International Conference 2014

“Revisiting the Philosophy of Preserving Wooden Structures: Cultural Landscape with Wooden Structures and Local Communities”
(16 – 18 December 2014, Shanghai, China)

Cultural Heritage Protection Cooperation Office, Asia-Pacific Cultural Centre for UNESCO (ACCU)
Agency for Cultural Affairs, Japan
World Heritage Institute of Training and Research for the Asia and the Pacific Region under the auspices of UNESCO (Shanghai)
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Excursion: Tsui Si Garden (World Heritage Site) in Tongli Town

Excursion: South Garden Tea House in Tongli Town
Excursion: Wang Xiaohui Art Gallery at Pingjiang Historic District, Suzhou City

Excursion: Li Geng Hall Restaurant at Pingjiang Historic District, Suzhou City
Preface

ACCU Nara Office has been holding International Conferences every year aiming to contribute protection and preservation of cultural heritage in Asia Pacific region. Since 2011, we and WHITRAP Shanghai had started to organise international conference jointly either in Nara or Shanghai as a part of collaboration between us. This year is the second trial to conduct the conference in Shanghai.

This is also the second time when the International Conference is being held under the general theme of “Revisiting the Philosophy of Preserving Wooden Structures”. At the first conference, we discussed how wooden structures had been restored; especially the changes in the philosophy of preserving wooden structures and restoration methods for preservation after the formulation of the “Nara Document” in Nara in 1994. Cases of individual buildings were given as examples.

This year, rather than looking at individual buildings, we will focus on groups of buildings, such as town streetscapes and villages, and the surrounding environment. We will facilitate discussions on their relationship with the local communities that play an important role in preserving the landscape with wooden structures.

Last but not least, I would like to extend special thanks to all those who have given advice and support in regard to holding this conference, beginning with the Agency for Cultural Affairs, Japan (Bunkacho); National Research Institute for Cultural Properties, Tokyo and Nara (Independent Administrative Institution, National Institutes for Cultural Heritage); International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM); JAPAN ICOMOS National Committee; the Japanese Association for Conservation of Architectural Monuments (JACAM); Shanghai Tongji Urban Planning and Design Institute and College of Architecture and Urban Planning, Tongji University. Also, special thanks for preparations for the conference are due to all of the staff of the WHITRAP Shanghai.

NISHIMURA Yasushi
Director
ACCU Nara Office
Preface

Within the cooperation framework between ACCU and WHITRAP, the second International Conference on “Revisiting the Philosophy of Preserving Wooden Structures” was held from December 16 to 18, 2014 in Shanghai, China. Heritage experts from ICCROM, UNESCO Beijing Office, China, Japan, Indonesia, Lithuania, Sri Lanka, South Korea and India were gathered together to explore the important topic of “Cultural Landscape with Wooden Structures and Local Communities”.

As we know, wooden structures are more vulnerable than those made from bricks and stones. — They are prone to damage in the face of both natural and manmade disasters, such as earthquakes, typhoons, pests and fire hazards, leading to a constant need of regular repair and maintenance. The local-based traditional knowledge and techniques of building and renovation, including the logging, processing, renovation and replacing of wooden material, have on one hand reflected the sustained nature of wood as a building material, and the wisdom of human beings in the way of use. On the other hand, they have aroused wide debates about the “authenticity of heritage” and “cultural diversity”, which have been marked in the Nara Document on Authenticity 1994 and continue to this day.

Today, by revisiting the philosophy of preserving wooden structures from a perspective of “cultural landscape”, we have become more aware that local communities are not only an integral part of the wooden-structure cultural landscape, but also the basis upon which those wooden structures are to be protected. We have realized that in the philosophy of preserving wooden structure, their protection is not simply about materials and renovation techniques, but more philosophically about “people’s attitudes towards nature”. The evolution of natural environment, the willingness and effort taken by communities to preserve wooden structures, and the realistic demands from communities for improvement and development all work together to influence the change of wooden structure as a cultural landscape. Therefore, developing a harmonious interactive relationship between nature, heritage and communities has become essential to the protection of wooden structures.

As Mr. Gamini Wijesuriya pointed out “The principles of conservation are not written in stone, and we should not be afraid to revisit and review them”. Giving new thought to the relationship between wooden structures and local communities from a cultural landscape perspective will not only help us better protect heritage but also contribute to our understanding of the philosophical thinking of the “coexistence of human and nature”. It is my earnest hope that this seminar will enrich the existing principles of heritage protection, and at the same time, will be of some
practical significance to the promotion of “cultural diversity”, as well as the issues of sustainable development that our world faces today.

SHAO Yong

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I. Keynote Speeches
Wooden heritage as cultural landscapes with empowered local communities

Gamini Wijesuriya
Project Manager
ICCROM

1.0 Introduction

In this presentation, I will propose a different approach for revisiting the philosophy of preserving wooden structures (which I prefer to call wooden heritage). I will use both concepts of cultural landscapes and local communities in this presentation but argue that heritage places hosting wooden structures constitute cultural landscapes with inherent empowered local communities. Before I start my discussion, let me highlight why I am interested in this theme.

Understanding and characterising heritage is a challenging task. Although, size, scale or numbers are not the most important measures, the Asian region can claim its wooden cultural heritage to be grand in scale, large in numbers and, above all, a significant testimony to ancestral wisdom. I have attempted to characterise issues raised by wooden heritage in general and Asian wooden heritage in particular over the last 15 years through my involvement with training courses on conservation of wooden heritage in Nara, Japan and Norway.

In 2012, here in Shanghai, I talked about ‘tapping the stone and bricks’ in order to understand the knowledge embedded in heritage structures made of stone and bricks. In 2013, I had the opportunity to make a presentation at an important event held in the city of Ningbo, China. The event celebrated the one thousand years anniversary of the Grand Hall in the Baoguo Temple, a well-known wooden structure, and 910th anniversary of the Yingzao Fashi, the technical treatise on architecture and craftsmanship which contains principles and technical details of wooden construction. On this occasion, I attempted to highlight the need for deeper understanding and better characterization of wooden heritage. The title of my paper was ‘Wooden heritage – a basis for re assessing the entire conservation discourse’. In this paper, I made some of the following arguments:

- Communities (or human affiliations) are integral part of wooden heritage without which, they will disappear without traces;
- Communities have acquired knowledge and skills about wooden constructions as well as for regular maintenance which is the key ingredient for continuity of wooden heritage;
- Changes, replacements and the regular use of protective measures such as repainting are required to guarantee the continuity of wooden heritage;
- Authenticity should be judged not only from materials but also from the associated processes, presence of communities, use, skills of crafts, traditional practices and management systems related to wooden heritage;
A conservation culture based on traditional skills, crafts and knowledge systems should be evolved using the knowledge embedded in examples such as Grand Hall and the Yingzao Fashi and be disseminated world-wide when dealing with wooden heritage.

In essence, my overall thesis was that, when speaking about wooden heritage, we are talking about continuity, which in turn links to communities without whose presence, wooden heritage will not survive. I will integrate some of these thoughts into this presentation.

2.0 Why a rethink?

First of all let me congratulate the organisers for selecting this theme for the conference, particularly the emphasis placed on ‘revisiting’ in an year which marks the 50th and 20th anniversaries of two documents, the Venice Charter and the Nara document on Authenticity used by the international community to guide the safeguarding of cultural heritage. The modern conservation movement, originated in the mid-19th century in Europe, has seen a relatively slow evolution due to a certain reluctance of the international community to ‘revisit’ early principles. This is particularly true for attempts to contextualise the heritage discourse into the regional situations outside Europe. The importance of revising the early knowledge is reflected in the words of some of the veterans in the field.

- Ramond Lemaire who was a signatory to the Venice Charter clearly expressed this issue at the pre-Nara meeting held in 1993: ‘the congress participants in 1964 did not realise the complexity of international preservation’
- Paul Philippot, former director of ICCROM and a signatory to Venice Charter, offered his observation on the issue in the 1980’s with the following assertion: ‘Even if today the great currents of conservation theory--European in origin--can be considered widely disseminated, their relative importance continues to vary from sector to sector’.
- Roland Silva who headed ICOMOS from 1990 to 1999 and figures as a strong campaigner to give a better voice to Asian heritage, in 1983 issued this warning: ‘We have cautioned the listener that the Venice charter itself is not necessarily the end of the road. We have shown the scope of such a charter and limitation which we have either to correct or to combat’.

According to our colleague Nobuko Inaba, the misconceptions among heritage professionals on the approaches to heritage conservation in Japan partially led to the complete revisiting of the question of authenticity and the development of the Nara document. At a national level, we also have recently noted the revised version of the China Principles which has incorporated many important country-specific issues.

There are other reasons to revisit heritage principles on a regular basis. For instance, the knowledge being created at national and regional levels that is more context dependent has lessons to share with the global heritage community. It was on this basis that the recent (2008) Beijing declaration had this to say.
Furthermore, attention was drawn to the principles and practices developed by the national heritage agencies through their own conservation endeavours since the beginning of the modern conservation movement, as well as the traditional practices for the care of historic buildings that have been transmitted from generation to generation.

In addition, the entire heritage process with which we are familiar poses many new challenges. Audiences are expanding, values are considered to be evolving and impacts are increasing. Above all, expectations of the communities involved frame not only what we can do for heritage but what heritage can do for society. It is in this context, that we now talk about reciprocal benefits to both heritage and communities as final outcomes for the heritage process. The pressure is also increasing for respecting diversity and seeking solutions for heritage processes tuned to the specific context. ‘One size fits all’ is being severely questioned.

