, transport services, tourist services, and working in heritage maintenance. Only 3.5 percent of the respondents were employed by private or governmental institutions or self-employed. It should be noted that about 50% of the respondents were farmers or had worked on the construction in the Siem Reap town. Many job leaders come from outside of the villages, and there will be many immigrants from the local villages abroad. With regards to education, it is found that 85.26 percent of the poor villagers had finished primary school, whereas 76.92 percent of the rich villagers had finished primary school, and about 15 percent of the rich had finished secondary school.

The studied villages have enormous natural resources, and a diverse and appealing environment, and are rich in cultural properties such as intangible and tangible cultural heritage including monuments from the early era of classical Khmer history, which together make these locales ideal for attracting tourists.

The research study has found out that the people living in the Bakong area of the world heritage site are very proud of the national soul, embodied in the monuments in their locale. But they live with strict regulations and policies that limit many aspects of their lives. The official heritage management authority, APSARA, has privilege and priority in planning, proposing and making decisions about land use in the local area that exceeds the authority of local people, local authorities and tourism businesses. It is the responsibility of APSARA to protect the world heritage site from all kinds of damage. However, there is a conflict between the APSARA authority and the wishes and needs of

local community members and a perception that the APSARA authority exercises control over their lives and happiness.

Many respondents lacked information about heritage management programs and opportunities; indeed, a large number did not even know that they were living in a world heritage-listed area. More than 50 percent of the respondents had not been informed by APSARA about opportunities for participation in heritage management or heritage tourism. The majority of the respondents, 87.84 percent, had not been offered information about the economic, social, cultural, religious, or environmental programs in the study area, or about forest access activities. However, about 40 percent of them had experienced the impact of strict world heritage management regulations.

Educated and informed locals, as well as local officials, accepted the proposition that APSARA has conserved and protected the monuments and it has protected the forests and the natural environment. Improvements in markets and agriculture, and increasing commercial opportunities from tourism, contribute budget of the state for education, health, infrastructure, police, and the like, for the benefit of locals. Yet there are complaints about inadequate management, for example about infrastructure. The roads around the monuments and in the villages are widely perceived to be in bad condition. Commercial stakeholders are also dissatisfied with the dusty roads around the temples in the Bakong area. In addition, many locales in the commune lack good roads to connect the city and rural areas. The perception exists that APSARA authority takes customary resources from the local people but they do not think or care so much about the traditional life of the community.

APSARA is perceived by many respondents to have done a good job in the heritage site in terms of heritage management. APSARA had stopped the illegal construction in the study area and the newcomers constructing the houses in the heritage site. Because had many problems in administration. APSARA has complicated administrative work, does not respect the Angkor charter and lacks a lot of project planning and has mismanagement in using human resources. This will be a threat to the monuments, and landscape and it lacks management knowledge of facilitating local life and also lacks study with discussion and project planning for starting the new projects. Such factors may create poverty in the villages around monuments of the heritage site.

The strict restrictions on construction, landscaping and renovation were among the most frequent topics of the complaint.

The research study found that there was about 10 percent of business runners in the study area, of them were women. Most of them had strict problems with APSARA authority in business and land use. These problems were light structures, farming and agriculture. Besides this, the APSARA authority was also too weak for uncontrolled backfill and uncontrolled development of the constructions. It can make the archeological traces disappear from day to day for conservation and further research. About 75 percent of local villagers were affected by this regulation of heritage management of the APSARA authority. In addition, about 40 percent of them (who had money) opined that there is difficulty in the construction regulation of heritage management in the study area. Moreover, the constructions are not in harmony at all in the study area of the world

heritage site, while the authority has not provided types of models for local people in the study area.

It was found by community leaders from the district that down to neighbourhood levels the APSARA authority did not do enough to publicize and explain its regulations to local people or to inform locals of opportunities for heritage-related development, training, and capacity building. Thus, local people proposed the creation of a one-stop window at the local level to facilitate the work of administration, information provision and consultation for poor local and illiterate villagers.

7.2 Testing the Hypotheses

The study has tested the hypotheses which are as follows:

Ho 1: There is no benefit of the sustainable heritage management practices in the study area.

