

FORMATION OF CULTURAL LANDSCAPE AND
RESIDENTS' RESPONSIVE PERCEPTION:
A CASE STUDY ON THE NORTHERN REGION OF THAILAND

JUNJIRA NUNTA

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENT FOR THE DEGREE OF
DOCTOR OF ARCHITECTURE PROGRAM IN MULTIDISCIPLINARY DESIGN RESEARCH
INTERNATIONAL COLLEGE

KING MONGKUT'S INSTITUTE OF TECHNOLOGY LADKRABANG

2015

KMITL-2015-IC-D-008-001

สำนักหอสมุดกลาง พระจอมเกล้าลาดกระบัง

FORMATION OF CULTURAL LANDSCAPE AND
RESIDENTS' RESPONSIVE PERCEPTION:
A CASE STUDY ON THE NORTHERN REGION OF THAILAND



JUNJIRA NUNTA

เลขหมู่.....
เลขทะเบียน...078080
วัน,เดือน,ปี 6...ค.ศ...2560



A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENT FOR THE DEGREE OF
DOCTOR OF ARCHITECTURE PROGRAM IN MULTIDISCIPLINARY DESIGN RESEARCH
INTERNATIONAL COLLEGE
KING MONGKUT'S INSTITUTE OF TECHNOLOGY LADKRABANG
2015
KMITL-2015-IC-D-008-001

COPYRIGHT 2015

INTERNATIONAL COLLEGE

KING MONGKUT'S INSTITUTE OF TECHNOLOGY LADKRABANG

Thesis Title	Formation of Cultural Landscape and Residents' Responsive Perception: A Case Study on the Northern Region of Thailand
Student Name	Ms. Junjira Nunta
Student Id.	52600401
Degree	Doctor of Architecture
Program	Multidisciplinary Design Research
Year	2015
Thesis Advisor	Assistant Professor Dr. Wanpen Charoentrakulpeeti
Thesis Co-Advisor	Dr. Panayu Chairatananonda

ABSTRACT

This research attempted to investigate factors affecting the formational patterns of cultural landscape and the temporal dimension of spatial dynamic, which were the results from the shifting communal needs in the historical and theoretical facets. It endeavored to elucidate the linkages between the behavioral-functional solution and the physical / spatial settings of cultural landscape deriving from the evolution of socio-cultural dynamic.

Objectives of the study comprised four consecutive procedures. Firstly, it examined the evolutionary linkages of cultural landscape components. Secondly, it endeavored the factors which affect to cultural indicators and physical settings which convey the cultural landscape changes. Thirdly, it attempted to elucidate the process by the perception and response of local residents toward the changes of cultural landscape. And finally, it suggested the guidelines of the cultural landscape conservation which were consistent with the public's perceptions. Meanwhile theoretical basis of the study is derived from four concepts; namely, cultures and the environment, cultural concepts to the settlement and housing, the conceptualization of cultural landscapes, and the perceptual-theoretical point of view on the environment.

The Northern Region of Thailand was selected as a case study site and three communities were chosen with different conspicuous levels of cultural landscape

changes—high, moderate, and low. Research methodology comprised data from both secondary and primary sources. Questionnaire survey and in-depth interview vis-à-vis physical / spatial mapping were designed to explicate and compare the connecting patterns between the cultural and physical aspects of the three settlements. Secondary data from previous research and official documents were used as supplementary data complementing the historical aspects of the research.

The study results showed that even though the physical environments of Northern Thailand's cultural landscapes have changed over the period of time, cultural and social activities which are associated with the central spatial area are still conducted but not as true to the original practices. The physical environment of the studied areas reflects the relationships of the people in each community through their cultural activities.

This study results demonstrated that the factors determine cultural landscape changes consist of policy factor, transportation factor, urban regulation factor, political factor, and globalization and urbanization factor. In addition, the study on local people perception and response to cultural landscape change exhibited two issues on the statistical analysis of the people's perception and response in different significant levels. First is the level of cultural landscape changes in the study area and second is social attributes such as ages and period of living. People lived in high level of cultural landscape change area have expressed acceptable and responsive attitude to the changes of cultural landscape more than people who lived in medium and low level cultural landscape change area. Furthermore, people who have lived in the area longer than ten years and are older than thirty years age expressed different opinions from those who have lived for less than ten years and are less than thirty years old; this reflects the nostalgia of the residents who have a strong attachment to the local cultural landscape. Urban spatial patterns are dynamic and changing all the time, but we should concern about physical changes because whenever physical setting change it would effect to cultural landscape change as well. Therefore, any development should be concerned with the configuration of cultural landscape and should not move or demolish the cultural landscape area. It will affect to resident's perception. Changes in

the material or size are acceptable but should keep the core belief or original tradition. Urban planners, decision makers and urban designers should concern about new constructions that can destroy the cultural landscapes. If cultural landscapes are lost, the relation between culture and physical environment will also suffer.

ACKNOWLEDGEMENTS

The success of this dissertation can be attributed to the extensive support and assistance from my advisor who passed away Associate Professor Dr. Nopadon Sahachaisaeree and present advisor Assistant Professor Dr. Wanpen Charoentrakulpeeti, who always gave me a lot of valuable knowledge and supervised me by sincerity. My thanks to Emeritus Professor Paul Hsu at Oklahoma State University who always advised me for my work, my life and offered the great opportunity for exchange study abroad, as well as co-advisor Dr. Panayu Chairatananonda, Dr. Salinee Sukolrattanametee, my committee Assistant Professor Dr. Yanin, Assistant Professor Dr. Chumporn and Dr. Nuchnapang, without them, my dissertation would not be completed.

I would like to thank the higher education for financial support.

I would like to thank my best friends Dr. Kingkarn (Mee), Mr. Pracha, Ms. Iya Low, Dr. Suthatip (Pee Aae), Dr. Porntip, and Dr. Wichitra, my lovely sister. Additional thanks to Dr. Rungnapha Khamung (Mao) and Dr. Pornnapa (Kae), Mr. Chotewit, Mr. Supot, Aey, Moddaeng, Khing, Tony, Salty, Koy, Tu, Pee Why, friends in the family of multidisciplinary design research program. All of you make my life become more colorful and fantastic.

I am thankful to all staff of the International college and staff in Faculty of Architecture Rojjana, Pee Jun and Pee Mam for administrative support. Finally, I am very grateful to my family and relatives, particularly my father, my mother, my brother (Samart), my kid (Patter) and my husband Mr. Satapol for all the support, care and love. Without you all, I would not be here.

Junjira Nunta

TABLE OF CONTENTS

	Page
ABSTRACT	I
ACKNOWLEDGEMENT.....	II
TABLE OF CONTENTS	III
LIST OF TABLES	IV
LIST OF FIGURES	V
CHAPTER 1 INTRODUCTION	1
1.1 Statement and Significance of the Problems.....	1
1.2 Research questions	4
1.3 Research Objectives	4
1.4 Hypothesis	4
1.5 The benefits of research.....	5
1.6 Scope of Research.....	5
1.6.1 The scope of the content.....	5
1.6.2 The scope of the study area.....	5
1.6.3 The scope of the demographic.....	5
1.7 Terminology.....	6
1.8 Limitations of Research.....	6
CHAPTER 2 LITERATURES REVIEW	7
2.1 The concept of culture and environment.....	7
2.2 The concept of cultural settlements and housing	8
2.2.1 Definitions of culture.....	11
2.2.2 Culture and Housing.....	12
2.2.3 Lanna culture.....	17
2.3 The concept of a cultural landscape.....	17
2.3.1 Definition of the cultural landscape.....	18
2.3.2 The taxonomy of Cultural landscape.....	23
2.3.3 The Elements of cultural landscape.....	24
2.3.4 Factors that influence the evolution and transformation of landscape....	28

TABLE OF CONTENTS (Continued)

	Page
2.4 Concepts and Theories of Perception	30
2.4.1. Environmental Perception.....	31
2.4.2. Influences on the Perception of Physical Environment.....	32
2.5 Related Research.....	33
2.6 Link theory with research framework.....	37
CHAPTER 3 RESEARCH METHODOLOGY	39
3.1 Study area.....	39
3.2 Data collection.....	40
3.2.1 Primary data.....	41
3.2.2 Secondary data.....	41
3.3 Population and sampling.....	41
3.4 Research procedures.....	43
3.5 Tool for collecting data.....	46
3.6 Pre-testing of the Instrument.....	48
3.7 Data Analysis.....	48
CHAPTER 4 THE CONDITION OF STUDY AREA.....	49
4.1 The physical characteristic of the northern area.....	49
4.1.1 Topography.....	49
4.1.2 The community settlements.....	49
4.2 History.....	50
4.3 Lanna Culture and Society	51
4.3.1 Traditions, beliefs and culture.....	52
4.3.2 Belief in a city building in northern Thailand.....	53
4.3.3 Beliefs about the worship of relics.....	54
4.4 Geography and Beliefs.....	55
4.4.1 Chiang Mai.....	55
4.4.2 Lamphun.....	57

TABLE OF CONTENTS (Continued)

	Page
4.4.3 Phrae.....	60
CHAPTER 5 RESULTS.....	63
5.1 The evolution and the linkage of the cultural landscape.....	63
5.1.1 Evolution of Cultural landscape in the physical elements.....	63
5.1.2 The evolution of the cultural landscape of the social culture.....	77
5.1.3 Evolution of the economic, cultural landscape elements.....	86
5.1.4 Cultural landscape and linkage of the cultural landscape element....	93
5.2 Factors affecting the Physical setting and associated with changes in the cultural landscape.....	111
5.2.1 Policy factor.....	111
5.2.2 Urban Regulation.....	116
5.2.3 Globalization and Urbanization Factor.....	122
5.2.4 Transportation Factors.....	130
5.2.5 Politics.....	133
5.3 The recognition and response to changes in the cultural landscape.....	134
5.3.1 The recognizing and responding to the changing cultural landscape...	138
5.3.2 The one-way Anova analysis of different social characteristics.....	140
5.3.3 The reaction to cultural landscape area change.....	154
5.4 Recommendation of cultural landscape conservation from the sampling	157
5.4.1 The comment of buildings and sites improvement in the area.....	157
5.4.2 The appropriate characteristics of the buildings in the community.....	158
CHAPTER 6 DISCUSSION AND SUGGESTION.....	162
6.1 Conclusions.....	163
6.1.1 Evolution and the link of the cultural landscape.....	163
6.1.2 Factors that affect the physical and correlated with changes in the cultural landscape.....	166
6.1.3 Perception and responding to the changing cultural landscape.....	166

TABLE OF CONTENTS (Continued)

	Page
6.2 Discussion.....	167
6.3 Implementations of the research.....	170
6.4 Advantages and limitations of research.....	172
6.5 Suggestions for further research.....	172
Bibliography.....	
Appendix.....	
Author Biography.....	

LIST OF TABLES

Table	Page
3.1 Samples in Chiang Mai study areas.....	42
3.2 Samples in Lamphun study areas.....	42
3.3 Samples in Phrae study areas	42
3.4 Conception and Operation.....	44
5.1 Beliefs and traditions Practice in the Community.....	81
5.2 Practice and participation in traditional and cultural activities	82
5.3 Participation in cultural activities of the community	85
5.4 Area that Participation in cultural activities of the community	85
5.5 Average Household Income.....	88
5.6 Revenues sample study area.....	88
5.7 Average monthly income and poverty.....	89
5.8 Sample's occupation.....	89
5.9 shows the occupation in the past.....	91
5.10 Adjustment and the environment with a new career today.....	92
5.11 Comparative cultural landscape element in each area before 1868.....	99
5.12 Comparative cultural landscape element. (1868- Present 2015).....	104
5.13 The Urbanization of Chiangmai.....	125
5.14 Changes in land use Lamphun.....	127
5.15 Changes in land use of Phrae.....	129
5.16 Adoption of changes in the cultural landscape.....	135
5.17 reviews the development of local areas which are related to belief.....	136
5.18 shows a one-way analysis of variance of the difference of the area.....	136
5.19 show the diagnostic tests are a pair of the different levels of the cultural landscape.....	137
5.20 Difference of area residents recognizing and responding to the changing cultural landscape.....	138

LIST OF TABLES (Continued)

Table	Page
5.21 Show the difference in age groups to recognize and respond to the changing Cultural landscape.....	141
5.22 Show the difference of time living in the area to recognize and respond to the changing cultural landscape.....	143
5.23 The reaction if there is cultural landscape area adjustment of community	144
5.24 Perception of cultural landscape change categorizes by gender of the sampling Group.....	146
5.25 Perception of cultural landscape change categorizes by age.....	146
5.26 Residential area with the acceptance level of cultural landscape change.....	147
5.27 Residential area with the methods of cultural landscape area adjustment.....	148
5.28 Residential duration and the acceptance of public area development which relates to beliefs of Chiang Mai	149
5.29 The perception of cultural landscape change categorizes by age.....	150
5.30 The perception of cultural landscape change categorizes by residential area.....	151
5.31 The perception of cultural landscape change categorizes by residential duration in the area.....	152
5.32 The perception of cultural landscape change categorizes by residential duration in Lamphun area.....	152
5.33 The reaction to the change of cultural landscape.....	156
5.34 The reason should be conserve the buildings in the area.....	157
5.35 Mean comments to the building characteristics appropriate locating in the community.....	161

LIST OF FIGURES

Figure	Page
2.1 Relation between culture and built environment.....	10
2.2 Conceptual framework.....	38
3.1 Location map of the study area.....	40
4.1 ChiangMai city wall.....	57
4.2 The belief that the shape of the city was similar to a human organism.....	58
4.3 Phrae city wall	62
5.1 The British Council	65
5.2 Khum Chao Buriratna.....	65
5.3 Ruankuangpook	66
5.4 traditional shop house	66
5.5 Contemporary wooden house	66
5.6 adjusted wooden house.....	66
5.7 Commercial house.....	66
5.8 Trade area.....	66
5.9 contemporary hotel.....	66
5.10 communities environment surrounding city walls.....	67
5.11 types of architectural styles in Lamphun.....	67
5.12 The original wooden vernacular (Huan Ba Gao).....	69
5.13 wooden shop house.....	70
5.14 gingerbread house.....	70
5.15 Applied gingerbread House	70
5.16 Belief in the shrine within the study area	80
5.17 belief in worship relics	80
5.18 tradition upheld.....	80
5.19 the graph shows the average income per household north.....	87
5.20 location of the cultural landscape in Chiangmai city.....	96

LIST OF FIGURES (Continued)

Figure	Page
5.21 Schematic representation of the cultural landscape in the city walls.....	96
5.22 Schematic representation of the cultural landscape in city wall of Lamphun.....	97
5.23 Schematic representation of the cultural landscape in city wall of Phrae.....	98
5.24 Chiang Mai Land Use Map.....	118
5.25 Lamphun land use Map.....	119
5.26 Phrae land use Map.....	121
5.27 The Urbanization of Chiangmai.....	124
5.28 The Urbanization of Lamphun.....	126
5.29: The Urbanization of Phrae	128
5.30 Transportation network plan of Chiang Mai city.....	131
5.31 Transportation Networks Plan Lamphun.....	132
5.32 Transportation Network Plan of Phrae City.....	133

CHAPTER 1

Introduction

1.1 Statement and Significance of the Problems

The spatial pattern of human settlement was determined and readjusted not only by the daily human needs, but also by their social norms and cultural settings. The locale and orientation of spatial-structural design were so developed and transformed in accordance with the existing built-environments and natural-environments. The physical setting of cultural landscape thus differed in accordance with their contextual, socio-cultural, and physical surroundings. Whenever human settle on anywhere, they will change environment corresponding to their needs and culture. However, these changes are adequate and respectful to nature so that people can live peacefully in any environment. Therefore, the difference of cultural landscape of each area is in accordance with the content of each environment.

Cultural landscape is value that people in community believe collectively and develop landscape environment in order to build civilization and improve human society. It can be expressed by spatial order, time, meaning, communication, activities, interactions, territories, cues, transformation as well as controlling order based on idealism, concepts and norms. Cultural landscape is a combination of manmade works and natural components that must be studied together. This includes the decision system of settlement and the relationship of location and housing (Rapoport. 1969). Cultural landscape describes the importance of social identity and lifestyle in the past, it is useful to explain social dynamics presented in a modern city.

Initially, there are some inherent quality in the form of vernacular architecture and landscapes that have been presented in the culture for a long time. Nowadays, in many parts of the world, the loss of the vernacular in the physical environment and the replacement of them from abroad, not in harmony with the culture of those happen too often and less attention. (Pocock & Hudson. 1978).

World urbanization and globalization are turning towns and cities around the world into meaningless places (Tempesta 2010: 259; Antrop 2005: 23; Yong et al. 2010: 116). Cultural landscapes are also faced with the problem of rapid changes of

cities' suburban expansion (Plieninger et al. 2014: 1; Myga-Piatek 2011:130) resulting in discontinuity and loss of identity of old cultural landscape features (Antrop. 2005: 21). In planning and management of land use, an issue is of concern: a cultural landscape may not hold a shared consensus of the society regarding its value and the need to protect it. Several studies show that a cultural landscape is important to the people in that area (Antrop 2005: 22; Nüsser 2001: 253). It shows the roots, identity, beliefs, and cultural practices that the people respect and share (Wu and Chang 2013: 266). Various elements of a cultural landscape can be found from the settlement patterns, the shapes of the houses, the architecture, the traditions, the religions, the patterns of the land, the agriculture and the transportation in that area (Chapanon 1983: 41; Sinsaengkaeo 2009: 14-15).

Past research studies on the cultural landscapes in Southeast Asia have adopted the concept of cultural landscape in conjunction with conservation of industrial heritage and architectural conservation regarding the environment and its function (Wang and Fu 2011: 6; Wang and Fu 2014: 29). Two research studies indicated that dynamic and conservative approaches could be applied to different components of a cultural landscape and their attributes and values, using the strategy of sustainability (Wang and Fu 2011: 6; Wang and Fu 2014: 29). This is consistent with the view of an ecosystem service approach (Hartel et al. 2014: 42; Plieninger et al. 2014: 1). Cultural landscape changes over time. It has been shown that preservation of a cultural landscape was not necessary in conflict with the development of that area. Indeed, a society can make conservation and development work hand in hand with each other (Plieninger et al. 2014: 1).

The previous studies of cultural landscape in Thailand have mostly focused on landscape elements, the value of a cultural landscape, and conservation and management (Iamvilai 2013; Mangkalang 2013; Sinsaengkaeo 2009; Thuanmunla 2010). However, none of these have reported about spatial linkages and factor affecting to perception of changes in cultural landscape. Nawanat Osiri (quoted in Sinsaengkaeo 2009: 16) said that factors affecting a cultural landscape are space, building elements, vegetation, circulation, urban village, temples, palaces, parks, and human activities. Many major cities are currently faced with an identity crisis (Jongkroy. 2008). Today, city landscape is transforming along with the tide of change and growth that comes from urbanization and tourism (Antrop. 2005: 23). Some

valuable areas and their physical environment are being ignored or changed. Therefore, researchers are interested in formulating guidelines to manage and prevent threats to cultural landscape that new prosperity may cause.

From the above literature review on cultural landscape, the author found that these studies placed their attentions on the physical and cultural landscape changes of a specific area. They did not compare the different level of changes that occurred or the transforming factors of spatial patterns of the cultural landscapes. A few studies have addressed, through exploratory scenarios, how local people perceived the change in their cultural landscape and how they defined the scope of action against the cause of the unwelcome changes. This research, however, aimed to do the following: to find the factors that have caused cultural landscape changes in Chiangmai, Lamphun, and Phrae northern city of Thailand, and to study the pattern of transformation of its cultural landscapes. This study also compared the perceptions of local people with those of the new settlers. The elements investigated consisted of settlement patterns, physical aspects, cultural activities, types of building, and their spatial configuration. In addition, this research attempts to investigate factors affecting the transformational pattern of cultural landscape and the temporal dimension of spatial dynamic resulting from the shifting communal needs in the historical and theoretical facets. It endeavors to elucidate the linkages between the behavioral –functional solution and the physical / spatial settings of cultural landscape deriving from the evolution of socio-cultural dynamic.

Meeting the community members' basic needs alone would be inadequate without signifying their socio-cultural necessities and their inherited identities. The study also aims to yield a theoretical linkage for policy makers in the *Planning* discipline, implicating the aspects of cultural significance of the research findings as part of their decision making. Revelation of the social and behavioral significance of societal identity and way of life in the past are crucial to the explanation of the current cultural and social dynamic.

Study on cultural landscape thus help enhance the decision making process for future urban development planning by means of explanation of the local lifestyle and the pattern of cultural attribute which change the physical settings of the local area. This study can also, apply to determine urban spatial management

development and urban planning that coherent with dynamic situation and to endure identity of local life style and cultural landscape.

1.2 Research questions

Firstly, how are the evolution and transformation of cultural landscape?

Secondly, what are the factors to determine the changes of cultural landscape?

Thirdly, whether people who live in different levels of cultural landscape change have different perceptions and responding toward cultural landscape changing or not?

And finally, whether social attributed factors affect to perceptions of dwellers towards cultural landscape changing or not?

1.3 Research Objectives

Objectives of the study comprise four consecutive procedures.

1. Firstly, it examines the evolutionary linkages of cultural landscape component.
2. Secondly, it endeavors the factors which affect to cultural indicators and physical settings which convey the cultural landscape changing.
3. Thirdly, it attempts to elucidate the process by the perception and response of local residents toward the changes of cultural landscape.
4. And finally, it suggests the guidelines of the cultural landscape conservation which are consistent with the public's perceptions.

1.4 Hypothesis

1. The study hypothesizes that H_0 = the level of cultural landscape changing will not result in the perception and response of changing cultural landscape for the resident.

2. The study hypothesizes that H_0 = social characteristics of the population affect to the perception and respond to the changes of the cultural landscape by similar levels.

1.5 The benefits of research

1. The results of the research to be recommended as a policy for strategic development.
2. To recommend guidelines for urban planning and design for the conservation of the cultural landscape.
3. It could be used to predict the growth trend which might be resulted in the socio-economic of physical characteristics for other areas.
4. The method could be used for perception study of cultural landscapes for other areas.

1.6 Scope of Research

1.6.1 The scope of the content

This study is emphasized on evolutions of formation, elements of the cultural landscape and the cultural landscape changed factors and causes. In this study, it will be focused on the cultural landscape of the city. However, the rural cultural landscape, vegetation and natural environment will not be in this study.

The cultural landscape is divided into three elements:

- The physical elements are the settlements, vernacular architectures, land usages and transportations
- The socio-economic elements are the beliefs, faiths, traditions and cultures.
- The economic elements are career and income.

1.6.2 The scope of the study area

The scope of the study is in three areas of Northern region, Thailand. They will be in and around the old city walls of Chiang Mai, Lamphun, and Phrae.

1.6.3 The scope of demographic

People who live within and surrounding the city walls of Chiang Mai, Lamphun, and Phrae.

1.7 Terminology

Cultural Landscape represents an area where shows the relationship between culture and physical environment. This reflects to the development of the society or community in the north of Thailand.

The recognition means to recognize and respond to the changes of cultural landscape in the north of Thailand.

Cultural landscape element refers to the physical characteristics, including settlements and vernacular architectures, land usages and transportations. The social and cultural elements include beliefs, faiths, traditions and cultures. The economic characteristics refer to occupation and income.

1.8 Limitations of the research

Limitations of this study are the aerial photos which were used in the analysis of these three areas. The picture in the same period could not be found so the researcher decided to use the closet time pictures for comparison. Some pictures were covered by cloud. Therefore, the analysis in this section was difficult. It was necessary to compare with the other years' photos.

The data in this research was collected from the cultural landscape in urban areas where some of them were lost traces Moreover, the samples in the areas of big city, such as, Chiang Mai, were inconvenient to provide the data because of they were busy for their business and the questionnaires were consisted of several issues and it might take long time to answer.

This research was studied on cultural landscapes in urban areas; focused on the study of socio-economic and cultural elements. According to the survey of the study areas, it was found that in urban areas, the natural vegetation and climate are not different. Hence, the researchers did not take the elements of the natural environment as a factor.

Time limitation of the key participants in the interview was also the limitation. Since the study areas have long history for more than 100 years, the researchers selected the seniors who could provide the historical information for the interview. However, it might be covered a range of informative or comprehensive memories by providing information from their predecessor's only.

CHAPTER 2

Literature Review

The basic theory of this study is derived from four approaches that include: The concept of culture and environment; cultural concepts to the settlement and housing; the concept of cultural landscapes and the perception theory on the environment.

2.1. The concept of culture and environment

Environment that is built under culture of each area can be called as "vernacular style" which has unique characteristic and relates to the physical elements of cultural landscape. This vernacular study is beneficial for the inferring and summarizing the interaction between environment and human behavior. Therefore, in a study should be the study on overall environment not only on the building or the component of building but also the cultural landscape, the original system of settlement as well as human behavior in the aspects of feelings, giving meaning, conceptual process and activity, and other hidden characteristics (Rapoport. 1969). The concept of lifestyle is important to study the interaction between the environment and behavior and environmental design. Life is a lifestyle activities and events which could explain the wide range of environmental and cultural links. This is extremely useful in the analysis and design environments (Rapoport. 1998).

The cultural specific images involve direct relationships between the architectural and urban forms as systems and events that are taking place in or around that form. One thesis that each element of the vernacular village and landscape is linked to an image that shapes and influences human behavior and appreciation, thereby helping to shape larger environmental patterns. Beyond the meaning that specific elements inherit, they have functional and economic values. As a result, their visual qualities are believed to be effective in enhancing behavior through their visual attributes. One of the most important conclusions is that there are many features of modern village extensions and landscape elements that enhance the interaction with the physical environment that ordinary citizen's value.

Besides, there are elements of the vernacular villages and landscape that people regret to lose, such as weekly markets, cultivation of terraces, etc. (Eben Saleh, 2000).

Mofti (1989 cited in Eben Saleh 2000) said that the study of changes in the architecture and landscape of the any period should handle with time and place, and should reflect traditional, contemporary and future value. Changes actualizes the modernization of customs in the context of the restoration of the ecological, economic, concern, compassion and cultural integration wisely by an understanding and qualified in physical, spatial and individuals in creating social reality through practical experience, insight and perception by which they can browse the details of the size of some of them.

2.2. The concept of cultural settlements and housing

The study on behavior environment enables the finding of repetition pattern, role, and similarity under the difference which includes the difference within similarity as well. Cultural aspect can be studied in 2 types. First, it brings to an important conclusion, for example the linkage relations of people and environment. Second, explains the requirement of cultural environment for the designing. Culture plays important role both in analysing and designing environment and also helps create understanding of different characteristics such as different opinion in comfort and environmental quality, standard and responding to location and climate material and technology (Rapoport, 1998).

Concept of culture can be categorized into 3 types:

1. Lifestyle that shows community identity
2. Meaning system and frame of communication meaning through symbol.
3. Group of method which applied for survival that have a relation with ecology and resources (Rapoport, 1998: 64-73).

Culture study can conclude 3 groups and these are: culture is preservation of community identity, rule of culture such as controlling and, knowledge transformation in part that involved in behavior and collected wisdom. A major role of culture is structure or frame practices which give identity meaning.

Identification of environmental facet can be divided into 4 types: firstly, spatial order, time, meaning and communication; secondly, settlement system; thirdly, cultural landscape lastly, factors.

Environmental behavior study is the study of science which seeks relation or interaction between human and environment. Explanation on the domain of relation development in environmental behavior studies is dynamic and changes all the time. Observations in environmental behavior study has 3 domains; first, human character in social, psychology and culture; second, context of physical environment which affect on human behavior and; finally, linkage interaction between human and environment. Studies in environmental behavior can be found in pattern, criteria and harmony under contrast that include contrast in harmony, too. Culture studies can do 2 forms. First is to bring significant conclusion such as linkages of human and environmental relation. And second, it explains requirement of cultural environment in design. Culture has a role in analysis and design environment and also helps to understand different character such as different opinion in thermal comfort and environmental quality, standard and response to site, climate, material and technology.

Environmental studies comprises fixed and semi-fixed features that have element of material of each area and non-fixed features that occupy, lifestyle, cloth, territory which link with behavior, interaction, communication, activity system, social structure system and value, and ideal value (figure 2.1).

Dividing element that clearly understands the character of environment is divided into: social variables as role, family, kinship, social network, status and so on. Cultural character is: world view, value, ideal, image, norm, rule, and lifestyle and activity system. More specific expressions of culture are world view, values, ideals, images and schemata, norms and rules, lifestyles and activity systems.

The term culture recent, it was first used in its current anthropological sense in 1871, when it was defined as " that complex whole which includes knowledge, belief, art, morals, customs and any other capabilities and habits acquired by man as a member of society" (Tylor. 1871).

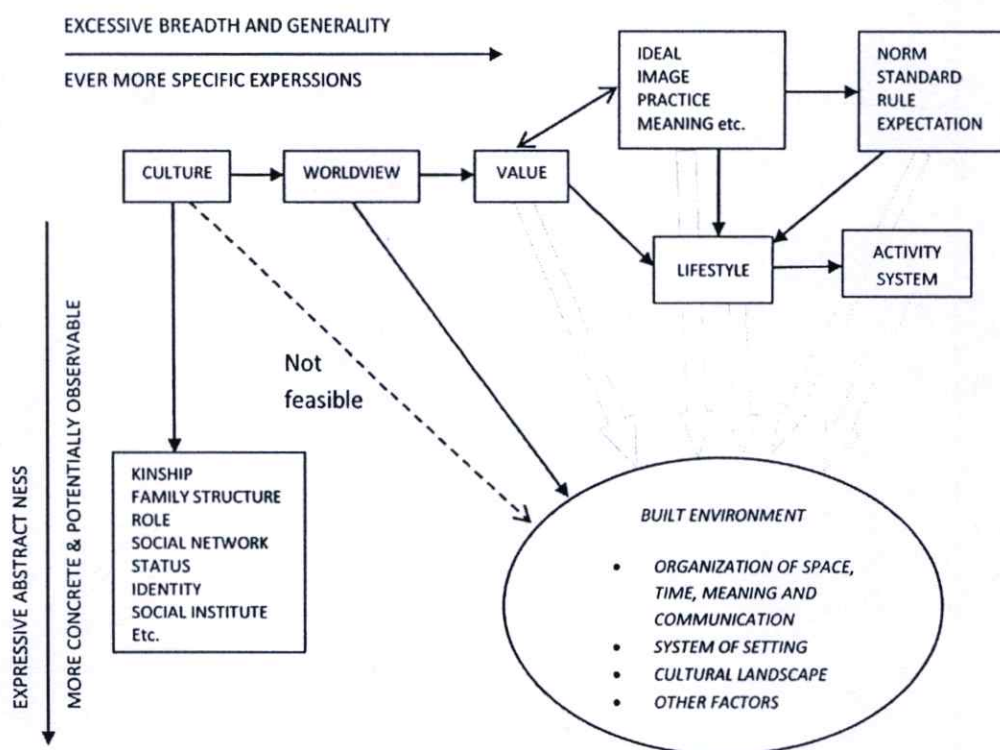


Figure 2.1 Relation between culture and built environment, (Based on Rapoport 2001, Fig.4; 2000, Fig.2)

Social factors include the social role of the family kinship networks. Status and other Characteristics include cultural worldview, values, norms and rules of practice ideal image, lifestyle and activity.

The works of several disciplines, such as cultural anthropology, cultural geography, architecture, and housing studies, have suggested obvious linkages between culture and the physical environment (Pandey. 1990). Culture expresses itself in both physical objects and subjective responses to the environment (Fan Ng, 1998, p. 57). Thus, the concept of culture and its manifestations appears not only in people's perceptions, beliefs, values, norms, customs, and behaviors but also in the designs of objects and in the physical environment, including houses and neighborhoods (Altman & Chemers 1980; Malkawi & Al-Qudah 2003; Ozaki 2002; Triandis 1994).

2.2.1 Definitions of culture

Culture by the Oxford Dictionary means faith traditions, art and social life of a country or nation. Beliefs and habits is something that people in the group or organization holds together.

The "culture" means that mankind has built up a successor to serve in existence. And social development of their own showing the growth of human society. As well as the consumption of usable physical or mental benefits such as watching what slaughterhouses.

In addition to the above, the "culture" refers to the practice of faith, art or products from any other thoughts or actions of people and communities related to social developments reflect the values (or social value) through history.

For Ralph Linton (1945) refers to the integrating culture of any society. In this context, culture means many aspects of life. Some anthropologists think culture is the norm or the idea behind the behavior (Holland & Quinn 1987: 4) anthropologist mostly thought of as a culture, as well as learned behavior and beliefs, attitudes, values and ideals are, or social characteristics of the population.

Ember & Ember (1998) said that for ideas or actions are considered cultural "it must share some of the general population or group of individuals. Although certain behavior is not common practice, it is culture if most people think is appropriate. In other words, culture is a system of meanings shared (Geertz. 1973) in culture were considered. Typically, the concept is one that can restrain and constant changes (Lawrence. 2000: 68). This concept refers to the culture. The allegorical dimension and there are many elements that develop in different time periods (Tuan. 1982).

Culture refers to many aspects of life; it may be broken down into different elements together to provide empirical analysis. DiMaggio (1997: 263) argues that cultural theory becomes extremely complex. But not fully implemented, so it becomes important to identify the number and composition analysis of the culture instead of keeping the culture as a whole or the main parameters. Rapoport (1998, 2000, 2001) argues that culture is the idea that a great many. The concept needs to be dismantled to become available. He suggested that by making the concept of culture is very tangible, and thus bringing it into practice, it would be possible and can start testing the components of culture.

2.2.2 Culture and Housing

Maintaining the cycle of life in an agricultural society, whether it is the location of any religion, there usually are similarities in lifestyle and well-being and unavoidable to have tightly combination between beliefs and life (Ornsiri Panin). A story about faith variously transmitted by descent from an ancestor from several generations to the present is what has influenced the lives of northern Thailand in all ages. Belief in ghosts or gods, or the media representation of the richness in cultivation is part of lifestyle. Traditions and ceremonies that reflect their gratitude to the factors that influenced fertility is universally recognized that agriculture is vital for Thailand. Beside this, there is also a Buddhist beliefs involved. Therefore, some beliefs have integrated the basic tenets of living combined with Buddhist beliefs together such as beliefs about the city and direction of the house, etc.

From the study of Mon houses of Ornsiri Panin (2000) found that in addition to educational, social and cultural basis of Mon, the house has a large living space which is the house that characterized by extended family. The social nature of Mon to the extended family to rise, it will be an addition to the house. This is the result of an extended family and kinship society closer to a pronounced effect on the use of space in the house and the size of the total area of the house. Acculturation about faith resulted in some changes to the area of the village. The cultural sides of the area for receiving or sending the result to the area near the Mon community look at other social beliefs of Thailand with the large Mon community. Their traditional beliefs are still strong. Factors affecting the change of the house are: extended family, construction lifespan and retrofits, construction materials, beliefs about ancestral spirits, living conditions changing accordingly to the universal living and the solution to the housing-related climate and thermal comfort of people in the house.

Rapoport (2001), elements of culture include worldview (such as values, definitions, norms, standards, expectations and rules), relatives and kinship relations, family structure and social networks. These components are considered influential in the creativity of the environment (Figure2.1).

The nature of traditional settlements, including physical representation of a balance between the similarities and differences of society of the needed social system include the separation of family life and participation in economic life and religious communities, hierarchy of open space in local settlements. Southwest of

Saudi Arabia, the extent to which various forms for a number of activities, although the location of each event will be unique in quality and spatial position associated with the settlement, they all joined in order to promote and support community life (Eben Saleh 2000). A study of the interaction of the physical structure and the built environment able to bridge the architectural and planning implementation in two ways include recognize that architecture and style of the invention was made by the skilled person whether it is a physical structure that is a story for religious or secular downs of life. Mosque minaret in the landscape display modern and simple symbols, the prayer area can show the importance for the ceremony on one side. The physical form is not just aesthetic but also strongly reflects the extent of religious and social needs. So it is given value greatly to the shape and content.

Recently, there has been a growing awareness of their influence on each other's physical (climate, geo technology) and non-physical (economic, political, cultural aspect) influenced on urban design and architectural styles. There is a new attempt to interpret the unique blend of cultural expression that is found in the architecture, art, religion and folklore, including the nature of culture, popular attitudes and common experiences. This is a vision of urban development that brings together past and present and that cut across political and economic boundaries. When the city and the development of modern architecture undermine both personal and community links with the interaction context is lost. New visual elements are not showing the relationship of the individual to the group or groups of the surrounding environment. In contrast to the traditional form new patterns that make people feel important. Designers and planners should start paying attention to the increasing size and spatial harmonious design (Eben Saleh. 2000).

The architecture and city format are worth because it has meaning or importance in how people perceive or act in a way, the relationship between the physical and the physical environment that will define the scope. The scope may be defined in terms of physical, territory, object or a change in physical appearance. Impact of how to enter the awareness of the extent of it could be focused on the importance of diversity, location and frequency of use of the facility or architectural style. The perception of the city or the architectural style and its scope was found to be positively correlated with the frequency of use and access. In practice, some scopes were found to elicit a sense of security in terms of vision and identity. The

concept of scope is important for environment designers that involve in creating a physical environment meaningful and coherent. Scope is the important factor of the interactions between people within the confines of the structure. Scope is the size of the user's physical and mental interaction with others. The scope of interaction with the structure or space can be associated with psychological needs such as security, identity and self-operation. Recognition, discernment, emotion and motivation all affect the interaction. Understanding this process is essential to the design process (Eben Saleh. 2000).

Scope builds a stronger relationship between the user and the created environment such as close relationships that are central to the collective behavior of the community. While the continuous scope, the shaped relation results in changing of social and cultural community experience. Steele (1981) has found that a sense of place is a result of physical, social and personal factors. A sort of open space with a distinctive oriental structures in the social space and in a way that clearly influence the size and form of communication between the residents. It was argued that the organization is a primary function of culture through the organization. Culture both protect and promote social interaction (Rapoport. 1990) the nature of traditional settlements as well as physical.

City and landscape forms of settlement include elements such as tangible form the city, architecture and organization of the natural contours and the built up elements. The intangible elements are defined only on the basis of the economic base, political and religious factors, especially the non-changing format. Implied by Islam, there are factors relating to the plan to control the influence of open space, building format and elements in the Muslim environment. Planners and architects may be recommended to develop methods to analyze the spatial arrangement of the particular structure influencing the interaction process is the first step in the quest to understand the influence of such factors on the spatial arrangement of the created shapes (Eben Saleh. 2000).

. The relationship between the physical structure and the built environment should not be considered as separate from human behavior. The built environment is useful for functional architecture as part of a design problem to be solved, although the planning and design process, the city design is an activity that does not exist. It is an architecture that makes these events to the building shapes that attract

the attention. This may leave the show that urban planners and designers do not have to spend a lot of architectural skills. But in the opposite fact, there is the need for planners to have good design skills that can determine the position of design flaws and determine the appropriate solution. The differences between urban planning, urban design and architecture must not be just a matter of a complex process. Public communications, the size and timing is not important (Eben Saleh, 2000).

The physical characteristics of housing in each community often reflect social systems and beliefs clearly. Shapes, forms of the house, the different shapes of housing in each local is a complex phenomenon that cannot find any reason to explain. However, those explanations are the foundation of the same issues is that the people who have different ideas and needs, there is a different expression in response to the physical environment (Rapoport, 1969: 40). Such responses are different in each country because of the change and diversity in society, culture, tradition, economy and physical factors. Even in the same area, these factors have also changed over time.

Though this slowly changes, it caused the remains of architectural shapes continues to be an important aspect of living a basic and traditional housing (Vernacular and primitive dwellings). The shape of the house is not only determined by physical reasons such as climate, geography or building materials. In contrast, the shape of the house since prehistoric are often caused by social factors, culture are the main factors. The physical factors of area, climate, materials or construction methods are the secondary factor (Rapoport, 1969: 47). Or it may be said that although issues concerning building materials, technical ability and the climate is a factor that affects the shape of the house. But in the end, what determines the shape of the house and the organization of living space is the vision that people have of a plan to maintain the life of the people (Tonkao Panin, 2005).

In the traditional pre-industrial society, when faith and religion serves as the core of the culture, belief and religion are the factors or driving forces that affect the properties of the symbol in all buildings, including houses from the macro level of settlement in the area, the organization of city system and village to the micro level of building houses, organizing space in the house and the placement of objects.

At macro level of a traditional society or culture which has not yet been merged with industry concept, can be able to see the faith that is evident in environment. In South Africa, in some places where faith and traditional values have not been erased is an example. The symbol of the objects including such building still appears to be obvious. The positioning, sizing and organizing for the system of agrarian landscape may reflect the view of that society toward the universe. The villager may be determined to birth pairwise as to represent the earth and heaven. The farms may be built in the shape of spirals due to the belief that the world was created in the same manner. The villager may be placed in an orderly manner similar to the body's organs that are arranged relatively to each other (Rapoport. 1969: 50).

In many areas, such as in China, Peru, India, and South Africa, some regions and cities of the Inca found that the system layout of the city in traditional society often reflects a belief system related to the universe in a variety of formats. These include the position of villagers in each village may be placed in the same manner with the star system. Each of the village may be arranged in a circle around the main village of the headman. This may have the position in the direction of the sunrise, and so on. In some areas, the arranging of the village and the positioned houses could be emulated according to the path of the sun. For example in European village, Baltic region often build the main road in the north – south which is accompanied by the island houses on either side. House number or row house runs from south to north on the west side of the main road. And from north to south on the east side of the main road which is the same path of the shifting of the sun in that residence (Rapoport. 1969: 52).

For such the system rules and tradition in the settlement and housing, no matter which part of the world it appeared, the origin of all cultural backgrounds and the belief system of religious are important issues. The issues of material and physical needs are secondary issues. Even the belief system may be associated with such comfort in the same manner with the “Feng Shui” system of Chinese. But, in traditional societies, whenever a belief system contrary to physical comfort, the main factor in determining the nature of the settlers will be in the respect of belief more than their comfort (Panin 2000).

From the studies of group Tai Dam, Tai Puan, and Tai Moy of rice plant and the faculty seen that the belief still have impact on the choice of location,

community context, and the new context that would be amenable to such a unique style of living. This is then become entailed heritage. However, when the aforementioned context is no longer extant, the ancestor will pick another context that lies in their ability to adapt to live and environment balanced by wisdom (Panin 2003).