These are only a few examples to highlight why we should be revisiting modern conservation approaches on a regular basis to create new knowledge without completely relying on outdated principles. Principles of conservation are not written in stone and we should not be afraid to revisit and review them. We need to engage in a constant process of creating knowledge:

‘We conceptualize knowledge creation as a dialectical process, in which various contradictions are synthesized through dynamic interactions among individuals, the organization, and the environment. Knowledge is created in the spiral that goes through seemingly antithetical concepts such as order and chaos, micro and macro, part and whole, mind and body, tacit and explicit, self and other, deduction and induction, and creativity and efficiency. We argue that the key to understanding the knowledge-creating process is dialectic thinking and acting, which transcends and synthesizes such contradictions. Synthesis is not compromise. Rather, it is the integration of opposing aspects through a dynamic process of dialogue and practice.'
We also need to understand that knowledge creation is a transcending process through which entities (individuals, groups, organizations, etc) transcend the boundary of the old into a new self by acquiring new knowledge’. (Nonaka & Toyama, 2002)

It is important for us to create new knowledge in order to influence the conservation discourse if it is to be relevant at local, national and global levels. In my presentation mentioned above (at Ningbo), I highlighted the need to understand wooden heritage in its totality including the links to communities and argued that this should form the basis for qualifying their conservation and management approaches. Conservation is not an alien theme, as reflected in the two significant examples mentioned above, namely the Grand Hall and the Yingzao Fashi. Instead, I suggested that lessons should be drawn from examples such as these with a view to re-defining heritage conservation principles. My argument is that the wooden heritage could be the departure point for writing a new chapter in the conservation discourse, which as you can see is now beginning to gain ground. It is in this context that I appreciate the theme of this conference.

3.0 Wooden Heritage as cultural landscapes.
In this presentation, I will characterise wooden heritage as cultural landscapes using this as a broader concept. A cultural landscape approach has the potential to enhance understanding of wooden heritage and guide conservation and management.

In its current World Heritage associated definitions, cultural landscapes are a ‘category of heritage’ and usually conceived as large geographical areas. Cultural landscapes are cultural properties and represent the “combined works of nature and of man” designated in Article 1 of the Convention. They are illustrative of the evolution of society and human settlement over time, under the influence of physical constraints and/or opportunities presented by the natural environment and by successive social, economic and cultural forces, both external and internal. But there are other definitions as well1 which takes cultural landscape beyond pure geographical or landscape conceptions to include all the features within. Features can be wooden structures, or any other legacy of humankind’s encounter with nature from reworked landscapes, agricultural elements, and also rural communities themselves. However, overall management principles applicable to cultural landscapes will not differ significantly based on their specific cultural features, be they wooden structures which are the focus of this conference or other bequests from the past. However, the case I would like to make is that the nature of wooden heritage itself makes it qualify as a cultural landscape.

Cultural landscapes represent the combined works of man and nature. They are about interaction among people, their cultural products and the exploitation of nature. They are about continuity of interactions within which change is inherent. This approach will provide opportunity to conceptualise

1 . US park services defines Cultural landscape as- ‘ a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. There are four general types of cultural landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes’.
processes as well as products. Wooden heritage is not only about material manifestations. Wooden heritage maintains an inseparable link to a community and the wisdom of its members. Unlike other building materials, wood cannot survive where there is no human life attached to it. (Here, I am not referring to archaeological materials). Wood is a product exploited by communities mostly sourced from the environment in which they live or within their own lands. Wood is often combined with other materials such as earth often obtained from the same or from other geographical locations where communities live. The choice of land for establishing settlements and the structures themselves evolved through a careful selection process and this has rewarded long-term sustainability with specific climatic issues such as termites and water addressed. Continuity is a key concept of cultural landscapes. Communities continue to maintain and sustain wooden structures with the knowledge systems and practices they have evolved over centuries. It is this aspect in particular that obliges us to recognise heritage places hosting wooden structures as cultural landscapes. Considering wooden heritage in these terms allows us to evolve and guide our conservation and management approaches, delivering practitioners and other interest groups a vast body of experience and a certain philosophical maturity already acquired by the heritage sector.

Wooden structures are vulnerable to a variety of factors, including local climatic conditions, insects, fire, regular use and rituals, to name only a few. Existence of these have not prevented or slowed down the process of wooden construction. Communities have always had the required knowledge to respond to these threats and the means to guarantee the continuity of wooden heritage – which I consider to be conservation. Many wooden buildings continue to serve the purposes for which they were established and this has occurred through their linkage to particular community/ies. Often where there is no linked community, there will not be a continuity of wooden structures.

4.0 Cultural landscapes with empowered local communities.

The above analysis highlights that wooden heritage is not only about cultural landscapes but also strongly linked to communities. Where there is no local or affiliated community, it is harder for wooden heritage to survive. I will argue that the local communities are an essential feature in as much as wooden heritage requires intensive forms of monitoring. On the other hand, I will also argue that those monitoring need to have knowledge and power to engage in maintenance work. Furthermore, I will argue that the local communities are empowered with required knowledge and skills to perform those tasks. Indeed, they are empowered because they are equipped with well-established techniques and time-tested knowledge. They are empowered because they maintain wooden heritage on a regular basis which is a key ingredient for long term sustainability.

*Wooden heritage is shared by many communities*

Wooden heritage is shared by many communities in the world. Wooden heritage may constitute villages and towns, structures and different parts of structures and movable elements like furniture. Wood or wooden elements are being used by all layers of the community. They vary from nomadic structures to kings’ palaces; lived in by poorest and richest; domestic to religious and public buildings. Indeed, wooden heritage is not only of PPPs (Priests’, Princes’ and Politicians’), but also of the little p’s
Globalisation and modernisation may have brought new materials and technology in to our lives, but at least for a few more generations the association with wood will continue. Wooden buildings and elements are also great reflections of community approaches and attitudes to the proportions of structures, and their attitude and knowledge about the aesthetics.

Equipped with time tested knowledge

Wooden heritage involves skills and techniques both simple to sophisticated, and the use of a variety of tools. It involves the knowledge necessary to identify different species, strengths, durability, colours and textures and, above all, availability to suit the purpose for which the wood will be used. Execution of large spans to achieve relatively large structures, engaging different techniques, and combinations with other materials, such as stone and other types of masonry, are also part of the craft. Communities themselves possess these skills to some extent, but there are also specialized craftsmen within a given society.

The woodworker or carpenter has been an important person in society from time immemorial as we can see from ancient literature. The following is a reference from a 9th century inscription in Sri Lanka which makes reference to carpenters. They are considered to be experts in their restoration work and the ruler had established a special village for their habitation:

- [There shall be] skilful carpenters in the village devoted to the work of [temple] renewal.
- They all… shall be experts in their [respective] work.
- …shall be granted to the officer who superintends work.
- …his respective duties, shall be recorded in the register.
- …they alone shall be answerable for its correctness.
- Blame [shall be attributed to] … [those] who do not perform it according to arrangement.

The knowledge and experience of the craftsmen were strongly associated with traditional knowledge systems. Silpa ancient texts on architecture provide guidance on various aspects related to wood, even starting from the instructions for selecting the most suitable trees for planting at different locations, e.g. near the house, in the temple, etc. This also guarantees the long-term sustainability of using timber for construction purposes. Ideal times for cutting timber, simple ways to treat it and the best ways to utilise it for a number of different purposes are among the types of knowledge related to wood within the society. The following are some poignant examples:

- Australian aborigines used the termite and fungus resistant bloodwood for their graves about 5000 B.C.
- Ancient literature has many references to the most suitable season and phases of the moon for felling trees (Indian Rig-Veda, 1000–400 B.C)

These indeed are the lessons that can be learnt from the great example such as Grand Hall and the Yingzao Fashi manual mentioned above. While the experience and knowledge of crafts existed in the society, there was also specific guidance which were either recorded or orally passed down from generation to generation. The Mayamatha, an Indian treatise on architecture compiled in the 6th
century AD, devotes a chapter to renovation work.

A temple (may be) ruined, broken down, fallen down, aged as to its materials or decrepit. Those (temples) whose characteristics are still perceptible in their principal and secondary elements (are to be renovated) with their own materials. If they are lacking in anything or have some similar type of flaw, the sage wishing to restore them, (must proceed in such a way that) they regain their integrity and that they are pleasantly arranged (anew); this (is to be done) with the dimensions -- height and width -- which were theirs, with decorations consisting of corner, elongated and other aedicule, without anything being added (to what originally existed) and always in conformity with the advice of the knowledgeable.

Be they one’s own house, a community place such as temples, or even the palaces of royalty, repairs and maintenance were, and are, carried out continuously. For instance, if a rafter of the roof perishes it is replaced. When a protective layer of paint fades away, it is repainted using the knowledge and materials known to the community. In the process, people are respecting the continuity of a place’s function, its form as much as possible, and even its aesthetics. They possess the knowledge and experience to undertake this.

Communities were aware of wood’s vulnerabilities and are continuously engaged in caring for the structures they have built. In my view, we are guilty of having alienated continuous care of heritage with modern notions of conservation. We have failed to integrate the knowledge preserved within communities and evolved over many years into the discussions.

Undoubtedly, the debate on authenticity in heritage took a new turn when issues of wooden heritage entered the discussion. However, the above discussion highlights the need for recognising various processes to be considered as important aspects of authenticity. These includes the recognition that regular repair and maintenance which understands the cultural values is inseparable from the presence and continuity of local communities. Furthermore, continuity of a function or a use becomes a vital aspect of authenticity. Wood as an organic material must be replaced if it decays and perishes. As such, the material expression may not be the key aspect of authenticity. Similarly, as Yukio Nishimura has argued, authenticity also rests on craftsmanship as wooden heritage needs constant maintenance and repair. It is the craft that transmits authenticity into the next generation. Moreover, credible and truthful information can come from these traditional sources. In summary, communities represent local commitment, knowhow, continuity and resilience!

