

The Dynamism of Old Wooden Houses within Chiang Mai City Wall.

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The Asian Conference on Sustainability, Energy and the Environment 2015
Official Conference Proceedings

Abstract

Cultural sustainability is one of the key factors for sustainable development apart from economic growth, environmental stewardship, and social inclusion. It is also associated with protecting, preserving and conserving tangible and intangible heritage. Architectural conservation gives a sense of identity, spiritual and symbolic as well as functional and economic values. It plays an important part for a cultural continuum leading to cultural sustainability. The main concept of this paper is to promote cultural sustainability through urban historic landscape and architectural conservation. The main concept of this paper is to promote cultural sustainability through urban historic landscape and architectural conservation.

Dwelling is about a 'place' for people, it is *'both a process and artifact: it is the experience of living at a specific location and it is the physical expression of doing so'*. They generally adapt or develop over times as needs and circumstances change. The dwelling is more than the structure transcending over the physical frame of their habitation. However, looking into how manifestations and adaptations of their dwellings will help to promote understanding people of any culture that is prime to cultural sustainability.

During the past decades Chiang Mai, the second city of Thailand, has confronted an astonishingly rapid growth bringing many problems to local citizens, including the decrease of old wooden houses within the city wall.

Within the above mention approach, this paper will investigate how 191 old wooden houses, surveyed during 1985, within Chiang Mai City Wall habituate to changes through over 30 years of times. It gives the over all picture of those houses through numbers, locations and other details. Moreover, a brief comparison between the wooden houses within the city wall and the traditional styles to see the adaptations of physical structures as needs and circumstances change. It ends with inside observations and suggestions.

Keywords: old wooden houses, dynamism, conservation, Chiang Mai city wall

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Introduction

Cultural sustainability is one of the key factors for sustainable development apart from economic growth, environmental stewardship, and social inclusion. It is also associated with protecting, preserving and conserving tangible and intangible heritage. Architectural conservation gives a sense of identity, spiritual and symbolic as well as functional and economic values. It plays an important part for a cultural continuum leading to cultural sustainability. The main concept of this paper is to promote cultural sustainability through urban historic landscape and architectural conservation.

During late the 20th century, for many scholars, the high communication technology and the so-called 'informational city' gives rise to 'space of flow' prevailing over 'space of place' (Castells, 1989: 348, see also Allen and Hamnett eds. 1995 and Harvey, 1989). This also brings global cities all around the world the 'sameness'. The differences, exclusions or marginalization turn out to be subservient. The multinational cooperation and international architectural styles take over physical appearance of the world cities. One of the most interesting questions is how this situation afflicted with urban historic landscape and cultural continuum.

David Harvey (1990) argues that, rather than insignificant, place bounded identity is more important in the post-modern capitalism era than before because of the following reasons: 1) the greater challenges over the 'sameness' within similar function cities around the world, 2) the uncomplicated location selection due to cheap transportation cost makes differences between places are more important than the opposite, 3) social, political and cultural differences make each location more attractive than the others for the multinational cooperation and 4) many of the surplus capitals during these two decades are invested in place constructions which is 'wiser' than going to savings, over scale real estate or tourist resort developments. In this sense, conserving physical or tangible, as well as intangible heritage is still important and cultural continuum could possibly extend far into the future.

Dwelling is about a 'place' for people, it is *'both a process and artifact: it is the experience of living at a specific location and it is the physical expression of doing so'* (Oliver, 2003). Dwellings are generally adapted or developed over times as needs and circumstances change. The dwelling is more than the structure transcending over the physical frame of their habitation. Thus, looking into how manifestations and adaptations of their dwellings will help to promote understanding people of any culture that is prime to cultural sustainability.

This paper aims at investigation to how 191 old wooden houses, surveyed during 1985, within Chiang Mai city wall habituate to changes through times. It starts with a brief history of Chiang Mai and the area within the city wall. Then the paper gives the over all picture of old wooden houses in Chiang Mai city wall through locations, ages and other details. Moreover, a brief comparison between the wooden houses within the city wall and the traditional Lanna¹ styles of 'wooden and Ruen Ka Lae² houses'

¹ *Lanna* is the name of a conglomerate of northern Siam principalities, mostly under the leadership of Chiang Mai. It covered the area of modern north Thailand and extended its influence far into the neighbouring regions. Its golden period was over two and a half centuries from the late thirteenth to the mid sixteenth century AD.

² *Ruen Ka Lae*: noble traditional house with two pieces of crafted cross wood at the top of the gable roofs.

are described to see the adaptations of physical structures as needs and circumstances change. It ends with the inside observations and suggestions.