2.2.3 Lanna Culture

Lanna culture is the same as other important cultures such as Ayutthaya-Rattanakosin or also known as the central culture consists of 2 cultures, which are folk culture, which is the culture of Rat, whether they are urban or rural, and cultural capital of the region, which is centered in the city. However, Lanna was not divided into traditional and cultural capital clearly like Ayutthaya – Rattanakosin, but as the process of integration between the two cultures at all times. The core importance of indigenous cultures, it is the fundamental importance of cultural capital. In the traditional manner, directly or cultural capital is in harmony with the traditional features of the native that already existed.

Lanna culture has developed and maintains a presence in the line of faith in the world or dimension of local legendary of the recalling the story, cultural ceremony, agriculture, legend, believing in ghosts, etc. Lanna capital culture is deep dimension of the universe that has its roots in India. The tradition of higher education have a written language, ritual and spiritual life in this world and the hereafter, various bibles and local legend that holds Buddha image as the Buddha's principles, etc. Both cultures are the way of living of people in different levels from the rural villages, city or community markets till the administrative center (Vallibhotama & Walailak. 2008)

2.3 The concept of a cultural landscape.

The idea of cultural landscape has been a fundamental concept for geographers since its first use in Germany in the 1890s. Rastel (1895-1896) defined *Kulturlandschaft* as an area modified by human activity, compared to a primitive natural landscape (Jones, M. 2003). Otto Schluter (1903) emphasized the formative influence of human activity in shaping the landscape in reaction against explanations

of natural determinism (Schick 1982). Schluter has described the relationship between man and nature by classifying the landscape into two forms, using the criteria of human action include natural landscape is a traditional landscapes that humans are changing the landscape and cultural landscape is a landscape that has been influenced by human culture. This categorization is so easy to understand and can be linked to relate sciences, such as history, architecture and so on.

Later, the further development of the concept of cultural landscapes and is known by Carl O. Sauer geographer, in his work 1925, Suauer defined the landscape as a combination of physical and cultural form: "Culture is the agent, the natural area is the medium, the cultural landscape the result", cultural landscape that is formed arise from cultural groups by stressing that culture determines the shape of nature and nature is the format of the culture as well. (Hayden 2000, p 15; Jones, M. 2003: 33) and in 1992 UNESCO's World Heritage Committee agreed on revised operational guidelines specifying that cultural landscape could be protected in accordance with the World Heritage Convention of 1972 (Jones, M. 2003: 21). Constitutes concepts about cultural landscape and the definition on the cultural landscape is a lot which can be compiled and summarized below.

2.3.1 Definition of the cultural landscape.

According to the meeting that was held in Rome by ICCROM (International Center for the Study of the Preservation and the Restoration of Cultural Property) and ICOMOS (International Council on Monuments and Sites) under the auspices of the Cultural Heritage Division of UNESCO in April 1983, has determined the characteristics of the Cultural Landscape that can be able to nominate as a World Cultural Heritage such as

- Landscape Design created by the intention of human such as Park land.
- The Landscape as a result from the social, economic, and religiosity as well as fossil landscape.

With Operational Guidelines for the Implement of the World Heritage Convention 2012 of UNESCO World Heritage Center that include the consultant of World Heritage Committee are ICCROM ICOMOS and IUCN, in this convention world heritage is divided into 3 types such as (1) Cultural and natural Heritage in which the

criteria of culture and nature have been separated from each other clearly, (2) Mixed Cultural and Natural Heritage in which it needs to be considered together from both cultural and natural criteria, and (3) Cultural Landscape that it can be listed under the mixed cultural and natural heritage in case some heritage sites consist of natural value but not enough to be fulfilled all criteria of natural heritage. However, the outstanding values of the cultural landscape have not only been evaluated by the cultural or natural quality, but also come from the relationship between culture and nature (Mangkalang, 2013).

Therefore, in this convention, the meaning of the cultural landscape can be defined as a cultural property representing the merging of man and nature that clearly shows the evolution of human society and the settlement for a long time under the influence of limitations and/or the physical opportunities that can be appeared by the natural environment and both inner and outer driving forces of economic, social and cultural continuity.

The Cultural Landscape Foundation has defined the Cultural Landscape as the show of both the area's identity and human interaction itself with that area for a long time. Since, it has associated with major events, therefore, all individual or group activities, can be a large building agricultural lands, parks, or walkways that can be a beautiful scenery.

Art Conservation Project has defined a Cultural Landscape as a geographic area that embeds cultural and natural resources which related to the historical development and the aesthetic value. The cultural landscape illustrates the origin and development of each society through the physical characteristics and usage of area.

However, the World Heritage Committee has defined the meaning of Cultural Landscape as the result of a combination between nature and human by demonstrating the evolution of human society and human settlements over time until now. Under the influence of the physical constraints and more opportunities to present, the natural environment determines the conformation. And then become a successor to the social, economic and cultural pressures, for both external and internal factors. The Cultural Landscape sifts through the criteria of value in the heart of the culture of the region.

The Niagara Escarpment Plan (NEP) (Office Consolidation 2002) defined Cultural Landscape as follows (cited in Andre Sheinman 2003: 14):

“A cultural landscape is the product of human activity over time in modifying the landscape for their own purpose, and is an aggregation of human-made features such as a village, farmland, waterways, transportation corridors and other artifacts.”

Moreover, there are still many people who defined a variety of definitions of Cultural Landscape mightily. Kerdsiri has codified for such studies from many sources and define its meaning as the result of an expression in the form of an obvious natural landscape through the action of culture. And there is a natural mediator which is indeed a Cultural Landscape. As a result from aforementioned, it seems to be a product that has become apparent. And this has relation between the results of the actions of human communities through the shape causing from the culture and the ability as it is solely based on the natural environment. Moreover, it is a valuable legacy inherited from the nature and evolution of human effort throughout each generation.

“Cultural landscape” is included both concrete and abstract things in which people in the group hold in common (value) and have done to terrain environment in order to support the growth and development of human society.

The Cultural Landscape is the environment resulting from the interaction of human and nature through the expression of the impact of ideas, beliefs, or social profiles and human culture which expressed a concrete interaction between man and nature. Or the environment that is a cultural heritage of the nature and evolution of many generations of humans. Or may not be concrete, but can be able to get a sense for such the place. (Mitchell, Rossler, & Tricaud. 2009)

De Blij, Harm (1977) geographer has defined the meaning of Cultural Landscape as the vestige and evidence of changes in the earth through the terrain and environment by human activities from the life of community or ethnicity. This manifests itself in tangible and intangible characteristics that have been learning and relaying from the predecessor to grandchildren for a long time. The things that is tangible including housings and residences, architectures, roads, agricultural areas, and communities, etc. On the other hand, the things that is intangible, is indeed the atmosphere. It can only be perceived by the visualization of that particular

community. This is actually the uniqueness of the area that can be recognized by images, sounds, smells and way of life of those people.

J. Edward Hood (1996) archaeologist of Cultural Landscape said that the Cultural Landscape is associated with a form of settlement, land use, and property holding. Nature cannot be separated from culture. In addition, the cultural landscape is the physical area and symbol for the production of social processes. The inclusion of values and strong opposition to the inclusion that unfair, the Cultural Landscape is both a tool and context of social change.

Feilden and Jokilehto (1998) have discussed the Cultural Landscape that is the work of human or work which is a combination of nature and human. And the archaeological areas which are historic, aesthetic, ethnological or anthropological.

Additionally, Feilden also discussed about the Cultural Landscape such as;

"Historical area and the environment that molded from many elements. This includes human activity is as important as the building itself, the composition possibilities, and the surrounding environment. These things are important in relation to the total composition which should not be ignored. All historical areas should not consider only for the relationship to architecture but, should also include human values which link to the social and economic context."

Ingolf Vogeler (2010) said that the Cultural Landscape is the expression of idea and behavior of human through the material reality or in other words, it is such the expression of idea and behavior of human through the environment that can be tangible. Ingolf has described about the expression of Cultural Landscape with the examples such as, the culture of religious which express in the religious landscape through places of worship including temples, churches, and shrines. Or the food culture that express in terms of the landscape through land use in agriculture, such as the rice terraces, gardening groove, etc. Moreover, Ingolf shows the relationship of the Cultural Landscape in terms of cause and effect. As the Cultural Landscape can be both cause and effect of cultural values, cultural institutions, human behavior perspective, and ideas perspective. That is when the Cultural Landscape demonstrates human behavior which then return back to appear as the ideal and human belief. Each segment has an impact on each other as cycle circulating.

Cronin has the idea of Cultural Landscape in terms of the relations of ideas, beliefs, and environment. Cronin explained that Culture and Landscape are

intimately connected through our faith and our values which determine the shape of the natural environment that surrounds and supports us to survive.

Thailand became interested in the Cultural Landscape and had expected that around the year 2006, the Office of the National Culture Commission (ONCC) has undertaken a study to explore the Cultural Landscape and the workshop approach to managing Cultural Landscapes in pilot areas to 12 provinces. However, it does not provide a term limit and clear definition in Thailand (Mangkalang. 2013).

Since 2007 ICOMOS Thailand has mentioned about the Cultural Landscape in "ICOMOS Thailand's charter that the conservation and management of archaeological sites and cultural heritage involved". This is an initial draft that defines the Cultural Landscape as the cultural heritage resulting from a combination of things which caused by nature and human together. This shows the evolution of human society and their settlement over the period. Under the influence of limitation of physical features and natural environment in addition to the driving force of the economy, society, and culture for both external and internal. The variety of process of interactions between human and nature that shaped as the heritage of Cultural Landscape. This often reflect specific techniques of sustainable land use according to the features and limitations of the environment for human settlement and the spiritual relationship with nature (ICOMOS Thailand, 2007). Later in the year 2011, there have been a redefined for new definition of Thailand Charter on Culture Heritage Management which provides a concise definition and easy to understand. The Cultural Landscape refer to the human terrain that is characterized by the changes which occurred with the condition of the natural terrain. And this natural terrain shows the human relationship with nature. This reflect the lives, beliefs, and faith in religious until gradually become identity (www.icomosthai.org).

Hattaya Siripattanakul (2007) said that the Cultural Landscape will consider from;

- 1.) The nature is the foundation of cultural heritage.
- 2.) The environment is the context of action or human activity.
- 3.) The sense of place due to the recognition of local identity and culture associated with the phenomenon of both tangible and intangible.

Kriengkrai Kerdsiri (2008) explains that the Cultural Landscape refers to each area that has a terrain with unique identity. When human began settling and learning

environment, then there is management of resources in the area to respond to the survival of living. By seeking for the appropriate way for adapting themselves through a period of time. However, human has their limitation in various fields, both in terms of the technology related to life, and faith in religious, etc. This is then drive human to make change to environment in the limited point. As well as including the limitation of nature to support the change, it is also limited. But ultimately, when they can seek for the best way to processing repeatedly, they will be able to model it and carry over the next generation.

For the further explain, first, the Cultural Landscape cannot think of the separation between nature and culture. Because, the landscape is the result from the culture or human-caused. Second, the cultural landscape associated with changes, namely, the cultural landscape is an area that has been altered by humans both intentionally and unintentionally. This is then drive the area to value up through the changes that occurred over time. But, however, the volume and speed may not be equal. Sometimes, it could be hard to be noticeable the cause of the change in layers of history of the landscape.

2.3.2 The taxonomy of Cultural landscape

An assortment of cultural landscape can be divided several ways UNESCO has categorized the cultural landscape are three types.

1. Landscape, which was designed and created intentionally by man, such as amusement parks.
2. The landscape has evolved as a result of the changing social, economic, governance, religion, and faith.
3. Landscape related to religion, culture or natural elements.

In addition, the cultural landscapes may also be divided into a set of historical (historic sites) historic landscapes that are designed (historic designed landscapes) Landscape local history (historic vernacular landscapes) and ethnic landscape (ethnographic landscape) (Birnbaum. 2009).

Ferina A. (1998) categorized into four types of cultural landscapes includes:

1. Historic Site - landscape with an important historical event, activity or individual.

2. Historic Designed Landscape - a landscape that is designed or planned deliberately by a landscape architect, garden specialists, architects or horticulture-related design principles, or those working in the garden or in a conventional sense, the landscape may relate to individuals, trend or event in landscape architecture, or important developments in the theory or practice of landscape architecture, value, aesthetics play an important role in the landscape, such as parks, university areas and buildings.

3. Historic Vernacular Landscape, evolved through use by the people, causes or events that dominated the landscape through social and cultural attitudes of individual, family or community. Landscapes reflect the physical, biological and cultural way of life on a daily basis, the function play an important role in the vernacular landscapes.

4. Ethnographic Landscape has the distinction of natural resources and cultural heritage associated with the definition of a resource, for example, the settlement period, the location is sacred, religious, geographical structure.

2.3.3 The element of cultural landscape

The cultural landscape has evolved and formed over time, which is caused by various factors including the nature and culture together. The cultural landscape is needed to be studied to see the process taking place in the cultural landscape in each area, which reviewed the literature on the cultural landscape, has researchers and knowledge of the people and other countries discussed the cultural landscape as below.

Amos Rapoport explains, elements of the cultural landscape will be considered in the system of setting include, environmental diversity, which is the Fixed-feature elements and elements of material culture, which is semi-fixed feature elements. Rapoport takes this concept to be realized environment Sense of physical milieu, which this integration can communicate through the role of those who remain associated with the location, display the results in a form of behavior that creates a joint action, he emphasized the importance of setting, because the landscape culture is more than a man-made elements or areas of human improvement.

André Scheinman (2003), a Heritage Preservation Consultant of Caledon, Canada said, the landscape consists of using beneficial Land uses and activities, Patterns of spatial organization, Response to the natural environment and Cultural traditions, although the cultural landscape of Scheinman discusses the cultural elements, but to show its emphasis on physical rather than, as has been shown in more detail the elements of the cultural landscape that physical element are:

- 1.) Circulation Networks
- 2.) Boundary Demarcations
- 3.) Vegetation Related to Land Use
- 4.) Buildings, Structures and Other man-made objects or land alterations
- 5.) Settlement clusters
- 6.) Archaeological sites

Heritage Resources Center and The Region of Waterloo City of London, England (2004) with the classification of the cultural landscape are:

1.) Landscapes such as the nature, rivers, canals or open space that could influence the location and management of the cultural or natural influence on the location of buildings and structures.

- 2) The expression of traditional culture
- 3.) Circulation Networks
- 4.) Boundary Demarcations

5.) Vegetation is an element of the cultural landscape that has a direct relationship with the formation of patterns of land use, vegetation patterns, is said to go beyond space utilization and natural areas.

- 6) Buildings and structures that are involved in spatial and management.

Ingolf Vogeler explained that the cultural landscape as an expression of opinion through the environment and what can be tangible, the predominant element of the cultural landscape can be divided into four components.

1.) Topography express the surface features of a place where humans have adjusted to create optimum conditions for survival, such as, if the shortage of flat land in the development of new residential areas, the peaks will be fine instead of a flat or a dam was built to generate electricity, the consumer - consumer, agriculture and so on.

- 2.) Vegetation is representative of the plant cover on the world, cultural

groups to evaluate plants in useful or useless, and then determine whether any plant that can be grown in the desired objectives, it becomes a pattern in areas such as up, planting trees around the fields to the wind.

3.) Structure The structure of humans, animals and plants, which expresses the cultural values of their tradition of creating buildings that vary by time and place, for different cultural groups to build this type of structure, with a unique spatial management represents the needs and vision of the group.

4.) Settlement Pattern is the sum of all the features mentioned above, the man-made environment both houses, barns, roads, canals, railroads are relative to terrain and vegetation, a process adapted Dynamic, sample forms rural settlements of only water, black, with a particular element is striking, structure (house, barn and other buildings), topography (tides, hillside covered with trees), the traffic (road, track, foot) and plants (corn fields and woods in the area).

Despoina Amanatidou (2005) said basic elements of the cultural landscape, contains elements that are not life-namely, geology, geomorphology, soil and weather, the elements of life, such as plants, elements of land use and human being changes in them, such as, agriculture, settlements, infrastructure and cultural elements, such as archeology, history, tradition features.

Eben Saleh M. (1999) divided the cultural landscape to 3 elements consist of Natural landscape elements, Agricultural landscape elements and Built landscape elements.

In Thailand the cultural landscape is divided into several concepts, each concept discussed in directly and indirectly, a concept that can be applied are as follows.

Panjarn Chananon (1983) said, the cultural landscape include settlement patterns, relationships, cultural regulations, traditions, beliefs, patterns, divided the land and building architecture and also Sutthinee Thongsa-ard (1981) said, including the cultural landscape, the settlement, the shape of the house, religion, agriculture and transport.

Ying Palopakorn (2009) provides an explanation of Landscape Structure, in a waterfront community is agriculture, which is the cultural landscape concept highlights the spatial essentially, a network of vessels of Dong and Raceway Park, where Irrigation Ditches is a small excavation of large river, to Orchard Ditches /

Garden Plot is the structure of agriculture forms one of the embankment into a vehicle along with the water in a ditch subplots that water can drain thoroughly.

Jedsiri Taeunmolana (2010) has analyzed the cultural landscape to landscape orientation in the management of community in Phoo Thai Ban Kokgong, Kalasin, classified as the sixth element.

1.) The cultural landscape of the settlement, divided by the shape of the area.

2.) The cultural landscape architectural elements, sub-divided into three categories, namely, architecture related to faith, belief, culture, architecture that meets the needs of living in endemic areas from agriculture and architecture.

3.) The cultural landscape of the occupation.

4.) The cultural landscape elements on society and culture.

5.) The elements of the cultural landscape and environment.

6.) The elements of the landscape, culture, space and traffic.

Also Nawanat Ohsiri (cited in Sinsaengkaeo 2009) explains the cultural landscape through a vernacular landscape, due to the integration between geography and culture too, has the following composition.

1.) Planning and system availability.

- Settlement patterns, caused by the influence of geography and culture, can be classified form; the settlers are three types, linear settlement, Clustered settlement and scattered settlement.

- The availability and the thoroughfare, the layout of the village with the aim of adapting the environment to suit their lifestyle, which is different in each culture, system availability and the thoroughfare was the result of the planning system for example, a waterfront settlement community planning area adjacent houses by the water and into the earth next to a busy thoroughfare and is well connected by land and water.

2.) Place of worship

Belief systems shown in the layout of the local community have two systems, namely, Buddhism and dominating nature, expressed through the following ceremonial sites.

- A central courtyard house is, clearing the village center is a symbol of spiritual community, consisting of the town hall and a large tree.

- Territorial spirit, resembles a miniature dwelling house, located on the fringe of the village is the presence of Territorial spirit is responsible for the village and its inhabitants.

- Places of worship, community in most of the temples are places of worship, which is divided into zones shrine and monastery. However, the places of worship of other religions, such as, mosque, church, Christian, ghosts, etc., can be part of the local landscape as well.

3.) Housing area

Thailand vernacular house looks simple, in line with the environment and human activities, reflecting local identity clearly, the characteristics of each region's native house, under the house, behind the pediment and terrace.

Review of the literature shows that, as a cultural landscape harmony between man and nature, therefore, need to take into account the cultural landscape in terms of physical, historical, social, economic and cultural. In this research, the research, the study of cultural landscapes in urban areas, a central historical area, was divided into three elements of the cultural landscape elements, namely,

1. The physical elements including, a. settlements, the expansion of the community, transportation, land use,

2. Cultural landscape elements, including social, cultural identity, culture, traditions, beliefs and social activities and

3. Cultural landscape elements, characteristics include economic, economic conditions, occupation, and income.

2.3.4 Factors that influence the evolution and transformation of the landscape

The transformation of the cultural landscape is driven by changes in the arrangement of the institutions, population, political, and economic climate and has resulted in the displacement of the landscape, the traditional practice of land use standards and at a commercial scale (Tobias and et al. 2013).

Urszula Myga-Piatek (2011) said factors influencing the evolution and transformation of the landscape consist of five factors namely: Natural factors,

Historical and political factors, socio-economic factors, cultural factors and civilizational factors.

- Natural factors include natural factors, the type of human activities on the environment in that area, consisting of geological structure, surface features, hydrological relation (surface and ground water), climate, soils, plants and the animal.

-Historical and political factors including, event resulting from changes in scope, wars, administrative divisions; system of authority and management of people and place, legal and administrative systems, which change according to the time of history, the composition of the spatial layout.

-Socio-economic factors, including form of the settlements, professional structure, social relations, ownership structure and tourism.

-Cultural factors: architectonic styles, scientific discoveries and technological inventions, tradition, spiritual culture, belief and religion, which are regularly reflected in the landscape.

-Civilizational factors including technical invention, tools devices, managements of the geographical space, architecture and communication.

The study of M.Antrop (2005), a factor that has influenced the landscape changes caused by three main factors, namely, accessibility, urbanization and globalization and in addition, factors that cannot be predicted and should be added to the calamity. Traditional rural landscape resulted in a great diversity of sustainable landscapes. Those have a better legibility and give a clear character and identity to place and region (M.Antrop. 2005).

Nawanat Ohsiri (cited in Sinsaengkaeo 2009) claims that factors affecting the cultural landscape are the space, the buildings, vegetation, walkways, urban planning, housing, temples, palaces and parks. Human activities are changing the land for their livelihood.

The research on the cultural landscape will have studied the cultural landscape and assessing the value of the cultural landscape, but this research, the researchers studied the changing perceptions of cultural landscapes, since studies on the relationship between humans and the environment is important and necessary for implementation of the proposed policy to guide the development or

preservation of cultural landscapes in each area in accordance with the recognition and the response of the people, residents in the following areas .

This educational awareness and responsiveness to changing cultural landscape that the researchers created situations, changing cultural landscape in the area, divided by the changing cultural landscape as three levels, a little bit change or no change at all, remains the same and faith practices, such as, conservation or increase the cultural landscape area, the medium level is, permit modification living adaptive reuse, allowing the material modification and change high level are, demolition or redevelopment. To create something new, replacement or relocation obsolete area. Then the results were analyzed to find answers to the following conclusion.

2.4 Concepts and Theories of Perception

The idea about the perception of the physical environment of humans is abstract concept. The psychological study about human relationships, behavior and physical environment express in a manner that is different by each person on the basis of different environments.

The recognition is the process to obtain information from the environment through sensory system. This process combines sensation of the perception felt by things in the environment. A person can separate one thing from one thing because it was organized in recognition process. This explained the principles of Figure and Ground and the integration or the pattern. In recognition, we tend to perceive things in a perfect manner by the lack of coordination to follow the experience of the past.

We recognize what the similarities are close together or in a contiguous manner confederation (Horayangkura. 1997)

1. Perception is the process to obtain information from the environment through sensory system. This process combines sensation as well.

2. Cognition is the process that involves the mental processes that combine learning, remembering, and thinking. Such mental processes would include the development of knowledge which is intellectual process.

Recognition and knowing process create emotional response and emotional process including recognition process, process knowledge, and emotional processes which are covert behavior.

3. Spatial behavior is the process that a person whose behavior occurs in the environment is associated with the environment through the action is observed from the outside called overt behavior.

Considering the behavior of the core 3 processes found that there is consistent with the goal of designing and planning including:

1. The cause of aesthetics shape for such duty related to the perceived shape of the perception pertains to the importance of aesthetics shape.

2. From the realization of the meaning of the symbol, the design must convey various meanings in accordance with the understanding of users and seers. At least should be able to convey the meaning in order to tell the news to those livings apart from this. The physical environment still convey the meaning of other symbols such as the display of social status, and the expression of system that the values upheld, etc. It may also cause a variety of feelings for those who may be involved with such an appreciation for the atmosphere of the place, a sense of calm, and may be curious, etc. This can be seen as the cause of both the symbolic meaning and feelings that relevance to the process-know-how and significance of emotional process.

3. The formation of meeting the demand functionally is the main goal of the design work and planning. The environment must be accordable and support the activities that occur so that the design work and planning related to the spatial behavior in the environment.

2.4.1. Environmental Perception

Environmental perception is a process of two-way relationship. Humans are part of the environment, is the recipient knows who influenced from the environment and the recognition of the environment, was also influenced by a person's perception. It is based on past experience and according to the aims of the individual at that time, or mental processes occur in the future, changing external environment is the environment in mind.

Environmental perception in everyday life involves recognition in many aspects together. But at this stage is to recognize the pantomime of a major and most active on the behavior in the environment as followings:

- Visual perception is the recognition of the meaning of shapes, features of various objects by interpreting of the various traces that is based on experience.

- Visual perception is the optical recognition (that makes as shape) and position of the objects. Light perception is consideration of the various elements of pantomime stereotypes (appearance, shape) including color, weight and texture. But object recognition is based relationships foreground and background to determine its position relative to the environment to control or guide the look of the audience.

2.4.2 Influences on the Perception of Physical Environment

Analysis of the development of the theory of perception and analysis theory of perception related to the physical environment has pointed to the influence that seems to be important to recognize the environment as followings:

1. Physical environment that individuals recognize, beside the elements are already interested, it also includes the influence of other surrounding environments which may affect recognition.

2. Past experiences of individuals who recognize the environment are crucial to recognize that the process occurs. The results of the perception that vary between individuals partially come from different past experience of each individual.

3. Demand as needed, or current or future target causing attention and value to other things while efficacy conscious awareness means attention to the news that a provocation.

In recognition, things that are around what is perceived as a context for the environment or environmental conditions that influence the perception of those things. The main fundamental awareness about this environment is strongly suggest that the design is absolutely necessary to consider the influence of the environment side, Environmental conditions not only influence the perception only has a major influence on the way of living, society, economy, etc. A person's past experiences influence how important the perception of individuals.

Many individuals with past experience accumulated and ready to be used as a reference and experience that may be referred to the process that is called mental

schemata. What we recognize is a concept that is something that we do not perceive the physical properties of each environment, but we all recognize features associated with past experiences.

From the mentioned definition of perception is a matter of translating or interpreting a provocation to the imagination of the people. Therefore, we can conclude from the study that the recognition means interpretation of the landscape environment such as physical condition, remarkable features inside the city from the living feelings and experiences and the behavior of individual processes occurring in the environment to help interpret the environment as knowledge, understanding and to recognize the combination of ideas and knowledge which are called (the process) Recall. This is the various methods to realize or know that inserted between external stimuli and response behaviors. The response depends on the physical properties of the stimuli and experiences to recognize that after what we experience in the past of perceived physical environment.

2.5 Related Research

1. Chun-His Wang and Chao-Ching Fu (2011) has implemented the concept of Cultural Landscape which combined works of nature and of man to use sugar factory as the case study. The major development of the sugar factory including historical background, the deterioration of the prosperous sugar factory were analyzed in the concept of Cultural Landscape and the possibility of conservation and research status of sugar factory in Taiwan has been analyzed and reviewed, the difficulties and obstacle in preserving the traditional process, possible protection process and basic conservation methods under the concept of Cultural Landscape and the cited potential problems.

2. Roman Fedorov (2013) used "support frame" to compare communicative structure of the cultural landscape and two main shapes of communication.

- The first one include land communication routes and settlement patterns, regional settlement patterns

- The second form include circuit relationship between society and culture that affect on economic development, both directly and indirectly and community life in the region. Methods that are used in the study are the spatial organization of

the cultural landscape and try to explain the cultural diversity of different parts in the study area.

3. Urszula Myga-Piatek (2011) showed cause and process of changing the shape of cultural landscape in the 21st century which related to the public factors that determine this change. Study the morphology and the threat landscape, consider the perspective of human geography and landscape architecture and the topic is viewed by policy (concept) of sustainable development based on the European landscape tradition.

4. Ianos Ioan, et al. (2014) found the relationship between cultural values according to a long and cultural landscape. This article presents an analysis which values the longstanding influence the resilience landscape, the long lasting value is defined as an essential element in sustainable cultural landscape, and the similarity of the dynamic cultural landscape with the territory dynamics system was done in order to show the specificity of the flexible cultural landscape.

5. Edward Relph (1975) said that the uniqueness of the area comes from three main elements include physical factors that can be observed, lifestyle and activities of the citizens, and meaning or value systems and beliefs of the community. These three elements are no clear rules or areas in combination to cause community identity. Each community has its own unique and appropriate for that area (Ornsiri Panin. 2000). These three elements are closely linked to each other. If there is any change in any element, it will affect the character and atmosphere of the place as well.

6. Ornsiri Panin and et al. (2007) study cognitive development and the relationship between Tai vernacular house, Chiang Mai – Chiang Tung. This research focuses on the comparative study of the relationship between the Ruan Tai Kheun in Chiang Mai and Chiang Tung. The contents are related to lifestyle and wisdom to create equilibrium between the natural environment and way of life found that both Tai Kheun in Chiang Mai and Chiang Tung have knowledge about a primitive irrigation systems as a tool to adjust the balance of life and the environment which affect the physical layout of the village with clear evident in the old village and also has a primitive society. However, such characteristics will vary depending on the development of the transportation system, land Characteristics, physical condition of the community, social kinship began to be transformed into a primitive form of eye

square on utilities. The relationship between around the floating house and village disciplinary system and mining firm and the road is the main factor that affects the floor plan. This reflects the life style of the house, divided into groups of Chiang Mai and Chiang Tung clearly. But the two groups remain focused on the relationship with the natural environment, using local material, and have water management systems in relation to life. Environmental features of the architecture of Ruan Tai Kheun in Chiang Tung is more clear than in Chiang Mai because the system is also self-sufficient society, the intense kinship with nature and with the understanding and protection.

7. Tonkao Panin and et al. (2005) study beliefs and social systems which related to the resident and living is the research primarily associated with the house, the local community and ecology as well as the homes of people in western Thailand. The main point of the research is to study the nature of life, systematic living that is sustainable in itself, with a belief in various forms, as well as social features which are the unique characteristics of each local as an important factor influencing the lives and lifestyles of such systems, principles, beliefs and social systems whether expressed in tradition, manner, religious ceremony, or regulatory restrictions. All of these form of life in each district including building the house, careers, resource used and the relationship between humans and the environment. Despite beliefs related to housing and the environment looks different to the conservative culture of each area, the issue is similar the cultures, beliefs and folk culture created harmonious unity difficult to separate from each other. The combination of this belief is often a consequence of migration of minority or ethnic groups; ethnic groups often lead those beliefs and its unique architecture along with it. The development of the households in terms of format, shape, and the use as a factor which shows the change of life in each district resulted in the development, integration and change of belief systems, social systems, culture as well as economic and lifestyle changes.

8. Natcha Sagunngam (2011) studied Cultural landscape of the floating village community : A case study of Sapan Runtee community, Laiwo, Sangkhlaburi, Kanchanaburi Province. This research aims to study the cultural landscape of the community that affect the formation of the cultural landscape, the dynamics of the cultural landscape and the value of the cultural landscape. Because this community

is a highly stylized landscape, the community has a diverse ethnic population, diverse cultures live together under a unique natural environment. The community is located on a Vajiralongkorn Dam in which the water levels are constantly fluctuating. But there is still a subsistence lifestyle.

According to the study of the formation of floating village community cultural landscape with three respects including: firstly, the natural environment and the influence of the construction of Vajiralongkorn Dam; secondly, the restrictions on the use of natural resources in the forest area of Khao Laem National Park; lastly, ethnic diversity and the ability to adapt to new environments.

9. The research of Thai-Mon vernacular houses of Ornsiri and et al. (2000), in the study of Thai-Mon vernacular houses, the case study choose to spread over an area of study in selected three groups are a group that is associated with the Bangkok area, the northern of the central part and the southern of the central, and the Western area. From the case study found that Thai-Mon vernacular houses overall, the region has a similar house as in the central area which is actually a wooden house, high basement, using the basement as relief purposes, the shape of the house is a house extension which the outline of the house in the first group as a pitched roof house but with the addition of expansion to the size depending on the extension of family members. There are factors associated with beliefs, particularly with regard to ancestral spirits and various superstitions which strongly influence on architecture, especially by putting the home draw direction to the west and the east. This is different from Ruan Tai, it is believed about the positioning of the grandparents spirit's room and bedrooms and other beliefs as that force the commanding position of living and different levels of folk which came from beliefs. Besides, we also notice that the expansion of the Mon house related to family extension unlike the case of Thai house extension that will not expand on the outskirts of the old house surrounded a house, but to fill out the form is not contrary to the direction of the ancestor room and extend as the room or house. Living in the house was mostly as empty hall which multi-purpose room has closed. Size of living space in the house is prepared to support the traditional activities of the masses it affects a large living area; meanwhile, those living in the house with a less members. In addition to real wooden house that tied house system of

Sagklaburi group common characteristic of the area and construction system and the use of materials different from household binder of Thailand.

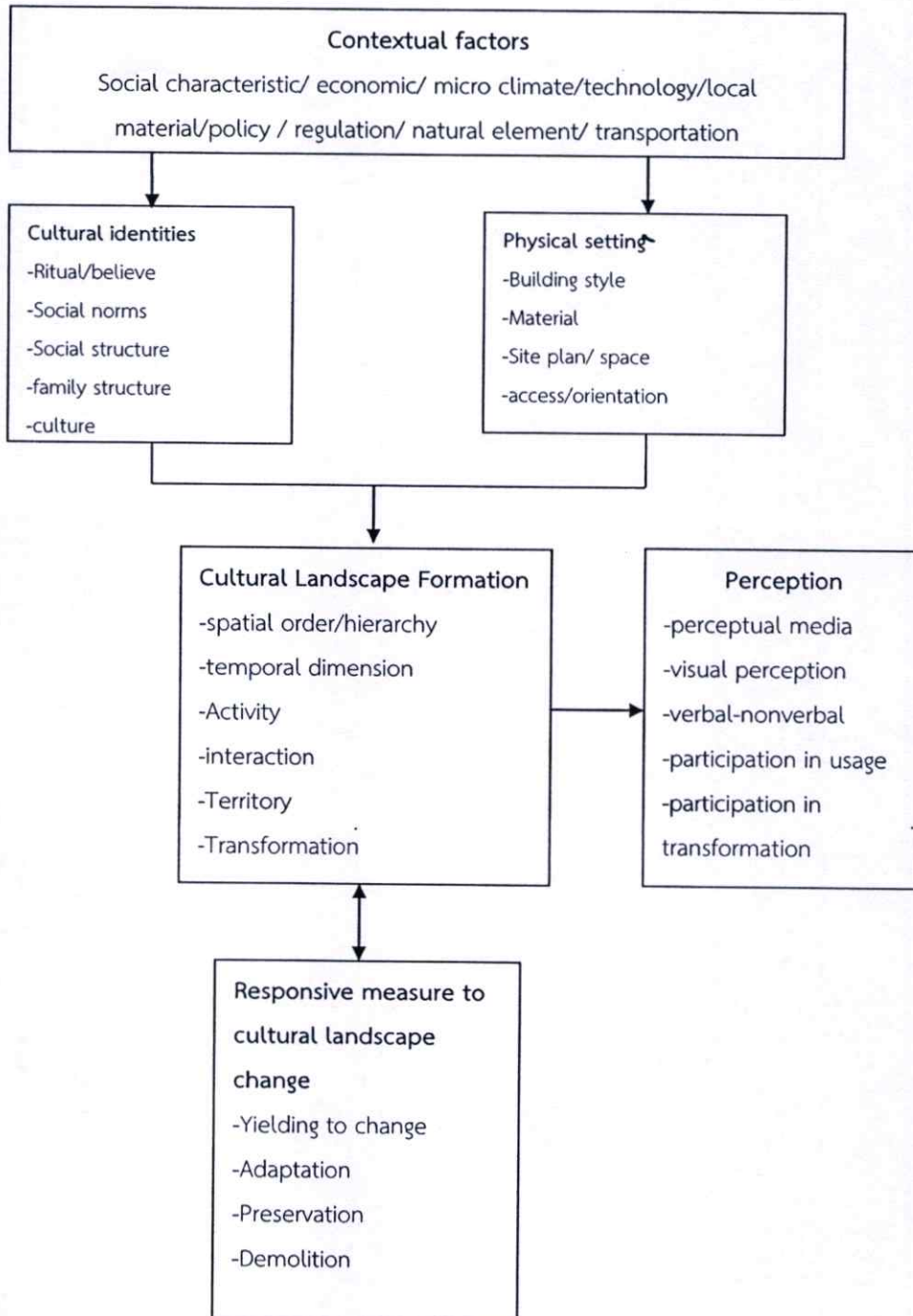
The survey area in similar group of the Bangkok area is the group found that the only small belief that affect housing has been influenced by Thai society and adapt themselves almost completely such as changing ghost room to holy room, but the West and North Central still have strong effect from the beliefs because of the nature of life and agriculture are still obvious.

2.6 link theory with research framework.

According to the review cultural landscape is an area where shows the relationship between culture and physical environment. This reflects to the development of the society or community. The previous studies of cultural landscape in Thailand have mostly focused on landscape elements, the value of a cultural landscape, and conservation and management. However, none of these have reported about spatial linkages and factor affecting to perception of changes in cultural landscape. This research divided cultural landscape into three elements consists of the physical element, social and cultural element and economic element.

The review of the relevant literature can be linked display concept for this research. The first part, including the social context. Economic, technological, social, community, climate and local materials affect cultural identity and physical condition also resulted in the recognition of different forms. The second part of the cultural identity also affects the emergence of the cultural landscape. The three indicators of cultural landscapes evoke different physical characteristics. And finally the formation of the landscape, culture and physical condition that occurs also affects cognition and response to changes in the levels vary. As shown in the research framework.

Figure 2.2 Conceptual framework



CHAPTER 3

Research Methodology

This research was both a qualitative and quantitative study in order to understand the formation of the cultural landscape in different levels. This chapter shows the methodology related in this research by separating topics from selecting the study areas (3.1), how to collect data (3.2), population and sampling (3.3), research procedures (3.4), tools for collecting data (3.5), pre-testing of instrument (3.6) and lastly, data analysis (3.7). The details are as follows.

3.1 Study Areas

The areas of this study were from the Northern region of Thailand. Traditional communities in the northern region have long been characterized as source of livelihood with social cohesiveness and environmental consciousness. Communities with different levels of change were selected in order to compare and identify the factors that cause changes in the cultural landscape.

Criteria for study area selection were:

1. Areas having had long history and long culture, from past to present;
2. Age of the area – these are the old areas and having had evidence of architecture in the past not less than 50 years;
3. Areas that have had the elements of cultural landscape and change, from past to present.

After selecting the scope of the area in the northern region, three communities were chosen to represent different conspicuous levels of cultural landscape changes—high, moderate, and low. The criteria for deciding the areas which represent those different levels of cultural landscape were role of the city, economic, and trace of cultural landscape. Based from those criteria, the selected areas were: the old city in Chiang Mai province, the old city in Lamphun province, and the old city in Phrae province (Fig 3.1). These areas have been established for a long time and they retain the same appearance as the time when they established. The kings who had instituted these provinces had a close relationship so these areas are regarded as sister cities. It means having the same types of cultures, norms, and

traditional architecture. Ages of these areas were more than 100 years and the landscapes are similar. However, as time changed, all areas have further developed; cultural landscapes have been changed differently. Therefore, the three provinces of Chiang Mai, Lamphun, and Phrae were suitable to be the study areas under these criteria; to test, analyze, and find factors determining those various changes.

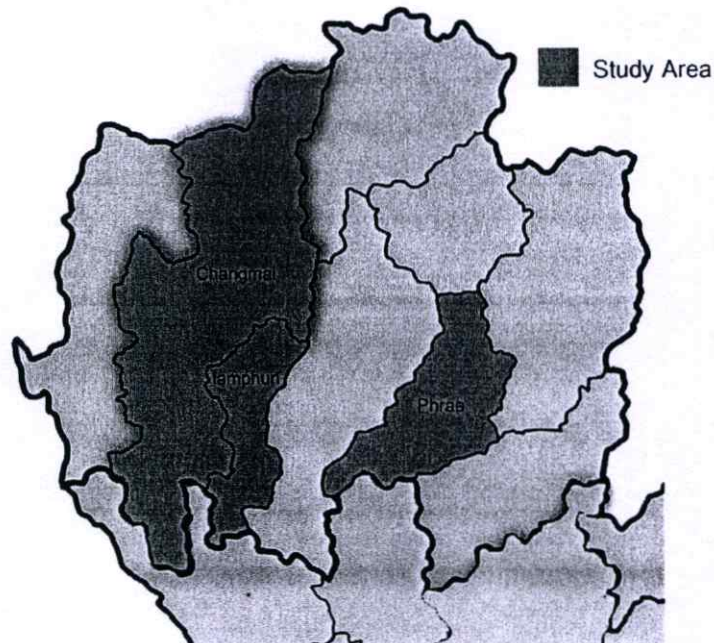


Figure 3.1 Location map of the study area

3.2 Data Collection

This research used secondary data and primary data. Questionnaires and in-depth interviews were used to compare to the spatial / physical map to study the links between social, cultural and physical characteristics of settlement patterns. Secondary data were obtained from previous researches and historical documents.

This research is a combination of qualitative and quantitative research. The qualitative research was used to analyze historical data and for interpretation; comparing the change in the cultural landscape of the past and the present. The interviews in the abstract form, such as beliefs were upheld in practice. Quantitative research using questionnaires were employed to perceive and respond to the cultural landscape change of the community.

3.2.1 Primary data

1) Field survey to explore the physical characteristics of the study area.

2) The questionnaires were distributed to the target population who live in the area to gather data that are important representation of cultural landscape of the study area; included open-and close-ended questions, using simple random sampling.

3) Interviews to gather insights from the past to the present were;

- Interview people who have lived in the area more than 20 years including seniors of community, academicians, and local community leaders.

-Confirming the accuracy of the information from the interview by searching documents or various secondary data.

3.2.2 Secondary data

Gathering data from various departments in both public and private sectors, including information on the physical setting, information document, the public utility, land use, economic information society. The sources of such information were statistic data from National Statistics Office, maps from the Office of Public Works and Town Planning in Phrae, Chiang Mai, Lamphun, Municipalities of Chiang Mai, Lamphun, and Phrae, and historical information from research papers, theses and textbooks from libraries

3.3 Population and sampling

The population study was divided into three groups.

The first target group of people who took the questionnaires of perception to the cultural landscape change, were selected by cluster sampling and simple sampling in each area including those who live in the area, aged 15 years and over. The province of Chiang Mai had 279 samples, Lamphun had 334 samples, and Phrae had 338 samples, with a total number of 951 samples.

Samples from Chiang Mai included people living in the municipalities of 11 communities: eight communities from within the city wall were ChompoochangMoi, LamChang, ChiangMun, Samakkee, Papao, Kuankama, Chiangyuan, Chetawan; and three communities outside the city wall included Wat Ket, Wat Lok Molee, and Panping.

Table 3.1 Samples in Chiang Mai study areas

Community	Number	Percentage
Inside the city wall	129	46.2
Outside the city wall	150	53.8
Total	279	100

Lamphun samples include people living in the municipalities inside and outside of the city wall totaling to 9 communities which include Phakongluesee, Mahawan, Sandonrom, Chaimongkol, Pratulee, Chamdevi, Wiangyong, Banluay, and Thakam-Thanang.