Ho 2: The actions taken for sustainable heritage management in the study area are not adequate.

The study employed two types of analysis to approach its objectives. A **quantitative analysis** was conducted to address the study's objectives and test the hypotheses. This analysis relied heavily on both primary and secondary sources, as detailed in Chapter III of the research methodology. In parallel, a **qualitative analysis** was undertaken to better understand the lives of local people in relation to culture, economics, socio-economic factors, and the environment. It also aimed to examine the management practices of responsible authorities, perceptions of sustainability, and the issues faced by local residents in the heritage site of Bakong.

The **quantitative analysis** specifically focused on analyzing the professions of local residents, their perceived benefits from the heritage site, the impact of strict regulations on construction (including shops, business centers, houses, and land use), the environment, cultural performances within the monument compounds, and the relationship between local people and authorities. Data was analyzed using tables, figures, and pie charts, generated through the SPSS program.

Additionally, to test the study's hypotheses, **descriptive statistics** and **cross-tabulation** were applied, with the **Chi-Square** test (X^2) used to compare observed values with critical values (V_c), considering degrees of freedom (d.f.) and a significance level of 5%. The Chi-Square method was used to determine whether the hypotheses were supported or rejected, based on the following criteria:

- If $X^2 < V_c$, the null hypothesis (H_0) cannot be rejected.
- If $X^2 > V_c$, the null hypothesis (H_0) is rejected.

These hypotheses were tested using data gathered from a sample of families in the selected villages within the study area.

I-Testing Research Questions of the Hypothesis1 (H01)

First, the study has found that the Chi-Square $X^2 = 0.133$, d.f.=1 and the critical value $V_c = 3.84$ while the significant level=5 percent. It is shown that $X^2 < V_c$, it presents the H_2 is supported. That means the main source of income is not from the study area in the world heritage site of Bakong.

Second, the study has found that the Chi-Square $\chi^2 = 0.430$, d.f.=1 and the critical value $V_c = 3.84$ while the significant level = 5 percent. It is shown that $\chi^2 < V_c$, it presents the H2 is supported. That meant the economic level of local people in the world heritage site is lower than the other place outside of the heritage site of study area in Bakong.

Third, also the study has found that the Chi-Square $\chi^2 = 3.154$, d.f.=1 and the critical value $V_c = 3.84$ while the significant level = 5 percent. It is shown that $\chi^2 < V_c$, it presents the H2 is supported. That means the local people have not derived benefits from the study area.

Fourth, the study has found that the Chi-Square $\chi^2 = 0.306$, d.f.=1 and the critical value $V_c = 3.84$ while the significant level=5 percent. It is shown that $\chi^2 < V_c$, it presents the H2 is supported. It is shown that the H01 is accepted, other words to say that there are no benefits of the heritage management practices in the study area.

II-Testing Research Questions of Hypothesis 2 (H02)

Fifth, the study has found that the Chi-Square $\chi^2 = 3.300$, d.f.=1 and the critical value $V_c = 3.84$ while the significant level = 5 percent. It is shown that $\chi^2 < V_c$, it presents the H2 is supported. It presents that local people didn't have experience with the protection regulation of the authorities in the study area, because most of them are poor and have no financial support for constructing their houses.

Sixth, the study has found that the Chi-Square $\chi^2 = 3.258$, d.f.=1 and the critical value $V_c = 3.84$ while the significant level = 5 percent. It is shown that $\chi^2 < V_c$, it presents the H2 is supported. That means the local people didn't know that the study area in

Bakong was registered in the world heritage. It is shown that there is a problem in sharing information in the study area.

Seventh, the study has found that the Chi-Square $\chi^2 = 1.914$, d.f. = 4 and the critical value $V_c = 3.84$ while the significant level = 5 percent. It is shown that $\chi^2 < V_c$, it presents the H2 is supported. It is shown that the APSARA authority did not have adequate management in sharing their policies in the local area. That is meant, the local people didn't receive the information in the study area in Bakong.

Eighth, the study has found that the Chi-Square $\chi^2 = 0.105$, d.f. = 4 and the critical value $V_c = 9.49$ while the significant level = 5 percent. It is shown that $\chi^2 < V_c$, it presents the H2 is supported. It means that, the regulations to management heritage in Bakong was so strict in the construction of the houses in the study area in the heritage site of Bakong.