Chiang Mai

Chiang Mai, a living historic city, is renowned for its natural beauty and cultural assets. It is in the north of Thailand and the inland Chiang Mai-Lamphoon Basin (as shown in Figure 1). It was founded in 1296 by King Mungrai and became the centre of Lanna Kingdom, a united northern principality, since. After over two hundred years of self governed Lanna was then ruled by the Burmese for over two hundred years. Siam³ and Lanna conquered the Burmese in the liberation war in 1782. Chiang Mai then became a vassal of Bangkok. Later, the country turned into totally centralized and Chiang Mai which was once a unique and flourishing culture, is now developing into a mere province within a Thai nation-state. (Thongchai, 1994: 102-103).



Figure 1 Location of Chiang Mai
(Source: googlemap.com)

At present, Chiang Mai is known as the second city of the country after only Bangkok. It is the centre of administration, economic, education, communication and also health services of the north. The Chiang Mai municipality - *thesaban nakhon* -area covers about 40 square kilometres with a population of 132,635 (Chiang Mai Municipality, 2014) in that it gradually reduces during the past decades. However, the urban sprawl of the city now extends into several neighbouring districts. The Metropolitan Area has a population of almost 700,000, nearly half the total of Chiang Mai Province, and the area covers 529 square kilometres - over 10 times of the municipal area. Chiang Mai is one of the major tourist attractions and becoming more and more global, bustling with Thai and foreign tourists from all over the world. There are also long term residents, i.e. Europeans, Americans, Japanese, etc. and foreign labours, especially the Tai from Myanmar, which said to be several 100,000s in Chiang Mai.

During the past decades, Chiang Mai has confronted an astonishingly rapid growth from both governmental and non-governmental capitals. Mega projects, new developments, shopping malls, and high rises sprang up all over the cities. This situation was peek during 2011-2013, before the Chiang Mai comprehensive plan has been introduced in May 2014 after a vacuum⁴ of law for almost 7 years (see Figure 3).

³ *Siam*: the former name of Thailand, before 24 June 1939 and again from 8 September 1945 to 20 July 1949.

⁴ Vacuum of law: the update process took almost 7 years, making there's no comprehensive plan during that time

Chiang Mai University, at the foot of Suthep Mountain, is one of the major magnets in this area, affecting much of the city structures and land-use patterns of the surrounding (see Figure 2).

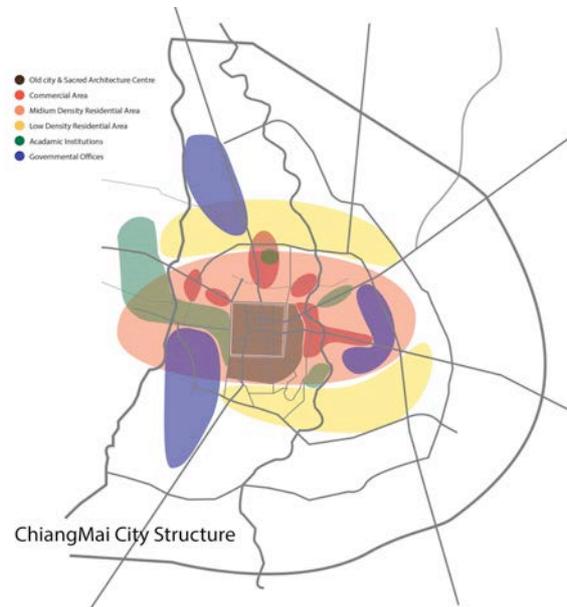


Figure 2 Chiang Mai City Structure

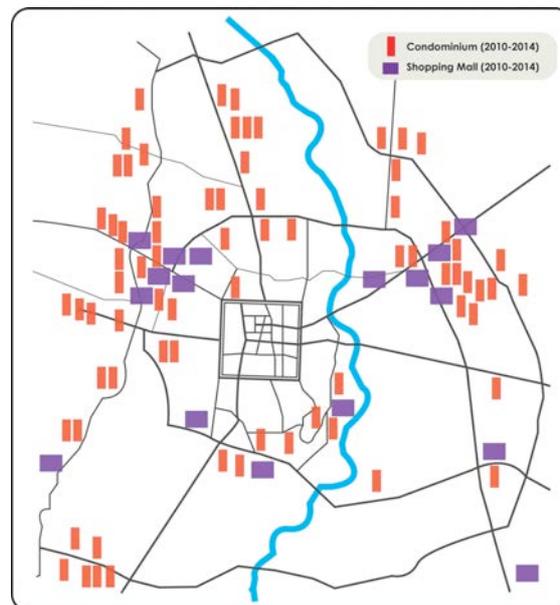


Figure 3 Chiang Mai city new projects during the 'no comprehensive plan' period

Though bringing economic benefit, the situation of the global Chiang Mai has also created many problems to the local citizens. The problems are traffic jams, air pollutions, insufficient supplies of public facilities and utilities, i.e. green open space, electricity, water supply, garbage disposal and the deterioration of urban historic landscape and buildings. The city has becoming 'ugly'. Chiang Mai city itself could be stated as an *over use* living historic city. Figure 4 shows locations of historical and archaeological significant ancient monuments within and beyond Chiang Mai city

wall.