Table 3.2 Samples in Lamphun study areas

Community	Number	Percentage
Inside the city wall	134	40.11
Outside the city wall	200	59.88
Total	334	100.0

Phrae samples include people living in the municipalities inside and outside of the city wall with 9 communities including Huekoung, Pranon, Thungtom, Chetawan, Pongsunan, Namkhue, Sriboonruang, Rongso ,and Methung.

Table 3.3 Samples in Phrae study areas

Community	Number	Percentage
Inside the city wall	145	42.89
Outside the city wall	193	57.11
Total	338	100

The second target group was those who have lived in the area for at least 20 years, seniors in the community, and community leaders. In-depth interviews in the abstract subject, such as the belief that upheld the practice, the transfer of activities from the ancestors of the community, and the changing cultural landscape in the past to the present were used, with a total number of fifteen people.

The third target group was the professionals who have experiences in local architecture, urban planning, and historical researches. These people comprised of Lanna province researchers and historical Lanna experts. In-depth interview about development issues in the cultural landscape were conducted with a number of seven people.

3.4 Research procedures

The procedure is as follows.

1) A review of literature and research-related documents. Historical information, cultural information, and socio-economic in the study area were analyzed and interpreted.

2) Survey the topography in the physical setting of the study area. This included the cultural landscape appearance in the area, building style, layout characteristics of spatial components, and local material by observation and photographic records.

3) Studying aerial photographs of the selected area to compare the changes in the residence over time, past and present.

4) In-depth interview in the abstract subjects, such as faith, and practices upheld in the past to the present were conducted. Questionnaire and interview residents in the community on the issue of perception and their responses to the cultural landscape changing were also applied.

5) The data obtained from the study area were compared with the patterns of linkages between physical and cultural features of the area. Information acquired at every stage of the research was used to conclude a model for the formation of the cultural landscape.

Table 3.4 Conception and Operation

Conception	Operation	Index	scale	Tool
Contextual factors	<ul style="list-style-type: none"> - Social characteristic - behavioral pattern - economic - technology - micro climate - local material -policy -transportation 	<ul style="list-style-type: none"> - sex - age - education - marital status - occupation - income - type of construction -climate - type of local material -Macro policy -Micro policy -access, road 	<ul style="list-style-type: none"> Nominal Ratio Ordinal Nominal Nominal Ratio 	Questionnaire, survey, document
Cultural identities	<ul style="list-style-type: none"> - Ritual / Belief - Functional affordance - Social Norms - Social structure - Family structure - Identity 	<ul style="list-style-type: none"> - belief in past/present - ancestral spirit - tradition - community rules - community status - single/ extend family - number of people in the household - community cultural identity 	Nominal	Questionnaire, In-depth interview, survey, document
Physical settings	<ul style="list-style-type: none"> - Local material - Site plan / space - Orientation 	<ul style="list-style-type: none"> - type of material -spatial configuration, open space 	Nominal	Survey, document

Table 3.4 (continued)

Conception	Operation	Index	scale	Tool
Physical settings	<ul style="list-style-type: none"> - Access/ approach - Building pattern 	<ul style="list-style-type: none"> - orientation/ spatial - configuration of building, villages - level of access (difficult/easy) - focal point/ view - classified type of building Past/ present 	Nominal	Survey, document
Perceptual measure Perception	<ul style="list-style-type: none"> - perceptual medium - verbal-nonverbal - visual perception - participation in usage - participation in transformation 	Perceptual media <ul style="list-style-type: none"> - level of perception - physical landscape/ cultural landscape - participation in usage area - participation in the community activity - participation in the development - participation in cultural landscape transformation 	Ratio	Questionnaire, observation
Cultural landscape formation	<ul style="list-style-type: none"> -spatial order - Temporal dimension - Meaning 	<ul style="list-style-type: none"> -settlement type - changes in each period - meaning perception 	Nominal	Questionnaire, mapping

Table 3.4 (continued)

Conception	Operation	Index	scale	Tool
Cultural landscape formation	- Communication	-communication in the community/ communication method	Nominal	Questionnaire, mapping
	- Activity	- culture activity in the community - commonly used area - landmark remembrance		Questionnaire, survey, document
	- Interaction	- amount of neighbor that know, relationship		
	- lifestyle	- Frequency for community activities - Hobby, preference		
	- Territory	- community areas		
	-Transformation	- method for transformation of cultural landscape		

3.5 Tool for collecting data

Two types of survey techniques—survey and structured questionnaire—were utilized to obtain two types of relevant information—physical environmental changes and residents' perception and responses to the changes. Both checklist and

mapping techniques were employed together with the visual survey in the areas under study to collect the physical settings, daily activities, and other spatial behavior in the premise and compare with aerial photography.

3.5.1 The survey forms were used to collect spatial data about building, vegetation, settlement, landscape, and physical setting of cultural landscape.

3.5.2 The questionnaire survey comprised of four sections to obtain different sets of information for further associative analysis.

The first section of the questionnaire inquired about the baseline information regarding demographic and socioeconomic attributes. The second section consisted of the extent of social relation, belief and participation in cultural activities bound to occur in the area. The third section questioned the subjects' perception using to weigh the hierarchy of their perception and response to cultural landscape change, using a five-scale measurement. The last section consisted of open-ended queries on the recommendation to cultural landscape change.

The criteria for the score

The levels of measurement responding to cultural landscape change had score as follows;

Highest	=	5 score
High	=	4 score
Moderate	=	3 score
Low	=	2 score
Lowest	=	1 score

3.5.3 Interviewed community leaders and academicians on the issue of transforming cultural landscape and factors causing changes in the cultural landscape of each area. In the interview, the researcher used interview snow ball which is, when asked to provide key people, including, community leaders, elders and scholars on various issues, then there is a reference to a person related to an interview. The answer of complete and unique, then put the result of the interview content analysis, combined with data from surveys, studies, documents, questionnaires from a sample of residents in the area were analyzed to find answers purposes each of the following research.

3.5.4 The aerial photographs and satellite images to be analyzed for the expansion of the community.

3.6 Pre-testing of the Instrument

Checking the quality of the research tools were as follows.

1. Questionnaires were brought to the experts to get a consultation in rechecking the accuracy and appropriateness of the data from the document as a basis.

2. Questionnaires were tested for its reliability with the population that was similar with the population target.

3. Pre-test questionnaires were brought back to the experts to correct mistakes and seek for any advice. Then, questionnaires were edited as suggested by experts. By doing this, the data collected would be more reliable and comprehensive.

3.7 Data Analysis

Quantitative data were processed by means of SPSS statistical package while qualitative information, such as those derived from in-depth interview and observation, were compiled and analyzed by means of content analysis.

The statistics used to analyze the data to test the hypothesis.

3.7.1. The processing of data and statistical analysis of the questionnaire for 951 samples were done by descriptive statistics using percentage, average, and standard deviation to explain demographic characteristics, participation in cultural activities, etc. Using parametric statistics such as Oneway-Anova test, t-test, and Chi square test to describe perception and response to the cultural landscape change.

3.7.2. The average score were derived from the analysis to compare the defined criteria for interpretation. The rate of adaptation to the cultural landscape changes were divided into 5 intervals. The interpretation of the principles of interval share class (class interval) using the following formula.

Average 1.00 to 1.49 means the lowest level of acceptable change

Average 1.50 to 2.49 means the low level of acceptable change

Average 2.50 to 3.49 means the moderate level of acceptable change

Average 3.50 to 4.49 means the high level of acceptable change

Average 4.50 to 5.00 means the maximum level of acceptable change

3.7.3 Qualitative data used content analysis method

CHAPTER 4

The general condition of the area

In the study on Formation of cultural landscape and residents' responsive perception: a case study on the northern region of Thailand required to explain the context of the area in order to raise awareness and contribute to the development and analysis of the elements of the cultural landscape in the study area for the next chapter. Therefore, this chapter discusses the history, the settlement, the social, cultural and physical condition of the study area.

4.1 The physical characteristics of the northern areas

4.1.1 Topography

The topography of Northern Thailand is mostly mountains and valleys. Flat areas between the valleys continue from the high mountains of the Himalayas and Yunnan, China. It features mountain range in the north, a line parallel from north to south, including DanLaos Mountain in the north, Thanonthongchai Mountain on the west, Phi Pan Nam mountain range in the middle of the region, Luang Prabang Mountain range in the Eastern. For flat areas are suitable for the community and agriculture have only a quarter of the total area. The area is characterized by a deep trough. It has high mountains surrounding the basin. The plains are a narrow and long in a north to south scattered everywhere in the northern zone. These flat call "Aeng", which is a major cultural origins of the Lanna kingdom, including Chiang Mai – Lamphun basin, Lampang basin, Chiang Rai,-Phayao basin, Phrae basin, and the last is Nan basin (Sarassawadee, 2006).

4.1.2 The community settlements

A dominant feature of the settlements in the northern region is the city spread along the river basin. The settlement is along the river. Flat areas are crowded; the high area is sparsely populated and is the living of the Lua and Yang which living by planting rice and crops. Therefore the lives of the people on the high

area and the flat area are different. As a consequence of the distribution in the basin with mountain barrier, it caused each city is consecutive. Thus, each city has its own unique characteristics such as localized resident is found to have an accent, vocabulary endemic different but they still understand and live together peacefully. The study areas located in the Chiang Mai province and Lamphun provinces settled in Chiang Mai-Lamphun basin which is the largest basin in the North. Aboriginal communities have settled well in groups. Both large and small scattered in the river plains and the foothills of Chiang Mai - Lamphun basin (Sarassawadee, 2006, p.29). Phrae province settled on Phrae basin which is the eastern basin of the North or also known as the Lanna East.

According to they had the historical background together for a long time; therefore, the culture and tradition are similar. But it may vary somewhat depending on factors being differ for each district.

At present, the word "Lanna" is well known as eight Northern provinces including Chiang Mai, Lamphun, Lampang, Chiang Rai, Phayao, Phrae, Nan and Mae Hong Son province. The main center of Lanna is Chiangmai city which age of 700 years since the establishment of the Kingdom by King MengRai until 1996.

4.2 History

Northern territory or the former Lanna had a history of a thousand years. Before Lanna kingdom founded by King Meng Rai, there were communities located in this area which have relationships with local legends such as community of Kok river basin, Aing river basin, Ping River basin, Wang River basin , Yom River basin and Nan river basin.

Chiang Mai is a large ancient city. Until now, the last 713 years, according to the stone inscription at Chiangmun temple said that King Mengrai established ChiangMai on Thursday, April 12, 1839 at the plains of Doi Suthep. There is a river, which flows from Doi Suthep through the north of the city. In West to East then turn into the embrace downtown East side and the south east. This river is called Mae Kha runs alongside the Ping River and to converge further to the south of the city. Currently, flat area is the location of this city which slopes from west to east. The sea level of the northwest corner of the city or Huelin corner has the highest level. King

MengRai found this location while he came from the city of Wiang Kum Kam to Doi Suthep. This area was originally a wild grass and deer lived in northeast of the town with the big pond where a major water source for animals is. When he found the suitable location for the city, he has invited his companion; Paya Luang, the King of Sukhothai and King Ngam Maung of Phayao, who ruled as a consultant in the city. The hosts were divided into two sets, one with 50,000 to build palace and other place within the city. Another 40,000 people had to build a moat, city wall, walls of the dam, gate etc. The construction vessel is four months to complete. The two friends had joined the celebration this newly created city which has been called "Nopburee Srinakornping Chiang Mai" (Wichai kattaha and et, al in 1986, p 110).

4.3 Lanna culture and society

The society of Lanna, Thailand in the past had developed a belief system and worldview from the traditional beliefs of Lanna people and the principle of Theravada Buddhism is the majority. Belief often comes from Buddhism. An important belief is ancestor spirits (PhiPuYa) that is believed that inspired a good and bad to descendants. Lanna people focus on the north-south axis by adhering to a major axis both axial house and axial city. According to ancient beliefs, the highlight of the city was created a core urban at the center of city called "Inthakin pillar" is a Lanna word meaning the city pillar or threshold. According to the legend about the ChiangMai city, the city pillar referred to as the "navel of city" or "Sadue Maung" and held in the big tree as a resident of Angel City. In ancient era, there was ceremony to worship the navel of city every year during the rainy season before the farmer. Only Chiangmai formalize worship at 8th month and 9th month called this ceremony is that "Khao Inthakin" which held and practiced in the regime of Lanna before gathering to central government. The area within the city walls called "Inwiang" to contain its capital which was a resident of the lord and master. There was a open space called "Khong" (Victory Field) near the Khong had a temple aligned with one side called "Wat Hua Khong" (Anuwit and Wiwat, 1996: 54- 59; https://library.cmu.ac.th/en_lannatradition).

4.3.1 Traditions, beliefs and culture

The populations in northern region are majority Buddhists. They are strong ties and traditions from the religion. The tradition occurred by a combination of lifestyle and religious beliefs. Belief in spirit as a result to a unique way of traditions which vary to the season, including Songkran, Yi Peng and Salakpat Tradition etc. Lanna people related to the soul which they believe that there is a secret to protect these beliefs on how to be able to reflect in everyday life and spatial expression. The animistic belief in spirits (they called phi) which are vital to the way of life over its predecessor, such as animism or ancestor spirits "PhiPuYa" to protect the family. Phi Arak or the spirit which have a duty to protect the country and community and Khunnam refers to the water source or the major rivers that serve as the veins of their lives. Phi Khunnam is the spirit who feeds water to the fields. Phi Fai (Fai= dam) has a duty to protect the irrigation dam. Su Kwan Kwai tradition is a ceremony that Lanna people feel deep gratitude toward the buffalos.

Lanna people with ties associated with animism. We can find from the daily life, as, when is it time to go into the forest in search of food or to hold camp in the forest, they often notice to spirit or deva who protect that place and when they eat in the wild, usually feed the spirit as well, moreover wherever they are, whether in the city or in the forest, when need to urinate they have to ask permission from spirit of place. These show that their lifestyle bound to the animism. Offering sacrifices to a spirit of Lanna or "LeangPhi" would be in the range between 4th until 8th of the north during this time we will find that the villages in the North region will sacrifice ancestral spirit greatly.

Ghost heroes of the community over the past known as the "Phi SuaBan Phi SuaMaung" ghost heroes (Phi) that protect the city include, Phi Arak Chao Ton Loung Kam Daeng, which settled at Doi Chiang Dao, ChaoPorKhormuaLek, Phi Arak Chao Ton Loung Kam Daeng protect on the north side, ChaoPorKhormuaLek protect the city in the south, the respect of "Phi SuaBan Phi SuaMaung" is the belief of tribal in Thailand from the past (Anuwit and Wiwat. 1996: 45)

The respect in ghosts and rituals that take place in the area thus are causing formation of the cultural landscape in each area. We called the area where doing

ceremony about ghost is “Hor” and called the place where spirits or deities reside in that “HorPhi” or Devils Tower, which will be an annual ritual.

4.3.2 Belief in a city building in northern Thailand

The settlement in the region to have faith in the city building, which will be held since ancient times by the layout of the building ancient cities in the past, the city is the oldest of the region, such as, Hariphunchai or Lamphun. At present, the Wiang Kosai or Phrae and Chiang Mai today, in addition to education about Chaiyaphum or a good location of building the city, then the city in line with the belief that the ancient variety beliefs which a mix are shaping the city, which over time affected the city's beliefs are as follows.

1. Belief in ancient city is a living organism, a defining characteristic of city as people comprising head, foot and navel.
2. Belief in centered universe, which is the faith and belief “Inthakin pillar” and relics in Buddhism.
3. Belief in direction of temple (Taksa), which showed the location of the priorities of sacred direction.
4. Rituals that resulted from the belief in the existence of the city.

In Lanna, there are ceremonies about dating destiny to renew and make a fortune for people and the belief in the existence of city as creature has a body and a destiny as human, so it occurred the ceremony traditionally for people and city prosperity.

1. The ceremony traditionally destiny, this ceremony is an important ritual of Lanna Thailand which popular in many such occasions, as a birthday, a new house ceremony, move to a new address. Sometimes illness. It is believed that the ceremony traditionally destined to renew themselves, and relatives longevity. Bring prosperity and luck.

2. The ceremony traditionally destiny house, believe that the house came under auspicious day, it is a good day to come over Rahu deadly predator makes home life torn down. That is why the people who lived in suffering and sickness. The owner and the neighborhood will join together to eliminate dispel called house dating destiny or “SuebShataBan”. Another was the Songkran period elapsed on April

16th, 17th, 18th, locals will set out one day inherit a house destined to achieve prosperity to the people.

3. The ceremony traditionally destined city or “Sueb ShataMaung” has long been reason to believe that the city was built up has horoscope or sometimes called a city horoscope. The planets were mixed fortunes over the city, making the city was destined to fall ill and destined to die. So people who live in the city have suffered with sickness and misfortune. The leader of the city will join together to make the destiny city causing the country is prosperous, abundant crops. The ceremony traditionally destined city for the Bible skills include the worship of Arak preserve the landmarks of the city, the gate and corner (Chaeng) located along the main four direction, the gate and Chaeng help to prevent the enemy, thus establishing this sacred place. Worship the city ceremony is in the middle of city or navel city. Later, they used the area in front of the Three Kings Monument.

4.3.3 Beliefs about the worship of relics

Relic or PhraThat is a northerner or Lanna worship, there are belief in relics of annual birthday, when people died the soul would return upon the relic. Location of relics typically located on the hill or mountains such as PhraThat Lampang Luang in Lampang, PhraThat Doi Tung in Chiang Rai, PhraThat Chae Haeng in Nan, PhraThat Chohae in Phrae and PhraThat Doi Suthep in Chiang Mai are similar. They believe in universal precept located on a high area convincing near heaven. There is only Lamphun province that is different from the others, because of the relics of Lamphun called “PhraThat Hariphunchai” is located in the center of Lamphun city It is probably due to the topography of Lamphun is mostly flat land, so the town or area in the walled city, which is characterized by the turtle, has been enshrined relics Hariphunchai in the heart of the town or city center.

4.4 Geography, history, traditions, beliefs area

The study area can be classified as follows.

4.4.1 Chiang Mai

4.4.1.1 Topography

Most Chiang Mai area is mountainous. Flat plain is in central of the Ping River basin. The north contact with the Shan State of Myanmar, including Phi Pannam mountain, Laktang, Pokkla, Thompong, Thuoy, Pha Wok mountain and Ang Khang mountain is part of Dan Laos mountain are boundary lines.

The south connects to Sam Ngao District, Mae Ramat and Tha Song Yang district (province).

The east connects to Mae Chan, Muang Chiang Rai, Mae Suai, Wiang Pa Pao district. (Chiang Rai Province), Muang Pan and Lampang district. (Lampang province), Banthi, MuangLamphun, Pa Sang, Wiang Nong Long, BanHong and Lee District. (Lamphun province)

The west connects to Pai, Mae Hong Son, Khun Yuam, Mae La Noi, Mae Sariang and Sop Moei district (Mae Hong Son province) (www.chiangmai.go.th).

4.4.1.2 History of Chiang Mai

Chiang Mai, a name that appears in the legend "Nop Buree Srinakornping Chiang Mai" is the capital of the Lanna Kingdom Thailand since Phraya Meng Rai, made up of 1296 (1839B.E), which is the age of 710 years in 2006 (2549B.E) and the city has been continuous evolution throughout the history, Chiang Mai is a freedom city, ruled by King Rajawong Meng Rai for 261 years (between 1296-1557 BC). In the year 1558 (2101B.E) ChiangMai interests of Independence to the Burmese king, named Bureng Nong and not fall under the rule of a regime engaged two hundred years, until Phra bat Somdejphrajaotaksin Maharaj and Phra Bat Somdejphraputtayodfah Yula Lok Maharaj, has helped Lanna Thailand under the leadership of, Phra Yakawila and Phra Yaja Ban, in making war to expel Myanmar from Chiang Mai and Chiang Saen successfully Phra Bat Somdejphraputtayodfah Chula Lok Maharaj established Phra Yakawila the ruler of Chiang Mai in the royal city of Bangkok and descent of Phra Yakawila, which is called the family you their seventh, rulers of Chiang Mai, Lamphun and Lampang successor, until the rush, reign

of King Chulalongkorn Phrabat SomdejphraChunlaChomklao Chao Yu Hua (Rama V), please reformist government lands settlement, has canceled a royal city in the north, the central authority spread and over the country through the administration of intendants. Establishing the Monthon system, Lanna states in the north were made into monthon called Monthon Phayub and the year 1390 (2476B.E), Prajadhipok, King Rama VII changed form of the governance as province until now.

4.4.1.3 Belief in the creation of Chiang Mai

Creating a city, as a result of more strategically and proper analysis of Phra Ya Meng Rai who established the city, as well as faith-oriented universe, which have contributed to Chiang Mai looks different from other city, downtown Chiang Mai in the ancient city boundaries are defined by a surrounding moat alongside the building walls, to prevent the enemy and the scope of the city prominently, the city appears today that there are two parts. Part of a square surrounded by a moat with water throughout the city, the square is width of 1600 meters, the city walls are brick, another part of the rampart or Bailey, the city walls. consists of four corner (Chaeng) and five gates, each gate is also interesting in terms of history, associated with attractions within the city itself, the wall height of about eight feet, the water in the ditch. also available is the water that flows from Hua Keaw, which emerged from Doi Suthep, live on in the city with a major five-door is on the east side called, Tha Phae gate, the western is Saundok gate, north is Chang Phueak gate, south is Chiang Mai gate, called southwest Suanpung gate (Suan Prung) notice all four are obvious, Chaeng Hualin, Chaeng Siphum, Chaeng Kha Tum and Chaeng Ku Hueang (Tew Wichaikuttha and et al in 1986: 112) (figure4.1).

Belief in creation of a virtual human body, the proportion of top or north into the upper part of the body is "Huawiang" or "Head of the city", the residence of King. the body or "Sadue Maung", as the market lower part of the body or Teen Wiang located Ban Ruen Kun Nang (the lord house) and Ban Ruen of Pri Pon (local house) and they work in, and also share the city in the direction of the city known as Tak Sar Maung, from these beliefs make use of the space is divided into different sections, at the top or north will be "Khoung" the sacred ceremonies of the city, of philanthropy and Sueb Shata Maung.

Traditions and beliefs, including, tradition Song Nam Prathat Hariphunchai, tradition Salak Pat of Lamphun is traditionally called Salak Yom, which is different from other provinces in the north.

4.4.2.2 History of Lamphun

Lamphun city was influenced by Dvaravati style. The city was built in the ninth century during Queen Chamadevi's reign, following the Lavo's prototype. The eastern part is close to the river and surrounded by a moat. The three sides of the city are also surrounded by a moat. The old moat is located on the plain of Chiang Mai-Lamphun valley and is 450 meters wide and 825 meters long, with an area of approximately 0.65 square kilometers. There is a river flowing through the town called Kuang River. The settlement of Lamphun in the past was located near this river. A geographic feature of Lamphun city is a cambered mound. It was used to prevent flooding.

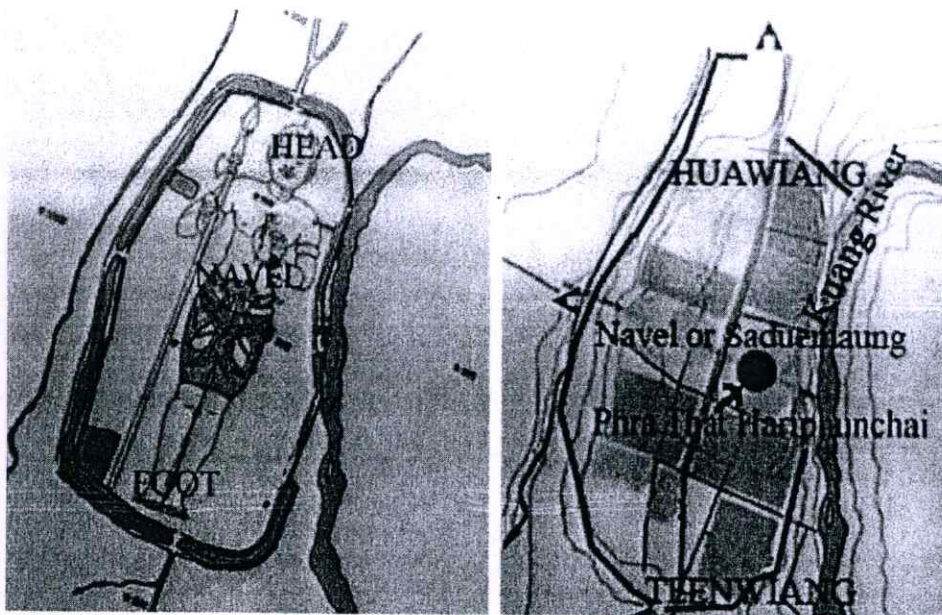


Figure 4.2 The belief that the shape of the city was similar to a human organism

Source: Lieorungruang 2001, analysis by the author

4.4.2.3 Belief in the creation of the city

According to the legend of Hariphunchai, Lamphun was built by hermits. Lamphun's old city wall is shaped like a conch from an ancient belief in this important animal in religious ceremonies. Conch is a representative of water or ocean in Phram-Hindu religious ceremonies. It is used in the King's ceremonies, and it is the

symbol of the victory. In King MengRai dynasty, the settlement of Lamphun was influenced by Chiang Mai. There was a concept that the city had a purpose and was similar to a human organism (Liorungruang 2001, 25). Lamphun was created to resemble a human body with a head, navel, and foot (Figure 2). The upper part of the body was called "Head or Hua maung" and consisted of important areas such as the head of the city. This area was occupied by the palace of the King, treasuries, and open space (Khuong maung). The center of the city is called "Sadue maung" or the navel of the city. This center was considered to be the most important part that situated the relic of Hariphunchai, the major center of worship of the city. The lower part of the city was called "foot or Teenwiang", which was the area of the lords and the people (Liorungruang 2001, 26).

Furthermore, the original urban plan was created according to a religious belief that the orientation of the physical environment was important. The city was divided into four orientations: the North, South, East, and West. The North was an area that was not prone to flooding, suitable for settlement, and designated to be the most important area. It was the site of a palace courtyard (Chao Luang) and a temple (Wat Phra That Hariphunchai) that were important to ancient kings. Most architectural materials were brick, stone, clay, and laterite. The South had natural low slopes along which water flowed down. It was the lower ground and designated as the stewards of the second layer of the treasury of elephant stables. The East was a thoroughfare alongside the river. This side was at the front of the town, appropriate for the settlements of local people and civil servants. The settlements' construction materials were mostly water-resistant bamboo and wood. The West was a forest area. It was also known as the area for the deceased; corpses were taken out of the town from this side and taken to the forest for cremation. They formed the Ku of Chamadevi (for storing the remaining ashes).

In the past, the town included the areas for the kings, dynasties, and temples. The present boundaries of these territories are still visible in the urban areas. Nowadays, the ancient wall, called "Hariphunchai", still holds six remaining gates: the West Gate called "Mahawon Gate"; the North Gate called "Chang see" or "Chang see Huawiang"; the East gate has three doors and is named "Takham," "TaSingh," and "Tanang"; and the South gate called "Lee" (Boonyakiat et al. 2012).

Inside the Hariphunchai wall, the king's royalty vassal temple, treasuries, and markets can be found. The navel center of the city is situated at Phra That Hariphunchai in the southwestern part of the city. The central part of the city was built according to the beliefs in the first stage of the formation of the city that it had a purpose and it was similar to a human organism. Later, in the twelfth century, the relic of Hariphunchai was placed in the vicinity of the navel center. Placing the relic at the naval center was like placing it at the center of the universe.

The palace was located close to the Kuang River, northeast to the Ping River. The area of Wat Chang Rong was in the north of Wat Phra That Hariphunchai. The area across from the palace from the west and northwest sides of the city were the residential areas of the lords. This pattern continued with its successor in the Lanna period and the restoration of the country in the Rattanakosin period.

Within the Hariphunchai town, a pagoda called "Hariphunchai", the most important pagoda, was built close to the center of the town as to be at the center of the universe. Nowadays, it is an important cultural landscape of Lamphun (Boonyakiat et al. 2012).

4.4.3 Phrae

4.4.3.1 Topography

The province is surrounded by mountains, the four directions, a mountain in Phi Pun Nam East and Phi Pun Nam middle; mostly about 80 percent is the mountain and the flat area is only 20 percent, the slope to the south along the flow of Yom River, a bottom of the pan, the province and districts on a plateau between the valleys, the plains of the province is in the valley with two large area are the plain area in Rong Kwang district, Muang district, Sung Men district and Den Chai district, which is topped by a large flat and other are in Long district and Wang Chin, which plains used to be housing and agriculture.

4.4.3.2 History of Phrae

Phrae is one of the oldest cities in Lanna which located on Yom River basin. But it does not appear clear historical evidence of Phrae, In legends, said that in the history of Khmer power around the 877-997, Phra Nang Chamadevi has radiated in

the occupied territories, Lanna has renamed the city in the Khmer language, such as Lamphun is Haripunchai, Nan is Nanthaburi, Phrae is Wiang Kho Sai or Nakorn Kho sai in the year 844 Kun Lueng Pol is a ruler who ruled the city. Called "Maung Pol or Pol rat Nakorn", the original name of the city for the period of construction of the first, sometimes called "Pol Nakorn", the name "Pol Nakorn" present there appears to be a sanctuary in Luang temple, in Maung Phrae district, Luang temple is the old temple, presumably made with the creation of Phrae city, a temple of city for a patronage over the years until the ruler of the legendary city over the Bai Larn. later in 1016, PongSaoDarn Mueng, Ngern yang Chiang Saen called Phrae that Kho Sai or Kho Siya Nakorn, Maung Phrae, was called in stone inscription of King Ramkhamheng Maharaj, of Sokhothai city, by the inscriptions of the fourth side states that in the period of King Ramkhamheng Maharaj has been expanded territory. The Northern legend called Phrae city as Maung Pol, while stone inscription called Maung Phrae, but considering the geography can be said Maung Pol and Maung Phrae is the same city and have become the main voice of linguistics as "Phae".

4.4.3.3 Belief in the creation of the city

Phrae or Wiang Kosai is shaped like an oval or conch, believed to have been influential in the Haripunchai, which has the shape of a conch same, with walls and a moat surrounded to prevent flooding and prevent the enemy in the past, the Great Wall of Phrae, is regarded as the oldest walled city in Thailand, which the local called the walls of the city as "Mek". From the study of historical documents are not found the faith in a divided city by the human body in Phrae, but founded the evidence for the belief Khoung (scared open space) and the temple Hua Khoung near Khoung of city, the area within the city is located important religious sites included, Wat Phrabat Ming Maung Worawiharn and area of cultural activity in the community is Kuang. Khlang Weang (the center of the city) will be the site of the Shrine, its ruler or a good ruler, with all five gates, including Sri chum gate, Young Ma gate, Mai gate, Chai gate and Marn gate.

Important traditional and beliefs are, the respect Phrathat Chor Hae, Salak Pat tradition, which Phrae called differently from the other that "Salak Kao Mor tradition", Suad berk tradition or philanthropy city is a belief in animism grandparents

take once a year, honoring ancestral spirits and other beliefs as well as other provinces in the north.

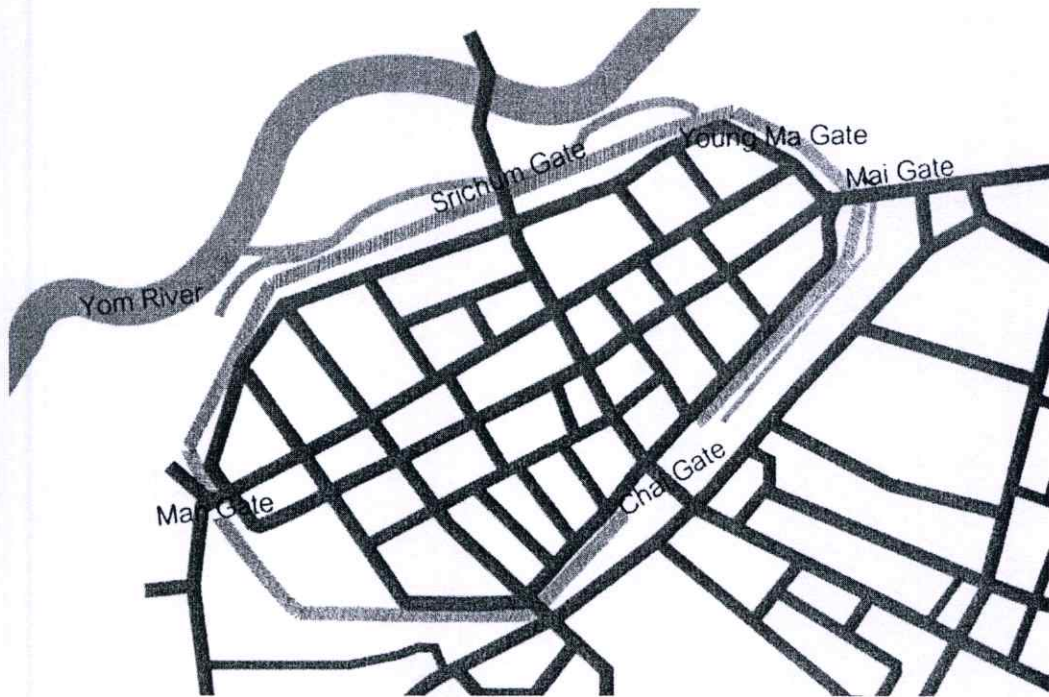


Figure 4.3 Phrae city wall

CHAPTER 5

Results

From the study of cultural landscapes and residents' responsive perception: case studies on the Northern region of Thailand, this research was presented the analysis results from four parts. The first part described the evolution and linkage of the cultural Landscape. The second part was the analysis of the factors which affect the related cultural landscape and physical setting. The third part consisted of the public perception and response of the cultural landscape changing which was acquired from questionnaires and interviews. Lastly, it was the recommendations of cultural landscape conservation from the sampling group.

In order to compare the different levels of the cultural landscape, it was divided regarding the level of changing. This study separated it into three levels; high, moderate and low by using the study area inside the city walls and the surrounding area of Chiangmai, Lamphun and Phrae where were represented cultural landscape changing respectively.

5.1 The evolution and the linkage of the cultural landscape

The evolution of cultural landscape in this study was divided into three components; physical characteristics, economic characteristics and socio-cultural characteristics. In this research, the cultural landscape's evolutions in the study area were summarized as the following:

5.1.1 Evolution of Cultural landscape in the physical elements

The physical characteristics of this research were discussed in topics of the settlement, the community expansion and the transportation. In this study, the studied area is the north of the original settlement of the river. The inhabitants were indigenous who settled scattered along the rivers and they were dense in the city wall area.

The study of classification periods in the past made it possible to acknowledge a change of architecture settlement as well as society and culture. It also outlined the main architecture in each period which might be associated with

the settlement, society and culture. From documentations study, historical evidences could identify the periods of the evolutions of vernacular architecture, settlement, society and culture in the areas of Chiang Mai, Lamphun and Phrae. There were three periods. The first period was the former King Rama IV (before 2411 B.E), the second period was during King Rama IV-VI (during 2411 to 2468 B.E) and the third period was during the reign of King Rama VI to present. (Since 2468 B.E to present) However, in each area might have overlapped period or slightly differences because each area was influenced by mismatched changing. The classification period could notice a change of architecture settlement as well as society and culture. It also outlined the main architecture in each period and might be associated with the settlement, society and culture. The details were as following:

5.1.1.1 Evolutions of architecture

The evolutions of architectures in the area of Maung Chiang Mai, Maung Lamphun and Maung Phrae. All of them had unique architecture of the region. However, from past to present, architecture style has been changed over time, such as, building style, materials and decorative arts, and so on.

1) Architectural style

According to the research in the north, Lanna buildings style was consisted of one story with high basement but it was different and unique in each area and functions, such as the basement area under the building, where was mainly used to store agricultural equipment. In each area of study was different as following:

1.1) Evolution of architectural style in Chiang Mai

In the early of King Rama IV era, vernacular architecture of Chiang Mai was made of wood (Figure 5.3) later, during the reign of King Rama IV to King Rama VI; Chiang Mai was contacted with Westerners and Chinese. Thus, culture and architecture had been applied with Western and Chinese style by the architecture of the city, including hipped-houses and wooden house in western style. Moreover, every side of roofs side was collided thatch as pyramid without isosceles and the house had high basement by using a mortar and plaster technique of Chinese artisans. Sometimes, it was built by using concrete instead of wooden column. The cement tile roofs were also popular instead of using the roof tiles. The house was built of wood called medieval house which was consisted of basement by the civilization development of

the building exotic tropical architecture house such as Thai house, which was prevalent from the central region of Siam or Manila house which was prevalent from Manila, Philippines. There were official house, guest house, agencies, vacation houses, and Ta-la-pa (Figure 5.1, 5.2). Ta-la-pa was a building which influenced from the Javanese or Singapore. It was a two-story rectangular configuration. It might have porch and the slope roof called Colonial architecture. It was a typical architecture of Europe, Britain, France and Germany, and then it was occurred sporadically in Chiang Mai.

Another colonial architecture style is Ta La Pa house where was found in Chiang Mai; The British Council, where was located in the East of Ping River. The building features were two-story building and Manila roof construction. It was created during World War 2th, but the exact year was unknown. However, it was believed that it might be originate in 2480 B.E by the building where was used as a commercial bank Thailand in Chiang Mai. The evidence is London Queen Victoria stamps which is saved in the building. Later, when the bank was moved and the building had been abandoned until 15 years ago. The British Council leased the building from the owner, Chatri Chaimongkol and used it as a building of the British Council Chiang Mai until now. In addition, Chinese merchants in Chiang Mai who came for merchandise created a form of residential housing by mixing with Chinese influence. The artisans were ordered from China to mix with the locals. Chinese craftsmanship was well established and finely detailed than Thai artisans.

During the reign of king Rama IV-VI, it was started in the latter half of the 1860s. British house was widespread from Europe and the famous one for the beauty was gingerbread house with a pediment and isosceles fin openwork pattern. It also had a curved line of gables and eaves sides thorough. It came with a built wooden contemporary house in the era of Queen Victoria of England.

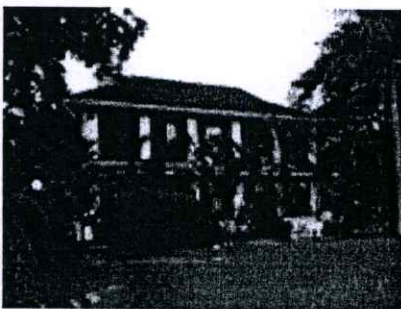


Figure 5.1 the British Council

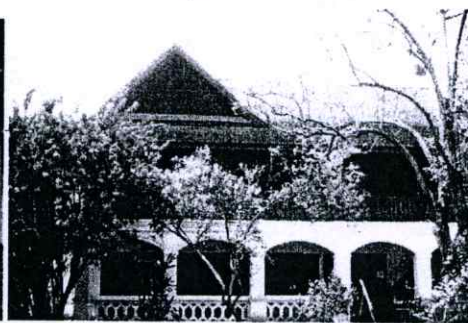


Figure 5.2 Khum Chao Buriratna

“Ta la Pa house or colonial architecture” (figure 5.1, 5.2)

In addition, the Chinese in Chiang Mai started the patterns of residential housing which was mixed with Chinese influence. Chinese craftsmanship was better in establishing and detailed than Thai craftsmanship.

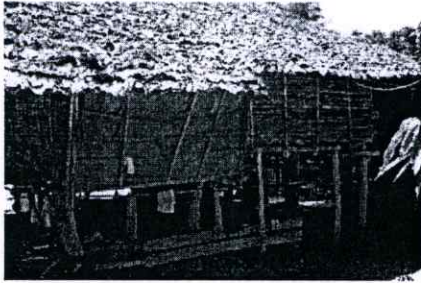


Figure 5.3 Ruankuangpook

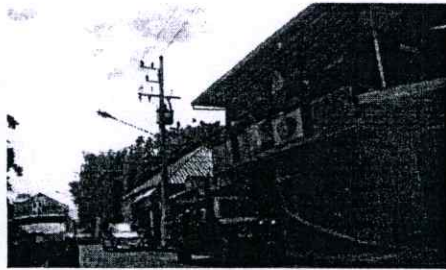


Figure 5.4 traditional shop house



Figure 5.5 Contemporary wooden houses



Figure 5.6 adjusted wooden house

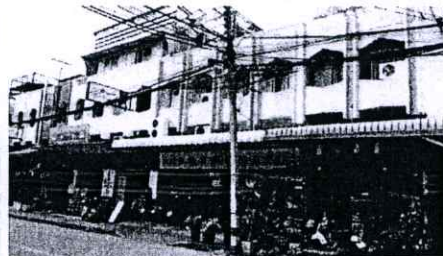


Figure 5.7 Commercial building



Figure 5.8 Trade area

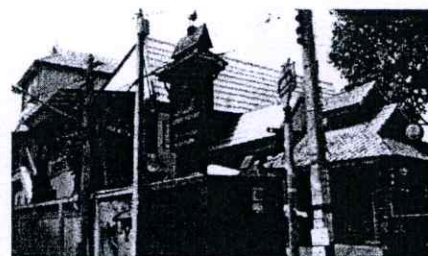


Figure 5.9 contemporary hotel

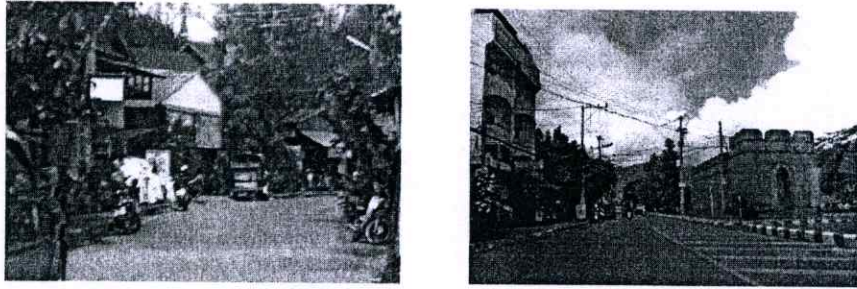
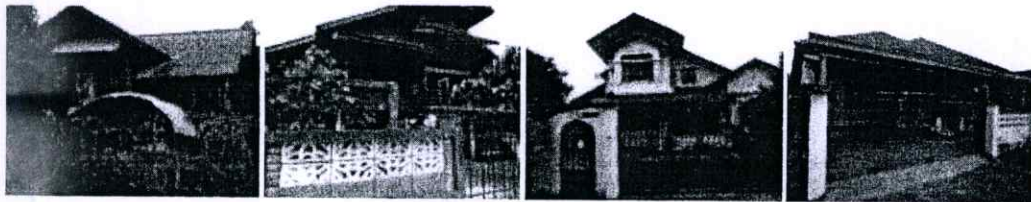


Figure 5.10 communities environment surrounding city walls

1.2) Evolutions of architectural style in Lamphun

Architectural styles where were found in Lamphoon were consisted of three types; ancient Lanna style, applied Lanna style and contemporary style. The details of the evolution as following.