Conclusions
Revisiting the philosophy of preserving wooden heritage is a very vital exercise. We should not be afraid of challenging some of the existing models of conservation, and with a view to further progress. This does not mean that we respect less the knowledge that already exists, but there is a genuine need to revisit our thinking and our practice on a regular basis. In this presentation, I have slightly moved away from the theme suggested by the organisers. Instead of concentrating on cultural landscapes with
wooden structures and local communities in revisiting the philosophy of preserving wooden heritage, I have used a different strategy. I have argued wooden heritage should be recognised as embodying cultural landscapes with empowered local communities. This is by exploiting inherent concepts of cultural landscape thinking: interaction, continuity and communities culminating in the combined works of man and nature. We may also explore the possibilities of using cultural landscapes as an approach to understand wooden heritage. Going one step further, I have argued that in our wooden heritage paradigm of good practice, communities are inseparable elements that maintain the material expression and continuity of use of the wooden heritage and are empowered with well-established and time-tested knowledge. We should therefore consider these points when revisiting preservation of wooden heritage.

Someone will argue that there are many wooden heritage buildings under the care of public authorities and/or in dense urban areas far removed from the concept of ‘landscape’. However, characterising these cases as ‘cultural landscapes with empowered local communities’ support the exact considerations which can favour their long-term sustainability. Knowledge, continuity and commitment are just some of the advantages of heritage capacities provided locally. All these contribute to sustainability both in the narrow sense - survival - but also in terms of securing a more dynamic role for these heritage places within society as it evolves. It is partly for these reasons countries in the West have launched new initiatives. For instance, see UK National Trust ‘Going Local’ initiative.

We have to recognise that conservation is not the primary purpose of most places that we have designated as heritage, but rather that they have to continue to perform their functions, which in turn deliver benefits to the users and the society at large. There are communities attached to these heritage places that in turn influence change according to the changing needs of the society. They also care for them in a continuous way using traditional or established knowledge. Conservation in a modern sense has to be considered as the application of knowledge that is associated with the creation and continuation of heritage. We have to recognise that heritage is the expressions of cultures that are diverse by nature. After all, we have argued that conservation of wooden heritage is about managing continuity which is perhaps the most central concept of cultural landscapes.

Acknowledgements: I am deeply indebted to Prof. Zhou Jian, Director and his team at WHITRAP and Dr Yasushi Nishimura, Director and his team at ACCU Nara for the invitation and hospitality.
1. The basic understanding of the authenticity and integrity in heritage conservation

Heritage conservation is value-based and oriented. In world heritage, authenticity and integrity are the important judgments to the quality of values. Operational Guidelines for the Implementation of the World Heritage Convention is a good reference for understanding authenticity and integrity.

The Nara Document on Authenticity provides a practical basis for examining the authenticity and is summarized in Operational Guidelines for the Implementation of the World Heritage Convention (OG, Para 79-85). The credible or truthful value attributed to the cultural heritage is from the quality of those value-attributed information sources. Knowledge and understanding of these sources of information, in relation to original and subsequent characteristics of the cultural heritage, and their meanings, are the requisite bases for assessing all aspects of cultural heritage. Such information sources carrying values are outlined as the following 8 attributes (OG, para 82):

1) form and design;
2) materials and substance;
3) use and function;
4) traditions, techniques and management systems;
5) location and setting;
6) language, and other forms of intangible heritage;
7) spirit and feeling; and
8) other internal and external factors.

Such examination integrates tangible and intangible attributes and emphasizes to exam in specific artistic, historic, social, and scientific dimensions of the cultural heritage to know the nature of heritage values.

However, this should be understood as a framework to examine authenticity. Cultural heritage has many types and their values differ from one by one. The attributes to examine authenticity of cultural heritages could be selective, based on the different nature of cultural heritage values. Only those attributes that adequately express or carry values would be selected in the examination process.

Integrity is another important judgment of the quality of values. Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. Examining the conditions of integrity requires assessing the extent to which the property (OG, Para 88):
1) includes all elements necessary to express its Outstanding Universal Value;
2) is of adequate size to ensure the complete representation of the features and processes which convey the property’s significance;
3) suffers from adverse effects of development and/or neglect.

2. A Methodological framework to assess landscape character

Nowadays, cultural landscape is not only regarded as a category of cultural heritage, but also as an inclusive methodology in heritage conservation. Landscape approach integrates culture and nature, tangible and intangible values from a dynamic historical perspective. In cultural landscape, heritage is examined as a living entity and a holistic system. From landscape view, all elements or attributes are connected and interacted each other and landscape is the final result of such interaction.

In today’s landscape assessment process, authenticity and integrity appear much clear structured system. _LANDSCAPE CHARACTER ASSESSMENT (LCA) GUIDANCE FOR ENGLAND AND SCOTLAND_\(^1\) is an efficient and productive methodology applied in England and Scotland, which would help us to understand relationships from heritage attributes to values.

In LCA, the understanding of the construction process of landscape is pyramid-structured and landscape elements are fundamental supporters (figure 1). Developed from landscape patterns and characteristics, landscape character forms.

![Diagram of LCA](image)

In LCA, concepts and layers are progressively defined and related.

**Elements:**
Individual components which make up the landscape, such as trees and hedges.

**Patterns:**
Forms or principle of combinations of two or more elements specifically belong to a landscape, which make a particular contribution to landscape characteristics and landscape character.

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2. Prepared on behalf of The Countryside Agency and Scottish Natural Heritage by Carys Swanwick, Department of Landscape University of Sheffield and Land Use Consultants, 2002.
Characteristics:
Elements, or combinations of elements, which make a particular contribution to distinctive character.

Character
A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.

In LCA, features are also referred and defined as ‘particularly prominent or eye-catching elements’.

According to LCA’s above diagram, the 8 attributes to examine authenticity in OG will be located in different layers. Typically, as materials and substance, themselves are not elements; rather, they are the characteristics of certain eye-catching elements such as buildings. Form, use and function are running through all layers of elements, patterns, characteristics and even character. Design, use and function, location and setting, traditions, techniques and management systems are mainly related to patterns and characteristics. Language, and other forms of intangible heritage, spirit and feeling could directly affect landscape character.

In international context, ‘features’ and ‘elements’ share similar meaning. Genius loci, spirit of the place and landscape character also similarly refer to the final perceived landscape through characterized landscape elements with tangible and intangible interactions.

Genius loci, spirit of the place and landscape character are the identity of the place and make this place unique and different from the others. They reflect the nature of landscapes and is the highest level of value management objective and always the most difficult one in conservation. The selection of elements to examine authenticity should aim to this objective. Elements effect on Genius loci, spirit of the place and landscape character should be carefully identified as they carry important values. The other elements might be considered but they are not the decisive ones in terms of values.

For example, in a sacred religious place, the sense of religion is the nature of landscape and the spirit of place, and also could be a management objective. Such value mainly convey through religious buildings and activities. Roads and trees could be elements of setting but will not enter into examination as decisive factors. Therefore, it is obviously that the assessment of “character” is not as the same layer as elements. If we examine authenticity or integrity of a heritage without clarifying and identifying layers of elements, connections and interactions, we would not be able to understand the structure of construction process of heritage meanings. It would hardly contribute to understand the holistic value of heritage and could hardly develop value-based and objective-oriented heritage management. This is what is not clearly guided and needs to be improved in OG in order to provide a more practical tool to examine authenticity and integrity.

In LCA, such layers have been clearly defined. The quality of elements, patterns and characteristics are the important judgement of authenticity of landscape values. The examination of the wholeness and intactness of elements and patterns are the important tool for the integrity.
3. Key issues in application of landscape approach

LCA can be applied in different landscape types to examine authenticity and integrity, from designed landscape to evolving landscape and to associative landscape. Key issues in the application of LCA are outlined and illustrated as below using a water town as an analytical case.

3.1 The identification of complete and systematic elements

In landscape approach, the identification of systematic landscape elements is the basic and key step to understand landscape. Unfortunately, this simple appearing work is the weakest section in heritage conservation practice because of lack of interdisciplinary knowledge. Different conservation groups only select those elements that they are familiar with or what they are good at to examine without a holistic picture of landscape in their mind. Such understanding or conservation only on single element will not contribute to the holistic values and will mis-lead management.

For the watertown landscapes nearby Shanghai such as Zhouzhuang, they are typical settlement landscapes along Changjiang Delta Area (figure 2). Key features, or landscape elements, such as buildings, roads, waterways, vegetation, public living space together with associative language, customs, production and communication space and etc., form the basic tangible and intangible landscape element system. In Zhouzhuang, black-white buildings, stone-paved roads along waterways associated with living space, daily activities nearby water, are prominent patterns and characteristics. It is the patterns and characteristics of these elements and the degree of their completeness and intactness that determines the quality of values of watertown, underpinning Genius loci, spirit of the place and landscape character. For example, water as a key element is essential and the examinination of its completeness and functional use of waterway in Zhouzhuang is the key step to address its authenticity and intergrity (figure 3).

Further more, each element has its own system. In building assessment, forms, colors, meterials, size, layout, function and structure becomes basic elements to examine its authenticity and intergrity.
In Zhouzhuang, the use of wood is only the material for building structure and is one of the elements carrying information of building values. The authentic value of the buildings needs to be determined by other building elements, such as colors.