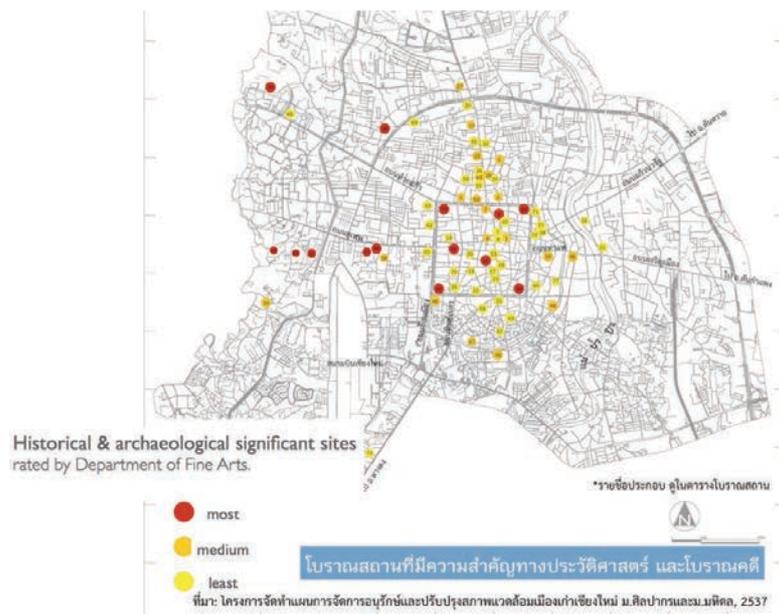


Figure 4 Locations of historical and archaeological significant ancient monuments in Chiang Mai

Chiang Mai City Wall Then and Now

Chiang Mai old city is located to the west of the Ping River and to the east of the Suthep Mountain. King Mungrai named Chiang Mai after its meaning – the new city. After moving to many sites previously, the location was perfect for his new city. Suthep Mountain acted as a natural boundary to the west and as a water resource for the city. The remnant, in the present Chiang Mai University at the foot of Suthep Mountain, suggests the water reservoir was to collect water from the mountain and channel it to the city (Sarassawadee and Pichit, 1996). Two metres higher than and over a kilometre’s distance from the riverbank, it was safe enough to protect the city from flooding.

Chiang Mai, like many other ancient cities, has ritual traces attached to its founding. As it is a highly ethnically diverse area, it has traces of different cultures and ideologies on the city plan. It seems true that the reason King Mungrai moving again to the present site of Chiang Mai was to find a new symbolic centre.

The city was laid out probably following a combination of animist traditions, Indic Theravada Buddhist and Chinese Mahayana Buddhist precedents, as a result a square city allied with the cardinal directions (Aasen, 1998: 66) The city wall was very formal rather than informal like Mungrai’s previous towns. The walled city was a special domain containing the royal palace, houses of the nobility and a number of temples. The design of the square city wall inherited from the allied kingdom, Sukhothai. (see Figure 5)