Lanna house

Lanna house

Contemporary house

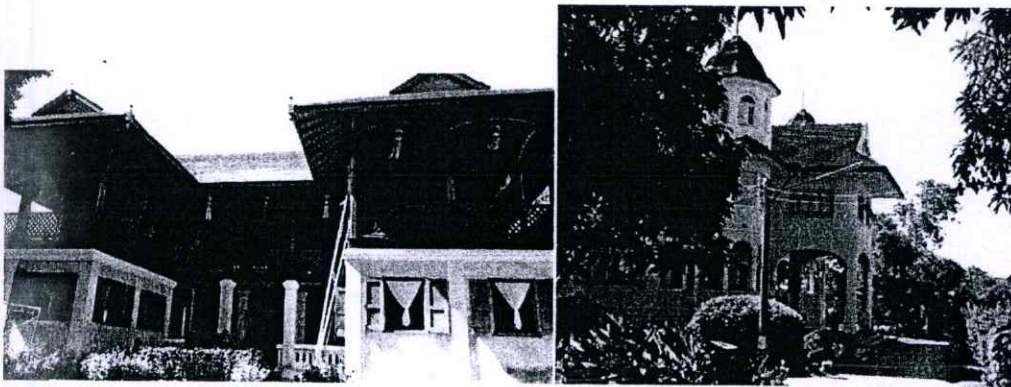


Figure 5.11 types of architectural styles in Lamphun

The first period before the king Rama IV, Lamphun's architecture was Lamphoon's ancient Lanna which was made by bamboo and wood. It was called "Ruankaungpook" and "Ruankaungmai". They had one story with high basement. The high basement was for ventilation which was similar to ChiangMai's architecture. The next period, by the end of the reign of King Rama IV and the reign of King Rama V to VI, it was the range of contact with Westerners and Chinese. This affected to Lamphoon to adopt the architecture of Western and Chinese, for example, "hipped house" which was wooden Western-style houses. Building style was a thatched roof

for every side as pyramid, but there was no isosceles. It also had raised platform, a mortar and plaster technique of Chinese artisans. Sometimes it was built by concrete instead of wooden column and used the cement (Hangwao) roof tile instead of the old roof tiles. Another example was "Medieval house" which was a wooden on stilts house. It was the exotic tropical architecture, as well as the "Thai house or RuanThai" which came from the middle region and the "Manila house", ubiquitous from Manila city, Philippines.

In this period, residential houses style in Lamphun was influenced and mixed with Chinese style. The decorative art was added by Chinese merchants in Lamphun. It was caused carvings decoration and Chinese roof rails tile mix with vernacular house. Chinese craftsmanship was well established and detailed. There were both one-storey and two-storey houses but mostly they were built by wood and cement along the street they were slightly elevated from the ground or a high basement. The wooden wall was called Fapakon. The window is Chinese style which was decorated by molding lime mortar mixed with banister and balustrade it was beautiful, neat and durable. The pattern was decorated by the bunch of vine and geometric. Building shops were storey or two storey. This technique has been gained from Chinese artisans and widespread later. It was mixed with the compost, mortar and plaster which were the mixture of chalk, rubber plant and rubber from animal's skin.

3. During the reign of King Rama VI; buildings with a contemporary style, it was built by universal materials, such as concrete materials, wood and it was mixed with modern building materials used in construction, such as concrete, brick, glass and steel.

1.3) Evolutions of architectural style in Phrae

The study of architecture and settlements of the Phrae found that the architectural style of residential buildings had wooden house style which was divided into four groups: the vernacular house, shops house, applied vernacular house and gingerbread house. From the survey found that these buildings were placed in the area inside the city walls and the area around outside the city walls. The buildings where were located inside the city wall had been the resident of their former master class before the administration was changed. It was found that the located on

Khumderm Street wooden shops houses have been the trade zone from the past until present. The evolutions in each period was shown as below.

First period, before the king Rama IV, the style of the architecture was the vernacular or the old people called HuanBaGao which was ancient house, made from wood, high basement but the main living area was upstairs (see figure 5.12).

Later, in the second period, during the reign of King Rama IV to King Rama VI, when the railroad was arrived to Den Chai (2456 B.E), the goods from Bangkok was spilled over into the city. The commercial zone was occurred for trading and exchanging of the city. We can found at the Charoenmaung street zone. There were Siam, Shan Chinese and Indian came to do business. Since the lumber trading was more prosperous and bustling, Phrae's architecture was developed from conventional house to the wooden shop house (see figure 5.13). The living space was divided into an area for commercial and residential. Later, in the reign of the king Rama V, VI and early of king Rama VII, the Westerners came to the north of Thailand for the forest concessions. Then, it caused the buildings in the city was built by wood and they were popular amongst the teak merchants and princes these buildings called the gingerbread house (see figure 5.14).

The last period, after King Rama VI to present, the architectural style was changed to Applied Lanna House which was a wooden house with a combination of Huan Bagao and gingerbread house. The functions were presented with more compact space and decorated the house with less detail than gingerbread house (see figure 5.15). *"Building houses is cultural, but distinguished by the combination of local materials and convert it into its own. The wooden buildings of the city have begun to change drastically when the first house, peaceful village next to the hospital of Wiang Kosai were allocated for sale"*



Figure 5.12 The original wooden vernacular (Huan Ba Gao)

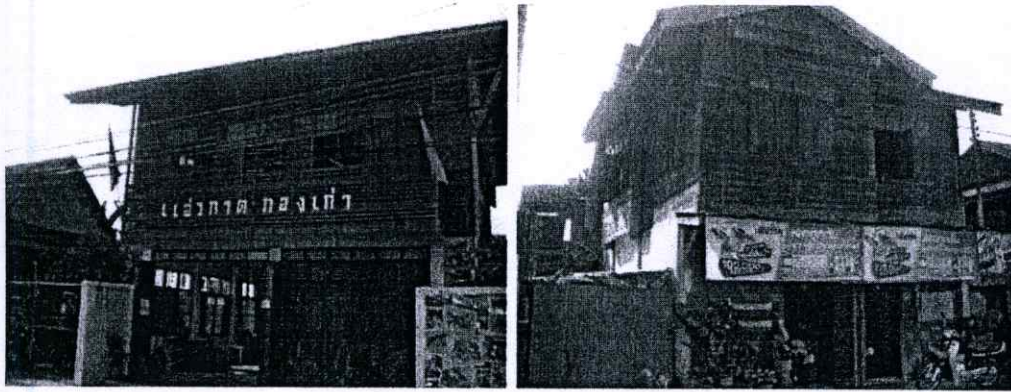


Figure 5.13 wooden shop house



Figure 5.14 gingerbread house

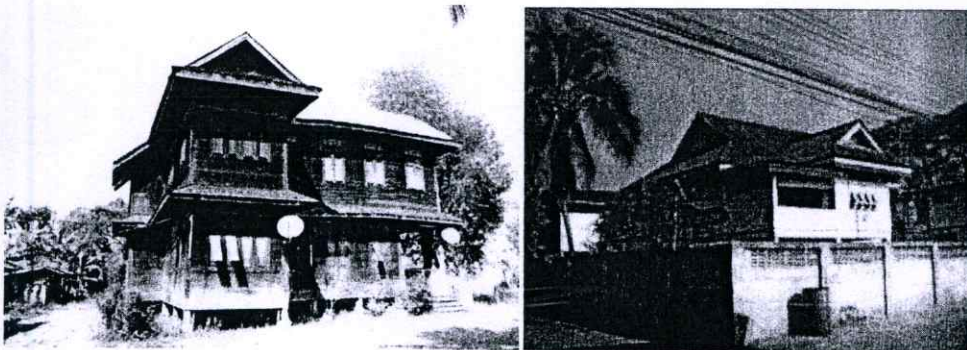


Figure 5.15 Applied House

Source: Survey

2) Materials and decorative arts style

Materials and decorative arts style of the north architectures were rarely different, but they might be varying various. The materials usages were also different in terms of the architectures style and periods of time, as the following:

From the first period of applied wooden house: Huan BaGao type was used teak or solid wood as the main material for the construction. The applied gingerbread house,

gingerbread and colonies types had a combination of new materials, such as reinforced concrete, the masonry bolts, hinges, glass fixtures, and luminaries for the component of the house. The decorative art feature of applied wooden house was divided into two parts:

1. Decoration in the main structure of the house. The example was the external wall which formed a single flake and hit the wall by stacking overlapped scales of two layers. It was horizontal entreated with the vertical and horizontal vertical mixing. The interior wall was made by beveling horizontal flat wood. Top of the wall was surrounded by slat and open for ventilation. The ceiling was decorated with wood as well. Most panes were consisted of a single piece of wood mullion mixed with wooden louver which was double window. It was similar to gingerbread house.

2. The general decoration of the house. The decoration of applied wooden house in each category was received the concept of a prototype house which was applied to be a basic decoration. Due to Huan Ba Gao was less art decorative than the gingerbread house, most of applied houses were used wood pattern to decorate the house by depending on owner's taste and techniques design of artesian or Salah. Later, after the reign of the king Rama VI had changed forms and materials of construction, the following year, in 2510 B.E., it was the time for the modern technician construction in modern architectural style and it was more universal. The Changes of material, technical and communications initially had slowly begun since wood was considered as a timber building material and it was adequate capacity to demand.

In 2532 B.E., the government had policy closed forest. These caused the lack of wood for house construction. Therefore, it was used industrial products which were easy and available instead. Thus, the Construction techniques and modern architecture replaced. This change was going to accelerate when the demand for houses construction was increased respectively. Formation of detached houses, row house, flat, and apartment were a universal architectural style.

In 2531 B.E., there was the support for the contemporary architectural style, such as a contest of Chiang Mai's houses identity and in national level, such as, a contest of local architecture, and unique concept of the Fine Arts Department. In 2542 B.E. designers, architects in local level, had created a lot of interesting houses in Chiang Mai. It could be said that the contemporary Lanna architectural is the style of this era.

5.1.1.2 Evolution of settlement

The settlement of the communities in the northern area was located along the river basin, called "Aeng". The main rivers of the region are river Ping, Wang, Yom, and Nan. They flow from the North to South. As in this study area, the settlement of Chiang Mai, Lamphun and Phrae have been settled on river basin. The settlement of Chiang Mai is on Ping River basin, Lamphun is on Kuang River basin and Phrae is on the basin area of Yom River.

1) The settlement of Chiang Mai city

The settlement is located along Ping River. The area in the city walls was an area of the former king and master class. Currently, it has become the district of the government. The commercial and residential district city buildings are the result of all Chaiyaphum and a proper analysis of King MengRai, the founder of the city. There is also a belief-oriented universe. The city was contributed differently from other cities. In the ancient city of Chiang Mai, the scope of the city is surrounding moat alongside the walls which was built to prevent the enemy and scoped the land. City walls were composed of four corners (Chaeng) and five gates. Each gate was interesting in terms of history: the connection history with the major places in the city. These four walls were not built for the exact 4 directions. They are slightly bended and high around 8 feet high. They are surrounded by the fortresses. The thickness of the wall is about 5 feet. There is water in a ditch a glass of water that flows from the creek-where the origin was from Doi Suthep. It is used a key gateway cities in the east. All 5 gates are called: the western gate is called SuanDok gate. North and south are called the ChangPhueak gate and the Chiang Mai Gate. Southwestern gate was called Suanprung gates.

In the past, the city walls were used to define the scope of "in" and "out of town". Traditionally, the area in the city walls was used for the space of the palace and temples as well as the residences of the nobles. Inside the city walls was defined as the main living area where was response to build a city with the ancient beliefs, apocalypse. This area was an important rite of the kings. Moreover, this area was used as the cultural space and the major commercial places of the city.

The "out of town" was used as a community of people, but later, the city walls where were created a boundary to separate the city and outside was less important since the various communities began to move into the city. As the result, the social and domination power were changed.

The houses in the city walls were made by skills and located the sites of the important buildings, such as, palaces for princes, Dean aristocratic houses and temples. In the West of the city, the warehouses and the residences of nobles were located outside the city walls. The settlement was divided the West bank of the Ping River where was the habitat of indigenous and the East of the Ping River in Chiang Mai, a group of people who came to settle or to trade in the city live there, such as Chinese, and Indian. Then, in modern era, Westerns came for forest concessions.

2) The settlement of Lamphun city

Lamphun urban settlements were located along the river. The location was chosen by the Queen Chamadevi. Lamphun is located on a hill turtle and has not been affected the flood. In terms of the settlement's inhabitants, the conditions of life were farming society, Buddhist and animist beliefs. They were dependent and helped each other in everyday life. The houses were gathered a group of relatives in the same social status. Then, they grouped up into the units. Inside the walls [was the place of relatives, royal family, and government offices. Since the royal family and the subordinate had farms outside the North, East and South walls, after the harvest season, the rice were transported to store inside the city walls. Inside the walls, there was a major shrine where sacred and worshiped, such as, the relics Hariphunchai and sets of a master class. Nowadays, some of noble family's buildings have been converted into the museums.

3) Settlement of Phrae city

The landscape and the culture of the city were developed from the people who lived in topography of the basin and Valley near Yom River. The headwater is in the mountains in the Pong district, Phayao province. It flows through the gorge of valley where the narrow space between mountains to Chiang Maun is and there are several streams flow from two mountains. As the result, some places of the valley might be bulged and become wetlands. It also causes the small ponds where is the place for the water to be joined. In this process, Yom River is becoming bigger before it flows through narrowed valley to the south, Sa-iab district. It is the big valley where the streams meet and becomes the small basin. Then, people were moved to settle a city.

Small valley basins within such a large house, culture, people, settlers built houses the city is known, also said that because of this, the area of the valley of the Mae Yom, Pong district, through the Chiang Muan district to district and where a narrow gorge and gorge wide, the area was closed width as the Pong district, Chiang Muan district and Tombon Saiap, it is the people to build. Home Chapin city, a city of Pong, the city of Chiang Muan and City Saiab, which as a city on the small side, like the Yom River flows through a narrow gorge into the wetlands is a large basin, the city's second as part of the basin the city.

Settlement of Phrae is located along the river, the houses gathered a group of relatives of the same social status, a community group, a small unit up, the walls are residents of kinship, boss, local people and a government facility, they have areas outside the city walls on the north, east and south, making after-harvest rice crops have been transported and stored within the city walls. Making the interior walls as a reserve food for the living of the inhabitants spread, the west side of town next to the river, so they have to grow vegetables along, fishing, forest from the forest. Nearby teak, which has so many causes forestry industry with, the problem of flooding in the rainy season the settlement area, it looks sparse, so the area to the west of the city, the space agriculture, the forest industry and the livelihood of the natives.

The settlement of the community can be divided into four groups (Klomlaew . 2009).

1) The area within the city walls, the settlement of the indigenous peoples, the current settlement areas within the walls of the city for consists of seven communities, including Wat Phra Non Buddha, Wat Luang Hua Khong, Wat Sri Bon Rueang, Phra Lrueng, Wat Sri Chum and Pong Sunan and temple is the center of each community.

2) Communities in the north area outside the city walls, the community consists of a glass tank, a new home and Petch Charat, this area was originally a field of Hua Khong community. In the ruler Phimphisan period in 1829 (2372 B.E.), the herd Tai Puan Tambon settle on Thung Hong and Shan or "Ngeaw" has come into the forests to build houses near BanMai community . The Wat Bo Kaew and Wat Chom Sawan is a center of Shan, and native has Sawanniwet temple is community center.

The new access road from the Mai gate connects to Yantrakit koson road through the Sa Bo Kaew community and BanMai community caused urban settlements along the Yantrakit Koson road.

3) Communities in the east outside the city walls consists of Maung Hit - Ton Tong, Maung Deng, Chai Mongkol, Maung Hit- developed and Tung Tom community. This area is a space, extension of the major axis within the city walls.

Settlements from the river began to change when the Yantrakit Koson road completed connect the street together as Charoen Maung Road, Chohae road, MaungDaeng road, and MaungHit road. This area of transportation more convenient, these occurred BanThung market, Chompu Ming market and shops, as well as wholesale, retail and consumer goods came together in this area.

4) Communities in the south, outside the city walls, comprising community Chase East settlement, in the south of the city, which is home to the tombs of the city, a gateway can be connected to Chetawan community and Rong Sor community.

Chetawan community has Wat Chetawan community with a community center, in the rainy season, the water always makes the settlements of indigenous cultures is very sparse.

In 1894, Dr. William Briggs and his wife, along with faculty came from Lampang to reveal Christ religious to the city. They settled in the West Chester Chetawan community, along the Yom River south of the Phrae city, due to repeated flooding, they moved to Tungtom community in 1913 (2456 B.E.) established the Christian Church, Phrae Christian Hospital, and Charoenrat School.

Range of the forest industry, the Bombay Burmar company has set up an office at Chetawan, the settlement consists of a multi-ethnic. Most of native in Chetawan community were workers in forestry with foreign companies and local bosses, some do agriculture on the banks of the river, in the present state of the forest industry has ended, the area is largely changed to government facility, educational institutions, such as the Office of Bombay Burmar currently is the Bureau of Forestry Phrae, East Asiatic Company's office is located of the School of Forestry and so on.

From nature of the settlement and community activities, within the Phrae municipality concluded the land use into two groups: a group of natives and foreigners.

The settlement's inhabitants, the condition of life is social and agriculture Buddhist and believe in animism in the same relative, the dependence and help each other in life, to populate it in a group of relatives gathered in the same social status, a community group up into smaller units, within the walls of a living relative, his boss, Prime and government facilities, because the boss and Prime troops within the walls of the city for different fields, outside the city walls on the north, east and south, making after-harvest rice crops, has been transported and stored within the city walls, making it the state. Within the city walls as a reserve food for the living of the inhabitants spread, the west side of town next to the river, thus planting vegetation along the water, the fish, forest from the nearby forest. Rentals with, with flooding in the rainy season the settlement area, it looks sparse, so the area on the west side of the city is host to the agriculture, forest industry and living at the natives in the past.

The group of foreign residents, divided into two parts, the first part is the people who live in an agricultural society, still the settlements adjacent to the main water quality and water resources sectors important to agriculture, such as, community Thailand that were set, settlers caught the river on the north side of the city, the second part is the people who come to trade and the timber industry, including Chinese, Shan and the West, which is a people who came to trade, Chinese, Shrine soft vine Kong as a center for community events, neighborhood and neighborhood streets north Yantrakit Koson a big settlements Thailand, Wat Chom Sawan, Wat Bo Kaew and Wat Ton Thong, Thailand is a major community center in

the south is that the residents of the West into a forest industry and publishing Christianity.

5.1.1.3 Transportation, Access

In the past, the main transport route is the river, Phrae, Lamphun and Chiang Mai is Yom, Kuang and Ping River. The ground transportation around 50 years ago to take a public bus, bicycle, tricycle, personalized travel by walking and cycling, with only the capacity to use motorcycles or cars, according to the information of the key, said.

Life before the city of Sung Men, when I was in year 2-4, I learned to ride a tricycle to Mae Than, a tricycle, a line, a three-wheeled vehicle, if a child is sitting it would fit three people, if it's two people sit about 6-7 cars, tricycles bite out of line, groove God took the children came to the city, but before that, he will ride a bicycle (Phathong).

5.1.2 The evolution of the cultural landscape of the social culture

Due to the integration of people living in the study area, all three happened since before the reign of the fourth, making society and culture of Chiang Mai, the Lamphun, and the spread is unique and convey to the children present, an evolution in detail below.

5.1.2.1 Beliefs Tradition and culture

5.1.2.1.1 Beliefs

Core beliefs are based in the North of Lanna or over the same area, because the area has a long cultural continuity, core beliefs are so similar in each area will vary somewhat in the belief that individuality. This depends on the context of each area is different, in this topic; the researchers divided the faith found in the northern areas into two groups; the belief expressed in spatial patterns and belief in theism. Beliefs about God, sacred or something intangible, which are transmitted through the villages, which in the space can be divided, with some buildings, some areas have no building, way of life over the past and at present have a lifestyle that is bound to the Buddhist faith and belief in respect for sacred things right and animist. Such as belief

that they will protect their homes, including traditions are being broadcast out, but now has lost some faith, some remain but just change the format of things. The person with important information said, *"faith and culture over the past ten years, did not significantly change, the belief in the old ones are still the same, but the people in present days don't know about it and might not believe in them, the problem is, some beliefs are still there but has been modify in some peoples understandings."*

Groups of Prae and Ngeow people, a group of people in traditional ways of life in the community, currently has changed from the past, the person with important information said, *"Before, the road is narrower than this, there were a lot of Chinese people, the Ngeow people will be outside the town, one Chinese people from Phra Norn, he had a wife here and there childrens had to stay near Phra Norn, if they were sick, they had no drugs to takes but only had herbs to eat, no doctor. Initially, before when moving the sand breaststroke at Wat Phra Norn, before Yom River flows near the city walls, now off to the other side because I do not know why, there was a timber house of a foreigner, as before, if the winter came, they will invite each other to casting at the Yom River, now no longer exists"*

Chiang Mai, which is an area that is changing the social side than the other, because a stranger to live with, why Chiang Mai is a center of trade and business, as the important person said, *"At present, there are a legacy of about 50% and the remainder shall be the newcomers, in regard to adapt will be difficult, because strangers coming into the community are having to do with business and the economies, for example, opening a restaurant will have to do with opening loud music, opening a snooker table, opening a bar, if it was a coffee shop then it's alright because this is a quite community."*

1) The belief expressed in spatial patterns.

According to the study, historical documents found the Northern people believes in the design of the city, like it is the central universe, the important person said,

"The belief of the city is the subject of conflicting religious visitors, whether it is the belief of the city at the center of the universe, it has changed this belief passive."

2) Beliefs about theism

Belief in "ancestral spirits" blended with Buddhism, the fundamental beliefs and worldviews of Lanna people, mostly descendants of Thailand to represent them as "urban". A way of life in an agricultural society, a world, the vision of apocalypse, believes that the combination of Buddhism and spirits at different levels, involved similar community groups Lanna general, basic beliefs of birth of each person comes from but kindred souls of the dead were reincarnated. Through the "Horse of ancestors", is a woman descended from the sons of the horse before, had served notice about the relationship in the past, including a notice of ways and solutions to always like, to make a fortune, charity, but this belief is currently unceasingly going down.

However, there are many beliefs and worldview of Lanna associated with belief in "ancestor" was also found in the present, as in the case of ancestral spirits that have divided the roles and hierarchy of ancestral spirits to protect. From the city to the level of kinship with "ghost grandfather grandmother" or "PhiPuYa" Protection of belief in ancestral spirits make Lanna people have an understanding and unity in ethnic. The traditions or "Lockheed Hoy" (conservative) in the conduct of the people. By placing rules on the subject of "fornication" for conduct in the life of a race of people descended to act on what is defined (Charoensupakul and Wiwat, 1996).

5.1.2.1.2 Tradition and culture

These beliefs caused the traditions and rituals to meet beliefs, within vernacular tradition upheld such as the spirits tradition, it shows the respect to spirit protect and care for the residents, making a living whether the tradition of ancestor spirits (PhiPuYa) to worship Wissanu deva and to worship four Heroines (Tao Tung See) invited to participate in a sacred ceremony. These traditions are not exact timing depends on the circumstance. It also found that lifestyle and community in the North is bound to include more conservative animism, the successor fate, when people get sickness or accident catastrophe or any misfortune. There are philanthropy and ceremony for dating destiny or fate (Songko and SuebShata), which is several levels, starting from dating destiny alone, destined Royal, destined city known as "Kaoberk" to remove morale, a concept to complement the mental and

spirit more complete, which does not have a specific people, but also including plants and animals such as Kwankgaw morale, took morale a buffalo etc.

The north is mainly Buddhist Thailand, which upheld the tradition as an anchor that is traditionally associated with religion and religious rituals. Most folk traditions or rituals are religious activities at the temple. Some exceptions traditionally do at home or at various locations within the community, such as Songkran and Yi Peng tradition.



Figure 5.16 Belief in the shrine within the study area



Figure 5.17 belief in worship relics



Figure 5.18 tradition upheld

For the sample, beliefs and traditions that are practiced within the community, Chiang Mai, Lamphun and Phrae, the majority also upheld Yi Peng, Songkran tradition and worship relics tradition (Figure 5.17) Tan Kua Salak tradition (Salakpat), tradition Hae Look kaew or ordination (Figure 5.18).

What the community sample and respect. The Godfather respected in the community (Figure 5.16) belief that the practices are worshiping Thao Thung see, the animistic grandparents "Baisrisukwan". Lamphun city is still a strong cultural tradition. From the questionnaires found that most of samples beliefs and practiced traditions

in communities exceed 90 percent. The tradition which is different from other provinces in the north is a traditional dye lot (Salakyom) which are found only in Lamphun. The tradition of bathing Buddhist relics in Thailand is traditionally practiced since the northern part of the tradition of ancestor worship Intakin pillar find the practice in Chiang Mai and Lamphun. In addition, there are some traditions were lost or reduced due to decreased agricultural areas. Kwangkaw tradition and Kwankwai (regard to Buffalo) is traditionally done on agricultural rituals. The sample consisted of people living in urban areas, although the city is not in agricultural areas but, as in the present. People in the area will have an area outside the city and faithfully perform the ritual Kwangkaw and Kwankwai (regard to Buffalo), but because the economy has changed. The career change is no longer sold because people in urban areas, not agricultural rituals anymore (Table 5.1).

Table 5.1 Beliefs and traditions Practice in the Community (answer more than1)

Beliefs and traditions	Chiang Mai		Lamphun		Phrae	
	N	%	n	%	n	%
Salakpat tradition	86	31.9	315	94.9	105	31.1
Traditional bathing relics	203	75.2	319	96.1	190	56.2
Songkran	253	93.7	313	94.3	315	92.9
Yi Peng	253	93.7	312	94.0	314	92.9
The ancestor spirits	118	43.7	314	94.6	142	42.1
The worship of the Thao Tung See	113	58.1	294	88.6	186	55.0
Worship Inthakin pillar	213	78.9	225	67.8	-	-
Traditions Kwangkaw, Kwankwai	23	8.5	43	12.9	33	9.8
Baisrisukwan	102	37.8	176	53.0	163	48.2
Tan Kua Salak tradition	16	5.9	3	0.9	22	6.5
Traditional bathing relics	157	58.1	182	54.8	287	84.9
Total	279	100	334	100	338	100

Source: Questionnaire

Furthermore, result of the questionnaire found that people in the north are still upheld and practiced the traditional and cultural activities, 89.6 percent still do cultural activities in their communities are (5.2).

Table 5.2 Practice and participation in traditional and cultural activities

Practice and Participation	percent
Participation in cultural activities in their communities.	89.6
Join the faith tradition continues.	63.8
not participate the event but give money to donate	19.2
Not practice any faith	13.5

Source: Questionnaire

1) Relationships in the community.

People in community's north kinship relations are bound up in the past. Most of the relatives together. The building houses can be seen from living within the same area, there are many common gated back. Unlike the current building began to barricade the area and gated for security from criminals as informants, a prominent informant said, *"There are 100 households on a fence blowgun. Houses near the goal they sought each other. Some homes kindred really were not fencing. Put together He came to the fence prosperity."*

The structure of the community relationship is related as a kinship which undertake activities together, whether they are religious, and community's activities. It can be seen from interviewing of all three area community leaders showed no significant difference. Area in the city wall is a center of psychological town. It located the site of the city pillar and temple of city, but nowadays the relations in the community' has changed from the original. The expansion of the city and globalization made lifestyle changes from past. Community relationships have fewer. Especially in Chiang Mai, this has changed in the physical way more than any other area, and found that the people in the community are less interrelated. The relatives lost in the past due to a stranger came to live in the greater area. Descendants of working age live or work outside the area. Leisure time in the past, people had

meeting at the center of community or Khoung. The current way of life, they have dinner and spend time at the mall instead. Like as the words of the important information people said.

"In the past, the families are stronger relationship affinity parents and children eating together every day, neighbors were generous together. I went home with whatever vegetables I kept asking if I was kin to each other, it would bring food to share a portion, keep vegetables to do soup. I do not waste money buying things, having time to talk to each other. Currently, the elderly were brought to live in good housing. It is missing some neighbors. The area was sold as hostels, hotels, restaurants to foreigners, have more newcomers in the area added. They are not familiar as before. Each person had own making, no time to eat together and the opinions also differ. "

2) Social Activity

Social activities are a key element of the cultural landscape, the emergence of a culture that requires the cooperation and assistance of those who expressed a space for social activities in the region, people in the community. to support and participate in the collective which is mostly religious activities, beliefs or traditions, festivals such as, favors, new house, funerals, interviews, community leaders were, these three areas are social events. In the past, the present, but did not differ from each sample inquiry found that social events are held in the community has changed a lot from the area that is changing the landscape of culture, events. social practices are less common, the number of participants and the frequency or the number of participants is less, but the area has changed the cultural landscape little changed social events less, by enumerating the details of each area follows. (Table 5.3)

2.1) Social Activities in Chiang Mai

Frequency of attending cultural events traditionally held community. Most participants almost always inferior to 77.5 percent of participants 1- 2 times per year and 13.5 percent attended at all times 8 per cent respectively (Table 5.3).

Local communities participate cultural activities in temple on 197 samples, representing 98.5 per cent followed open space (Lan) of community by 45 percent and Scared area 18.5 percent respectively (Table 5.4).

Most areas where samples go to engaged cultural activities is in the autonomous community of 96 per cent, followed by 71 percent in neighboring communities and other communities as far away as 15 to 30 percent respectively (Table 5.4).

2.2) Social Activities in Lamphun

Frequency of attending cultural events traditionally held community. Most participants almost always inferior to 80.5 percent participation 1- 2 times per year, 14.2 percent and 3.5 percent each event respectively (Table 5.3).

Local communities participate cultural activities in temple as 92.1 percent, followed by 79.1 percent of Open space (Lan) of community and Scared area 29.7 percent respectively (Table 5.4).

Most areas where samples go to engaged cultural activities is in own community 94.1 percent, followed by 5.9 per cent in neighboring communities and other communities further 1.7 per cent respectively (Table 5.4).

2.3) Social Activities in Phrae

The study sample in Phrae, found that the frequency of attending cultural events traditionally held community. Most participants almost always inferior to 54.1 percent participation 1- 2 times per year, 27.2 percent and 15.5 percent of all participants, respectively (Table 5.3).

Local communities participate cultural activities in temple as 95.2 percent, 22.4 percent, followed by Open space (Lan) of community and Scared area 12.0 percent respectively (Table 5.4).

Most areas where samples go to engaged cultural activities. Most areas in the Autonomous Community of 89.0 per cent, followed by 40.3 percent in neighboring communities and other communities further 13.1 per cent respectively (Table 5.4).

The results of the study sample, the three areas have a habit of attending cultural activities of the community as well as the area has changed the cultural landscape in the least Phrae continues to attend all or almost all the time. While the area is more than a city or landscape has changed over ChiangMai to attend every activity percent less.

Current social activity began to diminish due to sparse in the family is an extended family kinship is one house will include many families are without a fence. The relationship between fixed Social events will be attended at all times because

of the same lineage. But the family structure is more single family kinship relations are less. The guard-gated relations and participation in cultural activities of the community is less.

Table 5.3 Participation in cultural activities of the community.

Participation in cultural activities of the community.	Chiang Mai (%)	Lamphun (%)	Phrae (%)
every time	8	3.5	15.5
Nearly every time	77.5	80.5	54.1
1-2 times per year	13.5	14.2	27.2
Never join	1	0	0
On their own	97.5	63.8	79.5
Deposit to the relative merits	2.5	19.2	16.0

Source: Questionnaire

Table 5.4 Area that Participation in cultural activities of the community.

Area	Chiang Mai (%)	Lamphun (%)	Phrae (%)
Temple	98.5	92.1	95.2
Open space (Lan) of community	45	79.1	22.4
Scared area	18.5	29.7	12.0
Own community	89	14.2	27.2
Neighbor community	71	5.9	40.3
Other community	15	1.7	13.1

Source: Questionnaire

Architecture and faith is important to engage with each other. Cultural Landscape However, the landscape is permanently changed, which began to be discussed in the next section.

5.1.3 Evolution of the economic, cultural landscape elements

The study economics profession population lives in the northern hemisphere in the past lifestyle as a social farming Buddhist and believe in animism in the same relative, a complementing and supporting each other way of life.

The economic expansion (1884-1921 B.E) and into the West, make enough sustenance of the economy over to a capitalist economy, in terms of business competitiveness, such as, the forest. The British timber company, the expansion of trade both in Myanmar and Bangkok, Forestry initially began around 1840 BC, by the Mon, Myanmar, came to deposit with the boss and the city. Allowed to rent a timber in the area, Chiang Mai, Lamphun, Lamphun, forestry workers in British Timber Company, mainly which comes from Luang Phra bang, were herded into a group of about 5-50 people, with the Cadets Come, Khmu they are appropriate to the forest because it is strong and easy to work with major forestry labor. Other than that, there is also Khmu Shan, Karen, the city that is not commonly employed as a forestry work hard and stick to the system, people may not be as independent workers.

Changes in the economy, the emergence of capitalism, industrial development, manufacturing process technology has been used to reduce the cost and profit maximization, trade and services make the career change from agricultural work, industry, profession, trade, work outside the home do not have time to go out in the community or work abroad instead.

When trading capitalism after the Bowring Treaty with England next, until the train arrived at Den Chai, the commercial has come to dominate agriculture, with the forest industry slump in the post-World War the two made the area east of the city has become the center of a living model of capitalism even more. *"As before, the main occupation of the Phrae people are selling woods, the past two hundred years ago, before I came, we had to eat plain nationwide pre-colonial world is to eat plain of one of them, but there was a colonial one, it's the hunt for Thailand, I was perceived concessions to the ruler, the latter has become a franchise with the central government "(Phathong).*

5.1.3.1 Northern economy

Based on the research of TerraBKK Research found, the average revenue per month per household, north of 56, be in the range 27,800-8,900 baht / month, the

province with the highest average incomes of the upper North 5th rank. The first is Lamphun, with an average income per month per household of 22,500 baht / month is a minor, Uttaradit, Phrae, Lampang and Nan, who last year 39-56 average revenue per month per household will increase to differ, see the illustrations (Office of National Statistics, <http://terrabkk.com>).

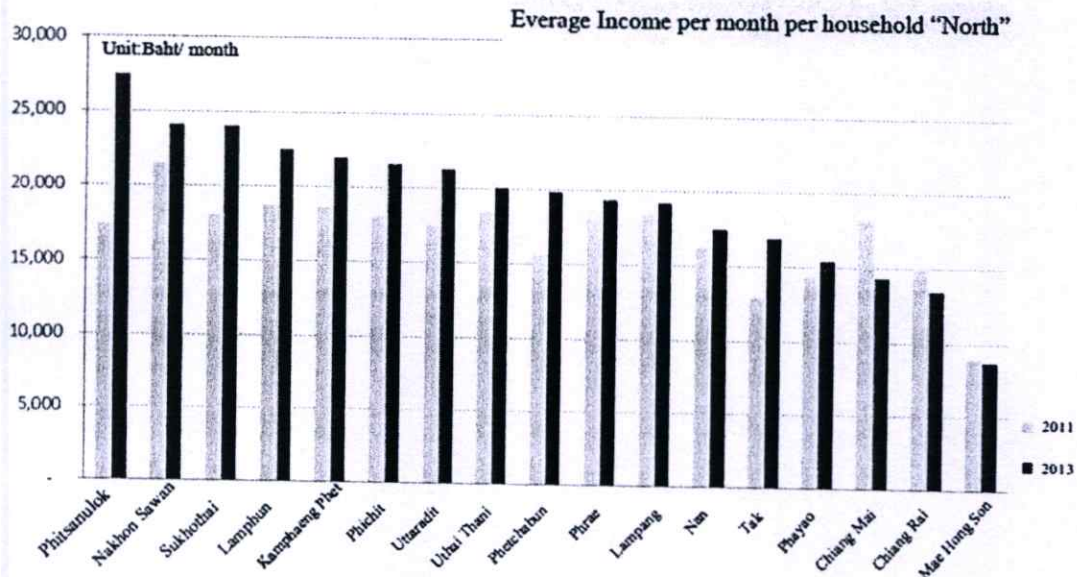


Figure 5.19 the graph shows the average income per household north.

Source: <http://terrabkk.com>

Table 5.5 shows the average household income of Chiang Mai, Lamphun and Phrae since 1996 to 2013 showed that, three counties has a median household income levels increase, the Chiang Mai is the average income of households in 1996 of 9,806 baht per month increased to 14,386 baht per month, which is the highest figure. Followed by the median household income of Lamphun start from 8,735 baht per month in 1996 is 14,104 baht per month in 2013. The average household income of Phrae province, with only 8,261 baht per month in the 1996 and increased to 14,045 baht per month in 2013, however, average household income in the year 2013 of these three areas did not differ much. However, considering household income data sample was collected from questionnaires, found.

Most household income Lamphun highest 20,216.89 baht was minor, Phrae and Chiang Mai 10,284 baht and 10,000 baht and a maximum income is Chiang Mai, Lamphun, Phrae 100,000 baht to 85,000 baht and 60,900 baht respectively,

while earning minimal. No revenue is this is quite different, as such, may be considered part of the family structure and number of members.

The study compares income population in the north and in the region showed that the average monthly income of respondents Lamphun's not much difference, but the average income of Phrae and Chiang Mai are broken differently as shown in Table 5.6.

Table 5.5 Average household income

The average income per month (baht).	Year 1996	Year 1998	Year 2000	Year 2002	Year 2006	Year 2011	Year 2013
Chiang Mai	9,806	10,349	9,243	9,582	12,586	14,904	14,386
Lamphun	8,735	8,722	10,231	11,328	11,843	14,361	14,104
Phrae	8,261	8,522	9,366	10,048	11,333	12,591	14,045

Source: National Statistical Office <http://service.nso.go.th>

Table 5.6 Revenues sample study area

Revenue (THB)	Chiang Mai	Lamphun	Phrae
Highest Revenue	100,000	85,000	60,900
Low-income	600	500	No income
Average income	10,000	20,216.89	10,284

Source: Questionnaire

The study found that there are separate areas of poverty and the average monthly income below.

Table 5.7 Average monthly income and poverty.

The average income per month (baht).	2008	2009	2010
	The provincial average income / average income in the city.	The provincial average income / average income in the city.	The provincial average income / average income in the city.
Chiang Mai	4,267/7,684	5,793/10,480	6,342/8,874
Lamphun	4,061/5,274	6,399/8,165	3,966/4,711
Phrae	3,051/4,015	4,758/5,859	4,963/5,673

Source: Office for National Statistics. <http://service.nso.go.th>

5.1.3.2 Occupations

In the past, engaged in agricultural from the inquiry found that all three groups, the majority of occupations, as trade, employment and independent professionals. Chiang Mai is 50 percent, Lamphun, representing 38.2 percent and the spread was 54.8 percent (Table 5.8), which can be seen that traditional occupation is farming has changed a profession, trade and contract agents, due to the area to farm decreased and the city rose, professional trade services and thus are more, which corresponds to Table 5.9, which 85 percent had been farmers in former and current farming anymore, by each province. Table 5.8 details

Table 5.8 Sample's occupation

occupation	Chiang Mai		Lamphun		Phrae	
	n	%	n	%	n	%
Trade	60	21.4	57	17.3	65	19.2
Contractors	20	7.1	34	10.2	13	3.9
Freelance	25	8.9	34	10.2	55	16.2
Housewife	12	4.3	21	6.3	36	10.7
Pensioner	16	5.7	11	3.3	25	7.4
Official	25	8.9	44	13.3	25	7.4
Company employees	29	10.4	40	12.1	18	5.3

Table 5.8 (Continued)

Employees	52	18.8	35	10.6	57	16.8
Owner	21	7.5	24	7.3	11	3.3
Farmers	2	0.7	10	3.0	3	0.9
Student	12	4.3	15	4.5	1	0.3
Etc	1	0.4	3	0.9	28	8.3
total	279	100	334	100	338	100

Source: Questionnaire

1) The sample Chiang Mai

The family had been engaged in agricultural, most never engaged in agricultural Number 109, for example, accounted for 54.5 percent, followed by ever farmers and a place of our own, and over 33 samples, representing 16.5 per cent and ever local engaged in agricultural, but others made of 22 samples representing 11 per cent respectively.

The majority of samples were not farmers, the current number of 169 samples per cent 84.5, followed by the farmers in the 30 samples, representing a 15 per cent respectively, and argue that no farmers, no that farm or ranch anymore because of the sale of 53 samples, representing 31.2 per cent, while the majority of other reasons accounted for 47.6 percent of 81 samples.

If a modification to a sample opinion that the occupation would be appropriate, if the Chiang Mai have to change careers from agriculture, mainly the occupation is government of 106 samples representing 53 per cent, followed by the professional technological number of 44 samples of 22 percent and technology, trade, agriculture and a half, the official number of 14 samples, representing 7 per cent respectively.

2) The samples of Lamphun

The family had been engaged in agricultural, most engaged in agricultural do not have at the number of 274 samples representing 87 per cent, followed by farmers and have had a number of 37 samples at 11.7 percent and had engaged in agricultural areas, but others 2 samples was 0.6 per cent respectively. The majority of samples were not farmers, the current number of 297 samples per cent 96.7, followed by the farmers in the 10 samples, representing 3.3 per cent respectively,

and not be farmers, no farm or ranch anymore because of the sale of 199 samples, representing 66.1 per cent, followed by career change is another example of 82 per cent and 27.2 for other reasons, for example, the number 10, representing 3.3 per cent respectively.

If a sample has been modified to suit the professional opinion that, for the Lamphun, Lamphun, if people need to change from the original occupation is farming. Most merchants of 240 samples, representing 75.9 per cent, followed by the professional technology of 25 samples, representing 7.9 per cent and a semi-agricultural 25 samples, representing 7.9 per cent respectively.

3) The samples of Phrae

The samples found that, most never were farmers of 143 samples was 49.3 percent, ever were farmers and has its own number of 101 samples representing 34.8 and never were farmers, however. Rental others to do the 43 samples, representing 14.8 percent, respectively (see Table 5.9) and by the Inquiry found that the majority of farmers and 252 samples, representing 86.9 percent, followed by the assembly. Farmers in 37 samples, representing 12.8 percent, respectively, by example, why not farmers that farm or ranch since sold over 88 samples, representing 30.3 per cent, followed by career change is. Another 57 samples, representing 19.7 per cent and other reasons, for example, the number 29, representing 10 per cent respectively.