Using LAC, a sample systematic structure of landscape can be illustrated to identify landscape elements, patterns, characteristics and character in Table 1 below.
### Authenticity and Integrity

<table>
<thead>
<tr>
<th>Landscape Element</th>
<th>Landscape Patterns</th>
<th>Landscape Characteristics</th>
<th>Landscape Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>buildings</td>
<td>building along water; daily living space outside building; …</td>
<td>forms, functions, materials… wood structure, black and white color…</td>
<td>quiet, peaceful, warm, small water living rural town with elegant and generous temperament in Changjiang delta area in China</td>
</tr>
<tr>
<td>roads</td>
<td>along water; bridge cross water;…</td>
<td>stone-paved, narrow; …</td>
<td>…</td>
</tr>
<tr>
<td>waterways</td>
<td>running through town; in front of or behind buildings; daily activities happen in water;…</td>
<td>narrow; daily use; network; …</td>
<td>…</td>
</tr>
<tr>
<td>vegetation</td>
<td>in inner yards at entrance of town or public space;…</td>
<td>rural; not too many; no street tree;…</td>
<td>…</td>
</tr>
<tr>
<td>market</td>
<td>connect to river; daily and traditional activities;…</td>
<td>frequently use; for daily life; for celebration…</td>
<td>…</td>
</tr>
<tr>
<td>living space</td>
<td>connect to street; connect to water…</td>
<td>ordinary life; with neighborhood …</td>
<td>…</td>
</tr>
<tr>
<td>activities</td>
<td>along water; outside building in water…</td>
<td>intimate relationship with water, local…</td>
<td>…</td>
</tr>
<tr>
<td>industry</td>
<td>agricultural; small business along water…</td>
<td>rural town landscape agricultural based. small scale business…</td>
<td>…</td>
</tr>
<tr>
<td>tradition</td>
<td>celebration for seasons; celebration in water…</td>
<td>rural tradition; friendly, local culture…</td>
<td>…</td>
</tr>
<tr>
<td>production space</td>
<td>outside town fishing in water. agriculture…</td>
<td>part of living town; people living on…</td>
<td>…</td>
</tr>
</tbody>
</table>

3.2 The importance of function in examining authenticity

Function is a basic intangible attribute penetrating landscape elements, patterns, characteristics and character, sometimes it plays decisive role in examining authenticity.

For watertown as Zhouzhuang, its essential nature of value is that it is a representative settlement in Changjiang Delta area, with the natural condition of abundant water and flat landform, where waterways were main transportation routes in rural areas. Settlement is the key function and nature of this cultural landscape and the spirit of the place. However, today’s Zhouzhuang, the settlement is not importantly associated with its surrounding rural agricultural production space, and the main function of waterway transportation is abandoned. The previous quiet, peaceful, warm and small water living town with elegant and generous temperament, changed into a popular tourism destination. Its functional nature has been changed. This change directly effects on the sense of the place. Also, following this essential functional change, changes of charateristics and patterns of elements happened. From visual senses, now red lanterns hanging everywhere and shops are busy selling souvenirs to tourists which
makes the small town commercial and public. The small town is full of visitors and is a celebrated stage for the outsiders (figure 4). Under this circumstances, to examine or to conserve the authenticity of buildings and other tangible elements would not save the decline of the value of this town because the essential value of the town is not carried by buildings. The activities happening in the watertown are telling fake stories of its history. The original and subsequent information of history allocated in intangible elements are declined. The authenticity of the cultural landscape values has been sacrificed, or, it has been changed into ‘staged authenticity’- a place to amuse tourists.

figure 4. Watertown Zhouzhuang as a tourism destination

Zhouzhuang, and many other protected living landscapes in China, are typical examples where the authenticity of tangible heritage values has been the main focus of conservation but the place still failed to maintain Genius loci, spirit of the place and landscape character. The key reason is lack of the understanding that the examination or management of authenticity and integrity is a systematic framework. Intangible elements are as important or even more important as the tangible elements to achieve the heritage values.

3.3 Historical perspective of authenticity and integrity
Heritage, especially landscape heritage is not formed in one day; rather, it has been evolving through long history. It is history that attached characteristics to the landscape elements and formed Genius loci, spirit of the place and landscape character. Without a thorough understanding of history of the landscape and the place, it would be impossible to identify the problems of authenticity and integrity embedded in landscape conservation.

Watertown is not a tourism destination. This judgement based on historical knowledge and understanding, helps us to identify current use and functional problems existing in authenticity of water town. As traditional rural settlement, watertown should also be organically oneness with its surrounding waterways and production fields. Town, waterways, fields are three key components of the landscape. So how could a watertown be gated and charge entrance fee to get in? It has gone too far to the authenticity and integrity of a heritage landscape as ordinary living place.
4. Conclusions and implications

- Both authenticity and integrity are the key issues to judge the quality of heritage values. With landscape holistic perspective and the methodology of landscape character assessment, the layering of structure to examine authenticity and integrity has been developed much clearer than Operational Guidelines for the Implementation of the World Heritage Convention. Such methodology requires interdisciplinary cooperation and to view landscape as a whole.

It is important to begin the examination work step by step. The construction of element system carrying values is essential. It based on our interdisciplinary attitude and knowledge.
1. Timber culture focusing on historical buildings

The most important characteristic of Japanese culture is timber. This might be illustrated by focusing on the various types of historical buildings. For example, Kondou at Horyu-ji temple in Nara, the oldest timber building in the world, indicates how timber buildings survived from the late 7th century. Daibutsuden at Todai-ji temple, built in Nara in the late 17th century, the largest timber building in the world, shows how the measures to reinforce such structures were invented; it might also be seen in the golden decorations, implying Pure Land, inside the Konjikidou at Chuson-ji temple built in Iwate in the 12th century, or the power of the authorities at Ninomarugoten at Nijo-jo castle, built in Kyoto at the beginning of the 17th century. Ginkaku at Jisho-ji temple, built in Kyoto in the 14th century, tells us of the harmony or silence between timber and the surrounding nature.

The high-level skills and techniques used in building timber structures had gradually developed and had even been applied to simple farmer’s houses and their settlements as far back as the 17th century. Furthermore, Oura church in Nagasaki, a Catholic church designed by French priests completed in 1865, had a structure made of timber; even the vault was made of lime mortar with bamboo by local Japanese carpenters. Myonichikan in Tokyo, a modern school building, was designed by Frank Lloyd Wright in 1921, it is a unique structure showing a high degree of freedom. And then, at Hizuchi Elementary School, built in 1958, the principals of modernism were applied by a skilled architect to create a timber building.
Although it now seems difficult to find such authentic timber buildings due to the recent focus on other materials such as glass, steel and concrete, apparently 60% of houses still have timber structures, according to *Japan Statistical Year Book 2014*. Therefore, it can be said that timber culture for buildings continues in Japan even today.

2. Topography and Climate for Timber Culture

The reason why timber culture has developed in Japan is basically a result of its topography and climate. Japan is covered with mountains, spread over roughly 80% of its land area. Furthermore, the islands comprising Japan face the Pacific Ocean, where warm currents flow northward. Unlike urban areas, where people live in high density, the forests covering Japan synchronize nature and settlements in local areas. The climate of Japan has four distinct seasons, which allow for rich forests with diverse plant life scattered around the mountains.

The topography and climate obviously enhance the landscape based on rich forests; at the same time, ironically, they can cause frequent and serious natural disasters, as many typhoons come to Japan by the end of summer, causing severe damage to timber buildings; the long periods of heavy rain in the rainy season and during autumn impact roof tiles, which slide off every year, and earthquakes due to the topography of the Eurasian continent have often occurred in Japan, resulting in additional damage to timber buildings. In addition, the fires caused by such earthquakes have resulted in gigantic timber buildings burning down and destroying the founder’s achievements in a flash.

Notwithstanding these challenges, Japan’s rich nature always provides high quality materials for timber buildings and their parts so that timber buildings can survive in a severe environment by using the ecological cycle. In particular, Japanese cypress has always played a significant role as a building material due to its suitability for long structural parts, with a delicate aroma and a very smooth touch; this enables Japanese people to savor its natural beauty. Therefore, skills and techniques to use trees without any waste have been developed.

In addition, the surface of Japanese cypress is barked by special techniques without affecting the trunk of the tree; in fact it is necessary to bark natural cypresses that are 80-100 years old and the surface of the cypress regenerates after 10 years. The cypress bark is cut and stuck together carefully, and then the roofs of the temples and shrines are covered with layers of cypress bark that make for a beautiful long-lasting roof line.

The other roofing materials are shingles used along with thin wooden boards and grasses for historical buildings. Shingles or grasses are cut and stored, and used as roofing materials with a durability of 30-40 years and which are provided by a permanent eco-cycle. Some shrines and temples are also painted by using Japanese lacquer, or *urushi*, which is produced by *urushi* trees; it is used to paint the surfaces of buildings to protect and decorate them.
Thanks to these rich plant-based materials for buildings, Japanese timber culture has developed even further. In addition, the plant-based material for timber buildings is always provided from areas that the farmers have cultivated carefully over many intervening years. Thus, timber culture involving the use of plant-based materials is basically embedded in such community-based landscapes.

3. Traditional techniques and materials for timber buildings

Securing traditional techniques

Many timber buildings in Japan have survived severe environments, exposed to rain and wind over several centuries. To keep a timber building in an ideal state, it is necessary to perform constant daily maintenance, along with dismantling and reassembling the building part by part every 300-400 years to try and prevent its condition from worsening. It is thought that daily and constant maintenance provides opportunities for maintaining traditional craftsmanship and training for future generations; at the same time, it is an important part of the system to allow the survival of authentic timber buildings to the present day.

The government of Japan has struggled to secure enough protection for cultural properties, as specific conservation techniques for conservation and restoration projects are needed, and in 1975, a law was passed to begin to support the technicians or maintenance teams utilizing such techniques, in order to retain them against trend of rapid mechanization. For instance, the government designated a master carpenter in charge of traditional carpentry design techniques, a technician with specific plastering techniques, technicians with traditional coloring skills, a master craftsman applying traditional roof tile techniques, a technician of barking cypress and a technician with expertise in roofing cypress bark, as well as a team of specific conservation architects. The government has now selected 70 specific conservation techniques including other manufacturing techniques, and it supports the 53 technicians and the 31 teams that teach the new technicians (2014).
Securing traditional materials

The importance of continuity for the supply system of traditional materials in conservation and restoration has long been recognized by many experts of built heritage. For instance, it might be necessary to use a cypress tree that is over 80 years old for repairing a historical building because it is a thick tree that has taken a long time to grow. However, nowadays it is too expensive to buy such a thick specimen from a lumber market. Therefore, it has become increasingly important to involve many stakeholders who can support not only cultural heritage but also natural heritage, in order to secure the continuity of traditional materials outside the normal market economy.