Ninth, the study has found that the Chi-Square $\chi^2 = 1.119$, d.f. = 4 and the critical value $V_c = 9.49$ while the significant level = 5 percent. It is shown that $\chi^2 < V_c$, it presents the H2 is supported. That is meant, the local people didn't receive the information in the study area in Bakong.

Tenth, the study has found that Chi-Square $\chi^2 = 3.485$, d.f. = 4 and the critical value $V_c = 9.49$ while the significant level = 5 percent. It is shown that $\chi^2 < V_c$, it presents the H2 is supported. That means that the APSARA Authority does an adequate job caring for the preservation of temples and natural environments in the world heritage site of Bakong.

Tenth, the study has found that Chi-Square $\chi^2 = 3.485$, d.f. = 4 and the critical value $V_c = 9.49$ while the significant level = 5 percent. It is shown that $\chi^2 < V_c$, it presents

the H2 is supported. That means that the APSARA Authority does an adequate job caring for the preservation of temples and natural environments in the world heritage site of Bakong.

Eleventh, the study has found that Chi-Square $\chi^2 = 3.915$, d.f. = 4 and the critical value $V_c = 9.49$ while the significant level = 5 percent. It is shown that $\chi^2 > V_c$, it presents the hypothesis that H2 is rejected. That means the local people accept the management of the APSARA Authority doing work on infrastructure in the heritage site in the study area in Bakong.

Twelfth, the study has found, Chi-Square $\chi^2 = 4.915$, d.f. = 4 and the critical value $V_c = 9.49$ while the significant level = 5 percent. It is shown that $\chi^2 < V_c$, presents the hypothesis that H2 is supported. It means that the local people accept the management of the APSARA Authority doing maintenance of the roads in the heritage site.

In this test H02: shows that in general, the majority of the tests show that the management of the management of APSARA Authority in the heritage site is still not adequate, even though there are three tests in the tendencies to reject the hypothesis. However, the qualitative research with percentages of respondents, it shows that the APSARA Authority does not take the actions adequate in the study area. And when we analyze and think more critically, we found that there are small indirect benefits for the local people, especially getting jobs from Siem Reap city as workers in construction tourist buildings or tourist services in the tourism area.

The study concludes that the local people living in the Bakong World Heritage site have not received significant benefits from the heritage management practices. The benefits they did receive were limited to indirect employment opportunities located far

from their homes. Additionally, the actions taken for sustainable heritage management in the study area have been inadequate, particularly in relation to the four pillars of sustainable heritage management: culture, economy, socio-economics, and the environment.

It is suggested that a fifth pillar, focusing on science, be added to enhance and support more dynamic and flexible management practices. This addition could foster the development of more effective and sustainable heritage management strategies. By incorporating this fifth pillar, the management of the Bakong heritage site—and, by extension, the entire Angkor World Heritage site—could be improved, ensuring its long-term sustainability and success.

7.3 Conclusion

A review of the research clarified the concepts of sustainable heritage management and identified the themes explored in this study, particularly the multi-dimensional aspect of heritage management, which is encapsulated in the "four pillars" approach to sustainable heritage management. The study also provided a historical account of the development, utilization, and preservation of the monuments within the Roulous temple group, which served as the focal point for the heritage management practices examined in this study. The research findings indicated that the benefits derived from heritage management at Bakong were both diffuse and uneven. While the provincial and national budgets have been strengthened by tourism, Siem Reap-based enterprises servicing the heritage tourism market have seen decades of growth and enrichment, and Khmer people have experienced pride in the recognition of their nation's historical achievements, the local community has not equally shared in these gains. Locals in the study area have benefited

from improved social services, environmental stewardship, and some job and business opportunities. However, the survey revealed that the perceived benefits were low. Most villagers continue to work in unskilled farming jobs, and the majority have low income and education levels. Many identified themselves as 'poor' and reported receiving minimal or no benefits from the heritage site.