If a modification career, sample opinion that the occupation is reasonable, if not a career change from agriculture, mainly the professional service of the 155 samples was 53.4 percent, followed by the trade of 75 samples and 25.9 percent are semi-agricultural 28 samples, representing 9.7 per cent respectively.

Table 5.9 shows the occupation in the past.

Career	Chiang Mai	Lamphun	Phrae
The family had been farmers	35	12.9	49.6
Never farmers	54.5	87	49.3
Currently not farmers anymore.	84.5	96.7	86.9

Source: Questionnaire

5.1.3.3 Adjustment and customization environment with new career

The occupation of Chiang Mai, but the majority of farmers are currently being expanded and a more prosperous a city with a diverse and different from the original, as well as professional services. Trade and other as a result, local people have to adjust their lifestyle to adapt to a changing environment. The discussion group on the issue of adaptation and adjustment environment to the distinguished career of the original has been done in the past found that, samples had to adjust public areas of the community in accordance with the way of life. In modern times, Chiang Mai 65.5 percent, Lamphun percent 82.8 and Phrae 68.8 percent, followed by samples to adjust the living space in your home to reflect on a career which modified, Chiang Mai 33.5 percent, Lamphun 11.1 percent and Phrae 30.2 percent, with a sample of their activities on a new career, ignoring the traditional occupation of the fathers of one in Chiang Mai and Lamphun, Phrae and 5.1 percent (Table 5.10).

Table 5.10 Adjustment and the environment with a new career today.

Adaptive and collaborative environment to present a new career.	ChiangMai (%)	Lamphun (%)	Phrae (%)
Adjusting common areas of the community in accordance with the new life	65.5	82.8	68.8
Fine home living space in accordance with a new career	33.5	11.1	30.2
Do not ignore the new professional career of the original ancestor	1	5.1	1

Source: Questionnaire

The studied conclude that, evolution in architecture, social economy of three areas is same in architectural style as the former Ruankuangpook and wood house later on the West to be occurred a gingerbread house and had to adjust to Western style combined local patterns and becomes to the uniqueness of the area known as the Lanna. Environment within the community has few houses nearby, no fences or just a low wooden fence, but now there are high fences to stop people getting to each other. After the entry of foreigners and the coming of the railway line north of Bangkok, social and economic conditions of the area has changed from a career as a

professional commercial agriculture and other occupations. Increasing of population, the decline of participation in cultural activities, community involvement and behavior patterns changed from the original which every home participated in community activities, in the present even they are relatives but could not participate due to economic conditions. They do not have time to participate the cultural activity and have to donate the money for ceremony instead. Currently, each community relations have changed from the original. The expansion of the city made lifestyle changes from past. Community relationships are less than the past, especially in Chiang Mai; this has changed in the physical environment more than other area, and found that the people in the community are less interrelated. The relatives lost in the past due to a stranger came to live in the greater area. Descendants in working age live or work outside the area for work. In the comment section to adapt to a new career that changes according to the economic and social conditions. Most of the sample desire to adjust the area and environment to new careers and careers that suit for the present are trade and government officer more than farmers because the land is diminished or partially sold out. The difference and these factors influence to the cultural landscape change, which is discussed in the next part.

5.1.4 Cultural landscape and linkage of the cultural landscape element

5.1.4.1 Linkage of the cultural landscape element

Within the element of cultural landscape, there are relations and linkage between the formations of the cultural landscape in each area; it is more specifically associated with the physical component of the social, cultural elements. In terms of architecture and the belief that the long tangled.

1) Faith that is related such physical, such as the belief of the Maung Faii, the belief in spiritualism ghost town home, this is to build faith to the people in the area. Culture of Hong Kwankaw, Hong Kwan Kwai which has diminished since no change at the farm and how to harvest the labor of tractors. Instead harvesters Buffalo, which had been used to make rice rarely seen in today's traditions Hong Kwan welcome buffalo or bison hardly seen today as well.

2) Architecture associated with faith. Faith and culture, including the shrine Capitol cremation cultural landscape as well as a community cultural

landscape. Demonstrate the origin and evolution of the community. The communities in this study are still traditional community. Appears to be evidence of cultural, architectural and natural resources are abundant, but the historical evidence is a small community and so there is not much that architecture supports the basic needs of life.

Community space the area will have a personal and a public area. It is an area that can take advantage of the community together. The key informant said.

"Before, there used to be a lot of space for the village to join, usually it's the temple." "I was home with well water to lap the house. It does not have all the It makes people get together. Assuming we store eggplant this house and we remove to keep the grass at another house, For example my home, that came out to collect vegetable to curry. We also developed a community cemetery together. Divide the work area among each common development. But today this is no longer." " if we want water we will get at water wells which is from the Yom River, if a premium is up more water. Both eat and shower the water is clear no need to use a filter. Mantis was pounding home a stone mortar and wooden pestle."

5.1.4.2 Cultural landscape in the area

From interviewing seniors in the community from the study are summarized in the cultural landscape below.

1. The open space between house and neighbor called Khoung or Lan. It is used for meeting of the family or neighbors, making household crafts and a play area for children who lived in that area.

2. Capitol The area is located in the community center and the construction of a building up to engage in activities such as meeting, community newspaper reading, a place of important events in the community and is an area where joint activities between people in the community.

3. School field is an area that has been used in playing sport are football field and basketball court, these place used for the community events.

4. The open space in the temple. The area used for community events such as religious activity, traditionally important dates.

5. Rice barn or barn is a key element in the lives of Lanna people in the past. Rice was kept each household only for family not for sale. If the any family was

not enough rice in the household, you can borrow from relatives or neighbors because people in the community had kinship relation.

6. Well is one of cultural landscape according to in the past well was the place where represents the importance of the area. The well in the past was only in the temple and common areas for people in the community used together. Sometime well is located in house of people who had high position only. Within relatives who live together well was shared. There were several believes about wells such as prohibiting cover the well it was believed that it is bad and disaster. Furthermore, it was believed that woman not allow to sit on the well because women are impure and less merit.

The study found cultural landscapes in each area are as below.

1. Cultural Landscape of Chiang Mai inside the city walls are Chiang Mai gate Shrine, Siphum city pillar shrine, Inthakin pillar, Khoung or lan (sacred open space) city gates, walls, Kings Monument, and ancient Lanna house in the walled city. The cultural landscape outside the city walls, including Doi Suthep pagoda, ChangPhueak monument.

2. Cultural Landscape of Lamphun area inside the city walls are Hariphunchai relics, the city wall, and shrine. Urban cultural landscapes outside the city walls of Lamphun include Statue Kruba Siwichai, Ku Chang – Ku Ma, Statue of Queen Chamadevi.

3. Cultural Landscape of Phrae, inside the city wall include SanamLuang or Khoung (sacred open space), Khum Chao Luang, City Pillar, Mek or city wall, shrine in city wall, YoungMa shrine, SaenChai godfather shrine .The cultural landscape outside the city walls is Chohae relics.

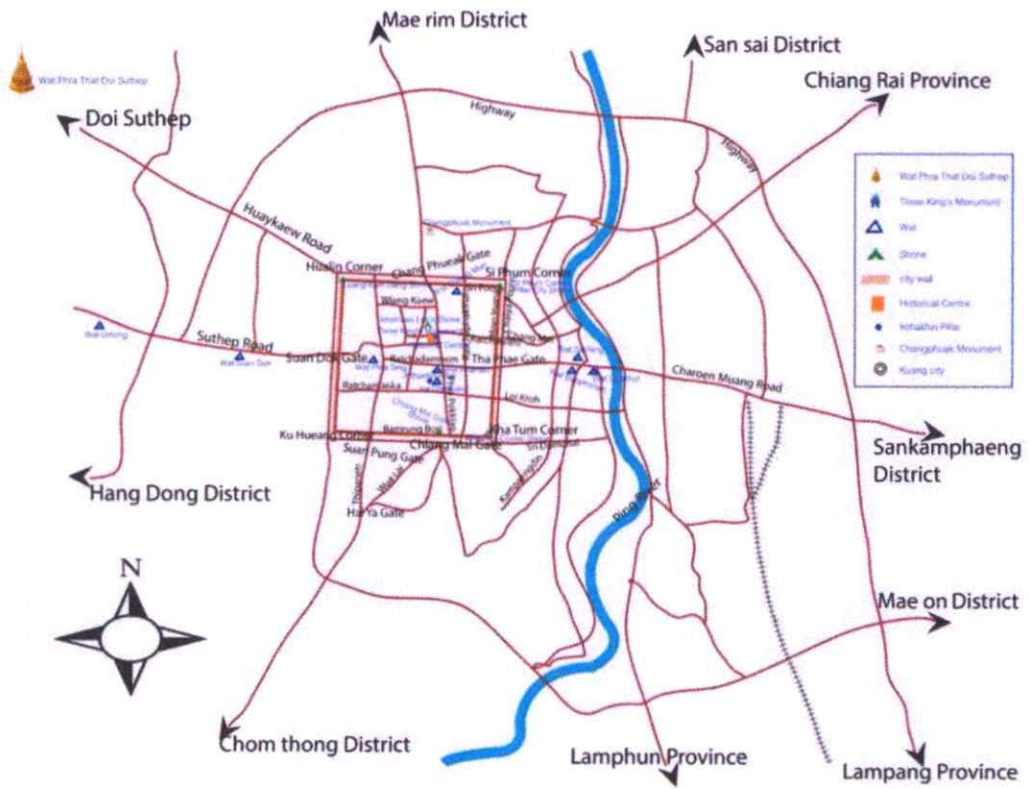


Figure 5.20 location of the cultural landscape in ChiangMai city

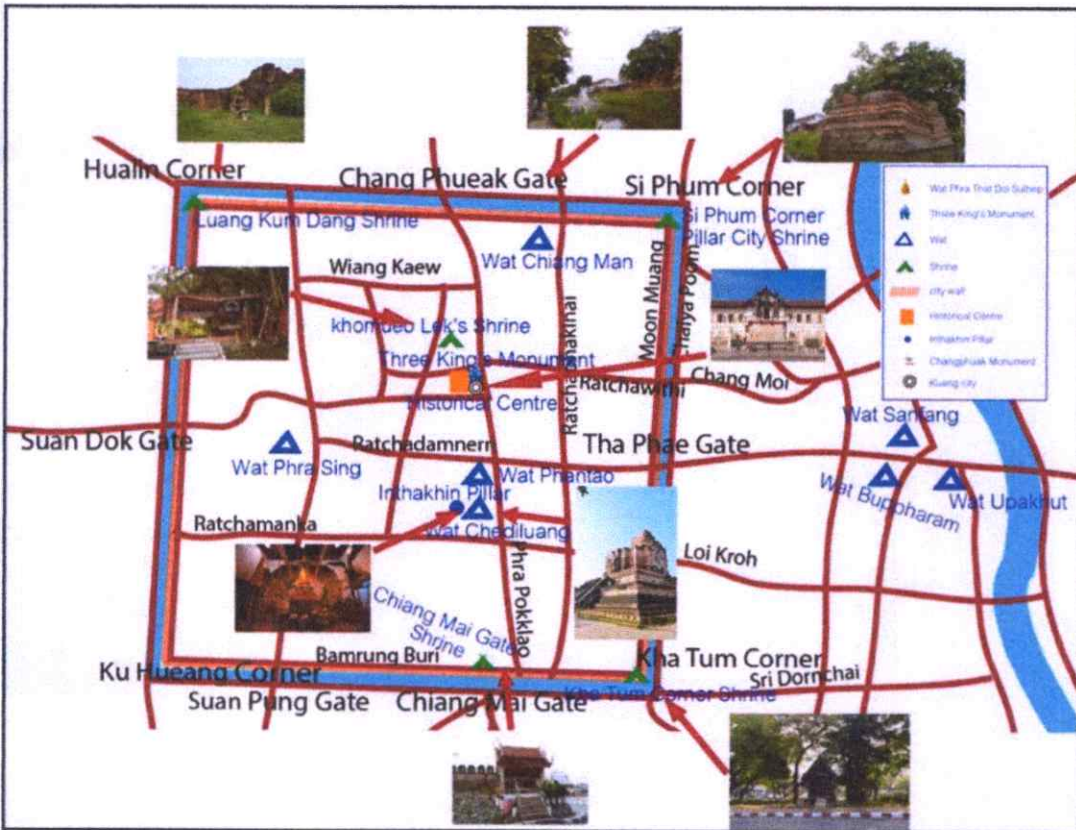


Figure 5.21 Schematic representation of the cultural landscape in the city walls

Source: Researcher

Map of the cultural landscape, both within and related outside area. Chiang Mai has beliefs in building the city, respecting to god and sacred place for protection and far away from ailments. Chiang Mai residents are revered shrine in the city walls of notification of each corner of the city, including Siphum city pillar shrine, Chiang Mai gate shrine, Kha Tum Shrine, Ku Hueang shrine which are gods that protected the city in each direction. Also in the walled city area have other important cultural landscape are three Kings Monument, Inthakin pillar in Wat Chedi Luang which celebrated worship Inthakin pillar annually. Wat Phra Singh is relics of birth year of the Dragon. The relics of the city's revered is Wat Phra That Doi Suthep, the sacred relics of Chiang Mai since ancient times. Chang Phueak shrine, the priority is historically used in ceremonies to select the city location. This ceremony using white elephant which called "Chang Phueak" walked around the city three times and it died, after that the monument was built up at this area as Chang Phueak shrine. Sacred ceremony used the main entrance through Chang Phueak gate which lies on the north of the city.



Figure 5.22 Schematic representation of the cultural landscape in city wall of Lamphun

Source: Researcher

The cultural landscape of Lamphun city include Hariphunchai relics, statue of Queen Chamadevi. The city is sacred to the Ku Chang KuMa of Queen Chamadevi situated in the north area of the city walls.



Figure 5.23 Schematic representation of the cultural landscape in the city walls of Phrae

Source: Researcher

The map shows the location of the cultural landscape in the city walls and around. The survey found that the important cultural landscape which affect people as Young Ma Shrine located Young Ma Gate, Chaopor Saenchai shrine located at Chai gates, Khong or lan (open space) locals call Sanamlaung where in the past used for religious rituals for the King. A particular cultural landscape in community is a Shrine of the god in each Community which are respected for family or people in the community. Religious cultural landscape includes Wat Prabat Ming Maung which is revered sacred of local people, worship Buddha Kosai, reclining Buddha in Pranon community and Hua Khong pagoda in Hua Khong community.

Table 5.11 Comparative cultural landscape element in each area before 1868

	variable	Chiang Mai area	Lamphun area	Phrae area	The differences between the three areas
Contextual factor	weather	The mountains and the plains mountain, the foothills are cool -the shape of urban areas like pan so it is hot and hard to ventilation.	The terrain is flat alluvial flooding. Grate plain for cultivation. The water transport facilities particularly trade and defense.	It is hot because the terrain like a pan	cold weather in the upper area and hot weather in the middle of the area -topography is flat between the valley. - Factor that determine the climate is topography
	Local materials	Wood tiles - Construction materials include columns, beams, stairs and structural materials using wood or bamboo, teak, redwood lumber remember.	- Architecture in the water used bamboo and wood. - Architecture located on land used bricks, stone,	Bamboo, wood, terra, cotta, grass.	Not different because geography and resources are not different

		Country Side bamboo flooring material side. Cover material used bamboo bong Ferry / bamboo lattice Thatched roofing material using rice straw.	clay and laterite.		
	policy	The town center	As Vice City	Through a city Outpost city	The city imposes a duty of policies from different states.
	The creators of the material	Wedge, pin	Wedge , pin	Wedge , pin	not different
Physical element	Architectural style	- Topped by thatched roofs are steep covered almost touching the ground, a mixed hardwood platform. - Wooden shops	House with high basement; Lanna house	Divided into four categories 1) The original wooden vernacular. 2) wooden shops 3) gingerbread house 4)applied house	Lanna buildings Gingerbread house Most buildings are not different because of the influence came from the region is no different. Broadcasting will be influenced

					by the Sukhothai, Chiang Mai Phrae over the entire area due to the influence of Myanmar because Phrae had been under colonial Burma to work in both ranges are. No concessions
Physical element	Spatial	The city wall is rectangular shape influencing of Sukhothai.	The shape of conch Brahmin beliefs.	The shape of city wall as conch shell is believed to have been influenced by Hariphunchai.	Another factor that makes the difference is the shape of the faith in the city.
	The area surrounding the residence.	<ol style="list-style-type: none"> 1. well 2. Bathing place 3. Khoung of house 4. barn 	<ol style="list-style-type: none"> 1. well 2. Bathing place 3. Khoung of house 4. barn 	<ol style="list-style-type: none"> 1. well 2. Bathing place 3. Khoung of house 4. barn 	same

		<p>5. Devils Tower grandparents fence along the south side of alcoholics.</p> <p>6. Use pond</p> <p>7. house for mechanic work</p> <p>8. kitchen garden</p> <p>9. pit toilets</p>	<p>5. Devils Tower grandparents fence along the south side of alcoholics.</p> <p>6. Use pond</p> <p>7. house for mechanic work</p> <p>8. kitchen garden</p> <p>9. pit toilets</p>	<p>5. Devils Tower grandparents fence along the south side of alcoholics.</p> <p>6. Use pond</p> <p>7. house for mechanic work</p> <p>8. kitchen garden</p> <p>9. pit toilets</p>	
Physical element	Orientation of the building	An east - west to east across.	An east - west to east across.	An east - west to east across.	same
	Land use	Most are farmers because agriculture is the main occupation of the people.	Most are farmers because agriculture is main occupation of the people.	Most are farmers because agriculture is main occupation of the people.	not different
	Transportation infrastructure	Shipments cart	Shipments cart	Shipments cart	not different

Social and cultural element	group of people	The LUA	Mon people Meng people Young people	Tai yai or Ngeaw Local people, konmaung	
	Lifestyle	Extended family	Extended family	Extended family	
	Beliefs, practices	Buddhist, Brahmin belief in animism grandfather grandmother elves undress shrine. - Beliefs, rituals and architecture were influenced by some Lua. Such as animism The console and the tradition of planting a residential house and the barn style (rice barn).	Brahman religion Hinduism and Buddhism - That the city builds a conch shell as the beliefs and symbols associated with ocean water, or one key derived from Hinduism.	Buddhist, Brahmin belief in animism grandparents undress shrine.	The family of ancestor worship spirits. - A little different due to the different origins of the faith of the ethnic difference.
	Living habits	Lanna buildings Gingerbread house Chiang Mai city or the building has a large pond with water barnyard lanna kitchen	Mon, Meng or the ancient settlement relatively densely lined the banks of the Ping River.	The tortuous Indigenous to the area Lanna style house.	not different

Table 5.12 Comparative cultural landscape element. (1868- Present 2015)

	variable	Chiang Mai area	Lamphun area	Phrae area	The differences between the three areas
Contextual factor	weather	The mountains to the plains and mountain foothills cool urban areas of the basin pan hot and windy weather seemed. Season Changes Summer long winter shorter.	Swelter in the summer rain season. Season Changes Summer long winter shorter.	Because the terrain is swampy hot pan Season Changes Summer long winter shorter.	- Factors that determine the climate. Topography and human behavior such as burning forests causes smog. Trees and green areas of the city less heated up.
	Material	Wood and concrete tiles.	Wood and concrete tiles.	Wood and concrete tiles.	Since resources and technology are not different.
	policy	The town center	As Vice City	Through a city Outpost	The city imposes a duty of policies from different

					states.
	The creators of the material	Steel Structures Wooden houses still existing structure using nails.	Structural steel beams - Wooden houses still existing structure using nails.	Modern building steel structure Wooden houses still existing structure using nails.	It is not different with the buildings that do not make use of science and technology in the construction is not different.
Physical element	Architectural style	- Building a modern shape - Lanna - Building upon the original wood floor below - modern architecture. The apartments, condominiums, housing. Not many remaining buildings - Within the walls is a conservation area which has controlled the height of the building, but does not	Modern architecture Single storey wooden building housing the addition of a two-story building. The town has a modern architecture and an old wooden house, but outside his apartment condominium.	Modern architecture Wooden buildings are divided into four categories 1) The original wooden vernacular. 2) wooden shops 3) gingerbread house 4) Applied House	Most buildings are different, as is the style of modern architecture looks like almost every area. Western International is a unique balance of old Noi million more. Some dilapidated lack of care

		control forms. It has a variety of architectural styles, both old and modern. - Outside walls are tall buildings, for example. Condominium occurring source of economic Neighborhoods and housing areas.			Gingerbread house was modified shape reconstruction.
	Spatial	Build a prosperous city grew along the transport route.	Shaped city grew along the boom.	The shape of a star extended along the road to progress along the road.	No different routes determines the shape and the area.
	The area surrounding the residence.	1. well 2. Khoung of house 3. rice barn (barn).	1. well 2. Khoung of house 3. Rice barn (barn).	1. well 2. Khoung house 3. rice barn (barn), leaving only a few houses in the	Since water does not stop with changing behavior and changing architectural style

				<p>area in the walled city still find some of the area outside the city, but the majority of a rice barn, but not used to packing longer used as storage.</p>	<p>bathroom home is not separated from the house, as in the past.</p> <p>- Well that is not well used but were not filled or buried due to the belief in the ban reclamation ponds.</p> <p>- Hardly find a Khoung house because land prices are higher and the house has a lower priority.</p>
The orientation of the building	Most buildings facing along the road without taking sides. I do not believe in some buildings blocking the	Most of the buildings along the road turned. The faith is not allowed in the	Most of the buildings along the road turned. Do not believe	People do not believe the decline will mainly focus on development	

		sun.	building across the West.	the sun is somewhat blocked.	along the road.
	Land use	City Centre area is mostly commercial trade.	Urban Conservation Area and the surrounding areas with the use of land not much different.	Land use with a variety of commercial, residential, commercial centers around the neighborhood and carrots Charoenmaung Goldwater.	<ul style="list-style-type: none"> - Different growth - The different living areas. - Different population
	Transportation infrastructure	Agricultural areas of the city were converted into residential housing and shopping.	Agricultural trade is reduced, people change careers or work Factory.	People change careers is declining agricultural trade.	<ul style="list-style-type: none"> - Career Change - Population greater demand for more housing.
	group of people	Road connections	Main Street Restaurant	Main Street	The city and the

				Restaurant	expansion of the city different.
	Lifestyle	Foreigners come to live in the area are mostly owners or people who have lived originally moved out to other areas by the sale or lease.	A stranger came to live in a small number of mostly indigenous people in the area from the past.	A stranger came to live in a small number of mostly indigenous people in the area from the past.	The change of ownership since father died. Children go work somewhere else, not in the area.
	Living habits	In urban areas, the building was used as a trade rather than living alone as a source of trade and tourism.	In urban areas, changing living habits a little bit like the old boss area as a park. An industrial estate on the outskirts of foreigners to live.	The city also has a habit of living space, not much different from the original. Is a residential district government	Vary according to the different prosperity.
	Beliefs, practices	Buddhist, Brahmin belief in animism grandfather grandmother elves undress shrine still exist in both	Brahman religion Hinduism and Buddhism The belief in animism	Buddhist, Brahmin belief in animism grandparents undress shrine.	No different beliefs, decreased due to Western culture came into

		urban and periphery. The frequency of religious rites less.	mogul still has not changed quite as much. The frequency of religious rites less.		possession. The frequency of less activity. Type of faith down People respected reduced
--	--	---	---	--	--

5.2 Factors affecting the Physical setting and associated with changes in the cultural landscape

This section is to find out the factors that affect the physical change and correlation with the elements of the cultural landscape. The meaning of the physical setting in this study refers to positioning, configuration or orientation of the area cultural landscape. When the physical characteristics of which are elements of the cultural landscape means something appeared or appearance of the area. In this study, the physical indicators including vernacular architecture, settlements and indicators of social-cultural characteristics are indicative of the cultural landscape. The cultural landscape of northern mostly is mountainous and only a quarter of the area is the flat area. Thus the settlement will mostly live between the valley and the riverside. The northern areas have many forest areas which are the headwaters causing many rivers to be collective. In the past, the lifestyle of people with cultural beliefs related to the area continued and long-standing relationships with a unique cultural landscape of the northern region. However, nowadays, a change from the past occurred with many reasons. Factors affecting the cultural landscape change do not directly impact the landscape changed, but many factors impact the physical environment and caused the cultural landscape change as well. Factors changing the physical environment include road construction or expansion, change the culture surrounding landscape area, policy development of the state so on. Prosperity comes to change the cultural area such as making activities in cultural area to be smaller by extending the road or from changes in land use. The factors which may cause changes in the cultural landscape are concluded as following.

5.2.1. Policy factor

The policy of the city effects to each city and has different physical characteristics and change of the cultural landscape as well.

5.2.1.1 National economic development plan

In Thailand, it is called National Economic and Social Development Plan. The 1st and 2nd policy plan in 1961-1971 focused on economic growth by developing the basic infrastructure and caused the development of many

infrastructures. For the North, Chom Phon Sarit Thanarat government set the north committees in 1961. The state has created economic infrastructure especially focusing on the roads and highways construction across the north line, which links rural areas to the cities of each region and Bangkok, capital city of the Thailand. In addition, developing plan purposes to establish industrial promotion institutions in Chiang Mai. The duty is to support small and medium size industries in local. Later, there was the establishment of northern industrial centers and now it is an Industrial Promotion Centre Region 1 (Chananon, 1986; Pattanawan, 2009).

The government investment in the promotion and development of infrastructure includes the stimulation and the economic support. Determining the role of Chiang Mai to be a minor city from Bangkok and is the main city of northern regions, is a series impact on the cultural landscape in Chiang Mai. It also formulates to the cultural identity changing of the Chiang Mai people. However, people in Chiang Mai, can also adapted with the change of the economy and society as occur.

In the 3th Plan (1972-1976), it determined Chiang Mai area, Lamphun area to be a center of economic growth and Chiang Mai is the main city. In this plan has highlighted the construction of secondary highways and subway to complement the main highway that was already created in 1st plan and 2nd plan to transport products from the countryside and villages to the market (84 years of Department of Highway, 1996: 116-118). There were the Chiang Mai – Lampang Highway (no.11) and connected to Lampang – Bangkok highway finished in 1968. Transportation from Bangkok to Chiang Mai is more convenient (Anu Nuenhad, 2003) there are both bus and coach business, which are rapidly expanding.

From the 4th National Plan, the proportion of industrial sector is more expanded than agriculture. It was the first time and continue growing, resulting in a career change from farming into a career in the industry. In addition, the 4th development Plan (1977-1981) and the 5th developing Plan (1982-1986) was assigned to each region as main city and sub city. The main north cities are Chiang Mai, Phitsanulok and Nakhon Sawan while the sub cities include Lampang and Chiang Rai.

From around 1987 onwards, it has dramatic change in Chiang Mai. In all aspects, the expansion of the city, the tourism businesses are growth and service, etc. So between 6th and 7th plan (1987-1996) accelerated economic development

from progressing to the further, Chiang Mai is defined as the main city continually in terms of a trade center, transportation, services and tourism of the region. The city expanded rapidly from 1987 onwards, with the investing from foreigners such as hotel, shopping centers, condominiums, housing, land allocated, etc. Especially in the city, while it crowded in the suburb area, which was used in agriculture, changed as housing program. It extends along the road surrounding Chiang Mai like Chiang Mai - Hang Dong, Chiang Mai - Mae Rim Chiang Mai - Sankampeang and Rim Kon Chun Prathan road. The expansion of the Chiang Mai city, the expansion of tourism include the development of infrastructure therefore it needs more housing. Housing allocated expansion in both urban and suburban areas with convenient transportation. The traditional communities effect both inside and outside the city wall. The housing allocated along the ring road around the city makes a new community and business center of the new round. Department stores rise in around the city can be noted from the increasing in store such as Big C, Tesco Lotus around 2007-2011 and the Central Festival mall and metabolic medicine in 2014 from the National Plan between 1th -7th of the above, focused on the economic and physical development, but still lack of the local culture promoting. However, in the plan 8th and 9th (1997-2006) and the constitution of the Kingdom of Thailand 1997 (Thai constitutions) and Education Act of 1999 (National Education Act of 1999) have set to promote local community and local wisdom. As a result, various sectors including government, schools and organizations pay the attention and engage with the community in Chiang Mai (Pattanawan, 2009).

From the National Economic Development Plan 1th -9th as described above makes physical characteristics of the study area has changed. Especially, Chiang Mai was developed and invested over Lamphun and Phrae province. Since each city has a different role. Chiang Mai was designated role as a main city of economic and tourism. The Lamphun defined role as a vice city. The establishment of industrial estates in the province of Phrae has been not assigned any roles yet. Thus, determined different policies affect the city extension and the physical change.

The data from the interviews of the important people showed that "The factor, that makes Lamphun still unchanged, be exciting like Chiang Mai, is development of the state into only the big city. Therefore, Lamphun was noted to be a small city and industrial estate was drawn up outside the city. The policy set

Lamphun to be a secondary city and Chiang Mai is a main city. The big budget goes to Chiang Mai, which makes Lamphun just grow up as what they have been set. A conservation trend came in 2004 and made Lamphun as a World Heritage, he added. Conservation boomed in 2005-2009 and then silent. It came with tourism as TTT, which comes to develop, or national policy development plan, provincial level while agencies work together to integrate and visualize it more clearly.”

5.2.1.2 Tourism industry promotion

The International Conference of the Association for the promotion of Tourism in Asia and Pacific on 1969 (Pacific Asia Travel Association-PATA), a meeting result is present Chiang Mai to be an important area in tourism after Bangkok by improving the airport to be an international airport and proposing a Tourism Association of North. Therefore, since 1970, Chiang Mai Airport is promoted as an international airport with convenience to travel which will effect to the tourism in the north and increase the flourish expansion also hotels and housing (Pattanawan, 2009).

The expansion of the tourism business promotes the increase of hotel, accommodation especially in the city wall area and around during the years 1987 up to present. Within the city walls used to be residential and commercial zone. The modifications of lifestyles in the community begin with people from other places who come up the property and change of possession. Currently, only 40 percent is the aboriginal people in some areas are not sold but leased to other operators, the number of hotels increased almost double over a period of approximately 10 years (From interviews with community leaders in the city wall, 2012).

5.2.1.3 Economic System

The economy system is another key factor which affects the changing cultural landscape. This is because when the transportation changed, the land use also changed due to land values gets higher, which attracts people from other residents come into the area. Revenue from traditional economic dependence on agriculture or households trade began to move towards a capitalist economy that relies on machines to produce. Trade and services in the form of management type of organization and monopoly with principle. In the words of the important respondent said that *“The downtown community in every community will have a problem*

because when tourists come into the community, people will think that it is business that community can do. Therefore, villagers think that if they can expand the house or land to do business, they would have an extra income. When the economic changed make villagers wanted money so the value of land will be increased and change from rent to sale. Because people think that they no need to take care it again after sailed, therefore people will migrate and find the new place which be purchased in a lower price, so it be more money left."

In addition, beside the economic change, the social change also has the effect as well. In the case of the Chiang Mai city, the coming of the missionaries of the Presbyterian school year 1873-1941, made a change in the western educational interaction with the local changes. In that period, the field of education has changed from previously studying at pagoda (Wat) back to the beginning of the school or academic institution. In addition, the architecture and buildings are influenced by the west as well. In the words of the person who provided information that "the main factor is social aspect. This is because children do not study it and depend on the child's interests. The current way of life, it has changed to a more urban society. Adults go to work Children also want to study in school, teaching local culture. Because of most children are at school than at home, currently the school teaches student on academic subject".

Economic and social factors have affected the cultural landscape because the people of the area take time to go to work to earn money and the system is in the form of company or factory to leave on time, which they have no time to attend cultural traditions. It may result in the loss of the cultural landscape because of its less importance. Unlike in the past, during the free season, the people have time to engage the traditional activities and agriculture is characterized interdependent-help form during having the traditional activities. They will stop for their own work and come to help each other to hold the community activities as the whole. In according to the key person provide the information claimed that

"In the past when there is ordination task, they will go for the whole family, but there is only one person / family who will go because now they have to make money to sustain their life due to the cost of eating and using increase. With the way its taste, its values with their children still return to tradition style. If they have paddy, they will have rice to eat. Female works a household while man is hired.

In addition, the socio-economic changes affect areas develop and attract the entry of foreigners come to the areas. The changing architectural styles and materials in the construction of cultural beliefs have been mixed and adapted to the strangers (comers). Changes in land use has discussed in the section on the evolution of architecture in which the entry of foreigners, such as gingerbread houses, Application Lanna house.

5.2.2 Urban Regulation

Start planning act has been enforced since 1975 in the north city plan in every province. Planning is responsible for directing the development and land use patterns of the area, but due to some loopholes, such as the lack of a drawing made by law enforcement was not available. The boundaries of the land-use plan expiration will cause problems in many areas, such as improper of plan caused from tall buildings blocking the view of the river and Doi Suthep, the cultural landscape of Chiang Mai. The integration of the peoples in Chiang Mai is to protest against the destruction of valuable land and historic areas.

5.2.2.1 Comprehensive Plan Chiang Mai

Past land use within the city boundary is a residence and outside the city walls is for residential and rural and agricultural land use. In terms of current land use, many types of data from Chiang Mai Office of Public Works and Town & Country Planning, aerial photographs and field surveys founded that land use in and around the city walls are in commercial type with high housing density, low residential community density, government institutions, and communities within the city walls that their land use as residential and government buildings, but the community area outside the city walls is residential and commercial type. The area of municipality Chiang Mai is divided into 4 kwang such as Kwang kavilak, Kwang Nakhon Ping, Kwang MengRai and Kwang Sivichai Nakorping, which divided landuse by categories as following.

- 1) Land use for conservation and promote Thai culture
- 2) Land use types of commercial and crowded resident, which will be appeared in the north and the east of the city walls

- 3) Land use residential medium density outside the city walls on the south
- 4) Land use types of government institutions outside the city walls on the west and the north
- 5) Land use residential low density
- 6) Land use types of religion institutions
- 7) Land use for rural and agriculture
- 8) Land use for recreation and environmental quality preservation
- 9) Land use for educational institution
- 10) Land use for residential conservation
- 11) Land use for specific industry

Land use compliance with comprehensive planning of Chiang Mai for the first announcement in 2006 until the 3rd edition in 2012 has been seen that there is a difference in the first announcement. The 1st and 2nd edition improves the noted areas to promote Thai art and culture especially in the area of the Chiang Mai wall until an updated the 3rd edition has been modified to increase the area of conservation, to promote Thai culture by covering the area of Chiang Mai Bailey with the original plan, including the area outside the city plan and the southeast is red, is to use the land and the commercial sector. Residential density causes the expansion of the commercial communities. Shopping malls and hotels in the areas that have had a plan for renovation law in 2012 does not apply retroactively prosperity, these changes make physical and land use changes.

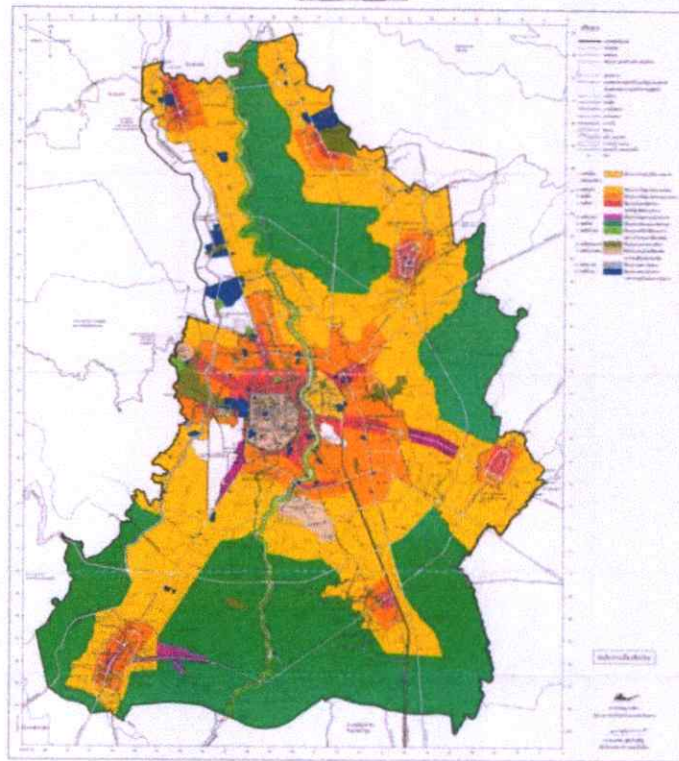


Figure 5.24 Chiang Mai Land Use Map

Source: www.dpt.go.th/Chiangmai

5.2.2.3 Lamphun Comprehensive Plan

In the past land use is used for living, rural and agriculture. Nowadays, there are many types of land use such as commercial, residential, community, government institutions. Communities within the city walls land use were used for living and government institute, but the community outside the city walls was used for living and commercial. The study area includes Chamadevi community, Sondonrom community, Mahawan community, Chaimongkol community, Prakongruesee community, Pratulee community, Banlao community and Wiangyong community. The total of eight communities inform from Lamphun Office of Public Works and Town & Country Planning, aerial photographs and field surveys found that land use categories are follows:

- 1) Land use for conservation and promote Thai culture
- 2) Land use types of commercial and crowded resident
- 3) Land use types of residential medium density

- 4) Land use types of residential low density
- 5) Land use types of institutions and public sector
- 6) Land use types of open space for environmental quality preservation
- 7) Land use types of rural and agriculture
- 8) Land use types of industrial and warehouses
- 9) Land use types of the specific industry
- 10) Land use types of religion institute
- 11) Land use types of open space for recreation and environment quality preservation
- 12) Land use types of educational institute

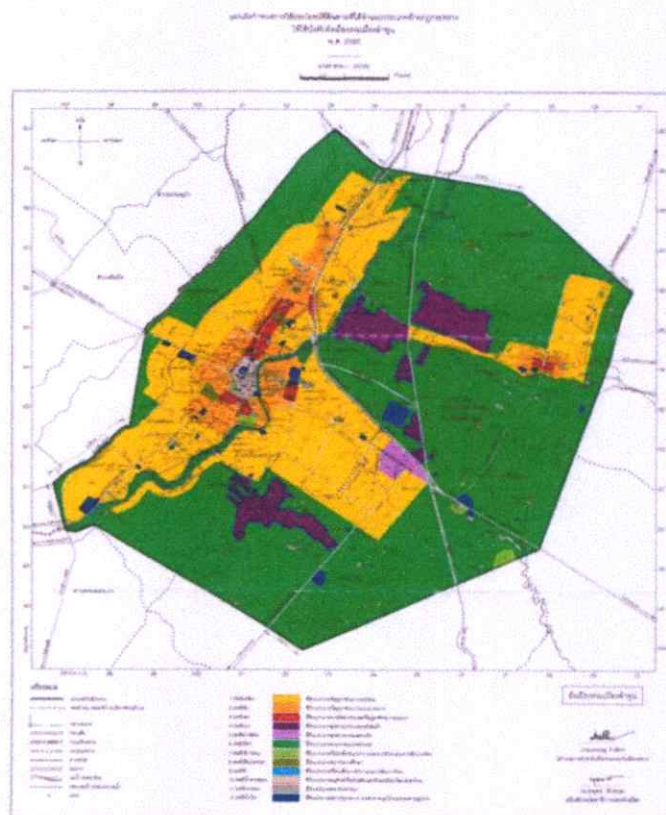


Figure 5.25 Lamphun land use Map

Source: Lamphun Office of Public Works and Town & Country Planning

5.2.2.3 Comprehensive Plan Phrae

Former land use was for residential and rural and agricultural land use. The current land use is used in many types such as commercial, residential, community, government institutions in the area within the city walls. Land use is applied in

residential and government buildings. The community outside the city walls used in residential and commercial land use.

The features of land use can be divided into four groups:

1) The area within the city walls is a government official area from the past until now. The current land use is used for residential and official residence and the Town Planning Act requiring a space for cultural preservation and government institution.

2) Communities in the north outside the city walls before were farm and residential areas. Currently, they are residential and commercial area included Sraborkaeow, Banmai and Petcharat community.

3) Communities in the east outside the city wall included Maung Hit – Tuntong, Maung daeng, Chaimongkol, Maunghit- Pattana and Tungtom. Trading and old commercial zone located on CharoenMaung Road. Since the Charoen Maung road expansion is rather difficult. Transportation is not convenient, the city expanded to Bantong intersection, which originally a farm and residential area from Bantong to the airport. Nowadays, the land use changed to commercial and residential.

4) Communities in the south outside of the city walls comprise of Chetawan community in the southwest nearby Yom River and Rongsor community in the southeast adjacent to the city walls.

Land use characteristics of each community noticed by the appearance of the important activities and race of each community by having the network traffic and activity which are the scope dividing the community. Since it is the urban society from the integration of the various communities, there will be fields around the city.

Although the current division among the communities in the municipality by considering the integration of the community using the temple is center and network traffic is a clear scope dividing community, in fact, the activities operation is needed to depend on each other.

Data from Phrae Office of Public Works and Town & Country Planning, aerial photographs and field surveys found that land-use planning divided to 10 categories.

- 1) Land use types of conservation and promote Thai culture
- 2) Land use types of residential low density
- 3) Land use types of residential medium density
- 4) Land use types of commercial and crowded resident

- 5) Land use type of institutions and public sector
- 6) Land use types of religion institutions
- 7) Land use types of rural and agriculture
- 8) Land use types of specific industry
- 9) Land use types of open space for recreation and environmental quality preservation
- 10) Land use types of educational institution



Figure 5.26 Phrae land use Map

Source: Phrae Office of Public Works and Town & Country Planning

The study comprehensive plan and land use map of three provinces founded that Chiang Mai comprehensive plan to change the color of land improvement in the third compared to the comprehensive plan includes Lamphun and Phrae were not a land use do not change much, which causes the skin to maintain the cultural landscape in the area over that this. In conclusion, we determine the land use of city plan is important because they help cultural landscape conservation areas.

Therefore, surrounded Rattanakosin area of Bangkok city planned as defined colors, the use of the land for conservation.

5.2.3 Globalization and Urbanization Factors

The growth or urbanization is one of the factors that affect to the extension of the city and caused the physical changes of the cultural as well as changes in beliefs. For example, local cultural landscape became smaller areas due to urbanization. From the original, there is a space for all people in the community area, it is decreased for now; the reason is the expansion of roads and changing the land use to another. The key informant said: *"The Gold Shrine, the court that the community respect, it becomes smaller for now. Enlarge wider road fronting the home because the court had asked the court to move away"* (Dangkong).