In 2006, the government finally launched the program “Forest for Heritage” to secure the resources for traditional materials and to advocate the conservation of built heritage by supporting the owners or bodies that maintain specific materials; this program means that even resources for traditional materials would become heritage and might result in cooperation in the conservation of both cultural heritage and the natural environment.
The government selects forests that are owned by individuals, universities, research institutions, and private companies, and then asks them to continue to maintain such forests for restoration projects of built heritage. For instance, forests of Sawara cypress, Hiba cypress, Cryptomeria japonica, chestnut trees, pine trees, and Japanese lacquer trees, as well as rush fields, were selected as Heritage Forests. So far, the government has selected 58 such locations (2014). The quality of the materials obviously depends on the ecology of the Japanese environment, and at the same time, it is necessary to have the support of the local community, which is helpful for maintaining sustainable conservation approaches.

Promotion of awareness of natural resources
In addition, to enhance public awareness of heritage conservation, the government is promoting the restoration of project sites. A restoration project which involves many stakeholders is a very important opportunity for the local community to know the history of a building as well as the traditional techniques and materials that were used in its construction. The conservation and restoration project sites used to be closed to those who might be endangered by their operations. However, interest in historical buildings has been increasing recently, while the government has tried to promote awareness of heritage conservation. As a result, project sites have gradually started holding public open days, which have become increasingly popular with local communities and even tourists.

At the same time, such days are a good challenge for craftsmen and technicians to demonstrate their techniques to the public. Japanese craftsmen are not the most talkative of people; however, they are able to be competent teachers for children without the need to talk due to their high-level techniques as result of long experience in the field. Boys and girls enjoy trying out new things, and learning traditional skills, techniques and materials might lead them to a new appreciation of their culture. Both present and future will benefit from this traditional knowledge, possibly creating a community-based landscape.

Fig 6 Public Open Day at Toshodai-ji temple, Nara
4. Conclusion

In conclusion, to keep timber buildings in their ideal state, it is necessary to do constant daily maintenance, as this plays a significant role in passing on traditional techniques and materials to the next generation. At the same time, securing traditional techniques and materials could become one of the approaches for involving local communities in not only cultural conservation but also natural conservation. Therefore, continuing to pass on traditional techniques and materials is the key to driving the dynamics of continuity of community-based landscapes.

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II. Papers by Participants
The Diverse Practices of Preserving the Living Cultural Heritages: A Case Study of Tongli Water Town, Southeast China

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Abstract: Tongli water town, located in south east China, was certified as a national historical and cultural town. In the past 15 years, the conservation and development of Tongli was ongoing. This paper uses various construction projects as the units of analysis, and catalogues them by different objectives, spatial and timing characters and operation mechanisms of these projects. Finally, this paper sums up the experience and problems of such projects, and analyzes their roles in simulating the vitality of town, protecting the historic landscape and keeping the diversity of life.

1. Introduction

Tongli, located in south east China, was certified as a national historical and cultural town, one of the 181 listed towns in China. Since 1998, the town government started the overall conservation of the water town. During the past 15 years, there have been more than 300 launched projects aiming at preservation and developments, which could be divided into eight categories. In such diverse practices, the cultural heritages of Tongli became one of the driving force for sustainability through the way of integrating the forces of local residents, government, experts and market.

In the global context of protecting cultural heritages, Tongli constantly adjusted and localized its strategies through diverse practices. As the prevalence of historic towns conservation all over China, the most two important things are the localization of the living cultural heritages’ value and the flexible strategies of developing through protecting.

This paper focuses on the typological analysis of the construction projects in the past 15 years, to understand the dynamics of Tongli by time axis and to analyze the goals and objectives of government and planners by spatial axis. The paper also attends to the correlations between time-space and the actors’ behaviors in different projects.

2. The types and objectives of the projects

All the government-led projects in Tongli can be catalogued into eight types, including preservation of architecture heritages, renovation of settings and landscapes, construction of cultural facilities, improvement of public environment, construction of hotels and inns, repairing of public housing, construction of tourism facilities as well as pilot projects. However, given the objectives of these eight types project could be re-assorted into three categories, which are conservation of historical/cultural heritages, improvement of living environment and development of tourism (shown in Figure 1).
3. The timing of the projects

Different types of projects were carried out in different time periods, the following is the implementation sequence of the eight types which are previously mentioned: first came the preservation of architecture heritages, then the renovation of landscape and construction of public environment followed, next was the construction of cultural facilities, and then the construction of large-scale of tourism facilities was started since 2008. The reconstruction of inns which used to be residential houses and the repairing of public houses were launched throughout the whole process, while the pilot projects cannot be sorted for their uniqueness. According to adjustments of governmental strategies, the past 15 years can be divided into four stages.

**Stage I: Year 1999-2002**

During this stage, the local government was mainly engaged in the development with state-owned assets. In addition, market capital was attracted by preferential leasing policy, which improving the cultural charm of Tongli. Meanwhile, with the increasing of tourists, a few local young man saw the economic opportunities, and then changed their old houses into inns, which became the family-style accommodation of the old town.

**Stage II: Year 2003-2006**

The government took five main measures during this stage: (1) investing the land-leasing rent in improving public environment to benefit both residents and tourists; (2) maintaining historic buildings, protecting heritages and increasing tourist sites; (3) cooperating with the university and establishing public place for culture promotion; (4) using subsidy fund to show the livable method of rehabilitating...
traditional houses; (5) making policy to encourage local residents to benefit from tourism industry and estate properties.

**Stage III: 2007-2009**

With the replacement of major, the spatial strategies of Tongli government changed. The New leader emphasized on periphery of the old town, including settlement area for low-income households, road construction and real estate development. Within old town area, the government invested in tourism facilities, meanwhile, the market force also fastened on tourist accommodation. At the same time, the local residents began to rehabilitate their houses for the increasing income.

**Stage IV: since 2010**

There are five main characters of this stage; (1) the inflow of migrant workers and non-local house buyers with the development of tourism; (2) the improvement of Tourism service standards and the urbanization of business activities; (3) the increasing willingness of natives to rehabilitate their houses; (4) the preferential policies to support local market elite; (5) the policy orientation to lead new development.

4. **The spatial analysis of the projects**

The spatial distribution of the government-led projects was scattered. The site selections were usually based on two criteria: one is the locations of state-owned idle land or vacant houses, the other is the radiantly economic influence on the surrounding regions. Such kind of projects were composed of the maintenance and reuse of the historic buildings as tourist attractions, the renovation of the main tourism route and public space, the construction of cultural facilities and distinctive inns. After the completion of such projects, the government-led travel service soon improved the environment for tourism and extended the range of touring, which brought the following three effects.

1. In the original range of tours and excursions, the rent of houses along the tourism route surged for the improvement of the environment. While the spontaneous replacement of business activities truly diversified the tourism services and improved the service qualities. Meanwhile, the increasing of housing rent also brought more benefits to the house proprietors.

2. With the expansion of the touring range, more residents gained benefits and more various traveling activities appeared. The initiative of community participation in tourism was sufficiently motivated, e.g. the rapid development of private residential inns and the numerous increase of the repaired/renovated houses. At the same time, more and more residents changed their residential houses into commercial use illegally.

3. Due to environmental improvement and increasing tourists, the market attractiveness of Tongli was enhanced. More and more foreign investors and local elites (including those still living in Tongli and those having already left) generally invested in the construction of tourism or cultural facilities by consultation with local government or dealing with residents.
Inspired by the government-led “spatial acupuncture” projects, the local residents, local elites and foreign enterprises invested in new projects which located within the influence scope of the formers. Therefore, such practices gradually formed a ring-net structure of spatial development and diverse functions of business structure.

5. The operation mechanism of the projects

There were various implementation approaches of the construction projects in Tongli, including individual investment, private enterprise investment, government investment, joint investment and NGO investment. Given the quantity and capital amount of different mechanisms, the government-led project is the dominant pattern. The number of the government-led projects accounted for 25% of total number of the projects, while the amount of governmental capital accounted for more than 50% of the total; the number of joint projects accounted for 29% and their investment accounted for 32%; although the number of resident investment projects account for the most as 35%, but the capital only accounted for 6%; only one NGO-led project showed the supportive role of social force. (see table 1)
(1) The government-led project

Since town government is the grass-roots unit of Chinese administrative system, the township government still follows the rule of “bosses” that makes the development planning of Tongli totally decided by the individual will of the local officials. Since the decentralization reform, the grass-roots government gained more power of decision-making and less interventions from the upper-level government. Therefore, with the familiarities of relevant laws and regulations, the township government usually promotes their projects without procedural and regulatory obstacles. As long as fully funded, the leadership’s decision could be quickly carried out, instead of long time pre-coordination and market research. Such character is called in Chinese “短平快” (short, adaptable and fast).

Secondly, as an administrative organization, the role of township government in the development projects is coordinator and manager, with its governmental functions of social/political/economic considerations. Therefore, from the long-term perspective of development, the local government pays much attention on integrated targets to maximize the overall interest. All the concerns should be put into the selection and timing of the government-led projects.

However, since most government-led projects aim at public interest instead of economic profits, such kind of projects are usually lack of the planning of post-management and usage. In many cases, the government carried out the projects only for the so-called achievements, “DOING” is much more important than “HOW TO DO” or “HOW TO USE”.