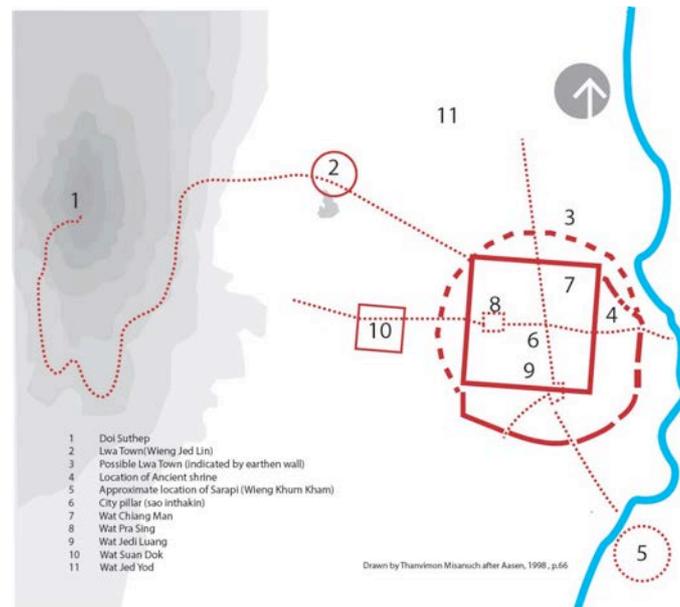


Figure 5 Old remnants and natural features of Chiang Mai City

Nowadays the old city appears in two distinctive forms. The inner wall is a cardinal oriented square with its 1.5 kilometres east-west width, and 1.6 kilometres north-south length (Pranom, 1987). The outer wall is semi-circular form to the east of the square connects to the northeast and southwest corners of the square city wall. (See Figure 5)

There is no clear conclusion about the building date of both city walls of Chiang Mai. One of the most stimulating hypotheses is that the square city wall was built when Chiang Mai was formally founded, on top of the circular Lwa⁵ City wall of which only its eastern part is now left. The supportive evidence for this hypothesis are: the width and the length of the city that was stated in the chronicle match with the outline of the two forms together not just the square city itself and the guardian pillar (soa lak muang or soa inthakin) which is at the centre of the circular form not the square (see Sumet, 1989; Nuansri, 1985; Aasen, 1998). Moreover, according to the chronicle, on the site of Chiang Mai was a Lwa town which was beset by demons (Wijeyewardene, 1986: 82). Another version of the chronicle also mentions that King Mungrai asked the Lwa king when he found the old pillar and he was advised to keep it at the original place for the good of the people (Sarassawadee, 1994).

The social organization of small and tightly knitted communities and the long history built up through ethnic complexity and diversity of Lanna, has its marked on Chiang Mai's characteristics and vicinity. Looking at a map, clearly Chiang Mai consists of several old remnants: Wieng Chiang Mai, Wieng Suan Dok, Wieng Jed Lin, as well as Wieng Khum Kham to the south of Chiang Mai (see Figure 4). This represents a group of interrelated walled cities with their different roles (Somchot, 1996: 387). It truly expresses the meaning of *muang* of which Mungrai was its *choa muang*⁶.

At present it is still occupied by worship places and civil institutions to a great extent. There are 38 Buddhist temples plus 7 abandoned sacred sites as well as other listed

⁵ An Austroasiatic-speaking group, who originally occupied lowland areas of Lanna, Northern Laos, and Shan states of Myanmar (Department of the US Army, 1970. Cited from Aasen, 1998: 17).

⁶ Head of principalities.

archaeological sites, i.e. the city walls. Moreover, at least 2 vocational colleges, 8 primary and secondary schools, a number of nurseries and language and tuition schools are located within the city wall. It could be stated that the area is still one of the good residential areas in town enjoying a low-rise environment surrounded by natural beauty and historical sites. Nevertheless, Figure 5 shows that the area also incorporate with many tourist facilities; hotels and guesthouses, pubs and bars, restaurants, banks, coffee shops, markets and super markets. It is the truly mixed of the old and new in the old city of Chiang Mai.

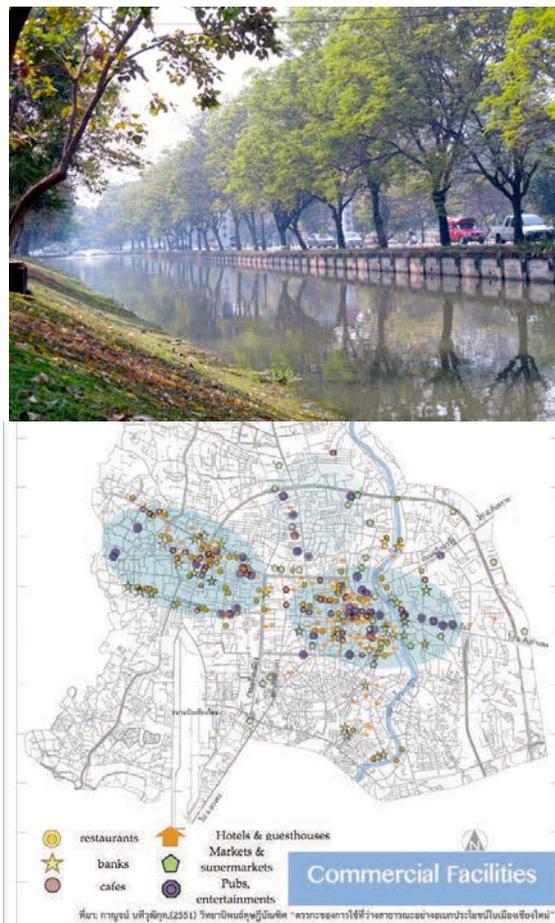


Figure 6 The Beauty of the City Moat and the Locations of tourist facilities in the three zones of Chiang Mai