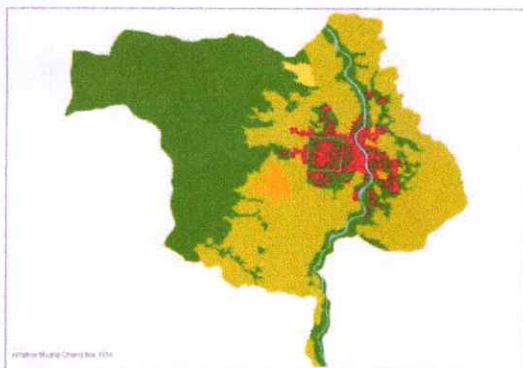
With the ways and modern life of prosperity and urbanization process changed people's behavior, many beliefs or lower Lost *"house faith - are currently less strict. When it is time to build house or do a business that is modern, the shrine was demolished, water wells were filled. Unlike before, no one dared to cover or moving because they believe that they will be blind"* (Chan Met)

It can be seen that the major changes that affected northern areas has a fundamental reform the reign of King Rama V. The coming of the railroad is the formation of a capitalist economy in the region and economic development plans and national social services. State Policy and Planning is not in line with the area. The house condition is changed, the condition of Khum Chao (Lord Residence) that used to tell the origin of the community is also changed the owner and has been dismantled to be modern. Land use at different levels of urbanization and communication network different and unequal levels of development. These three areas make physical changes at different levels. Chiang Mai has the greatest level of urbanization due to the prosperity dwellings that face modern style land use are more commercial and housing denser. The network of the road connects each section of the city toward the ring in changes to land around the road network. As a result, it changes in the cultural landscape. For instance, Chiang Mai area planning, as well useful in preventing new cultural landscape in the area were destroyed. Although a solution at the end of the physical space and cultural space has been converted to a revised comprehensive plan is adopted, it also preserve the cultural

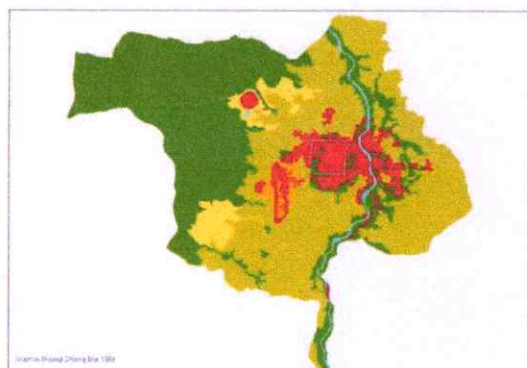
landscape in the area is intact and undamaged. In the Future, restoration of the lost cultural landscape requires cooperation from many parties. Both public and private sectors rely on the maintenance period to recover physical and activities, a lifestyle that contributes to the cultural landscape.

5.2.3.1 The Urbanization of ChiangMai

The expansion of the area of Chiang Mai in Figure 5.25 shows the expansion in the last 50 years, from 1954 to 2002, which by analysis of aerial imagery of Chiang Mai with GIS applications in 1954, 1968, 1976, 1995, 2002 and 2015 showed that Chiang Mai has a land-use change dramatically. The expansion of the city is a new settlement along the main road. Chiang Mai - Lampang and the outer ring road from the year 1996 to the year 2002 based on the analysis, the number of forest area was reduced from 49.06 percent in 1954 to 28.29 percent in 2015. The proportion of urban areas increased from 4.74 percent in 1954 to 59.24 percent in 2015. Furthermore, the field areas also decreased from 42.8 percent in 1954 to 1.56 percent in 2015 (Table 5.13). Expansion of existing communities located along the river and trends of expansion along the main road with the increasing urbanization from the past.



1954



1968

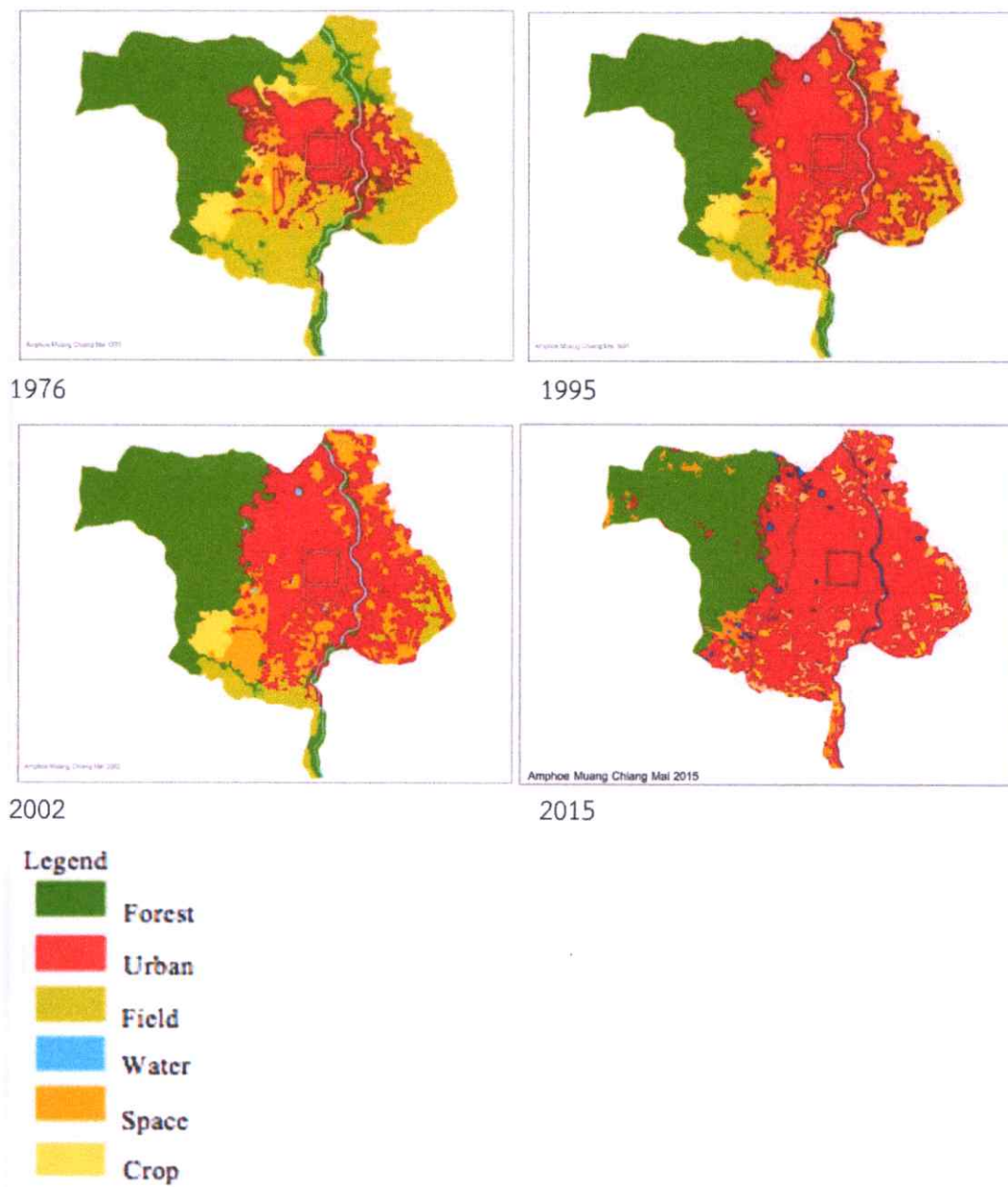


Figure 5.27 the Urbanization of Chiang Mai

Source: Researcher

Table 5.13 the Urbanization of Chiang Mai

Landuse	Chiang Mai											
	1954		1968		1976		1995		2002		2015	
	Area (m ² .)	%	Area (m ² .)	%	Area (m ² .)	%	Area (m ² .)	%	Area (m ² .)	%	Area (m ² .)	%
Forest	73,998,814.24	49.06	61,576,242.96	40.83	56,846,050.09	37.69	50,175,068.14	33.27	50,528,680.28	33.50	42,660,130.04	28.29
Urban	7,148,778.02	4.74	12,456,159.62	8.26	26,737,184.24	17.73	62,086,338.53	41.17	62,573,127.20	41.49	89,341,405.70	59.24
Field	64,577,702.91	42.82	65,264,353.26	43.27	53,665,945.56	35.58	18,994,763.05	12.59	10,249,348.59	6.80	2,356,421.84	1.56
Water	2,383,294.21	1.58	2,450,768.97	1.62	2,450,768.97	1.62	2,524,435.03	1.67	2,626,102.68	1.74	2,538,399.90	1.68
Space	1,690,438.17	1.12	1,697,075.09	1.13	3,886,986.66	2.58	12,435,581.29	8.25	21,158,734.88	14.03	8,252,238.82	5.47
Crop	1,020,545.56	0.68	7,374,973.20	4.89	7,233,008.00	4.80	4,603,322.68	3.05	3,684,237.21	2.44	5,670,976.81	3.76
Total	150,819,573.11	100.00	150,819,573.11	100.00	150,819,573.11	100.00	150,819,573.11	100.00	150,819,573.11	100.00	150,819,573.11	100.00

Source: Analysis by researchers.

5.2.3.2 The Urbanization of Lamphun

The analysis of aerial photos of Lamphun with GIS in 1954, 1970, 1977, 1996, 2002 and 2015 showed that there was a little change in using land (Figure 3). The expansion of the city along the Chiang Mai-Lamphun Road occurred from 1996 to 2015; there were new settlements along this road and its surroundings. The forest zone decreased from 57.97% in 1954 to 31.27% in 2015 and the urban areas increased from 0.73% in 1954 to 16.27% in 2015 (Table 5.14). The urbanization of Lamphun first spread from the settlements along the river. Later on, it spread to places where modern transportation was efficient.

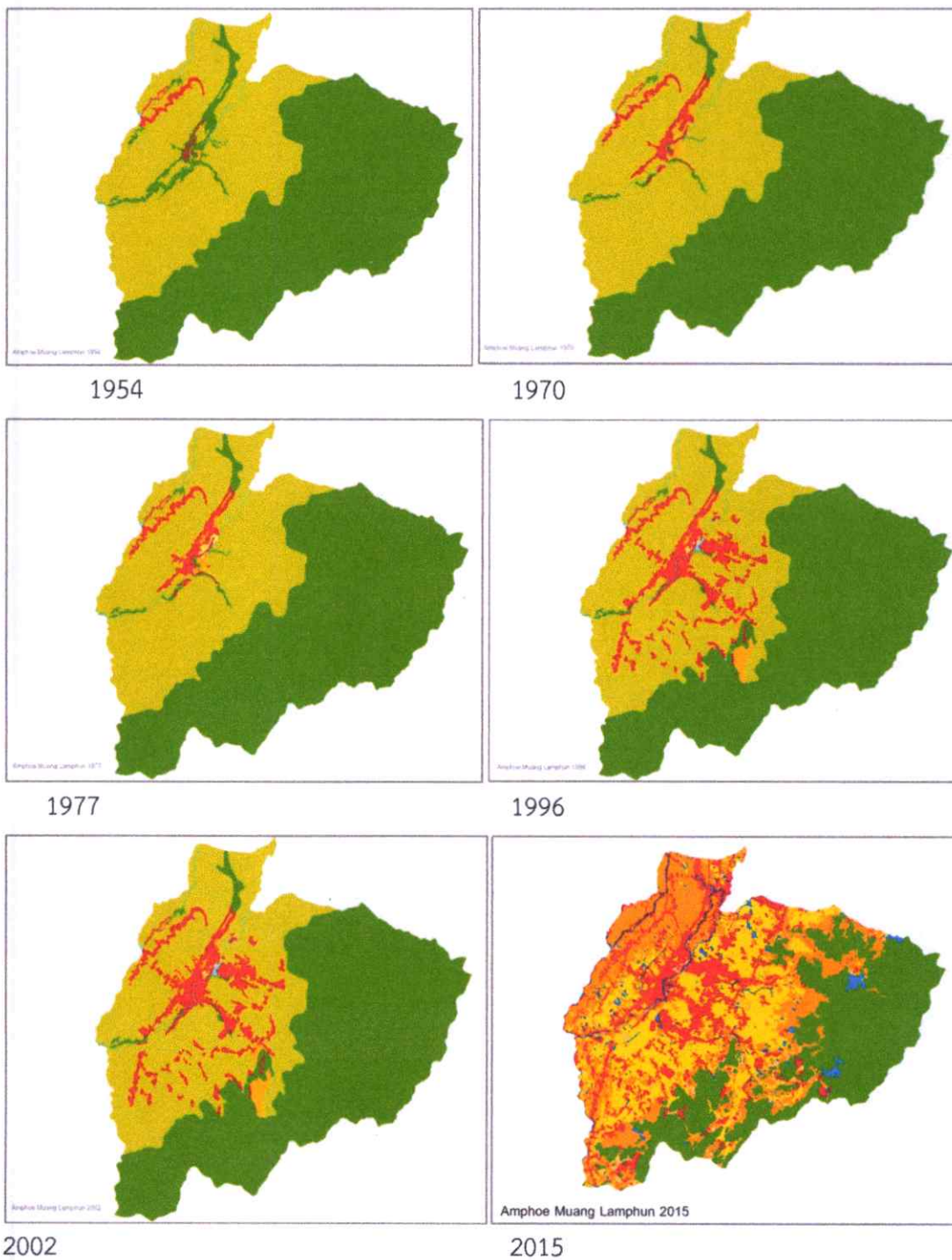


Figure 5.28: The Urbanization of Lamphun

Source: Researcher

Table 5.14 Changes in land use Lamphun

Landuse	Lamphun											
	1954		1970		1977		1996		2002		2015	
	Area (m ² .)	%	Area (m ² .)	%	Area (m ² .)	%	Area (m ² .)	%	Area (m ² .)	%	Area (m ² .)	%
Forest	291,739,781.38	57.97	282,687,149.34	56.17	282,761,180.21	56.18	262,503,081.77	52.16	262,508,773.34	52.16	157,383,775.32	31.27
Urban	3,695,343.94	0.73	9,641,395.59	1.92	10,318,056.16	2.05	31,866,670.44	6.33	32,824,103.62	6.52	81,872,237.95	16.27
Field	205,561,365.76	40.84	207,715,607.68	41.27	205,783,461.24	40.89	202,121,664.78	40.16	201,366,656.51	40.01	116,815,992.32	23.21
Water	1,780,003.61	0.35	1,780,003.61	0.35	1,780,003.61	0.35	2,075,525.54	0.41	2,075,525.54	0.41	8,632,094.78	1.72
Space	499,209.44	0.10	1,451,547.91	0.29	1,651,261.96	0.33	4,275,197.75	0.85	4,139,459.90	0.82	12,149,961.16	2.41
Crop	0.00	0.00	0.00	0.00	981,740.96	0.20	433,513.11	0.09	361,134.48	0.07	126,421,642.61	25.12
Total	503,275,704.13	100.00	503,275,704.13	100.00	503,275,704.13	100.00	503,275,704.13	100.00	503,275,704.13	100.00	503,275,704.13	100.00

Source: Analysis by researchers

5.2.3.3 The Urbanization of Phrae

The analysis of aerial photos of Phrae with GIS in 1954, 1973, 1995 and 2015 showed that there were little changes in using land (Figure 5.29). The expansion of the city along the Yantrakitkosol Road occurred from 1996 to 2002; there were new settlements along this road and its surroundings. The forest areas decreased from 80.29% in 1954 to 74.76% in 1995 and the urban areas increased from 0.85% in 1954 to 2.33% in 1995 (Table 5.15). The urbanization of Phrae first spread from the settlements along the river. Later on, it spread to places where modern transportation was efficient.

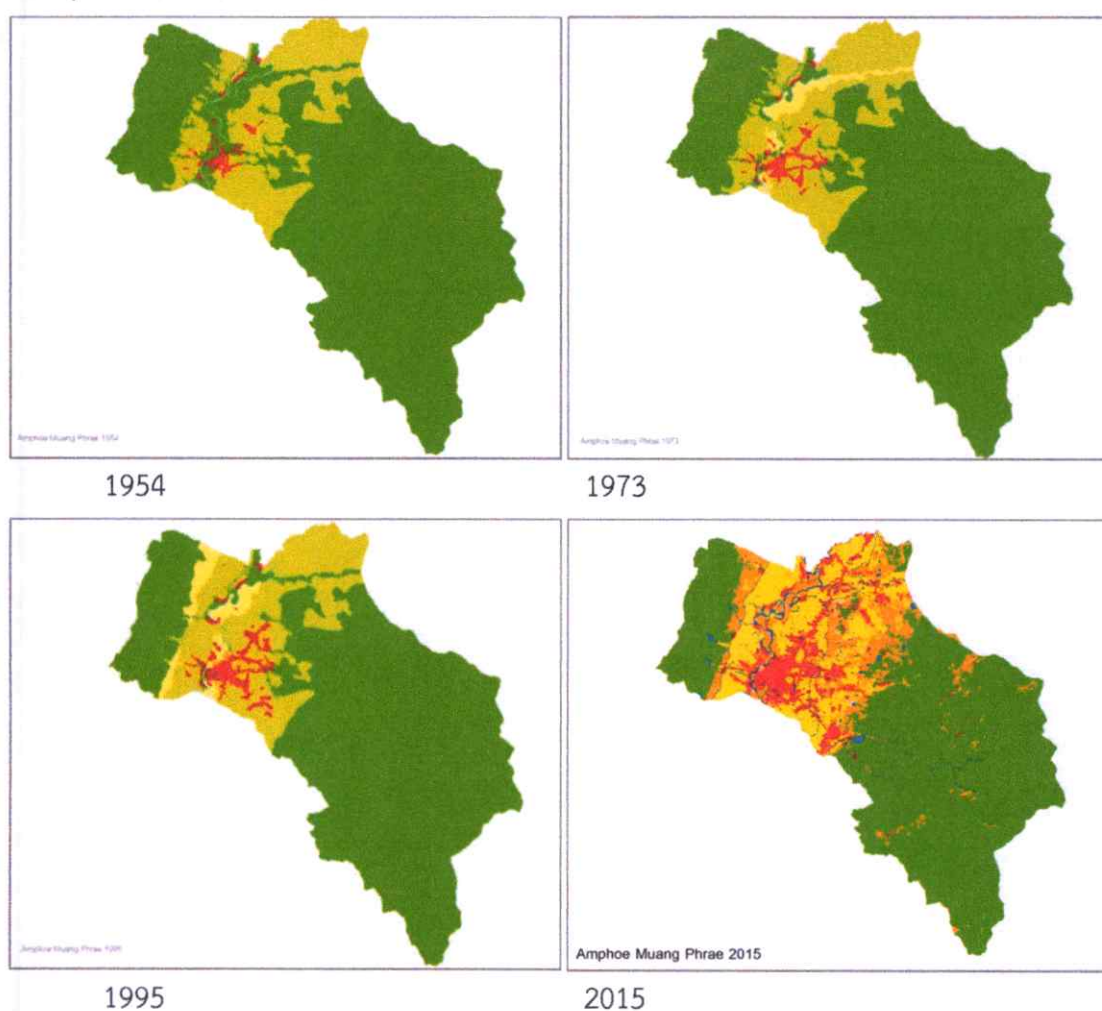


Figure 5.29: Urbanization of Phrae

Source: Researcher

Table 5.15 Changes in land use of Phrae

Phrae								
Landuse	1954		1973		1995		2015	
	Area (m ² .)	%	Area (m ² .)	%	Area (m ² .)	%	Area (m ² .)	%
Forest	616,877,822.96	80.29	592,383,605.35	77.10	574,425,924.37	74.76	486,257,918.15	63.29
Urban	6,560,361.00	0.85	11,027,161.14	1.44	17,912,761.81	2.33	52,355,703.36	6.81
Field	142,290,893.02	18.52	143,480,455.31	18.67	148,367,632.26	19.31	122,886,906.45	15.99
Water	2,605,263.83	0.34	2,295,173.47	0.30	2,295,173.47	0.30	7,657,294.05	1.00
Space	0.00	0.00	1,492,327.56	0.19	1,772,773.13	0.23	8,334,851.95	1.08
Crop	0.00	0.00	17,655,617.99	2.30	23,560,075.78	3.07	90,841,666.85	11.82
Total	768,334,340.81	100.00	768,334,340.81	100.00	768,334,340.81	100.00	768,334,340.81	100.00

Source: Analysis by researchers

The analysis of the urbanization of the three areas has found that all the three of communities and the expansion of a new settlement along the road, and the proportion of urban areas have been increase in the past, and the proportion of forest area and the field has decreased. From urbanization and the expansion of space by Chiang Mai province, a proportion of the urban areas increase mostly in Lamphun and Phrae has increased as well, but in a small proportion.

5.2.4. Transportation Network Factors

Northern transportation routes in the past were mainly based on water and walk because the urban communities were settled adjacent to riversides in which the commuting crucially relied on river for goods exchanges. However, when Northern Railroad route line during 1921-1941 was operated caused economic change in Payap precinct (northern area of Thailand). The connection between Payap precinct and Bangkok province was more convenient and faster. The cargos transportation by Northern Railroad route line was the factor that caused the economic changes for sustaining themselves and affected social change that could apparently be seen as the expansion and growth of the urban communities (Poolthajak, 1987).

The coming of the railroad caused the physical changes, emerged the community settlement along the railway, commercial district and the increase of the relationship with the outer people. Road construction and land and air transportation projects promoted the expansion of urban that led to land use change and the increase of commercial areas that impacted on the existing cultural landscape in the area of each area. The key informants claimed that *"The belief was destroyed by central urban politics and governance characteristics that we had thought sacred, but people from Bangkok or Siam who came to make the changes by building the roads through as the cut to insult the enemy in effigy that made city skills deteriorated and came to rule"*

The former transport in the past used carts, elephants, horses. Land transportation road communities have expanded more over by water transportation. The coming of the railway and highway caused the land transportation. Subsequently, there was the construction of an airport for air transport in which each consisted of transport network as following.

5.2.4.1 Transportation network of Chiang Mai

Transportation networks in Chiang Mai are included both land and air transportation. The land transportation includes railway line from Bangkok to Chiang Mai. In terms of transportation within the city limits, there is road network as a ring character to connect to each area joining together. Therefore, these transportation networks result in a change of land use surrounding the Chiang Mai city. When there are road constructions passing through the green area which is rural and agricultural

land use, the land price is increased. This leads to the adjustment color as yellow areas which is the of low residential density land use that causes housing estates come along the ring road for each layer.

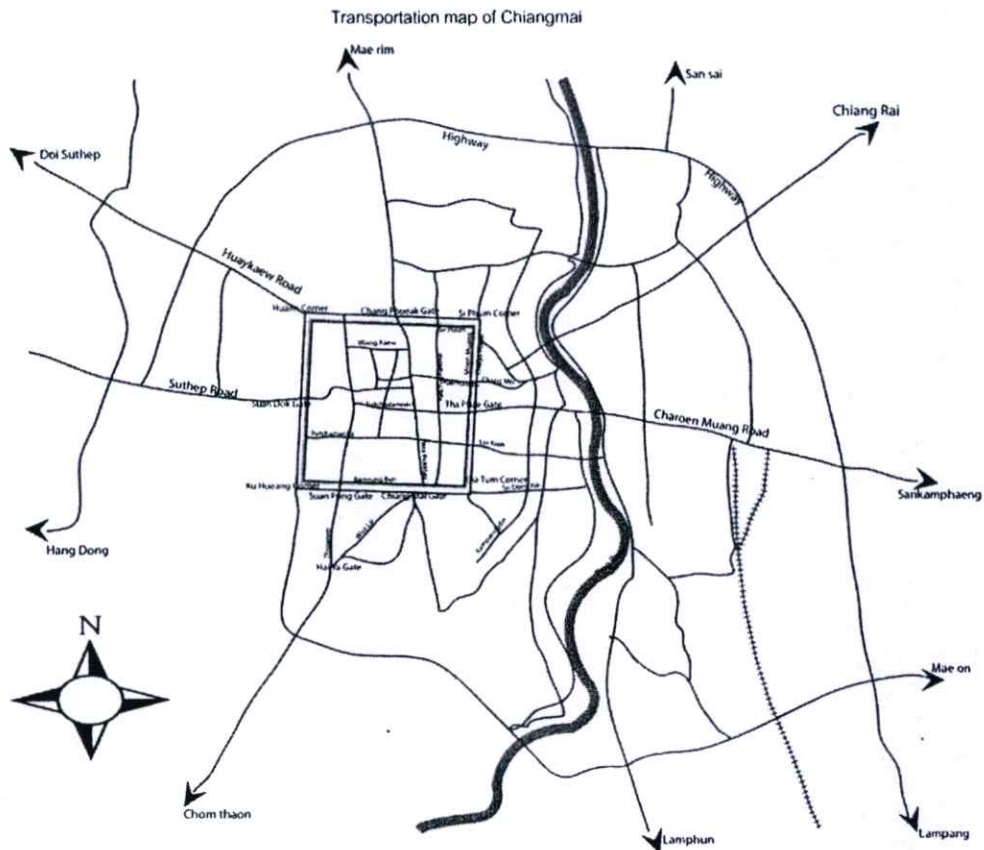


Figure 5.30 Transportation network plan of Chiang Mai city

5.2.4.2 Transportation Networks of Lamphun Province

The main road into the core city is Raj Road which is a road linking the areas outside the city and other areas within Lamphun city. Other major roads of the city include Chamadevi road, and Wang Kwa road linking to routes out from the city reaching to Lampang province.

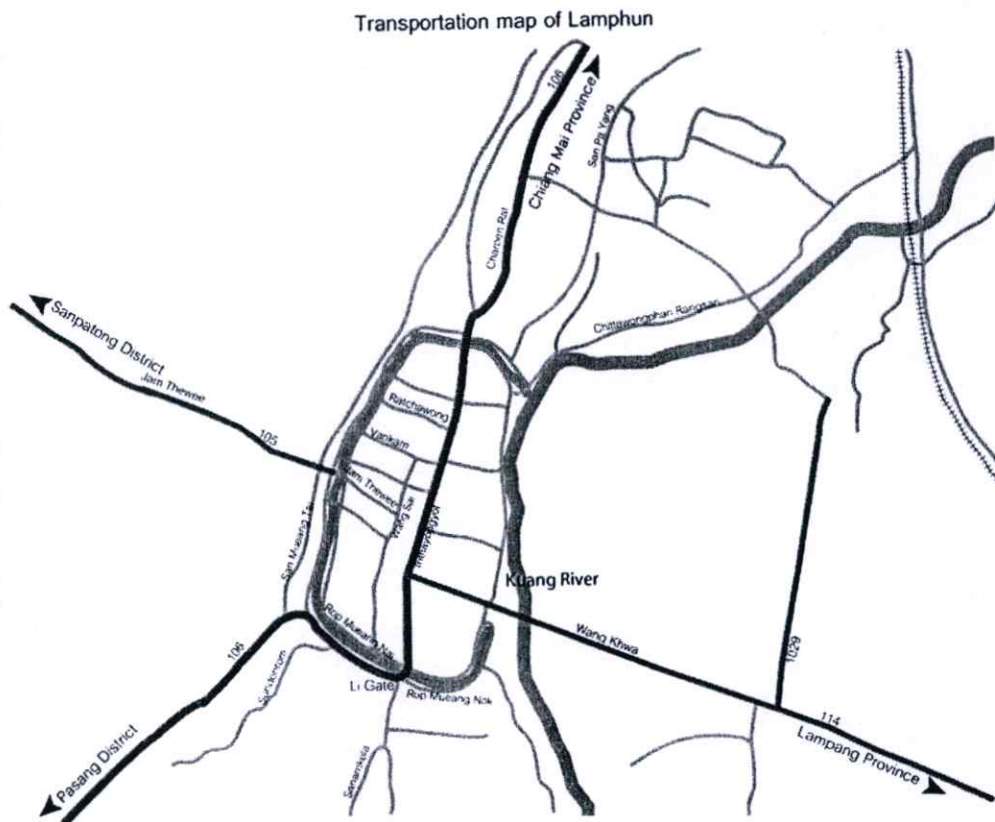


Figure 5.31 Transportation Networks Plan Lamphun

5.2.4.3 Transportation Networks of Phrae province

Roads within the city such as Charoen Maung Road, Khum Derm road, and Boon Chai Road are the major roads within the Phrae city periphery. When there are ceremonies and other festivals within the city, these roads will be used as major thoroughfare. Later, when the road Yantrakit Koson was completed in the inter-linking of roads such as Charoen Maung Road and Chohae Maung Dang Road, Maung Hit Road, this makes transportation more convenient. In addition, this is the collective locations of Ban Tung market, Chomphuming Fresh Market, retail stores, Wholesale trading center, retail Business Press Releases. The original location of commercial-trading district was located along the Charoen Maung Road. Later, when the city expanded, shops along the route Phuket Road and new commercial district around the Kat Namthong have been formed.

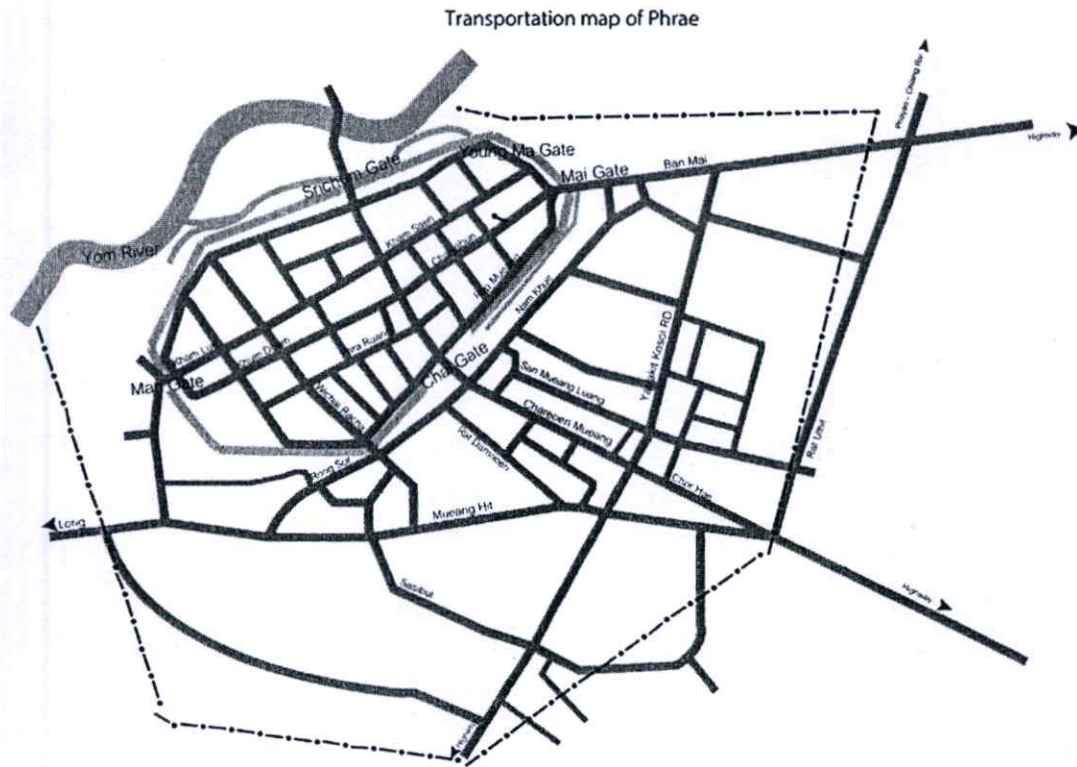


Figure 5.32 Transportation Network Plan of Phrae City

In addition, transportation also affects the belief in placing the orientation of the building. Previously, orientation of the building is to turn the house gate to the street, the front house or buildings in the north and northeast. The building of house will never orient to west direction since it is the local belief that this direction is an inauspicious direction. In addition, positioning of the main staircase of the house must be put in place in the north or east only. The survey found that the building that is the original building holding different stereotypes, but contemporary or modern buildings at the present do not take into account the positioning of the building orientation, but often turn the front of building to the street. Transport factor caused the belief in facing of the building decline.

5.2.5. Political and Governance Factors

The beliefs and culture which are components of the social aspects of the cultural landscape have different factors to cause the change including change of

governance evolution. The important information provider stated that *“religion changes according to the beliefs, the change of geography, and the faith of the people in Chiang Mai that need swamps on the top. Until Rattanakosin era, those beliefs were overturned. Faith was destroyed by politics. The central city that we used to believe to be sacred, Bangkok and Siam people came to change. The cutting of the road to be photos insult the enemy in effigy made skills deteriorated and came to rule the city.”* (Vitul)

In summary, the main factors that have resulted in changes to the cultural landscape include political, governance, transportation, and urbanization and growth factors. Each area has different factors affecting the changes of the cultural landscape. In Chiang Mai, the main factor is policy development that contributes to the change of cultural landscape rather than other factors, and other areas. Since Chiang Mai is determined as the main city of the Northern region, it results in tremendous physical development, which relates to transportation and city planning which affect land use. The political factor is also main factor for Lumphun Province but there is less physical changes since it is designated as secondary city and Lumphun has been nominated as World Heritage Site. Therefore, the concept of conservation will be prioritized over the concept of development. The physical condition of the Lamphun has not much changed from the past. Phrae Province has not been determined as the primary and secondary city as Chiang Mai and Lumphun respectively. Consequently, the policy is not the main factor that makes the cultural landscape of Phrae change. However, it is transportation factor that causes many cultural landscape areas in Phrae have emotional impacts in terms of the size of the area and economic factors resulting change of the lives of people in the area and participation in cultural activities of the community decline.

5.3 The perception and response to changes in the cultural landscape

5.3.1 The recognizing and responding to the changing cultural landscape

The cultural landscape is a cultural heritage that conveys the lifestyle of their ancestors. The people in the next generation, especially people in the area need to be recognized and have come to realize the goal. Therefore, the level of acceptance or recognition to the changing cultural landscape will affect the existence of the

cultural landscape. The survey showed that areas which are representative of the cultural landscape, including the city walls, Khoung or sacred open space, a community barn, old building, and wells to measure the level of perception and awareness of the cultural landscape change are five levels: very little, low, medium and more and maximum. The data was analyzed using statistical inferences which are the results of the study.

The study adoption the changes in the cultural landscape of the area showed that most of the samples exceeded the 60 percent admit to changing the cultural landscape (Table 5.16).

Table 5.16 Adoption of changes in the cultural landscape

The adoption of changes in the cultural landscape	Chiang Mai		Lamphun		Phrae	
	n	%	n	%	n	%
Agree	173	64.3	220	66.5	211	63.2
Disagree	96	35.7	114	33.5	123	36.8

Sources: Questionnaires

This part is a result of testing the first study hypothesizes that;

H0 = the different level of cultural landscape changing in the area will not result in the perception and response of changing cultural landscape for the resident

5.3.1.1 The analysis of the different levels of the cultural landscape in the area

The second research question with different levels of adoption affects the development of the cultural landscape. However, the researchers conducted tests to meet evolving cultural landscape area with a few levels. The public can respond to this test has shown the statistics used in the analysis, ANOVA (One-Way ANOVA) were studied by the different levels of space, divided into three groups: low, moderate, and the high level analysis of the scores of two parts: one to respond to

the development of local areas which are related to faith. The second part is the response to changing cultural landscape in the area.

- 1) One-way analysis of variance (One-way ANOVA) the difference in the response of the public areas of local development related to belief.

Table 5.17 reviews the development of local areas which are related to belief.

The development of local areas which are related to one's belief in community	Chiang Mai		Lamphun		Phrae	
	n	%	n	%	n	%
The area was originally developed for the better, but the main belief.	218	77.9	279	83.5	205	60.7
Move to new areas as appropriate to maintain the myth.	11	4.1	44	13.3	12	3.5
There should not be any development should remain the same as faith.	32	12	10	3.0	118	34.9
Develop a modern ignoring originally belief	5	1.9	1	0.3	2	0.6
Total	279	100	334	100	338	100

Sources: Questionnaires

The Statistics show that the test has a level difference of different statistical significance 0.05 $F = 59.743$, $p = 0.00$, and concluded that there is a difference of at least one area. The levels that are responsive to local community development areas related to faith. The different (Table 5.18) it must make the pairwise comparison analysis of variance, as shown in the next table.

Table 5.18 shows a one-way analysis of variance of the difference of the area

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29.543	2	14.772	59.743	.000
Within Groups	230.440	932	.247		
Total	259.983	934			

The analysis of variance residential area showed that the difference was statistically significant pairwise comparison was performed. As shown by the statistics for the different test paired multiple (Multiple comparisons), using LSD test indicated that the mean score of acceptable levels of development. All of the areas are different. The local cultural landscape of the area is changing cultural landscape level (M = 1.95, SD = .499), with an area that is changing the landscape culture medium (M = 2.11, SD = .405) areas. The cultural landscape is changing at a low level (M = 1.69, SD = .571), with the adoption of a common area of difference is statistically significant. 05 (Table 5.19).

Table 5.19 show the diagnostic tests are a pair of the different levels of the cultural landscape.

The difference of the cultural landscape in the area. (I) (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
Moderate level					
low level	.417*	.038	.000	.34	.49
high level	.158*	.041	.000	.08	.24
Low Level					
Moderate Level	-.417*	.038	.000	-.49	-.34
High level	-.259*	.041	.000	-.34	-.18
High Level					
Moderate Level	-.158*	.041	.000	-.24	-.08
Low Level	.259*	.041	.000	.18	.34

*. The mean difference is significant at the 0.05 level.

2) One-way analysis of variance (One-way ANOVA) difference of residents' area and respond to the changing cultural landscape.

The analysis of variance residential area: the difference was statistically significant in all issues will be compared in pairs. The section shows the statistics for the different test paired multiple (Multiple comparisons) using test LSD pointed out that the mean score of the adoption of the cultural landscape of the area representation of the agreement of changing cultural landscape level moderate and low level. The level of response to changing cultural landscape is significantly different statistically 0.01 (Table 5.20) in order to enhance the acceptance of cultural landscapes. The renovation of old buildings into a museum adds space or Khoung yard to the cultural activities of the community. The demolish barn converted into another living area. The public water reclamation outdated adjusts to new areas. The changes of temple rise modern style building in the walled city. The Devils Tower demolition of shrines to improve other areas and buildings has a floor area of more than four walls and establish entertainment center close to the temple.

Table 5.20 Difference of area residents recognizing and responding to the changing cultural landscape

Changing cultural landscape	Chiang Mai		Lam Phun		Phrae		F	Sig.	Post Hoc
	mean	S.D	mean	S.D	mean	S.D			
The adoption of improved cultural landscape	1.95	.499	2.11	.405	1.69	.571	59.743	.000	a,b,c
Conservation of old buildings with historical significance, both inside and outside the city walls	3.49	.901	4.54	.505	4.64	.732	227.988	.00	b,c
Improving the old building to be museums	4.51	.530	4.51	.530	1.72	.807	958.146	.00	a,b,c
Improvement by conserving the landscape area	4.17	1.010	4.42	.518	4.43	.847	9.914	.00	b,c

Table 5.20 (Continued)

Changing cultural landscape	Chiang Mai		Lam Phun		Phrae		F	Sig.	Post Hoc
	mean	S.D	mean	S.D	mean	S.D			
Adding space or yard Khoung to the cultural activities of the community	3.54	1.245	4.36	.557	4.64	.732	117.946	.00	a,b,c
Dismantling barn converted into another living area	2.90	1.066	3.31	1.164	2.60	1.489	26.498	.00	a,b,c
The public water reclamation outdated adjust to new areas	2.74	1.038	2.52	.916	1.78	1.048	80.560	.00	a,b,c
Change the temple court to be parking area	2.26	.934	1.74	.744	1.77	.772	37.556	.00	b,c
Change the temple court to be high buildings	2.28	.861	1.56	.565	1.71	.804	73.459	.00	a,b,c
Building on the city walls	2.26	.839	1.71	.628	1.70	.862	47.558	.00	b,c
Modern style building in the walled city	2.56	.810	1.50	.841	2.10	.870	121.280	.00	a,b,c
Deactivate area of Khuang Muang for new building	2.31	.887	1.43	.663	1.45	.596	142.409	.00	a,c
Demolition Devils Tower shrine for getting improve as other areas	2.04	.942	1.43	.552	1.56	.782	51.851	.00	a,b,c
There are buildings with more than 4 storey high in city walls	2.53	1.483	1.30	.663	1.96	.918	105.213	.00	a,b,c
Build entertainment center near the temple	2.81	1.047	1.17	.418	1.40	.548	437.512	.00	a,b,c
Building modern eclipsed relics	1.80	.908	1.14	.351	1.89	.834	105.202	.00	a,b

a= Local cultural landscape changing medium - the landscape changed little.

b= Local cultural landscape change dramatically - changed the cultural landscape in the medium level.

c= Local cultural landscape change dramatically - the landscape changed little.

This part is a result of testing the second study hypothesizes that;

H0 = social characteristics of the population affect to the perception and respond to the changes of the cultural landscape by similar levels.

5.3.2 The one-way Anova analysis of different social characteristics

The One-way Anova analysis of different social characteristics affects the level of response to changes in the cultural landscape. From a statistical test to find out that the social aspect is different formal recognition and response to change the cultural landscape or not. The social features being tested include age, sex, duration of residence, income, occupation, social characteristics that are significantly different statistically, only age, duration of residence in the area.

5.3.2.1 The analysis of different age groups and level of response to changes in the cultural landscape.

The analysis of variance for different age groups: the level of response to changing cultural landscape is significantly different statistically 0.01 (Table 5.21) on the issue of recognition of the cultural landscape. Renovation of old buildings into a museum Change is a parking lot. The changes of temple rises and the termination of the Range area, the city built a new building. The issue of buildings on the city walls difference was statistically significant 0.05.

Table 5.21 Show the difference in age groups to recognize and respond to the changing cultural landscape.