Figure 3: The government-led project of preserving architecture heritages and renovating landscape and setting, which observed the principle of heritage conservation, keep the original historic landscape in maximum.
(2) The joint investment projects

With the improvement of the entire environment, private enterprises and individuals began to cooperate with town government to be involved in Tongli’s conservation and development. As a result, besides the government-led projects, there have been the joint investment ones, which mostly are profitable projects such as tourist attractions and inns.

The costly planning of conservation and renovation brought the severe financial pressure to local government. While the public goods as streets, public environment, public facilities are lack of investment attractiveness, the government can only rely on the profitable projects to raise social capitals. As long as allowed by policies, the joint cooperation has turned to be the main form of the construction projects in Tongli, which indicates the transition from government-led to market-led. The role of local government changed from manager to assistant.

Such practices of cooperation integrated the strengths of both public and private sectors to public services, and made all the stakeholders share both the risks and revenues. This mechanism coordinates different stakeholders with common interests, making the goals of the projects more diversity and market-oriented. What’s more, the forms of cooperation is flexible, including franchising, joint ventures, equity transfer of state-owned enterprises or government subsidies for private investors, etc.

The joint form also provides opportunities to local residents to be involved in Tongli’s development planning, by changing their houses into commercial use, e.g. inns or restaurants. Driven by business interests, most residents voluntarily invested in repairing and renovating their private houses. They remained the spatial characteristics of traditional houses, including a number of well-preserved historic buildings and provincial level architecture heritages. Most participants appreciate such projects which highly increase their incomes and improve the town’s reputation.
(3) The private enterprise/individual investment projects

In Tongli, there are few projects operated by private enterprises independently, which were mainly blocked by the complicated operation procedures. Especially for the non-local investors, it seems to be more difficult for their lack of social network. In addition, the conflicts between the investors and the residents near the construction sites made the enterprises more intend to cooperate with the government.

Meanwhile, the residents’ investments were mainly used for the renovation and functional replacement of their own houses as inns or other tourist shops. Of course, there are other cases, such as some local residents rented others’ houses for business activities, or some residents rented out their houses to non-local investors. Overall, influenced by the government-led projects and the joint-invested ones, the willingness of community participation in the development of Tongli has grown quickly. At the same time, more and more non-local investors have been involved in the tourism market of Tongli.

Figure 4: The museum cooperated by government and private enterprise (left corner)
The entertainment pedestrian cooperated by government and local elites (bottom left)
The Heritage Exhibition Hall cooperated by government and university (right)
The project funded by UNESCO

The project of No. 168 Yuxingqiao Street is a low-cost housing improvement project with purpose, funded by UNESCO and operated by Tongji University. First of all, the user of the selected house should be certain low-income family; secondly, the location of the project should in the core area of the old town; finally, the house should be the historical building with traditional form. In the process of construction, Tongji University gave technical support for the project, which then became a pilot project of preserving traditional houses with economic and high-tech considerations. Such practice is creative and experimental, that provided some experience for the solution of historical house rehabilitation.
6. The experience and problems
In the past 15 years, driven by the town government, Tongli has experienced a diversified path of development, which is formed by the government’s flexible strategies of adjusting policies positively during the dynamic process. The multi-stakeholder cooperation has brought Tongli the motives of sustainability and the adaptability to the market. At the same time, such joint mechanism also balances different interests, especially the interests of local residents. In the principle of multi-stakeholders, the old town adopted a continuing gradual development strategy, which increased the income and asset value of natives gradually and continuously. Meanwhile, the survival capacities of the participants have been enhanced obviously. However, in the context of urbanization and globalization, the development of Tongli is facing new challenges.

(1) The tourism of traditional community
During the 15 years, all the updated and increasing facilities are for tourists not for local residents. Many service facilities for local residents were resettled to the peripheral new zone, and then the vacated space or buildings were constructed and renovated for tourism use instead, involving both government-led projects and resident investment projects.

(2) The urbanization of traditional community:
When meeting spatial conflicts between new comers and local residents, government tend to be more inclined to new comers and local elites. The engagement of new comers separated the integrating friendly community into Mosaics, turning to more complicated community.

(3) The Individualization of heritage community:
The inhabited heritage site is the stably physical space with long history and legal protection, including the remained social structure, which limits the environment and condition of human activities. However, with the stratification of traditional communities, the common interests and aspirations of the community have been individualized. How this kind of limitation can turn to the institution of preservation and the common action of development?
1. Background

The history of Yogyakarta began in Kotagede. Established in the 16th century, Kotagede is the former city of Javanese Islamic Royal Kingdom of Mataram. The city is arranged based on the concept of *catur gatra tunggal* or four components in one: *palace* as the center of the city, *square* as the public space located on the north of palace, the *mosque* as the center of religious activities in the southwest of palace, and *market* as the center of economic activities. Today, only two components remain: the mosque and the market.

The uniqueness of Kotagede can be seen in its *kampungs* (villages) with their historic traditional buildings and narrow alleys. Many houses in Kotagede were built hundreds of years ago, which shows that Kotagede has long since possessed the advanced ability to build unique traditional wooden houses. Therefore, the history and culture of Kotagede are important to be conserved so that the next generation can understand and appreciate their origin and culture.

2. Characteristic of Traditional Environment

a. Kampung

The dispersion of old Kotagede *kampung* (villages) can be traced back based on the toponymy centered in the palace as the house of the king and the center of government. Toponymy related with the inhabitant status tends to be more palace-oriented, and toponymy related with the inhabitant profession tends to be more market-oriented. Grouping of inhabitants based on their status and professions (craftsmen, religious leaders, officers, etc.) refers to their duties to serve the needs of the king and the people. Therefore, housing areas were zoned according to the functions of the inhabitants.

b. Streetscapes

The north-south orientation of Javanese houses is related to people’s belief. In the middle of *kampung*, houses still keep the north-south orientation. The emergence of major streets has contributed to the change of orientation that now facing the street, but the building still retains its site arrangement.

Among five main streets in Kotagede, two of them were dominated by shop houses along both sides, Kemasan street and Mondorakan street. The first one is dominated by silver shops. Along east part of Mondorakan street there are shop houses, while along the west part are Kalang houses - with combination of Javanese traditional and colonial styles. Kalang houses that were owned by wealthy traders now are used for commercial such as silver shops, restaurants, and homestay.
c. Alleys
The beauty of the Javanese traditional building style in Kotagede goes in harmony with its distinctive streets. Most of the small streets are narrow alleys less than three-meters wide with four-meter high walled structure on both sides, all leading to the market area. These capillary streets have strong influence in shaping the character of the district. The usage of the streets is mostly for pedestrian passage, public space, social communication as well as economic purposes. The Kotagede landscape is shaped by the existence of the high walls along the alleys that has its own character but as a whole it forms the unique character of Kotagede.
d. **Rukunan street**

Kotagede’s uniqueness can also be seen from its kampungs that are rich in historical building with traditional wooden architecture and the narrow alleys called ‘jalan rukunan’ or rukunan street. This street is formed by connecting the adjacent open space between the dalem (main house) and pendapa (open structure in front of dalem) of several houses in the neighborhood. The ‘rukunan streets’ width varies from 1 to 3 meter. The east-west streets have gates at both ends that form the border between the rukunan and kampung streets. These kinds of streets are easily found in the market areas and the cemetery-mosque complex.
e. Javanese traditional wooden house

A Javanese traditional house in general is a composition of several buildings and courtyards in between the buildings. Besides considering its functions, a Javanese house design should also consider its relationship with the sun, wind directions, rainfall, underground water flow, etc. In other words, natural balance should be maintained. There are four types of Javanese traditional house based on roof shape: joglo, limasan, kampung, and panggang pe. Each type has several variants. Some of them exist in Kotagede. Joglo is the most complicated and sophisticated roof type in terms of the construction and techniques. This type usually owned by nobles and wealthy people.

A Javanese house (called omah) has a rectangular or a square plan on the raised floor. Basically a Javanese house, including in Kotagede, is divided into two parts, outer and inner parts arranged according to a north-south axis, the inner part is the more sacred. For Javanese people, a house is not only a place to live but also necessary for ritual activities such as wedding. The outer part of omah (house) is emper (porch) and the inner part is dalem with three rooms or senthong (left, middle, right). There are two kinds of omah (house), a house that has dalem with two rooms (usually has kampung or limasan roof) and a house that has dalem with three rooms (usually has joglo roof).
Basically a traditional house consists of two parts, the main house and the additional/supporting house.

The main house consists of:

1) **Pendapa**, an open building (no walls) used for “public” activities for guests. Located in the very front of the compound near the gate, a *pendapa* can be seen from outside so it is usually built as a grandeur building to show the dignity.

2) **Dalem** is a center of the building arrangement of Javanese house which is used as a family room. *Dalem* which has a rectangular plan, according to Frick (1997) is formed by nine small squares based on vastu purusha mandala suci. Three squares in the front part are pringgitan and the three squares in the back part are senthongs.

3) **Senthong** consists of three rooms: *senthong kiwa*, *senthong tengah*, and *senthong tengen*. *Senthong kiwa* (left) is for heirlooms and weapons. *Senthong tengah* (also called Petanen, Pasren, or Krobongan) is for Dewi Sri, the goddess of fertility. *Senthong tengen* is for bedroom.

4) **Pringgitan** is located between *pendapa* and *dalem*. The word *pringgitan* comes from the word “ringgit” or puppet. When the owner has a certain ritual, the puppet leather performance will be performed in *pringgitan*.