The city wall area has been designated as the ‘Conservation Area for the Thai Art and Culture Promotion’ through several Chiang Mai Comprehensive Plans since 1982 including the present plan announced on the 26 May 2014 (see Figure 7). In addition, since 1988 the Chiang Mai Municipality law also regulated the architecture style and height of buildings in the conservation areas of Chiang Mai old city. However, Suebsak (2002) found out that the regulation of building construction has not efficiently encouraged physical development and incorporated physical characteristics of the area. There were buildings in different modern architectural styles. Many buildings had their locations and heights that block the view of ancient monuments, religious, and old buildings (see Figure 8).

Realizing the problem, the municipality set a team of experts reviewing the law and introduced a new law in February 2015 giving more details of how the new structures should be constructed in the city wall, including building masses and forms, roof styles, colours, textures as well as the sizes of signs and billboards. Hopefully, this will enable the more harmonious historical landscape of the old city. We then move to the next section investigating the situation of the old wooden houses within the inner city wall.

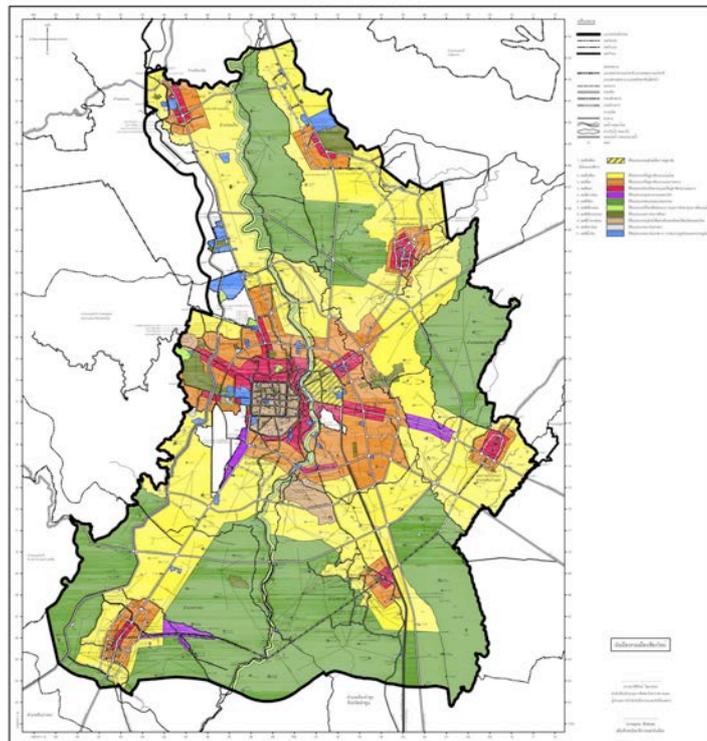


Figure 7 The Chiang Mai comprehensive plan 2014



Figure 8 A high-rise hotel adjacent to the city moat destroys urban historic skyline

The Declining of Old Houses in Chiang Mai City Wall

In 1987 a thesis submitted for a master degree in Urban Planning at Chulalongkorn University, by Pranom Tansukanun, entitled ‘A Study for Conservation Planning of

the Area within Chiang Mai City Wall' surveyed and rated religious and domestic architecture through their significance in age, history, special architectural characteristics, architectural aesthetic, townscape values, locations, and touristic values. It marked 191 old houses as 'valuable' for conservation.

The basic criteria for the house selection in the 1987 visual survey are traditional style and age over only 20 years, realizing the rapid house demolition rate. The majority of the houses surveyed that time were 31-40 years old (37.4%), 41-50 years old (27%) 21-30 years old (14%) and 51-60 years old (14%) respectively. The fewest were houses age over 60 years old (8%), while very rare cases were over 70 years old. Figure 9 shows the ratio of house age groups.