Changing cultural landscape	Less than 30 years old		31-50 years old		More 50 years old		F	Sig.
	mean	S.D	mean	S.D	mean	S.D		
The adoption of improved cultural landscape.	2.16	.616	1.92	.526	1.84	.487	14.316	.000**
Conservation of old buildings with historical significance, both inside and outside the city walls.	4.26	.820	4.27	.900	4.28	.862	.026	.974
Improving the old building to be museums	3.63	1.419	3.26	1.489	3.01	1.440	7.283	.001**
Improvement by conserving the landscape area	4.34	.684	4.38	.828	4.32	.822	.632	.532
Adding space or Khoung to the cultural activities of the community.	4.16	1.048	4.27	.955	4.28	.909	.538	.584
Dismantling barn converted into another living area.	2.98	1.244	2.94	1.313	2.93	1.297	.053	.948
The public water reclamation outdated adjust to new areas.	2.45	1.001	2.31	1.061	2.31	1.124	.723	.486
Change the temple court to be parking area	2.20	.968	1.95	.853	1.77	.776	11.904	.000**
Change the temple court to be high buildings	2.09	.876	1.86	.801	1.70	.763	10.034	.000**
The adoption of improved cultural landscape.	2.16	.616	1.92	.526	1.84	.487	14.316	.00* *
Change the temple court to be high buildings	2.09	.876	1.86	.801	1.70	.763	10.034	.00* *
Building on the city walls	2.02	.789	1.90	.860	1.77	.762	4.575	.011*
Modern style building in the walled city.	2.09	1.033	2.08	.947	1.94	.915	2.598	.075
Deactivate area of Khoung Maung for new building	1.86	.911	1.73	.849	1.60	.736	5.127	.006**

Table 5.21 (Continued)

Changing cultural landscape	Less than 30 years old		31-50 years old		More 50 years old		F	Sig.
	mean	S.D	mean	S.D	mean	S.D		
Deactivate area of Khoung Maung for new building	1.86	.911	1.73	.849	1.60	.736	5.127	.006 **
Demolition Devils Tower shrine for getting improve as other areas	1.85	1.005	1.67	.820	1.58	.717	4.665	.010 **
there are buildings with more than 4 storey high within city walls	1.87	1.013	1.96	1.368	1.83	.892	1.238	.290
Build entertainment center near the temple	1.71	.931	1.71	.971	1.61	.919	1.202	.301
Building modern eclipsed relics	1.55	.713	1.60	.812	1.60	.814	.144	.866

**Sig = 0.01, * Sig= 0.05

5.3.2.2 The One-way Anova analysis period living in different areas affect the level of response to changes in the cultural landscape

The sample for a period of living in different areas to perceive and respond to the changing cultural landscape difference is statistically significant improvement on the recognition of the cultural landscape. The change is a parking lot, devils tower demolition of shrines to improve the other areas (Table 5.22).

Table 5.22 Show the difference of time living in the area to recognize and respond to the changing cultural landscape.

Cultural landscape change	Duration 1-10 Years		Duration 11-20 Years		Duration more than 20 years		F	Sig.
	Mean	S.D	Mean	S.D	Mean	S.D		
Acceptance of cultural landscape improving development.	1.98	.576	1.86	.472	1.84	.465	6.356	.002**
Conservation of old buildings with historical significance, both inside and outside the city wall boundary	4.29	.870	4.26	.894	4.24	.863	.196	.822
Renovation of old buildings to be museum	3.17	1.489	3.18	1.490	3.24	1.405	.131	.877
Road improvement by maintaining the old landscape area	4.39	.788	4.33	.867	4.30	.770	.847	.429
Adding common area or Khoung for cultural activities of community.	4.30	.917	4.22	1.010	4.24	.887	.633	.531
Dismantling barns changing to other	2.98	1.328	2.83	1.265	3.02	1.277	1.714	.181
Filling the abandoned public ponds and improving the new area.	2.28	1.037	2.33	1.011	2.43	1.303	1.170	.311
Changing temple court to be parking lot.	2.02	.880	1.88	.789	1.64	.785	12.801	.000**
Building on the city wall.	1.91	.827	1.80	.834	1.86	.753	1.463	.232
Changing temple court to be high buildings.	1.88	.810	1.84	.791	1.63	.771	6.261	.002**
Construct new modern style buildings in the city wall	2.06	.935	2.01	.948	1.92	.960	1.346	.261
Disuse the city area to construct the new buildings.	1.73	.846	1.69	.781	1.59	.786	1.892	.151
Dismantling the spirit shrines improving as other areas.	1.72	.887	1.59	.704	1.56	.723	4.024	.018*
There are buildings higher more than 4 storey in the city wall area.	1.96	1.373	1.88	.934	1.77	.872	1.732	.178
Creating entertainment area nears to the temple.	1.71	.959	1.65	.927	1.59	.948	1.146	.318
Constructs the new modern buildings blocking Phrathat	1.64	.814	1.58	.805	1.49	.761	2.212	.110

** Sig= 0.01, * Sig= 0.05

Table 5.23 The reaction if there is cultural landscape area adjustment of community
(Answer can be more than 1)

The reaction if there is cultural landscape area adjustment of community	Chiang Mai		Lamphun		Phrae	
	n	%	n	%	n	%
Create school building/public library	155	56.1	294	88.0	204	60.2
Adjustment of new activities such exercise place	155	55.4	122	36.5	208	61.4
Adjustment of new flooring materials from sand in the past changing to other new modern materials	156	55.7	103	30.8	197	58.1
Reclamation the area constructs the new buildings on old zone	155	55.4	15	4.5	194	57.2

Source: Questionnaire

1) The acceptance and response to changes of cultural landscape Chiang Mai 'samples

1.1) The acceptance of changes of cultural landscape area Chiang Mai

The studied result of acceptance level of the buildings change by improves buildings and relevant sites consistently with cultural landscape in the area. Found that the cultural landscape which the sampling group agrees to change the most level is "Road improvement and maintaining the old landscape area," with mean 4.52. The cultural landscape which sampling group agrees to change at high level is "Improve wilderness area to be public park," with mean 4.34. Conservation of old buildings with historical significances both inside and outside the city wall boundary was obtained mean 4.28. In addition, the common urban area or yards for cultural activities of community was with mean 3.70.

Landscape changes which sampling group agrees to have the cultural landscape adjustment in the middle level is agree to dismantle barns, remove old town hall buildings which old town ruler, with mean 2.99 and 2.66, respectively. Since the demolition means losing the existed cultural landscape agrees to have

public ponds improvement by improves the new area with middle level of mean 2.80. The changes of using space of residential buildings as guesthouses or hotels agree to build the high 4-storey buildings in the city wall area with acceptances mean are 2.72 and 2.55, respectively.

The sampling groups agree to have the cultural landscape improvement at low level: moving the prison outside the city wall area, with mean 2.38; creating some decorations on the city wall, with mean 2.77; changing temple court as high buildings, with mean 2.26; disuse the city area to construct the new buildings, with mean 2.22; changing temple court as the parking lot, with mean 2.20; dismantling the spirit house to improves as the other areas, with mean 1.92; dismantling the ghost spirit shrine to improves as the other areas, with mean 1.85; constructing the new modern building to blocks Three Kings monument, with mean 1.78.

Found that barns, old buildings, and ponds are the representatives of cultural landscape in the area that people had accepted to change at middle level from the previous belief which prohibits filling the ponds. Currently, this belief gets slightly loss and agrees to change without pay attention the old beliefs. But most of people still realize value of the old cultural landscape wanting to add common urban area or yard to be community cultural area, disagree to build some decorations on the city wall.

Moreover, acceptance level of adjustment or change the representatives of cultural landscape in the area which the villagers using together such as city wall, temple court, city space, spirit shrine, ghost house, three kings monument which are the representative of the people's belief in the community. It gets the acceptance degree of changes at low level. Chiang Mai people mostly disagree to dismantle ghost house, spirit shrine, or disuse of space area which showing the concern of their previous cultural landscape and also agree to maintain the value of historic or culture such as adding common urban area and architectural buildings conservation in the area. Meanwhile, it is undeniable that most people still need to conserve coupled with the development which can be seen from sample group with mean demand of road improvement by maintain the old landscape, mean is the highest level. However, the participation of belief activities getting lesser impacts to the cultural landscape engagement in the community getting down respectively.

1.2) Perception of cultural landscape change and Chiang Mai area's social attribute factors

From the analysis of the social attribute factors among respondents of sampling group whether there is perception level of cultural landscape change in the different level or not by apply the personal factors as gender, age, income, education level, duration of residence, and residential area. Found that there were significant different statically as gender and age factors—male and female sampling group has perception of cultural landscape to the disused and empty area improves as the public area differently. And the sampling group who age over than or equal to 30 years and less than 30 years has the perception in the topic of cultural landscape area change such as yard or space is high buildings statically significant difference.

Table 5.24 Perception of cultural landscape change categorizes by gender of the sampling group.

	Male			Female			Sig.*
	Number (People)	Mean	S.D.	Number (People)	Mean	S.D.	
Do not use the previous area anymore	118	2.16	0.741	161	2.26	0.890	0.009
Improve the wilderness area as public park	118	4.52	0.714	161	4.21	1.050	0.002

*Sig. = 0.05

Table 5.25 Perception of cultural landscape change categorizes by age.

	Age over than/equal to 30 years old			Age less than 30 years old			Sig.*
	Number (People)	Mean	S.D.	Number (People)	Mean	S.D.	
Adjustment of courtyard area as high building	253	1.82	0.883	26	2.30	0.351	0.008

*Sig. = 0.05

The relationship analysis of the residential area with the acceptance level of cultural landscape change

From the result of statistical analysis, Chi-Square Tests, found that residential sampling group in the area inside and outside city wall boundary has acceptance level of cultural landscape area change or local public area which related to community's belief that its statistical significant relationship has Sig. equal to 0.00.

Table 5.26 Residential area with the acceptance level of cultural landscape change.

Residential area	Acceptance level of cultural landscape area change				Total
	There should be no any development; it should be remain as original beliefs	Develop the area to get better bases on original practical beliefs	Be able to move the new area appropriately with remain its original beliefs	Develop and change cultural landscape area by ignorance the original beliefs	
Live inside the city wall boundary	11.6%	25.1%	3.9%	1.9%	42.5%
Live outside the city wall boundary	.8%	56.4%	.4%	0%	57.5%
Total	12.4%	81.5%	4.2%	1.9%	100.0%

Sig. = 0.00

From the analysis by using statistic, T-Test, with the sampling group who resides in the community inside the city wall boundary compares with outsiders of the city wall boundary found that there was statistical significantly different, Sig. = 0.00, of acceptance level of cultural landscape area adjustment.

Table 5.27 Residential area with the methods of cultural landscape area adjustment.

Methods of cultural landscape area adjustment	Residential Area	Number (People)	Mean	S.D
Deploy the new activities but corresponding with original life-style.	lived inside the city wall boundary	31	1.90	.746
	lived outside the city wall boundary	122	1.97	.852
Reclaim the land to construct new building does not use the old area to do activities.	lived inside the city wall boundary	31	3.58	1.205
	lived outside the city wall boundary	122	3.51	.865
Adjust the original materials to be new modern materials.	lived inside the city wall boundary	31	1.45	.961
	lived outside the city wall boundary	122	1.53	.864
Modify to library building	lived inside the city wall boundary	31	2.23	.956
	lived outside the city wall boundary	122	2.92	.723

Sig. = 0.00

The difference of residential duration impacts to the acceptance of public area development relates to beliefs which statistical significance at the 99% confidence.

Table 5.28 Residential duration and the acceptance of public area development which relates to beliefs of Chiang Mai

Change of cultural landscape	Duration 1-10 years		Duration 11-20 years		Duration more than 20 years		F	Sig.
	Mean	S.D	Mean	S.D	Mean	S.D		
Acceptance of cultural landscape improving development.	2.26	.743	1.98	.390	1.87	.390	12.591	.000

Sig.=0.01

2) The acceptance and response to cultural landscape change of sampling in Lamphun area

2.1) The acceptance of cultural landscape change of Lamphun

From the studied found that sampling group mostly has the acceptance level to conserve the old buildings with historical significance, both inside and outside the city wall boundary with the higher mean level 4.54. The acceptance level requires modifying the old building to be a museum with the higher mean level 4.52. Accepting the improvement of wilderness area to be a public park, improving road by maintain the original landscape area, adding common area or courtyard to be an area conducting cultural activity of the community, improving road by cuts the trees on the both side with mean higher level 4.49, 4.42, and 4.38; respectively. The acceptance level of dismantling barns changing to other living area, filling the disused public ponds and modify to a new area with mean middle level 3.37 and 2.56, respectively. Sampling group mostly has the acceptance level to construct the new modern style buildings in the city wall boundary, disuse of common urban land/central area of the city and builds a new building, dismantle ghost house to improve other new areas, dismantle spirit shrine to modify other area, construct the high building over than 4-floor inside the city wall boundary, construct entertainment

center close to temple, build new modern buildings style blocks Phrathat Hariphunchai in most lowest level. For the studied result identifies that the sampling group have the acceptance level to constructs or dismantles any items inside the city boundary with very less level.

2.2) The acceptance of cultural landscape change and social characteristic factors of Lamphun area

In this research assumes that the different social groups have no different perception level of changes in the cultural landscape. The social characteristics which had been applied to analyze such gender, age, income, occupation, education, residential duration in the area, living area by using statistical T-test and Anova test. From the studied found that individual factors of sampling respondents group has resulted in recognition of cultural landscape change in the area with significant statistic such as age factor, residential duration and living area which had been applied to find out the differences by using T-test. It found that individual factor with statistical significant difference such as age factor, residential zone, and living duration. Sampling group with age over than or equal to 30 years old and less than 30 years old has recognition in the topic of high-building change and common urban area conservation with statistical significant differences.

Table 5.29 The perception of cultural landscape change categorizes by age.

	Age over than/equal to 30 years			Age less than 30 years			Sig.*
	Number (People)	Mean	S.D.	Number (People)	Mean	S.D.	
Construct high-building	280	1.30	0.674	10	1.14	0.351	0.005
Courtyard or common area conservation	280	4.47	0.528	10	4.66	0.482	0.016

*Sig. = 0.05

Moreover, sampling group resides in the different area between lives inside and outside city wall boundary has perception of cultural landscape change in statistical significant differently in the topic of common urban area change and conservation level.

Table 5.30 The perception of cultural landscape change categorizes by residential area.

Cultural landscape Change	Live inside the city wall boundary			Live outside the city wall boundary			Sig.*
	Number (People)	Mean	S.D.	Number (People)	Mean	S.D.	
Changing level	134	1.48	0.581	134	2.00	0.535	0.001
Courtyard or common area improvement	200	1.59	0.574	200	1.22	0.441	0.019

*Sig. = 0.05

The difference of residential duration has recognition of cultural landscape change in the topic of constructs new modern building style closes to PhraThat Hariphunchai, creates entertainment center closes to PhraThat and acceptance of modifies the old building to be a museum and conservation of the old buildings. Sampling group who lives in the area over than 10 years agrees with the higher level more than the sampling group who lives in the area less than 10 years with statistical significance as table 5.31.

Table 5.31 The perception of cultural landscape change categorizes by residential duration in the area.

Perception of cultural landscape change	Lived in the area over than/equal to 10 years			Lived in the area less than 10 years			Sig.*
	Number (People)	Mean	S.D.	Number (People)	Mean	S.D.	
Construct new building closes to PhraThat	260	1.15	0.354	74	1.03	0.18	0.000
Create entertainment center closes to PhraThat	260	1.19	0.430	74	1.03	0.18	0.000
Modify old building to be a museum	260	4.53	0.520	74	4.77	0.42	0.000
Conserve the old building in the area	260	4.55	0.507	74	4.87	0.34	0.000

*Sig. = 0.05

Table 5.32 The perception of cultural landscape change categorizes by residential duration in Lamphun area.

Cultural landscape change	Duration 1-10 years		Duration 11-20 years		Duration more than 20 years		F	Sig.
	Mean	S.D	Mean	S.D	Mean	S.D		
Acceptance of cultural landscape improving development	2.20	.408	2.17	.422	2.07	.394	2.944	.054

Sig. = 0.10

3) The acceptance of changes of cultural landscape of sampling in Phrae

3.1) The acceptance of changes of cultural landscape Phrae' area

The studied result found that the acceptance level to renovates buildings and sites in the area with lowest level which mean 2.08 in overall. Considering to each items found that the acceptance level to renovate buildings and places in the

area with the highest level arrange respectively level is Conserves the old buildings with historical significance with mean 4.66, the higher level which arrange respectively level is Road expansion by maintain its original landscape area with mean 4.43, the moderate level which arrange respectively level is Dismantle barn changing to other living area with mean 2.63, the lower level which arrange respectively level are Acceptance to build new modern buildings style inside city wall boundary with mean 2.08, Construct the buildings higher than the inner layer of 4th city wall boundary with mean 1.98, Filling the irrigation channel to be road with mean 1.91, Filling the disused public ponds and modifies a new area with mean 1.8, Move the prison to outside of the city wall boundary with mean 1.77, Change temple court to be parking lot with mean 1.77, Building any items in the cloud with mean 1.72, Expand the road by cutting the trees on the both sides with mean 1.72, Change the temple court to be high-buildings with mean 1.71, Dismantle the ghost house, spirit shrine to renovate to be other areas with mean 1.59. The acceptance degree of the lowest level which arranges respectively level are The acceptance level to abandon Sanam Luang (health park) and build new buildings with mean 1.46, Move Khum Chao Luang building to other places changing the usage area with mean 1.41, Dismantle Khun Chao Luang building changing buildings style with mean 1.39, Move Sanam Luang (Health park) to outside the urban area with mean 1.35.

From the studied result found that sampling group in those 3 areas has the acceptance level of cultural landscape change in higher and highest degree in the topic of cultural area preservation includes the acceptance of building conservation, renovates the old buildings, add the common area or courtyard to conducts the cultural activities of the community. The topic was seen together among the sampling groups from a low to moderate level of acceptance is Move the spirit shrine, ghost house to construct new modern building style blocking PhraThat.

The different issues are The acceptance to renovate the temple court to be parking lot, The acceptance of creating some items on the city wall, Changing the temple yard as the high-buildings, Constructing new modern buildings style inside the city wall area, Have the high-buildings more than 4 storey inside the city wall boundary and create entertainment center closes to the temple. The sampling group in Chiang Mai area has the acceptance level of changes higher than other sampling groups in Lamphun and Phrae provinces. Phrae province has the lower degree of

acceptance level of filling the abandoned public ponds to renovate to be other areas with mean 1.80, while Chiang Mai and Lamphun have the moderate degree of acceptance level with mean 2.80 and 2.56 respectively.

3.2) The perception of cultural landscape change and social characteristic of sampling in Phrae area

From the statistical test found that personal characteristics in Phrae area has no difference of recognizing the cultural landscape change.

The comments relate to the level of cultural and traditional change in overall in the area from the past till present day, it mostly changes its formation but still has original beliefs—151 samples, 52.1 percent; there is slightly change—123 samples, 42.4 percent; there no change—9 samples, 3.1 percent; respectively.

The perception of cultural landscape area changes, so constructs the new modern buildings style in the city wall boundary has mean 2.08; builds the buildings higher than the inner layer of 4th city wall boundary, with mean 1.98; filling the irrigation channel to be a road, with mean 1.91; filling the abandoned public ponds and renovates as a new area, with mean 1.8; move the prison to outside the city wall zone, with mean 1.77; change temple court to be parking lot, with mean 1.77; create the items in the cloud, with mean 1.72; expand the road by cutting the trees on the both sides, with mean 1.72; change the temple court to be high-buildings, with mean 1.71; dismantle the ghost house, spirit shrine to renovate to be other areas, with mean 1.59; In the lowest level which arranges the respectively level are abandon Sanam Luang (health park) and build new buildings, with mean 1.46; move Khum Chao Luang building to other places changing the usage area, with mean 1.41; dismantle Khum Chao Luang building changing the buildings style, with mean 1.39; move Sanam Luang (Health park) to outside the urban area, with mean 1.35.

5.3.3 The reaction to cultural landscape area change.

If there is public area development in the local which relates to people's belief in the community, mostly it should be develop the previous area to get better based on the original beliefs—260 samples, 82.8 percent, it should be move the new area which appropriate with the original beliefs—44 sample, 14 percent, there is no

any development it should be keep its original beliefs—9 samples, 2.9 percent, respectively.

If the area conducts the religious activities of the village such as Temple court should be renovate, will the villagers agree to renovate? Samples mostly agree to renovate—20 samples, 66.3 percent; disagree to renovate—106 samples, 33.7 percent; respectively.

If agree to renovate the public area such as temple court, what will the villager agree to change? Samples mostly agree to change as school buildings/public library—288 samples, 91.7 percent, renovate to be new activities such as exercise place—110 samples, 35 percent and adjusting the new floor-material from sand previously—96 samples, 30.6 percent; respectively.

The reaction to the change of temple area within the community.

The comments if abandon some temple areas in the community, mostly agree to modify the area from temple to governmental institutions—270 samples, 85.7 percent; disagree of move or change the temple area to other activities—38 samples, 12.1 percent; and agree to change the area from temple to be a commercial zone—4 samples, 1.3 percent; respectively.

The comments of Lanna ancient building conservation, mostly agree to preserve building for history and the people in the next generation to study—213 samples, 67.8 percent, disagree to preserve the building—101 samples, 32.2 percent; respectively.

The comments to the change of conservative buildings in the area, mostly agree to change the buildings usage to be commercial purpose or hotel but remain its original format—262 samples, 83.4 percent; agree to renovate the building but remain its original format since it's important to residents—23 samples, 7.3 percent; and agree to change the building into new modern building style—23 samples, 7.3 percent; respectively.

Table 5.33 The reaction to the change of cultural landscape. (n=318)

The physical and cultural landscape comments in the area	Number (n)	Percentage
If there is disuse some temple area in the community		
Agree to change the area from temple to governmental institutions	270	85.7
Disagree to move or change any temple's area for other activities	38	12.1
Agree to change the area from temple to be commercial zone	4	1.3
Agree to change the area from temple to be residential buildings	3	1
The comments to the conservation of Lanna ancient building		
It should be preserve for history and the children to study	213	67.0
Do not want to conserve because of	101	31.8
The reaction to the change of buildings conservation in the area		
Agree to change the building usage in term of commercial or hotel but remain its original style	262	82.4
Agree to renovate but remains its original style, since it is important to Lamphun residents	23	7.2
Agree to change the buildings format to be the new modern building style	23	7.2
Agree to dismantle to do other purposes	6	1.9
Total	318	100.0

The reason to conserve the buildings mostly because of the building has historical significance—302 samples, 96.5 percent; because of age of the buildings is old—227 samples, 72.5 percent and for tourism—151 samples, 48.2 percent; respectively.

Table 5.34: The reason should be conserve the buildings in the area.

The physical and cultural landscape comments in the area	Number (n)	Percentage
The reason should be conserve the buildings in the area	302	96.5
The building has its historical significance	227	72.5
The age of the building is old	151	48.2
For tourism		
The building located inside the city wall area	133	42.5
The house of the important person in the area	112	35.8
Total	318	100.0

5.4 Recommendation of cultural landscape conservation from the sampling group

The studied result found that the comments of buildings and places are importance to the area with highest level in overall which has mean 4.78. Considering each item found that the degree of comments of buildings and sites crucial to the area that consider as the highest level which arrange respectively such as City shrine, with mean 4.62; PhraThat Chohae, with mean 4.61; temple inside the city wall boundary, with mean 4.59. Then, the higher levels arrange respectively are Nareerat school, with mean 4.46; Sanam Luang (health park), with mean 4.38; Khum Chaoluang, with mean 4.35; Father/Mother shrine, 4.24; city wall, with mean 4.2; Pa Mai school, with mean 3.61.

5.4.1 The comment of buildings and sites improvement in the area

The studied result found that the comments of buildings and sites improvement in the area have lower level in overall, with mean 2.08. Considering each items found that the degree of comments of building and places improvement

in the area are in the highest level which arrange respectively is conservation the old buildings which have historical significance, with mean 4.66. Then, the higher level that arranges respectively level is expanding the road by maintains the original landscape area, with mean 4.43. The moderate level that arrange respectively level is dismantling barns changing to use other living area, with mean 2.63, the lowest level arrange respectively is.

5.4.2 The appropriate characteristics of the buildings in the community

1) The studied result of the sampling group inside and outside the old city wall boundary Chiang Mai

The studied found the sampling group inside and outside the old city wall boundary Chiang Mai found that the buildings which suitable locating in the community in Chiang Mai area is the moderate level in overall with mean 3.53. Considering each items found that the degree of comments of the building characteristics that suitable locating in the community with higher level which arrange respectively are ancient wooden buildings, with 4.32; the wooden traditional shop house, with mean 4.29; one storey wooden house with high basement, with mean 4.23; modified wooden house, with mean 4.12; wooden house with big pillars, with mean 3.82; old wooden house style but lower part modified as two storey house, with mean 3.74; modern house style with half-woods and cements, with mean 3.59; the building designed corresponding with the environment either governmental or personal buildings, with mean 3.58. And the building characteristics which suitable locating in the community in the moderate level arranges respectively are Thai contemporary tenement houses, with mean 3.44; modern house styles, with mean 3.40; new modern buildings style that higher than 2 storey, with mean 3.14; 2 storey new modern tenement houses, with mean 3.07; apartment or student dormitory, with mean 2.78; big-size hotel, with mean 2.78; and guesthouse, with mean 2.66.

2) The studied result of the sampling group inside and outside the old city wall boundary Lamphun

The degree of comments of buildings style found that it is moderate mean 3.16. Considering each items found that the degree of comments of building characteristics that suitable locating in the community in the higher level is the old building style and wooden materials such as ancient wooden house, old wooden traditional shop house, wooden house with big pillars, one storey wooden house with high basement, and wooden contemporary house

The buildings significance inside the area has the highest mean by arrange the order of the highest mean are city wall, PhraThat Hariphunchai, Queen Chamadevi monument, KrubaSriwichai monument, Ku Chang-Ku Ma, Chamadevi temple, Sutheva Ruesri monument, city center, city shrine, Phra Yern temple, Phra Khung Rasri temple, national museum, ancient Lanna house and outside the city wall boundary such as urban community museum, Juan Phuwa (Governor house), and San Pa Yang Luang temple; respectively. And mean of the highest levels of comments are ghost shrine/father shrine, the former Khum Chao Nay, and other temples inside the city wall, ancient wooden house, old wooden traditional shop house, wooden house with big pillars, one storey wooden house with high basement and wooden contemporary house, respectively. And mean of the highest level of comment is 4.78 in overall.

3) The studied result of the sampling group inside and outside the old city wall boundary Phrae

The study found that the comments of the building characteristics that suitable locating in the community is the higher level in overall, with mean 3.75. Considering with each items found that the degree of comment of building characteristics the appropriate locating in the community with the higher that arrange

respectively are old wooden traditional shop house, with mean 4.39; ancient wooden house, with mean 4.38; one storey wooden house with high basement, with mean 4.3; wooden contemporary house, with mean 4.1; wooden house with big pillars, with mean 3.71; old wooden house style but lower part modified as two storey house, with mean 3.71; modern house style with half-woods and cements, with mean 3.69; the building designed corresponding with the environment either governmental or personal buildings, with mean 3.6; Thai contemporary tenement houses, with mean 3.54. The moderate level arranges respectively are new modern house styles, with mean 3.48; 2 storey new modern tenement houses, with mean 3.13; new modern buildings style that higher than 2 storey, with mean 2.99.

From the analysis comparing to those 3 areas found that the sampling groups realize the appropriate buildings locate in their own community in the highest level are old wooden traditional shop house, ancient wooden house, one storey wooden house with high basement, wooden contemporary house. For the area which has landscape change in moderate level, the aforementioned buildings suitable locating in higher level area but mean score less than the area has landscape change in the higher and less level. The building characteristics that sampling group thought that are appropriate in their community less than other style is new modern buildings style that higher than 2 storey (Table 5.35).

Table 5.35 Mean comments to the building characteristics appropriate locating in the community

Building Types	Chiang Mai	Lamphun	Phrae
Old wooden traditional shop house	4.29	3.86	4.39
Ancient wooden house	4.32	3.86	4.38
Wooden house with one storey high basement	4.23	3.74	4.3
Wooden contemporary house	4.12	3.67	4.1
Wooden house with big pillars	3.82	3.79	3.71
Old wooden house style but lower part modified as two- storey	3.74	3.3	3.71
Modern house style with half-woods and cements	3.59	3.05	3.69
Building designed corresponding with the environment either governmental or personal buildings	3.58	3.31	3.6
Thai contemporarily tenement buildings	3.44	3.23	3.54
New modern house styles	3.40	2.63	3.48
2-storey new modern tenement buildings	3.07	2.53	3.13
New modern buildings style that higher than 2 storey	3.14	2.53	2.99
Average	3.53	3.162	3.752

Source: Questionnaires

CHAPTER 6

Discussion and Suggestion

Comparative studies on perception and response level of the local residents are useful to understand the formations of cultural landscape in different level. The results of this study indicate that the way of life of northern people have closely related to their environment, family structure, and local wisdom to manage their resources given by nature. What local people have been done to nature, along with culture, beliefs and religions nation are for their peaceful and simple life, under limited technology. In other words, local people can live a compatible life with nature, which is called "cultural landscape".

The cultural landscape is important that local people in the area that represents the roots and the identity of the community, including faith and cultural events where people practice common in many parts of the world, lost the vernacular of the environment, physical and replaced by a new model that does not comply with the social culture that often occur frequently in the form of vernacular architecture and cultural landscapes, which show in a long time. Which is currently being ignored (Pocock & Hudson, 1978), which the study will be useful for planning for the design community and the policy in urban planning that is consistent with the recognition of cultural landscape of the area. The guidelines for the management and prevention of threats to growth, which could cause the cultural landscape and what is valuable in the area, were destroyed.

The issue leads to the question of this research is to change the cultural landscape level as those living in the area is still perceived as a cultural landscape in their area, which is a source of objective research. The first is to study the evolution and links of the cultural landscape, the second is to study the factors that affect the physical location and relationship to changes in the cultural landscape, the third is in order to learn to recognize and respond to the changing cultural landscape and finally to the guidelines for conservation of the cultural landscape that is consistent with the perception of the people, by this research process, qualitative research combined with quantitative research. The survey, analysis of aerial photos each time to ask the people who live in the area and interviews with community leaders,

scholars and local elders in the community and has led the study and data analysis to discuss the results and conclusions of the research. Results of the research to take advantage of the limitations of the research and make recommendations for further research, as detailed below.

6.1 Conclusions

The results obtained in this study as follows

6.1.1 Evolution and the link of the cultural landscape

This study found that, elements that shaped the cultural landscape has many variables, so education is organized to factor shaping the cultural landscape as three groups to present a simple, consisting of landscaping elements, physical culture, the landscape, culture, nature, social, cultural and economic landscape elements, which are detailed below.

6.1.1.1 Evolution of Cultural landscape in the physical elements

The physical characteristics of this research include, architecture, settlements, the expansion of the community, the transportation of the study area, the settlement's original north, where they settled near the river, the inhabitants are indigenous settlements, scattered along the river and the area in the walled city. The settlements and the expansion of community change along the route, transportation, land use, the area is more urban areas, gardens, fields, agriculture and forestry accounted for the decline, the transportation network on transport land is the main cause of road network linking each area of the city together.

1) Architecture

The evolution of architecture in Chiang Mai, Lamphun and Phrae, with the unique architecture of the region, but this style of architecture, it has changed over time, as well as building styles and materials and decorative arts and more, which evolution the architecture is changing due to the influence of several factors, such as the entry of foreigners, thus creating a blend of culture, artisans from abroad and the changing climate and manufacturing technology. The architectural style of each period, but at present, people living in the city is not farming anymore, the living

space of the building, according to a new career that changed with the addition of modifying a bathroom, a kitchen to use the agents, the main material used. In the past, the bamboo and wood material changes initially continues to do slowly, due to the timber support adequately the demand, but when the policy of closed forest, wood became scarce, so the use of material technologies in modern construction can be produced, easy to find on the market, construction techniques and modern architecture into renewable forms detached houses, row houses, multi-room floor, such as, flats, apartments, hostels, are formed as the international architecture.

2) Settlement

The urban settlements in the northern areas are located along the river basin or basins, the main river are Ping River, Wang River, Yom River and the Nan River, which flows from north to south, as well. Area Studies settlement of Chiang Mai, Lamphun and Phrae, occur in alluvial plains, Ping River, Kuang River and Yom Rivers respectively, the community as a small distribution in the form. The group is in the same social or family history within the walls of the residence of the military lord's faith-based skills to build a city or town, but the current regime to make changes to the building or modified. Housing chiefs are government agent's access to the main transport in the river, because of urban settlements located on river plains began shipping the ground about 50 years ago to use public transport, bicycles, tricycle, a personal journey by walking and cycling, is currently being transported by land and air.

6.1.1.2 Evolution of cultural landscape in social culture element

Faith is transmitted through the area, which in the space can be divided by some buildings, some areas have no building, way of life over the past and present still a way of life that is bound to the Buddhist belief and faith in what respect sacred right and animist. Faith in relation to such physical, beliefs Maung Faii, spiritualism ghost town houses, to build faith to the area, the culture of Hong Kwan Kao, Hong KwanKwai (Buffalo) ceremony, which has diminished, due to the lack of farming and change method for harvesting using tractors combine labor instead of buffalo which had been used for farming not be seen today, so Hong Kwan a Buffalo tradition is hardly seen today as well.

Architecture related to faith and culture, including, shrine, Capitol, cremation, cultural landscape as well as the cultural landscape of the community, demonstrate the origin and evolution of the community, which communities in the study area is still traditional community is, appears to be evidence of cultural, architectural and natural resources are abundant, but due to a small community of historical evidence and it is not much, architecture supports basic needs to live.

Lifestyle, traditions and beliefs, the northern most part Buddhist, tradition is important to anchor the heart, which is traditionally associated with religion and religious rituals, most folk traditions or rituals with religious activities at the temple. The majority, some traditionally made at home or at various locations in the community, Northern are important, Songkran, Yi Peng, Salakpat tradition.

Core beliefs that exist in the northern Lanna are very similar, because the area has a long tradition of core beliefs continuously, it is similar in each area will vary somewhat in the belief that each person. Based on the context of each area is different, the researchers divided the faith found in the northern areas into two main groups, the faith expressed in the spatial patterns and belief in theism beliefs, god or sacred things that did not exist.

The relationship of the community who live in communities in North relations, kinship ties in the past, to build a house that can be seen from living in the same area, are home to a kinship shared by many the latter, unlike the current building began to barricade the area and gated for security from criminals. Social activity, people in the community to support and participate in the collective which is mostly religious beliefs or traditional festivals, such as Songkran, the traditional new house, a traditional funeral the study found that social events in three areas are not different.

6.1.1.3 Evolution of Cultural landscape in economic element

Economic studies found that the population living in the northern areas of life in the past as an agricultural society, Buddhist and animist beliefs in the same family, society and help each other. Currently, there are a variety of occupations and professions proportion of services, trade and service is more, as farmers reduced. Changes in the economy, the emergence of capitalism, industrial development and manufacturing process technology has been used to reduce the cost and profit

maximization. Trade and services makes careers changes from agricultural work to, industry, profession trades, and if those that work outside their hometown and don't have enough time to join the community have work abroad instead.

6.1.2 Factors that affect the physical and correlated with changes in the cultural landscape

On the issue of the composition of the cultural landscape, the researchers analyzed the factors affecting the results of the study found

Factors affecting the cultural landscape of evolution is an important factor, namely, the policy includes plans for social and economic development of the country Policy, Planning, Policies to promote industry and tourism.

The second factor is urban regulation.

The third factor is growing urbanization process. Growth or expansion of the city, a town, a factor that affects the growth of the city and caused the physical changes of culture, as well as changes in beliefs, for example landscape local culture in a small space. Urbanization resulting from the original, there is space for everyone, due to the expansion of roads and land use into something else. Faith and culture in the last ten years, has not changed significantly, confidence in the old way. The belief is still there, but they have modified the way.

The fourth factor is the factors of transportation, will deliver access to space and the expansion of the city.

The fifth factor is the factor of politics, the parents keep some beliefs changed cultural landscape a replacement, for example, the doctrine of the pillar, which is influenced by the culture medium into the area of North and transitioning, the sequence honor of holding the ceremony, some with the elites lost in space, where the importance of the king and the elite was transformed into a government facility or museum at present.

6.1.3 Perception and responding to the changing cultural landscape

To recognize the changing landscape, the culture of each area, are influenced by changes in physical, the study found that, in a changing cultural landscape is a recognition that different areas are changing cultural landscape low or moderate.

In addition, the permit adjustment or change what a cultural landscape, in an area where the community share, including the Great Wall of the temple, Kuang city,

shrines, Devils Tower, what worship regularly area which represents the belief that the community respect, a level allowing changes to a lesser degree. The results showed that, the majority of states do not allow the dismantling of Devils Tower, shrine or deactivate the Range, which is a precursor of still cherish the landscape tradition of its own and has agreed to keep a valuable historical or cultural facilities including, maximizing space Kuang city and conservation architecture in the area, while it is undeniable that most people still have to conserve to the development, as you can see from the sample average in the need to improve the roads, by maintaining the landscape, original, on average, the highest level despite current involvement with faith less, the engagement in the cultural landscape within the community down.

Personal factors affect perception and response of people in the area, age and length of residence. People who live in the Old Town area or near the city wall, the city has undergone a perceived difference, people who live outside the city walls or live far from the cultural landscape, the youngest person living in a period of less than 10 years, with the recognition and response to changes in the cultural landscape than those who are older and lived in the area for a long time.

6.2 Discussion

The physical environment of the cultural landscape of the region has changed over time, the belief systems of northern Thailand, about how to build a city that has not lost, but is still growing at a level different, urbanization (urbanization), affect the pattern of settlement, urban environment, the relationship between the urban environment and cultural activities, the distribution of building traditions and beliefs that cause the significant cultural elements and dynamics of the distribution model.

The results of the study on the belief in the settlement of the city, it was found that the main areas and open space in the city center instead of center of the universe and the space used for religious ceremonies and traditional These findings are similar to studies of Rapoport (1969, 52) In many places in China, Peru, India, parts of Africa and the Incas. In the traditional model of the city reflects a belief in the universal system as shown in the latest case, for example, the village is arranged.

The main area or areas Plaza and turned the building in the direction of the sun, also reflect changes in the cultural landscape, in this study, the majority of surveyed homes with authentic Lanna contemporary and the use of styles and materials, mainly concrete instead of wood because it is cheaper and easier to buy, because they have become rare and expensive materials. Cultural and social space-related spatial continue to practice, the frequency of participation in cultural decline, due to lack of time or economic reason to work for a living, the physical environment of the area of education reflects the relationship of the people in each community through cultural activities for them. The distribution of the buildings show that urbanization is affecting the distribution of old and new buildings, new buildings are being built along the route of transportation.

Recognition of changes in the cultural landscape of the people who lived in the area for over ten years, which is different from those who have lived less than ten years, reflecting the stickiness of residents who have a strong attachment to the cultural landscape. Recognition of the cultural landscape is different social and age groups; awareness is also different, because of the familiarity and other factors. The perception of the landscape, which may change over time with the changing landscape and society (Tempesta 2010, 258-259) study on the perceptions and responses of people in the area continue to change the landscape. Culture, in line with the concept of Plieninger (2014, 1), that conservation is not necessary to always opposed development, society can actually make conservation and development to collaborate in the same way. In addition, Wu and Chang (2013, 266) says, professionals need to look for new ways to connect local history, culture and way of life both inside and outside of the old city, in order to bring about the image the city has become. The city is affected, the physical environment of the area and the cultural landscape of community, faith, and the extent of their participation in cultural activities that have been reduced in the medium.

The study also found that the Range or patio is assembled, cultural activities and community building, most people who want to preserve, in the past, building on the river, but the urbanization process causes expansion of the communities near the road, this study shows that the physical environment of the cultural landscape are closely associated with the culture, it reflects the social development of communities through time differently. Cultural landscape has not disappeared, it will

be just a new form, reflecting the new ways of building and construction materials, the future trend is that more and more people who are new to many tourists culture, sightseeing tourists or foreigners tend to mix and blend into the culture of the people, how to maintain the cultural landscape in the area must have a knowledge of the value and importance of landscape culture to the public in order to achieve recognition and awareness cherish what is in their area, especially the resettlement action plan and guidelines for urban pollution and visually preservation of cultural heritage, all the cultural landscape as a social value that represents a unique identity in terms of the spiritual, educational, economic value, etc., the cultural landscape of northern Thailand also valuable a benefit for local people and understand the Lanna culture.

This study shows that there are many factors affecting the form the cultural landscape of the region, but the faith and culture of the people remains intact cultural landscape is not lost, it will gradually change. a new model, the factors affecting the cultural landscape, including the city's growth and economic policy changes in the physical environment, changes in the composition and function space, and building the open space evidence of the city's growth is indicative of the changing patterns of the old buildings in the city (Lanna) to contemporary and modern. Building materials have also been replaced with concrete or synthetic material because of the shortage of wood, landscape, cultural heritage, as well as missing, the belief that the city is divided into different parts of the human body. The working areas of the city has changed and no longer follow this belief, a cultural landscape that remained, because of the trust the public has the physical appearance of new recruits to maintain their traditional culture.

Factors threat

As the cultural landscape as part of the daily lives of people, some people do not care how important or the cultural landscape, also in certain areas are excited and motivated by the newcomers. In particular, the tourism and the expansion of the city, the values of the object in place, misconceptions about adhered to, economic status, especially the material form of the house and furniture instead of moral behavior and moral and cultural practices. People who go out of their original homeland to other provinces or nearby, to better understand the

sources and reducing the humanity of them, Globalization seems to change traditional culture, the cultural landscape of the local people could deteriorate in the future. How to preserve the cultural landscape in the area is raising awareness about the new settlers, urban planners and designers should be aware about the new construction, which can destroy the cultural landscape. As the cultural landscape will disappear relations, culture and physical environment, it would be difficult to further study, the factors that support and are dangerous for the existence of the cultural landscape as a result of the study, a complex and detailed that should be studied each side, finer management of the cultural landscape in this historic city, geography need to be researched in depth before they managed to prevent the collapse, but it is the basis for sustainable development of the cultural landscape.

6.3 Implementations of the research

The study of factors that affect the cultural landscape of the region, progress, expansion of roads, the infrastructure, the conservation or preservation of cultural landscapes to remain in context changes in today's world is not just a conservation area, the cultural landscape it alone, because the cultural landscape of life, people's beliefs are broadcast and displayed in the form of a physical and cities. The dynamics have changed over time, but should be considered regardless of the physical changes or physical changes which will impact on the cultural landscape changes as well. Thus, in the development of any physical, should take into account the location of the cultural landscape are important, no moving location or locations that have an impact on the perception of the people in the area, but can be modified material or size, but faith or belief was also preserved, which will contribute to the cultural landscape in the area was not lost, and a virtual identity or roots and identity of the city that was.

The conclusion of this research, led to the proposed conservation of cultural landscapes in accordance with the recognition and response of the residents.

1. In the development program of the government, then do not give a review of the cultural landscape in the area is gone, the policy and design. The physical development of the cultural landscape must be concurrently changed, however,

does not affect the perception not break faith, culture, and traditions, local, can be changed, but at the same time, the public can continue to worship the faith, the way their culture is.