The research found that only a small number of villagers directly benefited from heritage management through jobs in heritage management organizations or opportunities to provide services to tourists. Additionally, some villagers received indirect benefits from increased tourism to the Angkor area, such as jobs in construction or tourism businesses in Siem Reap (over ten kilometers away) and increased sales of their farm produce in provincial markets. This partially confirmed Hypothesis 1, which posited that locals derived no benefit from sustainable heritage management at Bakong. While there were indeed some benefits, they were not always visible or transparent to locals. Overall, the majority of residents perceived the benefits of heritage management to be minimal, and the benefits from heritage tourism were seen as unevenly distributed, not easily accessible, and unavailable to most local residents.

Respondents agreed that heritage management practices at Bakong had strengths, particularly in the restoration of monuments, marketing the area for tourism, attracting visitors, and managing the natural environment. However, the majority of locals reported dissatisfaction with overly strict land use regulations imposed by the administering authority. These regulations severely limited opportunities for house construction, upgrades, renovations, decoration, and other forms of land modification. Public infrastructure, such as road upgrades, was hindered by regulations that restricted

disturbances to the soil near the monuments, leaving locals to contend with poorly maintained, dusty, and muddy roads. Additionally, the uneven application of regulations allowed a few private businesses to make substantial modifications to land and buildings, while the majority of locals were prevented from making even minor changes to improve their micro-enterprises.

Locals with farming backgrounds received little support in developing tourism-related businesses or in improving their skills to thrive in the commercialized market economy of the area. In general, the heritage authority at Bakong was perceived to fail in adequately consulting and problem-solving with local people, informing them of their rights, responsibilities, opportunities, and benefits, or providing jobs, training, or apprenticeships in heritage management, business, or alternative employment. There were also complaints about the authority's abrupt approach to public landscaping and the destruction of structures long used by local communities for religious and cultural purposes. Furthermore, restrictions on local cultural activities, such as festivals and rites within the temple compounds, negatively impacted the contemporary religious, cultural, and communal significance of the temples.

The study highlighted weaknesses in the strategizing, coordination, and implementation of heritage management by the relevant authorities in the area. Long-time employees of APSARA identified internal organizational issues, including the misallocation of human resources and finances, insufficient research and planning for the heritage master plan, and a poor, sometimes antagonistic relationship with local villagers, particularly regarding land use issues. Representatives of local government authorities at the commune and district levels also agreed that the heritage management authority could improve its

capacity to advise, consult with, and involve the local community in heritage management planning and implementation. A more coordinated effort with local authorities was seen as essential for achieving holistic, inclusive, and sustainable development in the commune and district.

7.4 Recommendations

Comparatively, it was found that another rural one sustainable available in rural contexts is to train people in basic financial management.

Evidence from Nigeria suggests, that training rural people in financial literacy is an effective method for reducing rural poverty (Ajide, 2015). Accordingly, it is suggested, that the people in Bakong commune might benefit from training workshops in financial management and financial literacy. Currently, there are no institutional workshops or other opportunities for them to learn about how to manage their money in an agrarian market economy.

Another method for poverty alleviation making microfinance available. According to the FFTC agricultural policy platform, microfinance can help fight poverty and the need for household dependency consistently. Numerous studies show a positive relationship between poverty reduction and microfinance growth in different regions (FFTC 2023, Chicknira 2022, Lila 2014, Kandker 2005). By the findings, it is suggested, that residents of the Bakong commune lack access to microfinance programs.

The research found, that the educational level of the residents of Bakong commune is very low. This impacts negatively residents' ability to comprehend heritage policy,

integrate new agricultural technology, transition non-farm livelihood; take up employment in the heritage sector; and start tourism-related commercial activities.

Suggested solutions are 1. To promote rural education for success in the non-farm economy; 2. Integrate knowledge of heritage policy into the general education system; 3. Open up community courses in the local area for teaching, about business, finance, tourism-related jobs, and heritage management jobs. 4. Provide scholarships to attend the high schools and universities in Siem Reap founded by local large tourist corporations, NGOs, and the government.

To foster sustainable development in the rural commune of Bakong, situated within a heritage site, several key interventions are recommended:

1. Financial Literacy Workshops: Given the evidence from Nigeria highlighting the efficacy of financial literacy training in reducing rural poverty, initiating workshops on basic financial management and literacy could empower the residents of Bakong commune. These workshops would equip them with the skills necessary to navigate the agrarian market economy more effectively.