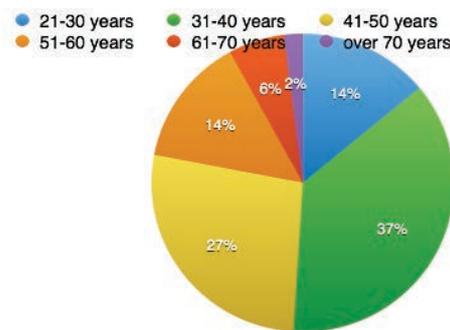


Figure 9 Old House Ages in Chiang Mai City Wall from the 1987 Survey

Most of the houses were situated at the centre, to the east and the south side of the city wall where economic functions have been higher than the west (Figure 17 shows the locations of houses surveyed in 1987 and 2013). This was also true for the 'highest values' architecture of which were mostly located to the east and the south side of the city wall. Figure 10 shows the significance of houses in the city wall rated through all criteria. Among the 4 significance groups; the highest, very high, high and moderate, the biggest group was the high values (55%). The highest value group shared 7%, the very high values shared 20% while the moderate values shared 18%.

Interestingly, not very many of these houses were located on the main roads, but along small winding alleys that has always been one of the major characteristics of the old Chiang Mai.

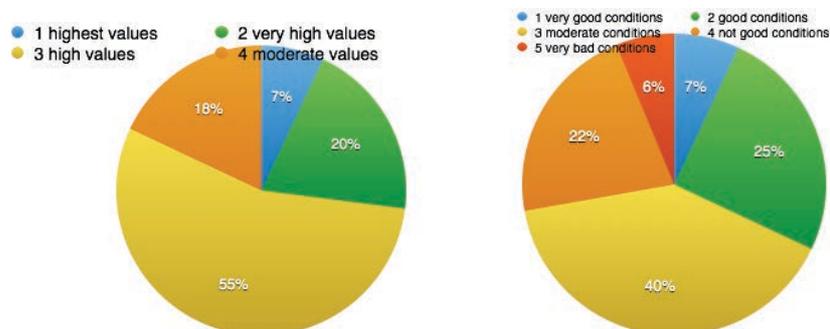


Figure 10 Values and Conditions of Old Houses from the 1987 Survey

The conditions of these houses were generally in the moderate group (40%), good (25%) not good (22%), very good (7%) and very bad conditions (6%) respectively.

In 1992, another survey by Pranom for a small research on ‘Changes of Old Buildings in Chiang Mai City Wall Between 1987-1992’ sponsored by Klang Foundation found out that only about 19% of the houses were in better conditions. While about a half had already been demolished (27%) and were going to be demolished (23%). Moreover, and the rest of the houses (31%) were in uncertain stage (see Figure 10). It could have been said that, apart from about one fourth of the houses that were demolished, the old houses up to a half were in risk. It was also clear that the most vulnerable houses were the old age owners who loved and stayed in the houses but the ancestors were reluctantly keeping the houses.

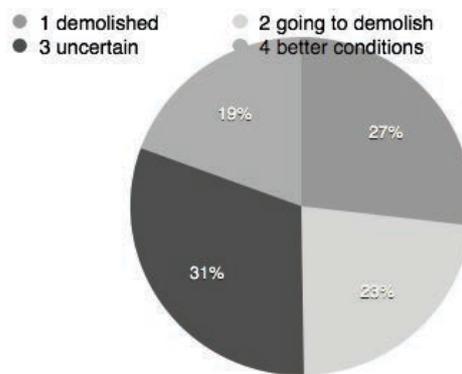


Figure 11 Conditions of Old Houses Comparing Between Year 1987 and 1992

The 1992 survey also found out that the majority of houses, 28 out of 33 houses, were demolished when changing use from residential to guesthouses, dormitories, commercial buildings and others. Only a few could use the same physical spaces for the new functions. This came to a universal problem for historic cities - ‘form and function dilemma’ as stated by Ashworth (1991) – when needs and uses change much more rapid than physical attributes in most historic cities. However, Ashworth also argues that conservation could be a tool for management of urban change. The next section we will investigate how wooden houses adapt physical attributes from traditional Lanna style to fit with the changes through times.

The Adaptation to New Needs

In 2013, another survey by Pranom, in cooperated with a team from the Compass Magazine, conducted for writing an article to raise the public awareness of old house conservation. The article gives a summary for the old building types in Chiang Mai city wall associated with ages into 5 categories ordering from new to old, details as follow:

1. The modern buildings - 50 years
2. The modern wooden houses 50-60 years
3. The adaptive traditional wooden houses 60-70 years
4. The traditional wooden houses 70-80 years
5. The large traditional-colonial buildings over 80 years

First – the concrete modern buildings, age about 50 years, the starting time of Chiang Mai University that brought many modern buildings to Chiang Mai. The low roof slope with concrete and cement elements are the significant characters of the buildings in this period (see Figure 12). There are not very many buildings of this type the old city with only a few single and shop houses. However, this type of building is still significant to the total picture of architectural development of Chiang Mai. For this reason, the further study on the adaptation of old houses within the city wall will cover this type of houses.