### 3. Problems

From time to time, Kotagede has undergone many changes that have led to the weakening of its authentic characteristics. There are some problems in conserving wooden houses in Kotagede heritage district as follows:

**a. Modern life**

The need to accommodate modern life requires the change of space arrangement as well as building design. This causes some traditional houses to change to more “modern”, either partially or entirely. Also, financial needs and high cost maintenance have encouraged the owners sell a part or a whole traditional house that leads to the decrease in number of traditional houses in Kotagede, for these houses are moved out of the vicinity and replaced by non-traditional buildings.
b. Commercial activities

*Kampungs* (villages) in Kotagede were once bustling with traditional houses which were single-story buildings. With the passing of time, the density of buildings in the district increased, open spaces and yards became scarce. Rapid development occurred in the part of main street (Mondorakan street) which grew into a commercial area with two-story buildings. All of those will threaten the existence of historical and cultural values of Kotagede, which in turn will cause Kotagede to lose its uniqueness.

c. Ownership

Common problem in conserving old traditional houses is ownership. There is a time when the parents inherit the house to the children by dividing the house into some parts.

d. Availability of wood

Many traditional wooden houses were collapsed or damaged because of the big earthquake in 2006. Those houses need to be reconstructed or rehabilitated, but it was very difficult to find good quality of wood.

e. Human resources: experts of wooden structure and skilled craftsmen or labors

All traditional houses in Indonesia are wooden houses – including in Kotagede, but unfortunately not many people interested in this field. Lack of qualified experts and labors is another problem in conserving traditional wooden structures.

f. Natural disaster – especially earthquake

Another threat to the existence of Kotagede was the big earthquake in May 2006 that inflicted massive damage to many buildings. Aside from the age factor, the old building technology was insufficient to withstand the 5.9 Richter scale of earthquake. Understanding earthquake resistant construction is very important for repairing and building post-earthquake houses, as well as to anticipate future earthquakes. Vernacular architecture has been designed and tested overtime to withstand earthquake forces. For instance, the *joglo* structure is a type of traditional open frame structure that is quite seismically resistant. The structural stability of this building against earthquakes is primarily attributed to the main frame structure consisting of *saka guru* (four main columns) and beams. The structure supposedly behaves adequately during light to medium earthquake owing to its ductility. The building is mainly a wooden structure that significantly contributes to its ductile characteristic. The collapse of several *joglo* in Kotagede is primarily due to the deteriorated wood and improper construction joint detail. Moreover, rehabilitation or reconstruction using new materials and techniques which are easier and cheaper compare to traditional techniques – leads to the concern about the changing character of Kotagede heritage district.

4. Conservation Activities

Programs and activities to conserve Kotagede as a heritage district had started since a few decades ago by local and central government and also some non-government organizations such as Jogja Heritage Society. Since 1998, Jogja Heritage Society (JHS) in collaboration with various institutions and the local community had done some activities and projects in Kotagede such as:
a. 1998: Conservation of Folk Performance in Kotagede funded by the World Bank. The aim of this program was to improve community awareness on heritage conservation. Folk performance were used as an entry point to conserve.

b. 2006: big earthquake. Many houses, tools, and equipment of silver craft have been destroyed but rehabilitation/reconstruction fund from government is very small. It is impossible to restore traditional houses using proper conservation principles. This situation would threat the lost of character of Kotagede heritage district.

A few days after the earthquake some post earthquake responses programs were held, such as:
1) Community Empowerment Program (CEP) by Gadjah Mada University & Pusaka Jogja Bangkit (including JHS) - July 2006 - March 2007 supported by JICA
2) Declaration of the local heritage organization (Kotagede Heritage District Team/KHDT) August 17, 2006

c. 2006-2007: Reconstruction four traditional wooden houses damaged by 2006 earthquake. The project was funded by the Government of Netherlands.


The Manual was compiled by JHS with inputs from various parties, especially the local community. The first step of compilation was data acquisition from previous studies, complimented with a survey of the most recent condition. Then, several meetings with the local people are intended to explain the aim of the Manual and to invite the people to involve in the process of compilation. The next stage is a workshop to collect input from the local people and local government. City regulation No.6/1994 and General Plan of Yogyakarta City Planning 1994-2004 are among the regulations that have to be referred. The draft of the conservation manual was compiled and then tested on four houses in order to assess the extent to which the manual may be applicable. The final stage was a seminar which was held to get input from a more extensive audience on the draft.

e. 2007: Proposing Kotagede as one of 100 endangered sites in the world to the World Monument Watch. In 2008, Kotagede was listed in the World Monument List.

f. 2009: Producing two books entitled Documentation of Post Earthquake Reconstruction Process and Post Earthquake Conservation Guidelines, funded by UNHABITAT.

g. 2010-2011: Extension Program on Heritage Conservation (Java Reconstruction Funds /JRF), includes producing two books (comics) entitled Guidelines for Conserving Traditional House and a book entitle “Rumah Pusaka Kotagede” (Kotagede Heritage Houses) that documenting all traditional houses in Kotagede. The idea of producing comics about conservation of traditional houses is to make ordinary local people more understand the way to conserve their own houses easily. The Manual book produced before is too difficult to understand by people.
Lithuania is a small European country located at the Baltic Sea. (territory of the country approximates about 65,000 square kilometers, with population of just under 3 Million). The climate is humid favourable for extensive forest growth. One third of the country remains covered by woods. Pine, spruce and oak predominate in Lithuanian woods, and it reasoned an impressive evolution of wooden culture. Wood was traditional, most cultivated building material. That's why about 90% of vernacular and a part of professional (resorts, towns’ outskirts, rural estates) architecture was predominantly wooden until the Second World War. The architecture as well as equipment of domestic economy were both functional and sensibly decorated.

Main characteristics of Lithuanian wooden architecture are simplicity and functionality, sober modesty, and what's most important – sensitive and rational interrelation with natural environment. And that's why the rural landscape appears exclusively sound and peaceful in the country. Wooden architectural heritage is among the most fragile ones, fastly deteriorating if not properly maintained, and suffering from fires, heavy climate and change of way of life. Wars, mutinies, famine and plague caused tremendous losses in XVII – XVIII c. Huge wars, revolutions and state land reforms followed in XIX - XX c. Nevertheless building, woodworkers and craftsmen traditions were smoothly passed from generation to generation until the Second World War. After the Second World War the situation changed dramatically. Occupation by the Soviet Union in 1940 brought a wast collectivisation and industrialisation. The dominantly agricultural country became industrialised. Population massively moved to towns that grew impressively fast in 70’s and 80’s. Following the construction conduct and norms of the Soviet Union, newly built residential houses most often were typical Ferro-concrete.
buildings. The old building traditions were abandoned.

So what is left out of the wooden culture? What wooden architectural heritage we still possess in Lithania?

- Part of the XIX–XX c. villages and individual farms, that were left in territories not suitable for intensive agriculture;
- Resorts architecture;
- Small towns and some historic suburbs of the towns of same period that avoided major urban development or economic growth;
- Some wooden estates and sacral architecture (churches, chapels, synagogues, sect.) from XVIII–XXc.
- Archaeological objects that remain under the uncultivated soil.

Vilnius is a capital city of Lithuania. The historic centre of Vilnius - the Old Town - takes up the area of approximately 594 hectares. It is an exceptional illustration of central European town which evolved organically over a period of five centuries. Historic centre of Vilnius was inscribed upon the UNESCO World Heritage List in 1994. Archaeological research data gives evidence of a settlement’s existence for almost a thousand years until the city turned into a capital in 1323. Until the end of XIII c. the city was constructed of wood. It was protected by wooden castles. The last wooden castle of Vilnius was burned down in 1390 and since then masonry construction took its way. Vilnius flourished in XVI–XVI c., when it was a capital of a strong Grand Duchy of Lithuania, that covered lands from the Baltic to the Black Sea, partly covering wast lands of current Belarus and Ukraine. At that time masonry construction traditions arrived from Germany, Poland and Italy. The Dukes’ Palace and Castle, as well as the historic town core, were built in brick. However, most of the suburban areas remained wooden until the early XX c. The city suffered from numerous fires, but reconstruction of residential buildings lasted until the Second World War. Luckily today some of the historic suburbs, that were built in wood in XIX-XX c., still survive and are protected as listed urban areas and a buffer zone of Vilnius historic city centre, the UNESCO World Heritage site.

Žvėrynas, the historic suburb of Vilnius, was succesful in safeguarding most of its wooden architecture and today is the best urban complex that survived. It’s also most valuable because of sound intercourse with natural environment and artistic character.

Until the end of XVIII c., territory of Žvėrynas was almost entirely covered by woods and and used as a hunting area of Vilnius’ nobility. This activity gave a name to the district - Žvėrynas means “menagerie”. General Governor’s hunting house was built here in early XIX c., later it was reconstructed into a suburban villa. Russian Orthodox church in brick was built and a wooden bridge joined the area with the main city in 1892. In caused dominant pine trees to be cut-down extensively followed by construction of suburban villas and residential buildings. Those were richly decorated 1 or 2 storey buildings in style of historistic romanticism or modernism. The new stone bridge was built in 1901 that inspired more intense constructions in the area in 1903—1914. At the begining of XX c.
villa architecture still dominated Žvėrynas, but the growth of the city was changing the area into an exclusive residential one. Wars caused numerous changes of property owners and use of the wooden buildings in Žvėrynas, but the urban area survived until the nowadays, bringing us a unique human scale, its recreational and artistic character. Since the 1950’s new brick buildings gradually appeared here, but the former urban structure based on typical homestead plots remains intact together with dominant wooden buildings and entire streets’ elevations.

Already in 1960’s the community of this urban area got an understanding and appreciation of the urban and architectural uniqueness of their living environment. Consequent communal action in documenting, promoting and protecting the wooden heritage in Žvėrynas started in 1970’s. The pioneer initiative was driven by a few local residents, basically teachers, writers and artists. Then the initiative was strengthened by pupils and local residents. The initiative resulted in photographs, documentary films, excursions, exhibitions, and collections of artifacts. Its crucial that lections and exhibitions often took place at schools. It’s how the youth generation became aware about the history and artistic value of the urban area. The historic conciousness inspired and stimulated several generations of the local community. It was an essential sensitization process, that left deep traces. Initiative of Žvėrynas community sharpened attention of art historians, heritage managers and city planners. Consequently the first systematic historic analysis and the Protection Plan were accomplished in 80’s.