2. States or the relevant authorities should create awareness among the local people, by preparing projects or activities related to the cultural landscape of the area, the current municipal projects created to promote tourism. The pedestrian street, but do not create awareness among the local people, who trade as strangers for money is not a conscious conservation, the project succeeded to bring awareness and a sense of culture, the value of its own space, so that local people cherish the things that are valuable in their own areas.

3. If there is any area in the development community should take into account the results of the study, to modify or improve the original material, without prejudice to existing beliefs in order to maintain their traditional identity. The cultural landscape of the area that expresses the identity of the area, have been modified or are unknown to modern belief that is contrary to the cultural landscape makes the identity is lost, public or private, must do and how to take into account public and private, need to cooperate and support the state budget for conservation groups, organizations and people in the area.

4. People in the community should be established among conservation organizations, cultural and historical heritage, with the collaboration of government agencies, such as municipalities, educational institutions, to achieve a strong and sustainable.

5. Establish a center for learning about local landscape and cultural importance in the past to reflect the lifestyle and knowledge to the younger generations to learn the history of the past and to the appreciation and awareness as well. Historical sources can be added, namely those in the community with the development of the private sector in the creation of new or renovated buildings must blend in with the area.

6. Should the conservation of old buildings to reflect the historical roots of the area is also a center of attraction for tourists, too conservative and should be consistent with such development, the use of new materials and technologies, but still in the original form, or can be modified to suit today's living in the building, old building, renovated as a museum or library to achieve sustainability in the area.

7. Create ordinance or regulation or prohibition to permission to build, improve or build upon something inappropriate at the cultural landscape of the area's identity.

6.4 Advantages and limitations of research

The advantages of this research, a combination of quantitative research and qualitative research, quantitative research results can be applied to work generally; information on the quality research makes in-depth information.

Limitations of this study, the aerial photos are not all the years and years. BC. The area spans three shots at different times and some not cloud the analysis in this section is difficult to use compared too many years.

This research is the storage landscape in urban areas, which areas of the cultural landscape of some of the lost traces are to make inquiries and samples for areas with a high city include, Chiang Mai, is not easy, because of the need to provide livelihood and ask a lot of issues and it takes a long time to answer.

6.5 Suggestions for further research

1. Education should be tested as a group sample of tourists that will have to recognize and respond to the cultural landscape of the area, however, so that the results of the study were used to propose guidelines for space tourists or the resident living, in issuing rules or policies for cooperation and prevent the loss of the cultural landscape in the area.

2. There should be a study, comparing the cultural landscapes of rural areas to the city, that there are factors that result in changes in the cultural landscape is different, however, and people living in rural areas recognize different people living in the city or not, because prosperity and urbanization, globalization may undermine the cultural landscape to be lost.

3. Historical data collection should be studied in depth, so deeply analyze and understand the background and development of the surrounds.

4. Should study climate change, whether affects the cognitive changes, comprising cultural landscape or not.

Bibliography

- Altman, I., & Chemers, M. M. 1980. "Cultural aspects of environmental-behavior relationships." In H. C. Triandis & R.W. Brislin (Eds.) *Handbook of cross-cultural psychology* 5: 335-394. Boston: Allyn & Bacon.
- Andre Scheinman. 2003. "Criteria for the Identification of Cultural Heritage Landscape: Town of Caledon."
http://www.caledon.ca/en/live/resources/Criteria_for_the_ID-of_Cultural_Heritage_Landscape.pdf.
- Antrop, Marc. 2005. "Why landscapes of the past are important for the future." *Landscape and urban planning* 70 (1): 21-34.
- Aongsakun Sarassawadee. 2000. *Ancient communities in the Chiang Mai-Lamphun basin*. Amarin Printing & Publishing Public Company Limited. (ltd). (In Thai)
- Aongsakun Sarassawadee. 2006. *History of Lanna*. Amarin Printing & Publishing Public Company Limited. (ltd). (In Thai)
- Arnold R. Alanen and Robert Z. Melnick. 2000. *Preserving Cultural Landscapes in America*. The Johns Hopkins University press. .
- Boonyakiat C., Chaiseema T., Champawan S. , Intachai P. , Pupanya Naren. Raungkhum Suwat. Interview, December - November 2012. Junjira Nunta, Interviewer. *Local history and evolutions of cultural landscape in the area. Lamphun, Thailand.*
- Chapanon, Panngam. 1983. *Cultural geography*. Bangkok: Department of geography, Faculty of Social science. (In Thai)
- Chananon Praiaor. 1986. "The roles of merchant capitalists in the rise and expansion of Copitalism in Northern Thailand 1921-1980." Master of Economic, Chulalongkorn University.
- Charoensupakul Anuwit and Tameepan Wiwat. 1996. *Northern Thai domestic architecture and rituals house-building*. Bangkok: Thammasat University. (In Thai)
- Chinawon Chompupun. Interview. December 2013. Junjira Nunta, Interviewer. *Local history and evolutions of cultural landscape in Phrae, Thailand.*

- Desponia Amanatidou. 2005. "Analysis and Evaluation of Traditional Cultural landscape as a Basis for its Conservation Management a Case Study in Vikos-Aoos National Park-Greece." Ph.D Dissertation, Faculty of Forestry and Environment Science, ALBERT-LUDWIGS University.
- Eben Saleh, M.A. 1999. "Value Assessment of Cultural landscape in Alckas Settlement, Southwestern Saudi Arabia." Department of Architecture and Building Sciences, King Saud University.
- Eben Saleh, M.A. 2000. "The architectural form and landscape as a harmonic entity in the vernacular settlements of Southwestern Saudi Arabia." *Habitat International* 24: 455-473. www.elsevier.com/locate/habitatint
- E.Gunilla A.Olsson. 2000. "Landscape change patterns in mountains, land use and environmental diversity, Mid-Norway 1960-1993." *Landscape Ecology* 15: 155-170.
- Fan Ng, C. 1998. "Canada as a new place: The immigrant's experience." *Journal of Environmental Psychology* 18: 55-67.
- Farina, A. 1998. *Principles and Methods in Landscape Ecology*. London: Chapman and Hall.
- Geertz, Clifford. 1973. "The Integrative Revolution : Primordial Sentiments and civil Politics in the New States" in *The Interpretation of Cultures*. New York: Basic Book.
- Hattaya Siripattanakul 2007. "Cultural Landscape?" *ICOMOS Thailand Newsletter* no.10 APRIL – JULY.
http://www.icomosthai.org/iTH_news/download/Newsletter10-1.pdf
- Helen Alumae, Anu Printsmann & Hannes Palang. 2003. "Cultural and Historical values in landscape planning: local's perception." In *Landscape Interface Cultural heritage in Changing landscape*. Hannes Palang and Gary Fry. eds.:125-141. London: Kluwer Academic.
- Iamvilai, Chantana. 2013. "Cultural landscape of Lopburi old town." Master's Thesis, Chulalongkorn University.
- Ingolf Vogeler. 2010. "Critical Cultural landscape of North America."
[http://www.uwec.edu/geograh/ivogeler/CCL-bookchapter-pdf/index/html.Ingolf.\(2013,Apirl2\)](http://www.uwec.edu/geograh/ivogeler/CCL-bookchapter-pdf/index/html.Ingolf.(2013,Apirl2))

- Jana Spulerova et.al. 2011. "Historical Agricultural Landscape as a Subject of Landscape Ecological Research." *Hrvatski geografski glasnik* 73(2) : 155-163.
- Jongkroy, Puntip. 2008. "Urbanization and Changes of Settlement Patterns in the Peri-urban areas of Bangkok Metropolis." Master Thesis, Kasetsart University. (In Thai)
- Jones, Michael. 2003. "The Concept of Cultural Landscape: Discourse and Narratives." In *Landscape Interface Cultural Heritage in Changing Landscape*, edited by Hannes Palang and Gary Fry: 21-51. London: Kluwer Academic.
- Kerstin Potthoff, 2013. "The use of 'cultural landscape' in 19th century German geographical literature."
- Kirdsiri Kreangkrai. 2008. Community and cultural landscape. Bangkok: Usakane.
- Klomlaew Teerawut. 2009. "A Conservation Guideline for Vernacular Wooden House in Phrae Municipality Area." Master of Architecture, Chiangmai University.
- Ianos Ioan, etl. 2014. "Perennial values and cultural landscape resilience."
- Lieorungruang Vitul. 1979. *Conservation and cultural heritage management*. Bangkok: Charoenwit.
- Lieorungruang, Vitul. 2001. *Lamphun Architecture*. 1 ed. Chiangmai: Chiangmai University. (In Thai)
- Lieorungruang Vitul. 2002. Faculty of Architecture Chiangmai University, 2 ed. (In Thai)
- Lieorungruang Vitul. 2003. Ancient house in Lamphun project documentation "Lamphun beautiful house livable city" Provincial Office Lamphun Provincial Capitol. (In Thai)
- Lieorungruang Vitul. Interview. November 2012. Junjira Nunta, Interviewer. *Local history and evolutions of cultural landscape in Northern Thailand*. Chiangmai, Thailand
- Mangkalang, Warika. 2013. "Cultural landscape of water-based community along klong Damnoen Saduak between Lak ha and Lak hok, Ratchaburi and Samut sakon province." Master's Thesis, Chulalongkorn University. (In Thai)
- Malkawi, F., & Al-Qudah, I. 2003. "The house as an expression of social worlds: Irbid's elite and their architecture." *Journal of Housing and the Built Environment* 18: 25-48.
- Myga-Piatek, Urszula. 2011. "Cultural Landscape of the 21st Century: Geographical

- Consideration between Theory and Practice." *Hrvatski geografski glasnik* 73 (2): 129-140.
- Nunta, Junjira, and Nopadon Sahachaisaeree. 2010. "Determinant of cultural heritage on the spatial setting of cultural landscape: a case study on the northern region of Thailand." *Procedia - Social and Behavioral Sciences* 5 (0):1241-1245. doi: <http://dx.doi.org/10.1016/j.sbspro.2010.07.268>.
- Nuenhad Anu. 2003. *Chiangmai society* Volume 5. Chiangmai: Nopburi.
- Nüsser, Marcus. 2001. "Understanding cultural landscape transformation: a re-photographic survey in Chitral, eastern Hindukush, Pakistan." *Landscape and Urban Planning* 57 (3-4): 241-255. doi: [http://dx.doi.org/10.1016/S0169-2046\(01\)00207-9](http://dx.doi.org/10.1016/S0169-2046(01)00207-9).
- O.A.Goncharov and Iu.N.Tiapovkin. 2013. Cultural and Environment Factors in the perception of perspective among indigenous Tundra.
- Ornsiri Panin. 2000. "Thai-mon vernacular houses." Institution of Research and development printer Silpakorn University. (In Thai)
- Ornsiri Panin. 2003. "The local wisdom in Thai-Puan vernacular houses: transition to new vernacular architecture on local wisdom and technology based." Bangkok: Silpakorn University. (In Thai)
- Ornsiri Panin and et.al. 2004. "Local wisdom in cultural ecology of Thai people sustainable living." Bangkok: Silpakorn University. (In Thai)
- Ornsiri Panin and et.al. 2007. "Local wisdom development and relationship between the vernacular houses of Thai-Kern in Chiengmai-Chiengtung." Bangkok: Silpakorn University. (In Thai)
- Ozaki, R. 2002. "Housing as a reflection of culture: Privatized living and privacy in England and Japan." *Housing Studies* 17 (2): 209 -227.
- Pandey, J. 1990. "The environment, culture, and behavior." In R.W. Brislin (Ed.) *Applied cross cultural psychology*: 254-277. Newbury Park, CA: Sage.
- Pattanawan Israporn. 2009. "The process of cultural and social changes of Tai Khun in Nantharam Community, Haiya Subdistrict, Mueang District, Chiang Mai Province." Master of Arts (Regional Studies), Chiangmai University. (In Thai)
- Plieninger, Tobias, Claudia Bieling, Bettina Ohnesorge, Harald Schaich, Christian Schleyer, and Franziska Wolff. 2013. "Exploring futures of ecosystem services in cultural landscapes through participatory scenario development

- in the Swabian Alb, Germany." *Ecology and Society* 18 (3):39.
<http://dx.doi.org/10.5751/ES-05802-180339>.
- Plieninger, Tobias, Dan van der Horst, Christian Schleyer, and Claudia Bieling. 2014.
 "Sustaining ecosystem services in cultural landscapes." *Ecology and Society*
 19 (2): 59. <http://dx.doi.org/10.5751/ES-06159-190259>.
- Pocock, D., & Hudson, R. (1978). *Images of the Urban Environment*. London:
 Macmillan.
- Preecha Dangkong. Interview. December 2013. Junjira Nunta, Interviewer. Local
 history and evolutions of cultural landscape in Phrae, Thailand.
- Rapoport, Amos. 1969. *House Form and Culture*. Englewood Cliffs, NJ: Prentice-Hall.
- . 1990. *History and Precedent in Environmental Design*. New York: Plenum.
- . 1992. "On Cultural landscapes." *Traditional Dwellings and
 Settlement Review* 3(2) (spring): 33-47.
- . 1996. "Culture and built form-a reconsideration":157-175 in D.G.Saile (ed)
 Architecture in Cultural changes: Essays in Built Form and Culture Research.
 Lawrence: University Press of Kansas.
- . 1998. "Using 'culture' in housing design." *Housing and society* 25 (1/2): 1-20.
- . 2000. Science, Explanatory Theory, and Environment-Behavior
 Studies. In Wapner et.al., (Eds) Theoretical Perspective in Environment-
 Behavior Research. New York: Kluwer Academic/Plenum.
- . 2001. "Theory, Culture and Housing." *Taylor & Francis* 17: 145-165.
- Roman Fedorov. 2013. "Genesis of the cultural landscape of Urals and Siberia."
Journal of Eurasian Studies, Vol.14 (2) : 207-216.
- Robin Torrence. 2002. "Cultural landscapes on Garua Island Papua New Guinea."
Antiquity 76: 766-76
- Sanan thamthi. 2007. Architecture and traditional beliefs in building Northern Thai
 vernacular houses. The center for the Promotion of Arts and Culture Lanna
 Suthep Printing. (In Thai)
- Sagunngam Natcha. 2011. "Cultural landscape of the floating village community : A
 case study of Sapan Runtee community, Laiwo, Sangkhlaburi, Kanchanaburi
 Province." The national conference of Graduation, Silpakorn 1st. Silpakorn
 University. (In Thai)

- Schick, M. 1982. Otto Schluter 1872-1959. In T.W. Freeman (Ed.), *Geographers Biobibliographical Studies*, 6 : 117-122. London: Mansell.
- Sinsaengkaeo, Sirintip. 2009. "Adaptation guidelines for cultural landscape regards to the management and development of agricultural area in mitigation of floods according to The Royal Initiative Pilot Project Monkey Cheek in Bangbal Phanakorn Sri Ayutthaya Province." Master's Thesis, Chulalongkorn University. (In Thai)
- Steel, F. 1981. *The sense of place*. Boston:CBI.
- Tempesta, Tiziano. 2010. "The perception of agrarian historical landscapes: A study of the Veneto plain in Italy." *Landscape and Urban Planning* 97 (4): 258-272.
- Tibor Hartel, *Ecology and Society* 19(2): 42. The importance of ecosystem services for rural inhabitants in a changing cultural landscape in Romania.
- Thuanmunla Jetsiri. 2010. "The study of components in cultural landscape: case study".Phu-Phin Ban Khok Kong, Kalasin province." Master's Thesis in Landscape architecture degree, Department of urban and planning. Graduate school, Silpakorn University.
- Tongsa-ard Suttinee. 1981. *Cultural geography*. Faculty of Arts, Silpakorn University.
- Tonkao Panin and et.al. 2005. *Beliefs and Social Aspects in Relation to House and Living*. Bangkok: Silpakorn University. (In Thai)
- Triandis, H. C. 1994. *Culture and social behavior*. New York: McGraw-Hill.
- Vallibhotama Srisakra and Shongsiri Walailak. 2008. *On tradition and culture, beliefs, and history of Phrae Province, Northern Thailand*. Bangkok: Watcharin Printing. (In Thai)
- Vimolsiddhi Horayangkura. 1997. *Human Behavior on the Environment*. Bangkok: Chulalongkorn University. (In Thai)
- Wang, Chun-Hsi, and Chao-Ching Fu. 2011. "The Conservation of Disappearing Sugar Industry Cultural Landscapes in Taiwan." *Journal of Asian Architecture and Building Engineering* 10 (1): 1-6.
- . 2014. "Dynamic and Diverse Conservation Approaches for an Historical Irrigation System: A Cultural Landscape in Taiwan." *Journal of Asian Architecture and Building Engineering* 13 (1): 25-32.

- Wanmek Boonchouy. Interview. May 2013. Junjira Nunta, Interviewer. *Local history and evolutions of cultural landscape in Chiangmai*. Chiangmai, Thailand.
- Wuthikrai Pathong, Interview. January 2013. Junjira Nunta, Interviewer. *Local history and evolutions of cultural landscape in Phrae*. Phrae, Thailand.
- Wu, Chen Ting, and Shenglin Elijah Chang. 2013. "Re-searching for the Dragon Landscape: A Case Study of Re-connecting Hakka Cultural Landscape with the New Comers in the Taoyuan Metropolis, Taiwan." *Procedia-Social and Behavioral Sciences* 101: 256-267.
- Yong, Yi, Hao Zhang, Xiang-Rong Wang, and Uwe Schubert. 2010. "Urban land-use zoning based on ecological evaluation for large conurbations in less developed regions: Case study in Foshan, China." *Journal of Urban Planning and Development* 136 (2): 116-124.
- Ying Palopakorn. 2009. "Landscape ecological structure and ecological service case study: the irrigation ditches and orchard's ditches in a canal network, Omm-Nont canal, Bang-Yai, Nonthaburi." Master's Thesis. Faculty of Architecture. Chulalongkorn University. <http://cuir.car.chula.ac.th/handle/123456789/17565>
- Average income per household north, Office of National Statistics. (online). Available: <http://terrabkk.com>
- Comprehensive plan ChiangMai. Chiangmai Office of Public Works and Town & Country Planning.
- Comprehensive plan Lamphun. Lamphun Office of Public Works and Town & Country Planning.
- Comprehensive plan Phrae. Phrae Office of Public Works and Town & Country Planning.
- Chiangmai General condition. (online). Available: www.chiangmai.go.th
- Comprehensive plan ChiangMai. (online). Available: www.dpt.go.th/Chiangmai
- Lanna tradition. (online). Available: https://library.cmu.ac.th/en_lannatradition.
- www.icomosthai.org
- www.lamphun.go.th
- <http://service.nso.go.th>

Appendix

Questionnaire

The Formation of the Cultural Landscape and Residents' Responsive Perception:
A Case Study of Northern Region of Thailand

The data from this survey to be part of a graduate thesis, interdisciplinary design research
King Mongkut's Institute of Technology Lad Krabang, Bangkok.

Thank you for your cooperation in answering the questionnaire.

Section 1 Personal information of respondents.

Section 2 social relation, belief and participation in cultural activities

Section 3 perception and response to cultural landscape change

Section 4 the recommendation to cultural landscape change.

Section 1 Personal information of respondents

House Number..... Community.....

1. Gender () Male () Female

2. Age.....Year

3. Income per month.....Baht

4. Religious

() Buddha () Christ () Islam () Others.....

5. Race

() Northern people () Other region () Chinese () Indian
() Myanmar () Others.....

6. Education

() Uneducated () Primary education () Secondary school
() High School () Diploma () Bachelor
() Postgraduate () Others please

specify.....

7. Career

() Government service () Employees () Private companies
() Business owner () Trade () Farmers
() Contractors () Freelance () Student
() Pensioner () Housekeeper () Others please

specify.....

22. If not, the reason why (Respondents could choose more than 1)

- No anymore, because sold Changed career already
 Expropriated land Not enough income
 Others.....

23. If the Chiang Mai person had to change careers from any occupation is suitable for them

(Please order if you answer more than 1)

- Technology Retail trade A semi-agricultural jobs
 Government Others.....

24. If new jobs are earning more than ever before, you will move out of the area to another or not?

- Yes, because..... No, because.....

25. If you don't have the space, will you move or not?

- Yes, because..... No, because.....

26. The current career changes from the original to another, according to the environment, what would you do?

- Fine home living space in accordance with a new career
 Adjusting common areas of the community in accordance with the new life
 Do the new thing and ignore the ancestor's originals
 Renovating the building and the environment as a new profession by the demolition
 Others.....

Section 2 social relation, belief and participation in cultural activities

27. Frequency of attending cultural events traditionally held community

- Never joined 1- 2 per year Nearly every time every time

28. Any space in your community to attend cultural events (Respondents could choose more than 1)

- Temple Khoung Village square sacred place Others.....

29. What areas are you to engage in cultural activities?

- In their own communities
 The area surrounding communities
 Other communities farther

36. What is your opinion if a majority of local area which related to the belief of the people in community was developed?

- () There should not be any development should remain the same as faith
- () The area was originally developed for the better, but the main belief
- () Move to new areas as appropriate but maintain the original belief
- () Develop a modern ignoring originally believed

37. If the area of the village, such as religious activities, the temple was modified, you are consenting or not

- () Accept () Not Accepted

38. If you allow the public area to change such as, temple, how you would change it (Order the selected)

- () Deployment of new activities such as exercise yard
- () Reclamation new buildings, but not in the same area
- () Adjustable floor of a former sand as other modern materials
- () Building / Public Library

39. Have you used the community well or not?

- () Yes and still use (Answer question 40)
- () Has, but not anymore (Answer question 41)
- () Never (Skip to answer question 40)

40. Why do you still use?

- () Because it's in the community area () Because have used before
- () Others.....

41. If you have used before, why don't you use now?

- () Is not the community area anymore
- () Have use of clean water already
- () Because the area has changed into something else
- () Others.....

42. Do you think there should be conserved buildings of the ancient Lanna in Chiang Mai or not?

- () Should preserve its history and particularly for the children's study
- () Merely
- () No, because.....

43. If a change historical building in Lamphun, what is your opinion?

- Don't think there should be any changes
- Accept, but should keep the same concept
- Allow to change the use of buildings, commercial buildings and hotels, but the pattern remains the same
- Allow change the style to a modern building
- Allow demolished to make something else

44. Why do you want to preserve the building in Chiang Mai (Respondents could choose more than 1)

- Buildings of historical importance
- The building is located on Great Wall
- Is the home of the importance of the area
- The age of the building
- For tourism
- Others.....

45. Perception and response to cultural landscape change

opinion	Not agreed at all	Not agree	moderate ly	Agree	Very agree
A skyscraper construction over four floors inside the city walls.					
Modern style building in the walled city.					
Moving outside the prison walls.					
Devils dismantle the tower to improve the other areas.					
Demolition shrine is another area for improvement.					
Obsolete Khoung city area and new buildings.					
Modern building eclipsed the Three Kings Monument					
The public water reclamation outdated adjusts to new areas.					

opinion	Not agreed at all	Not agree	moderate	Agree	Very agree
There are buildings on the city walls.					
Change is a parking lot.					
Demolish barn converted into another living area.					
Adding space or yard Khoung to the cultural activities of the community.					
Renovate Old Capitol Museum.					
Demolition of the old City Hall building is another area.					
To change the function of a building housing a guesthouse or hotel.					
Improvement Area Wilderness Park					
Improving roads by cutting trees on either side of the exit.					
Road improvements by maintaining the landscape.					
Conservation of old buildings with historical significance, both inside and outside the city walls.					

46. Do you think the buildings and such places are important to the area and how many?

Building / location	Not important	Less important	Very less important	Merely	Much	Very Much
1. Three Kings Monument						
2. Khoung City						
3. Walls						
4. Phra That Doi Suthep						
5. Tha Pae Gate						

Building / location	Not important	Less important	Very less important	Merely	Much	Very Much
6. The Moat						
7. Shrine						
8. Crown and vocational school building components.						
9. Temple Phra Singh						
10. Wat Chedi Luang						
11. Virtually the						
12. The Court ghost / Shrine						
13. Other temples in the city walls.						
14. Ban Chao Noi Inn						
15. Lanna house both in and outside the city walls.						

47. Do you think the buildings and such places are important to the area and how many?

Building Type	Not suitable at all	Not suitable	Merely	Suitable	Very Suitable
1. The traditional wooden buildings					
2. Wooden building Simplified					
3. Wooden building high basement					
4. Wooden traditional Retail trade					
5. Big column House					
6. Old-style wooden houses, but the improvement is the addition of a second floor.					
7. Half-timbered and cement modern houses					
8. Modern shape					

Building Type	Not suitable at all	Not suitable	Merely	Suitable	Very Suitable
9. Building contemporary Thailand.					
10. The two-storey modern building					
11. Modern buildings higher than two floors.					
12. The building is designed with the environment, whether Government or private buildings.					
13. Apartment or dormitory					
14. Large hotels					
15. Guest House					

Section 4 the recommendation to cultural landscape change.

Questionnaire

The Formation of the Cultural Landscape and Residents' Responsive Perception:
A Case Study of Northern Region of Thailand

The data from this survey to be part of a graduate thesis, interdisciplinary design research
King Mongkut's Institute of Technology Lad Krabang, Bangkok.

Thank you for your cooperation in answering the questionnaire.

Section 1 Personal information of respondents.

Section 2 social relation, belief and participation in cultural activities

Section 3 perception and response to cultural landscape change

Section 4 the recommendation to cultural landscape change.

Section 1 Personal information of respondents

House Number..... Community.....

1. Gender () Male () Female

2. Age.....Year

3. Income per month.....Baht

4. Religious

() Buddha () Christ () Islam () Others.....

5. Race

() Northern people () Other region () Chinese () Indian

() Myanmar () Others.....

6. Education

() Uneducated () Primary education () Secondary school

() High School () Diploma () Bachelor

() Postgraduate () Others please

specify.....

7. Career

() Government service () Employees () Private companies

() Business owner () Trade () Farmers

() Contractors () Freelance () Student

() Pensioner () Housekeeper () Others please

specify.....

8. Numbers of family.....

9. Members of family.....

10. House living in

() Rent () Owner () Cousin's house

11. Housing characteristics

() one storey wooden house high basement () one storey wooden house

() one storey cement house () Two-storey cement house

() Commercial building () Apartment

() Two storey wooden houses and cement () Two storey wooden house

() Others.....

12. The age of the house.....Year

13. Hometown () The area in the city walls () Outside the city walls

() Lamphun but other districts () Other provinces

14. Have you lived in a different province () Yes () No

15. You've been living there for.....Year

16. How many neighbors do you know?

() 1-2 nearby () Only cousins

() Nearly all in the village () All homes in the community

() All homes in the community and outside the community

17. Status in the Community (Respondents could choose more than 1).

() Volunteer () Community leaders () Temple Committee

() Cultural Council () Community Board () No position in the community

() Others.....

18. Leisure time activity where you usually do (Respondents could choose more than 1)

() Home () Park () Community yard () Temple () Plaza () Others.....

19. Where do you purchase?

() Municipal Market () Community market () Mall () Others.....

20. Has your family done a Farmer career before?

() Have and has their own land () inside the municipalities

() Outside the municipality () Yes, but rent the space () Never

21. At present, do you still do this career or not?

() Yes () No

22. If not, the reason why (Respondents could choose more than 1)

- No anymore, because sold Changed career already
 Expropriated land Not enough income
 Others.....

23. If the Lamphun person had to change careers from any occupation is suitable for them
(Please order if you answer more than 1)

- Technology Retail trade A semi-agricultural jobs
 Government Others.....

24. If new jobs are earning more than ever before, you will move out of the area to another or not?

- Yes, because..... No, because.....

25. If you don't have the space, will you move or not?

- Yes, because..... No, because.....

26. The current career changes from the original to another, according to the environment, what would you do?

- Fine home living space in accordance with a new career
 Adjusting common areas of the community in accordance with the new life
 Do the new thing and ignore the ancestor's originals
 Renovating the building and the environment as a new profession by the demolition
 Others.....

Section 2 social relation, belief and participation in cultural activities

27. Frequency of attending cultural events traditionally held community

- Never joined 1- 2 per year Nearly every time every time

28. Any space in your community to attend cultural events (Respondents could choose more than 1)

- Temple Khoung Village square sacred place Others.....

29. What areas are you to engage in cultural activities?

- In their own communities
 The area surrounding communities
 Other communities farther

30. What do you and people in the community respect (respondents could choose more than 1)

- ghost grandparents Household god ghost house
 Shrine..... Others.....

31. Beliefs and customs are still practiced within your community (Respondents could choose more than 1)

- Fortunately culture The baisrisukwan
 Than Kua Salak tradition The ancestor spirits
 Traditions into Kwankgaw Traditional Buffalo Blessing (Kwankwai)
 Traditional bathing relics Songkran
 Yipeng tradition Traditional worship Inthakin pillar
 Doi Suthep traditions The elves spirits

32. You have to pay homage to the shrine / spirits grandparents / rites of any faith or not, if no, go back to answer question 33

- Went alone Deposit with the relative merit Never

33. Any reason you did not attend (Respondents could choose more than 1).

- The house does not respect anymore No time
 Have to work Home believes but I don't
 Faith decrease Economic Reasons Others.....

34. Comments about the change in the overall culture and traditions from the past to the present

- Unaltered But not much change
 Format change, but also belief Radically changed the traditional

Section 3 perception and response to cultural landscape change

35. Why do you think that today's traditional buildings were affected?

- Due to hot weather, so people usually built with cement
 Since no money, so the house or buildings are sold
 The original building was decaying deteriorate
 Due to the popularity of new, more modern style
 Since many members, thus expanding and modifying the behavior of living

36. What is your opinion if a majority of local area which related to the belief of the people in community was developed?

- There should not be any development should remain the same as faith
- The area was originally developed for the better, but the main belief
- Move to new areas as appropriate but maintain the original belief
- Develop a modern ignoring originally believed

37. If the area of the village, such as religious activities, the temple was modified, you are consenting or not

- Accept Not Accepted

38. If you allow the public area to change such as, temple, how you would change it (Order the selected)

- Deployment of new activities such as exercise yard
- Reclamation new buildings, but not in the same area
- Adjustable floor of a former sand as other modern materials
- Building / Public Library

39. Have you used the community well or not?

- Yes and still use (Answer question 40)
- Has, but not anymore (Answer question 41)
- Never (Skip to answer question 40)

40. Why do you still use?

- Because it's in the community area Because have used before
- Others.....

41. If you have used before, why don't you use now?

- Is not the community area anymore
- Have use of clean water already
- Because the area has changed into something else
- Others.....

42. Do you think there should be conserved buildings of the ancient Lanna in Lamphun or not?

- Should preserve its history and particularly for the children's study
- Merely
- No, because.....

43. If a change historical building in Lamphun, what is your opinion?

- Don't think there should be any changes
- Accept, but should keep the same concept
- Allow to change the use of buildings, commercial buildings and hotels, but the pattern remains the same
- Allow change the style to a modern building
- Allow demolished to make something else

44. Why do you want to preserve the building in Lamphun (Respondents could choose more than 1)

- Buildings of historical importance
- The building is located on Great Wall
- Is the home of the importance of the area
- The age of the building
- For tourism
- Others.....

45. Perception and response to cultural landscape change

opinion	Not agreed at all	Not agree	moderate ly	Agree	Very agree
A skyscraper construction over four floors inside the city walls.					
Modern style building in the walled city.					
Moving outside the prison walls.					
Devils dismantle the tower to improve the other areas.					
Demolition shrine is another area for improvement.					
Obsolete Khoung city area and new buildings.					
Modern building eclipsed the Three Kings Monument					
The public water reclamation outdated adjusts to new areas.					

opinion	Not agreed at all	Not agree	moderate	Agree	Very agree
There are buildings on the city walls.					
Change is a parking lot.					
Demolish barn converted into another living area.					
Adding space or yard Khoung to the cultural activities of the community.					
Renovate Old Capitol Museum.					
Demolition of the old City Hall building is another area.					
To change the function of a building housing a guesthouse or hotel.					
Improvement Area Wilderness Park					
Improving roads by cutting trees on either side of the exit.					
Road improvements by maintaining the landscape.					
Conservation of old buildings with historical significance, both inside and outside the city walls.					

46. Do you think the buildings and such places are important to the area and how many?

Building / location	Not important	Less important	Very less important	Merely	Much	Very Much
1. Prathat Hariphunchai						
2. Khoung City						
3. Walls						
4. KruBa Sriwichai						
5. The Gate city						
6. KuChangKuMa						

Building / location	Not important	Less important	Very less important	Merely	Much	Very Much
7. The Moat						
8. Shrine						
9. city pillar						
10. Lanna house both in and outside the city walls.						
11. museum						
12. The Court ghost / Shrine						
13. Other temples in the city walls.						

47. Do you think the buildings and such places are important to the area and how many?

Building Type	Not suitable at all	Not suitable	Merely	Suitable	Very Suitable
1. The traditional wooden buildings					
2. Wooden building Simplified					
3. Wooden building high basement					
4. Wooden traditional Retail trade					
5. Big column House					
6. Old-style wooden houses, but the improvement is the addition of a 2 storey.					
7. Half-timbered houses Half modern mortar.					
8. Modern shape					
9. Contemporary Building Thailand					
10. The two-storey modern building					
11. Modern buildings higher than two storey.					

Building Type	Not suitable at all	Not suitable	Merely	Suitable	Very Suitable
12. The building is designed with the environment, whether Government or private buildings.					
13. Apartment or dormitory					
14. Large hotels					
15. Guest House					

Section 4 the recommendation to cultural landscape change.

Questionnaire

**The Formation of the Cultural Landscape and Residents' Responsive Perception:
A Case Study of Northern Region of Thailand**

The data from this survey to be part of a graduate thesis, interdisciplinary design research

King Mongkut's Institute of Technology Lad Krabang, Bangkok.

Thank you for your cooperation in answering the questionnaire.

Section 1 Personal information of respondents.

Section 2 social relation, belief and participation in cultural activities

Section 3 perception and response to cultural landscape change

Section 4 the recommendation to cultural landscape change.

Section 1 Personal information of respondents

House Number..... Community.....

1. Gender () Male () Female

2. Age.....Year

3. Income per month.....Baht

4. Religious

() Buddha () Christ () Islam () Others.....

5. Race

() Northern people () Other region () Chinese () Indian

() Myanmar () Others.....

6. Education

() Uneducated () Primary education () Secondary school

() High School () Diploma () Bachelor

() Postgraduate () Others please

specify.....

7. Career

() Government service () Employees () Private companies

() Business owner () Trade () Farmers

() Contractors () Freelance () Student

() Pensioner () Housekeeper () Others please

specify.....

22. If not, the reason why (Respondents could choose more than 1)

- No anymore, because sold
- Changed career already
- Expropriated land
- Not enough income
- Others.....

23. If the Phrae person had to change careers from any occupation is suitable for them (Please order if you answer more than 1)

- Technology
- Retail trade
- A semi-agricultural jobs
- Government
- Others.....

24. If new jobs are earning more than ever before, you will move out of the area to another or not?

- Yes, because.....
- No, because.....

25. If you don't have the space, will you move or not?

- Yes, because.....
- No, because.....

26. The current career changes from the original to another, according to the environment, what would you do?

- Fine home living space in accordance with a new career
- Adjusting common areas of the community in accordance with the new life
- Do the new thing and ignore the ancestor's originals
- Renovating the building and the environment as a new profession by the demolition
- Others.....

Section 2 social relation, belief and participation in cultural activities

27. Frequency of attending cultural events traditionally held community

- Never joined
- 1- 2 per year
- Nearly every time
- every time

28. Any space in your community to attend cultural events (Respondents could choose more than 1)

- Temple
- Khoung
- Village square
- sacred place
- Others.....

29. What areas are you to engage in cultural activities?

- In their own communities
- The area surrounding communities
- Other communities farther

30. What do you and people in the community respect (respondents could choose more than 1)

- ghost grandparents Household god ghost house
 Shrine..... Others.....

31. Beliefs and customs are still practiced within your community (Respondents could choose more than 1)

- Fortunately culture The baisrisukwan
 Than Kua Salak tradition The ancestor spirits
 Traditions into Kwangkaw Traditional Buffalo Blessing (Kwankwai)
 Traditional bathing relics Songkran
 Yipeng tradition Traditional worship Inthakin pillar
 Doi Suthep traditions The elves spirits

32. You have to pay homage to the shrine / spirits grandparents / rites of any faith or not, if no, go back to answer question 33

- Went alone Deposit with the relative merit Never

33. Any reason you did not attend (Respondents could choose more than 1).

- The house does not respect anymore No time
 Have to work Home believes but I don't
 Faith decrease Economic Reasons Others.....

34. Comments about the change in the overall culture and traditions from the past to the present

- Unaltered But not much change
 Format change, but also belief Radically changed the traditional

Section 3 perception and response to cultural landscape change

35. Why do you think that today's traditional buildings were affected?

- Due to hot weather, so people usually built with cement
 Since no money, so the house or buildings are sold
 The original building was decaying deteriorate
 Due to the popularity of new, more modern style
 Since many members, thus expanding and modifying the behavior of living

36. What is your opinion if a majority of local area which related to the belief of the people in community was developed?

- There should not be any development should remain the same as faith
- The area was originally developed for the better, but the main belief
- Move to new areas as appropriate but maintain the original belief
- Develop a modern ignoring originally believed

37. If the area of the village, such as religious activities, the temple was modified, you are consenting or not

- Accept Not Accepted

38. If you allow the public area to change such as, temple, how you would change it (Order the selected)

- Deployment of new activities such as exercise yard
- Reclamation new buildings, but not in the same area
- Adjustable floor of a former sand as other modern materials
- Building / Public Library

39. Have you used the community well or not?

- Yes and still use (Answer question 40)
- Has, but not anymore (Answer question 41)
- Never (Skip to answer question 40)

40. Why do you still use?

- Because it's in the community area Because have used before
- Others.....

41. If you have used before, why don't you use now?

- Is not the community area anymore
- Have use of clean water already
- Because the area has changed into something else
- Others.....

42. Do you think there should be conserved buildings of the ancient Lanna in area or not?

- Should preserve its history and particularly for the children's study
- Merely
- No, because.....

43. If a change historical building in the city, what is your opinion?

- Don't think there should be any changes
- Accept, but should keep the same concept
- Allow to change the use of buildings, commercial buildings and hotels, but the pattern remains the same
- Allow change the style to a modern building
- Allow demolished to make something else

44. Why do you want to preserve the building in Phrae (Respondents could choose more than 1)

- Buildings of historical importance
- The building is located on Great Wall
- Is the home of the importance of the area
- The age of the building
- For tourism
- Others.....

45. Perception and response to cultural landscape change

opinion	Not agreed at all	Not agree	moderate ly	Agree	Very agree
A skyscraper construction over four floors inside the city walls.					
Modern style building in the walled city.					
Moving outside the prison walls.					
Devils dismantle the tower to improve the other areas.					
Demolition shrine is another area for improvement.					
Obsolete Khoung city area and new buildings.					
Modern building eclipsed the Three Kings Monument					
The public water reclamation outdated adjusts to new areas.					

opinion	Not agreed at all	Not agree	moderate	Agree	Very agree
There are buildings on the city walls.					
Change is a parking lot.					
Demolish barn converted into another living area.					
Adding space or yard Khoung to the cultural activities of the community.					
Renovate Old Capitol Museum.					
Demolition of the old City Hall building is another area.					
To change the function of a building housing a guesthouse or hotel.					
Improvement Area Wilderness Park					
Improving roads by cutting trees on either side of the exit.					
Road improvements by maintaining the landscape.					
Conservation of old buildings with historical significance, both inside and outside the city walls.					

46. Do you think the buildings and such places are important to the area and how many?

Building / location	Not important	Less important	Very less important	Merely	Much	Very Much
1. Prathat ChoHae						
2. Khoung City						
3. Walls (Mek)						
4. SanamLuang						
5. The Gate city						
6. Khum Chao Luang						
7. The Moat						

Building / location	Not important	Less important	Very less important	Merely	Much	Very Much
8.Young MaShrine						
9. city pillar						
10.ChaoPoSaenchai Shrine						
11. Lanna house both in and outside the city walls.						
12. The Court ghost / Shrine						
13. Other temples in the city walls.						

47. Do you think the buildings and such places are important to the area and how many?

Building Type	Not suitable at all	Not suitable	Merely	Suitable	Very Suitable
1. The traditional wooden buildings					
2. Wooden building Simplified					
3. Wooden building high basement					
4. Wooden traditional Retail trade					
5. Big column House					
6. Old-style wooden houses, but the improvement is the addition of a 2 storey.					
7. Half-timbered houses Half modern mortar.					
8. Modern shape					
9. Contemporary Building Thailand					
10. The two-storey modern building					
11. Modern buildings higher than two storey.					

Interview Form

1. General Information

House number.....Moo.....Date Interview.....

1.NameAge.....Gender..... Religion.....

2. Number of family members.....Person/People

3.Respondents status..... Householder..... Resident

4. Birthplace..... 5. Living areaYears

6. Career..... 7. Income/month

8. How many neighbors know how many households?

9. How often do you take participants in the village activities?.....

10. Attending cultural events.....

11. Status in the Community.....

2. When interviewed about the landscape, culture and beliefs of the community

1. Community life.....Year

2. How different is living in the past and living in the present?

3. The relationship of the people in the area in the past, the same or different or not.

4. What are the beliefs that people in the community are upheld with in the past are and at present, are there anything else that they are upholding any traditions, any lost or ignored?

5. In your community, do they believe in ghosts, godfather or any sacred rites and to any range?

6. What are the unique in your area?

7. What beliefs or symbols that represent respect common practices of people in the community?

8. The common areas of the community cultural activities and beliefs of the community, the past is any current use of the area or not?

9. Do you think what causes the changes to the physical environment in your community?

10. Comment on the environment, landscape, culture, past and present.

11. The modifications to the cultural landscape of the community?

AUTHOR BIOGRAPHY

Name Ms. JUNJIRA NUNTA
Date of Birth 6 January 1976
Address 17 Moo 3, Tombon Maesai, Ampur Rongkwang
Phrae 54140

Educational Background

1997 Bachelor of Architecture (Interior Architecture)
King Mongkut's Institute of Technology Ladkrabang,
Thailand
2003 Master of Urban and Regional Planning
King Mongkut's Institute of Technology Ladkrabang,
Thailand
2015 Doctor of Architecture, Multidisciplinary Design Research
King Mongkut's Institute of Technology Ladkrabang,
Thailand

Specialties and Practice Areas

Local History
Vernacular architecture

Work Experiences

1997 - 1999 Designer at LME Co.,Ltd. Bangkok, Thailand
2003 – Present Lecturer at Maejo University Phrae Campus