Figure 12 An example of a Modern House Converting to be a Hotel
(Source Left Photo: <http://www.yourchiangmai.com/blog/wp-content/uploads/2014/06/hom10.jpg>)

Second – modern wooden houses coexist in the modern time, age between 50-60 years. The house also has low roof slope but mainly made of wood, and the more western style planning than the adaptive Lanna traditional style previously built (see Figure 13). In the 1987 survey, this type of house was not included since they were quite young.



Figure 13 An Example of a Modern Wooden House in the City Wall.
(Source: The Compass Magazine, Vol.10 No.124 September 2013)

Third – adaptive traditional wooden houses that design before the modern wooden house period, age between 60-70 years. The characters of houses in this period are still in harmony with the traditional Lanna style but the design and planning began to pick up some elements in the western style, for example; more separated rooms rather than the fluid inner-outer spaces and less open spaces within the houses (see Figure 14).



Figure 14 Examples of Adaptive Traditional Wooden Houses
 (Source of left photo: The Compass Magazine, Vol.10 No.124 September 2013)

Fourth – post traditional wooden houses, age between 70-80 years, with some influences from the large traditional-colonial⁹ buildings in the previous period and adapt some of the Lanna traditional style, bringing wonderful houses with characters of Lanna style.



Figure 15 Post Traditional Wooden Houses

Fifth – large traditional-colonial buildings, age over 80 years. Many buildings smartly used some of the colonial style elements to express Lanna style and hot humid climate buildings by keeping the open or fluid inner-outer spaces. These are one of the good examples of the adaptive design from originally Lanna style houses. The first sub-type in this group were made of cement and woods, while the second sub-type were mainly made of woods (see Figure 16 and 17).

⁹ Colonial is a western influential style, though Thailand has never been formally colonized, but the term is being used to specify the time or period of the influence.



Figure 16 Large Traditional-Colonial Buildings: Cement and Wood Sub-type
 (Source: The Compass Magazine, Vol.10 No.124 September 2013)



Figure 17 Large Traditional-Colonial Building: Wooden Sub-type with Cement
 Fence Posts.

Lastly, the ‘wooden and Ruen Ka Lae’ or the original Lanna style houses will be described here for the comparison of the physical attributes, though none is exist in the city wall at present. The typical Lanna wooden house plan in Figure 18 shows that the stairs lead to the front deck or ‘Jan Na’ (1) and the elevated multi-purposed area or ‘Teun’ (2) where guests are accepted in this area. Connecting to the ‘Jan Na’ is a small passage (Hom Lin-7) between two bedrooms (Hong Non Yai-3 and Hong Non Noi-4) that leads to a dinning area (Jan Lang-6) where the water pots (Han Nam-8) are normally located and a cooking area (Heuan Kheau-5).

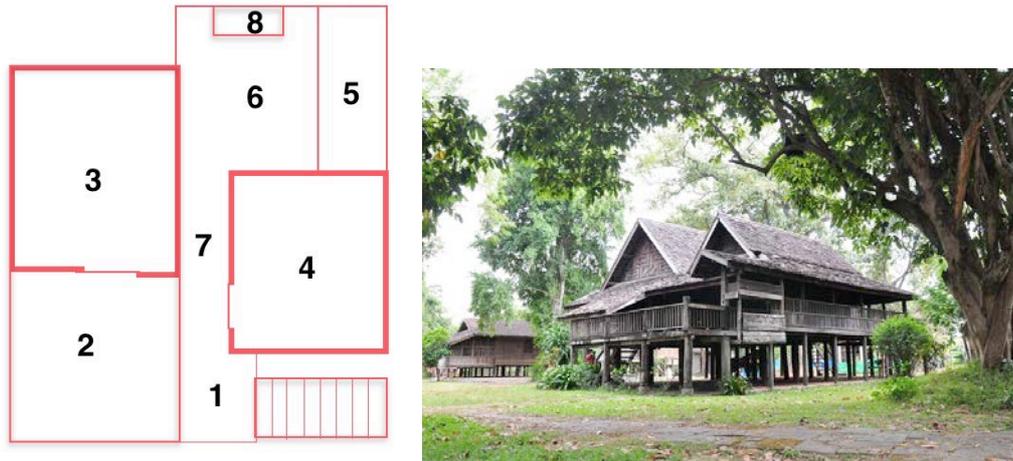


Figure 18 Typical Floor Plan of a Wooden Traditional Lanna House
 (Source: Drawn after Anuvit and Wiwat, 1978,
 photo: http://202.28.248.175/57/u57265/wordpress/?page_id=294)