2. Microfinance Initiatives: Introducing microfinance programs can significantly contribute to poverty alleviation by providing accessible financial services to the community. Drawing from various studies showcasing the positive impact of microfinance on poverty reduction, establishing such programs tailored to the needs of Bakong residents could enhance economic resilience and reduce household dependency.

3. Education Enhancement: Addressing the low educational levels among Bakong residents is crucial for their socio-economic advancement and ability to engage in heritage-related activities. Proposed solutions include promoting rural education, integrating heritage policy into the general education curriculum, and offering community courses on business, finance, tourism-related jobs, and

4. Heritage management:

Additionally, providing scholarships for higher education opportunities in Siem Reap, supported by local tourist corporations, NGOs, and the government, can further empower the youth and adults alike to contribute meaningfully to the local economy and heritage conservation efforts.

By implementing these recommendations, Bakong commune can foster a more inclusive and sustainable development trajectory, ensuring that the community benefits from its heritage while concurrently addressing poverty and educational disparities.

The specific recommendations on the basis of the findings of the study are as below:

- i. It is advised that the state would spend more money on education, health, capacity building, training programs, and access between the Seam Reap town to a rural area for promotion to tourists so that the tourists can interact well with the local cultures in the study area.
- ii. APSARA should provide certain construction model structures construction including materials directly in the village and for poor people and provide the information frequently to the local community.

- iii. To attract tourists by visiting the monuments or interacting tourists with local culture in the heritage site of the study area, APSARA should construct the roads and parking places for monuments by improving the landscape and environment with skillful expert landscape architects.
- iv. Finally, local authorities should provide technical support for the modernization of agriculture for local villagers in the heritage site of the study area. And the last one that would be helpful for the community is to open a one-way window for solving problems in the regulation of heritage management.

7.5 Scope for Further Research

This research study can contribute the sustainable heritage management in the study area encompassing the four villages of Aolaok, Lolei, Thnal Trang, and Stoeung of Bakong commune of Siem Reap province as well in the whole of Angkor Park. It also can help the APSARA authority and concerned stakeholders to control management in a way of a sustainability and benefit. For future studies, researchers should focus on other major sites near Angkor Wat or Angkor Thom within the heritage site to explore know-how solutions for generating benefits. Additionally, to better understand the implications of these results, studies should examine the impacts of regulations on both heritage preservation and the livelihoods of local communities in the study area.

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APPENDIXES

QUESTIONNAIRE 1

Candidate: CHHIM Phet

Subject: "Sustainable Heritage Management in Bakong, Siem Reap"

Introduction, Information and Consent Statement for Interviewees

Dear honorable guests,

I am currently pursuing a Doctor of Philosophy (Ph.D.) in Management at Build Bright University. My research focuses on Sustainable Heritage Management in the villages of the heritage site in Bakong Commune, Siem Reap Province. The purpose of this study is to describe heritage management practices in the study area, document the locality's socio-economic profile, identify gaps in ensuring sustainability in heritage management practices, and provide recommendations for improvement.

I would be grateful if you could kindly complete the following questions. Your support will help me complete my degree and contribute to recommendations for enhancing sustainable heritage management in the study area.

[To be administered to 315 residents in four villages in the study area]

I. Personal Information

1. Gender: Age:....., living in Bakong since.....

2. Education

☐ Primary School

☐ Secondary School

☐ High School

☐ Bachelor Degree

☐ Master Degree

☐ Ph.D

☐

3. Profession

☐ Manager

☐ Medical

☐ Technical

☐ Teaching

☐ Staff

☐ Self-employed

Farmer

Sales/trade

Transport

Retired

Other.....