1 ‘Jan Na’ - Front Deck 2 ‘Teun’ - Multi-purposed Area 3 ‘Hong Non Yai’ - Master Bedroom 4 ‘Hong Non Noi’ - Bed room 5 ‘Heuan Kheua’ - Kitchen 6 ‘Jan Lang’ - Back Deck 7 ‘Hom Lin’ - Passage 8 ‘Han Nam’ - Water Pot

We can see that the fifth group of ‘large traditional-colonial building’ is the one that splendidly mixed traditional and western influence with different planning but the similar high-pitch roof style and the fluid of spaces around the building. The fourth group of ‘traditional wooden house’ also with the form follow tradition, appears to have more traditional elements than the fifth group for example the ‘Fa-Lai’ or moving partitions and the lath partitions (Figure 19).



Figure 19 ‘Fa-Lai’ (left) and Lath Partitions (middle) with a ‘Han Nam’ (right) in Traditional Lanna Houses

The third group of the ‘adaptive traditional wooden houses’, though having the same high pitch roof styles, the planning and spatial organization is different. Moreover, spatial fluidity is lesser than the traditional Lanna house.

The second group of the ‘modern wooden houses’ was the starting point of being ‘different’ from the traditional Lanna. The most distinctive feature was perhaps a much lower pitch roof as bigger roof materials allowed to do so. The planning and

spatial organization was also influenced from a new way of design. However, woods were still the main material throughout the house.

When times change, the first group of the 'modern house' that was not included in the first survey has been more and more important as one of the significant development period. It reflects the social and technical context of the time with low pitch roof and mainly masonry and concrete works. The void system and vertical and horizontal solar fins are also unique and create a sense of aesthetic of its own.

The Spirit of a Living Historic City

The latest survey reveals that only 59 houses from the 1987 survey still exist (see Figure 20). Within these numbers, only 54 houses could be counted as 'valuable' that is 28% or lower than one-third of the houses. The majority of the 54 houses are in the third and fourth groups, ageing about 60-70 and 70-80 years old. There are very rare houses in the fifth group and most of them are very large houses. (See Figure 21)



Figure 20 The Locations of Houses Surveyed in 1987 and 2013
(Source: Compass Magazine, September 2013)



Figure 21 A Very Large House Still Exist in the City Wall
(Source: Compass Magazine, September 2013)

Though the latest survey shows many problems of urban conservation, especially the rapid rate of old house demolition, surprisingly the team was not depressed but was very happy indeed. This seems to be true because the inner city wall is still a place of greenery with lots of trees and shrubs, and a tranquil place in some sense. It still is a place of ‘spirit’ of a living historic city with lots of neighborhoods, people and activities of its daily and sacred lives. (see Figure 22)



Figure 22 The Spirit of the Place: Small Alleys with Lots of Trees and Shrubs
(Source: Compass Magazine, September, 2013)

Conclusion

As mentioned earlier, looking into the manifestation and adaptation of dwellings helps to promote understanding people. These are at the center of identity and spirit of their dwellers that could strengthen cultural sustainability. It could be summarized that the dynamism of old wooden houses concerns a global and a local levels. At the city level, the more global factors, such as socio-economic, play an important part. These factors drive the city into the more global network. Thus, new needs, especially from tourists, have come to light. As the historic landscape of old Chiang Mai was low rise among open spaces filled with shrubs and trees, not packed with buildings as many European cities, the 'infill' has become extremely significant. The infill architecture should be well taken care of together with regulations and codes for a livable city, protecting good lives for its people and good views for its visitors.

At the house level, the three interconnected issues: dwellers, process and dwellings as artefacts, are concerned. These issues are contextual and have been also change in accord with socio-economic factors through times. The adaptations of old houses within Chiang Mai city wall are varied during the past decades. Though some are demolished, others are reshaped, reorganized or change to new uses. Many cases still show the conformity with traditional style. These various types of manifestation and adaptation should be safeguard in place.

However, in some cases, dwellings are transformed into a new 'out look' with similar spatial organization. These cases, not at a glance, show the compatibility but could fit in and add the continuum of traditional architecture that still exists today. A question may arise here that why rather 'new' buildings should be included in the conservation list of Chiang Mai. The answer may point out to 'groups of buildings' values and the overall landscape of the old city. In addition, the replacement by newer buildings would decrease the values of urban historic landscape.

A closer look into details of these adaptations would give more knowledge and a better decision on how to conserve these dwellings. With its variety, the area within Chiang Mai city wall could act as a living museum for the pride of its local people and a learning center for its visitors. The most important thing is to manage to achieve this goal.

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