4. Is your family's **main** source of income from heritage-related activities (heritage manager, heritage maintenance worker, the seller at heritage site, tourist guide, transporter, etc.) Yes/No:

5. Do you regard your economic level in comparison with other people in the village as:

Above average:

Average:

Below average:

II. Benefits and Losses from Sustainable Heritage Management

6.1 Have you or your family derived any benefit from the development of Bakong as a cultural heritage site?

Yes No

6.2 If answering YES to the above (6.1), please specify what kind of benefit it was:

a- Employment in APSARA authority Y/N

b- Selling food, drink souvenirs to tourists Y/N

c- Providing transport to tourists Y/N

d- Providing other services to tourists Y/N

e- Employment on heritage site maintenance Y/N

f- Employment on local infrastructure projects Y/N

g- Increased customers in your business Y/N (as villager living in heritage site)

h- Increased income in your business Y/N (as villager living in heritage site)

i- Prosperity and liveliness in local area Y/N (as villager living in heritage site)

j- Pride at your culture Y/N (as villager living in heritage site)

k- New social, educational, and cultural opportunities Y/N

(as a villager living in heritage site)

7 Has the APSARA Authority offered you participation in its:

cultural programs? ☐ Yes ☐ No

economic programs? ☐ Yes ☐ No

social programs? ☐ Yes ☐ No

environmental programs? ☐ Yes ☐ No

8.1 Have you ever experienced any losses or restrictions in your residence, livelihood, or other activities because of the heritage management regulations at Bakong?

☐ Yes ☐ No

8.2 If answering YES to the above (8.1), please check one or more of the following. Loss to/ restrictions on:

a- residence ☐

b- business ☐

c- land-use ☐

d- forest access ☐

e- cultural activities ☐

f- social activities ☐

g- religious activities ☐

III. The opinions of people living in the heritage area

9. Do you know that Bakong is registered as a World Heritage site?

☐ Yes ☐ No

10. How much information have you been given about heritage management (rules, policies, benefits, restrictions, news updates, programs, etc.) in your local area?

(The rates for the answers to the questions related to 1 to 5 will be used for the levels of satisfactions such as: 1- Very satisfied; 2- Satisfied; 3- OK; 4- Dissatisfied and 5- Very dissatisfied.)

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

11. How much do the regulations to manage heritage at Bakong affect your life?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

12. How easy is it to construct a house in the heritage site?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

13. Do heritage protection regulations affect your ability to sell, work or do business?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

14. Does APSARA Authority do an adequate job caring for the preservation of temples and natural environment?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

15. What do you think about the infrastructure in this heritage site?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

16. How regularly does APSARA Authority maintain the roads?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

QUESTIONNAIRE 2

To be administered to local officials:

1. What have been the notable achievements of sustainable heritage management in the Bakong heritage site [please discuss this in relation to the '4 pillars': cultural heritage, local economy, local society, and local environment]
2. Your opinion about any weaknesses of sustainable heritage management in the Bakong heritage site.

3. Your assessment of the strengths and weaknesses of the APSARA Authorities contribution to heritage management in the Bakong heritage site.
4. Have there been any difficulties (for local officials, locals) interacting with APSARA authorities, including satisfaction, frustrations, difficulties, mis-communication, etc.?
5. Have you been able to resolve these problems? If so, how?
6. What suggestions do you have for improving the effectiveness of sustainable heritage management at Bakong?
7. What plans do you have for implementing new heritage management initiatives in the future?

QUESTIONNAIRE 3

To be administered to the local special interest groups in the study area. [The five special interest groups are: community elders and representatives; local businesspeople; local residents; natural resource users; and Buddhist laypeople.]

1. In what ways have you been satisfied with the impacts of the authorities' heritage management in your own particular area of interest? [relevant to 'S' AND relevant to HO1]
2. Especially what benefits, if any, have you derived from APSARA's heritage management in your own area of interest? [relevant to 'S' and relevant to HO1]

3. Have the sustainable heritage management actions taken by APSARA in your own particular area of interest been adequate in your view? [relevant to 'S' and 'W' AND relevant to HO2]
4. In what ways you have been dissatisfied with the impacts of the authorities' sustainable heritage management actions in your own area of interest? [relevant to 'W' AND relevant to HO2]
5. What aspects of APSARA's heritage management in your own area of interest could you exploit to your advantage? [relevant to 'O']
6. What aspects of APSARA's heritage management threaten the sustainability of your own area of interest? [relevant to 'T']
7. What suggestion do you have for improving the effectiveness of sustainable heritage management in your own particular area of the interest? [relevant to 'O']