The year 1990 brought a fundamental geopolitical change – Lithuania regained its statehood after 60 years of occupation. Democracy and restitution of private ownership allowed to turn dreams into life more efficiently. Nevertheless freedom, democracy and consequent scope of inspiring positive changes also brought relevant challenges. Vilnius became a capital of an equal European states. National management as well as foreign and international representative institutions got concentrated in the city,
and growth of population rose rapidly. Due to its close location to the city centre Žvėrynas became a very popular area for real estate traders. It caused negative changes in the area: so called 'accidental' fires destroyed number of protected wooden houses releasing plots for new development. But local community started to fight with this 'modern phenomenon'. Subsequently the Heritage Preservation Plan of Žvėrynas was redeveloped in 1992 and the list of protected properties was updated in 2004. Local community played an active and visible role: initiated and debated planning and documents bringing their arguments and motivation regarding safeguard of wooden historic properties and quality of green living environment. Since the year 2002 the local community in cooperation with Vilnius Old Town Renewal Agency (OTRA) regularly celebrates European Heritage days, thus promoting protection of heritage assets.

Communal activity inspired attention of municipal administration and public bodies towards maintenance and safeguard of valuable wooden historic houses in the entire city. 2003-2005 Municipal administration ordered the Strategy for Protection of Vilnius' Wooden Architectural Heritage. Review of architectural value and physical state of more than 2000 buildings was carried out in 2004-2005. 97% of these were residential, 0,25% public and 2,75% of the mixed function buildings. Their architectural character varies from simple vernacular to sophisticated villas, designed by professionals. Buildings were valued not only according to their architecture, quality of construction and authenticity, but also taking into account quality of urban environment. The research covered central part of the city – the historic centre and its former suburbs. There were 4 urban areas defined with the dominant wooden buildings – it exceeds 75 % of all buildings in the area. Another 12 small zones (groups of buildings) as well as separate valuable buildings were spread over the city centre. Consequently the new list of the protected wooden objects was set in which Žvėrynas appeared the biggest area. It’s the protected urban cultural heritage area, where architectural character, traditional built material, surrounding...
4 wooden building dominance zones have been defined:
• Žvėrynas and Šnipiškės are protected urban areas;
• Others – protected single buildings and groups of buildings.

Strategy was approved by the city council in 2005. Vilnius Old Town Renewal Agency took a lead role implementing the Strategy. The Agency was found by city council aiming to implement an integrated territorial management of the UNESCO WH site and its buffer zone. This organization that takes care of the World Heritage site also applied its rich experience for preservation of the wooden architecture and areas. OTRA started the work in Žvėrynas by consolidation of public celebrations of the European Heritage Days and close communication with local municipal authority and lead residents. Following that, professional restorers came to advise and consult the property owners. The most important result was the achieved trust and cooperation between the local community, OTRA, and municipal authority. Then having approved municipal program Vilnius Old Town Revitalisation Programme: Subprogram “Community Capacity building (Wooden houses restoration)” and allotted funds, physical upgrade of listed historic houses commenced in 2005. Restoration projects were implemented following the co-financing scheme where costs of the research, design, construction and supervision works were shared 50/50. Following the Program two first wooden houses were restored in 2006 and funded only from municipal budget due to critically weak finances of property owners. 2 more buildings following costs co-financing scheme were restored in 2008. This Program experience became a prolific and exemplary one and it was an inspiring success Public-Private Partnership (PPP) experience.

Unfortunately economic crisis in 2008 interrupted this graceful commence of the “Community Capacity building (Wooden houses restoration)” program. Neither municipal nor national administration was able to allot funds for continuation of the Program. Hence owners were left on their own. Vilnius OTRA developed another Project called „Preservation and maintenance of Wooden
Architecture in Vilnius”. This Project was developed in cooperation with Oslo municipality for Cultural Heritage Management and Žvėrynas community in 2009. It was aimed to create Recommendations on Maintenance and Restoration of Historic Wooden Buildings. Several seminars were organised in Oslo and Vilnius where professional architects, engineers, restorers and historic property owners met to share their experience. Several times head of Oslo municipal unit for Cultural Heritage Management Mr. Morten Stige presented valuable experience on wooden heritage regeneration, that was initiated by a communal movement. Pooling the comprehensive knowledge and ideas the Recommendations were published in 2010. Targeting the support funding of the European Union Financing Mechanism 3 owners of residential wooden houses in cooperation with Vilnius OTRA and Norwegian municipal authority developed 3 Project applications in 2013. An information centre on Vilnius Wooden Architecture was planned to be set in one of the buildings following the PPP scheme. Unfortunately support was not given to any of the applications.

“Wooden houses restoration” program annually consults and debates with the property owners on ways and methods to implement restoration projects. And though the economic situation in Lithuania started to recover in 2012 the municipal budget isn’t yet capable to renew co-financing. The geopolitical tensions that appeared in Ukraine and Central Europe, again became a substantial obstacle for heritage preservation funding.

Žvėrynas isn’t the only case evidencing communities interest and initiative in heritage preservation. Religious communities were always interested to take care of their heritage too. There are 80 percent of Roman Catholics among population. Other minorities include: Evangelic-Lutherans, orthodox,
muslim, Jewish, and other. Faith was one of the forms and means to resist ideological occupation that reasoned wide and fruitful safeguard of old wooden sacral buildings in Lithuania.

Architectural heritage of traditional villages and estates suffered the most during XXth century. During the past two decades urban evolution and economic reorganisations caused high emigration and relevant change of way of life. However, the countryside population though heavily declined is gradually reviving. The cultural heritage in villages survived the best where lands were poor and economic progress was minimal. In many cases those villages were founded in an impresively nice natural landscape, making them great for summer residencies. The new owners seem to be interested in maintaining and upgrading the authentic architecture properly. Musteikos village could be taken as a good example to demonstrate community consolidation in developing a common project aimed to systematically restore an entire settlement. Their Project got financial support from European Union Financing Mechanism for a complex restoration of village houses’ roofs, wells, fences and gates as well as upkeeping of surrounding landscape. Indeed more and more wealthy property owners restore or recreate traditional wooden architectural heritage today. Though relatively expensive the wood has one again become a popular building material in modern architecture, that was nearly impossible 20 years ago.

These days the main problem is critical lack of professional woodworkers and craftsmen. Professional wooden conservation is performed almost only by open air museums with the very few exceptions of private initiative. As a demand for woodworkers is high the prices of such works are high too. As mentioned earlier, wood crafting traditions were almost lost after the Second World War. Luckily growing current needs in wooden construction creates favourable conditions for revival of woodcrafting. Regular training is being organised by an open air muzeum in Rumšiškės, group education of woodworkers is restarted in several technical schools all over the country. Unfortunately, current government financing system hinders craftsmanship. Again interest of well organised and initiative communities becomes an important and could even become a driving power for relevant changes. Finally, it is a property owner, who has the last word in how correctly or carefully tradional knowledge and technologies will be applied in restoring or upkeeping authenticity of historic property.
Conclusion: Communities that are socially consolidated, have common cultural understanding and their interests are, possibly, the most important factor that can ensure effective and continuous preservation of the historic wooden architecture. It’s crucially important for small countries of weaker economy, where fragility of way of life is higher. Therefore we believe that we need to focus on all the relevant means to support development, consolidation and corporate action of local communities.

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Introduction

Sri Lanka has a recorded history of more than 2500 years. Our cultural Heritage has grown with the introduction of Buddhism in 3rd century BC. History of Sri Lanka can be divided as pre-historic, proto-historic and historic periods.

Sri Lanka is gifted with gigantic monastic complexes, administrative capitals, created as a result of the arrival of Buddhism to the country. These consist of architecture, sculptures and paintings. Most striking feature of the heritage is their continued usage since the creation of them starting form the 3rd century BC to present. At present, there are six World Heritage Sites in the country.

Timber in Buildings in Sri Lanka

Timber is the most commonly used material in constructing buildings for different purposes. Being a tropical country, it was easily available and people were aware of the crafts and techniques. Timber was also the material for constructing many temples at least the superstructure. Because of the heavy rain in the country, the buildings even if the main structure was brick or stone, roof had to be constructed in wood to make it a hipped roof.

In addition to the roof structure, it is evident that wooden columns have been used when accounted for the numerous stone bases found in ancient sites in Sri Lanka.

Ancient Timber Monuments in Sri Lanka

Timber is the most popular and easily found building material in the present as well as past. The wooden architecture in Sri Lanka goes back to a period of over 2500 years. A building tradition of wood and mud walls has existed since the early settlers colonized in Sri Lanka. In early period timber was used in log form. After the invention of tools, logs were converted in to the required sizes and shapes.

The Tradition of wood construction in Sri Lanka goes back to pre and proto historic periods. Timber buildings, which remain today, were of the 15 - 18 centuries. The tradition of wooden structure is excellent in design, construction and carvings. Over thousands of timber buildings are conserved today including the remains of Assembly halls, Shrine Rooms, Rest halls and even timber bridges etc. These buildings can be seen in and around Kandy, which was the mediaeval city.
In the fabrication of timber components for the construction of the ancient buildings the strength and the impressive appearance of structures were given prominence to the old buildings.

Four main types of timber structures are identified.

i. Timber used as a base of building – (Temple on Pillars, Way side Resting Places)

ii. Timber used for superstructure – (Audience Hall, Drummer’s Hall)

iii. Timber used for the roof where the superstructure can be any material – (Shrine Rooms, Houses etc)

iv. Other – (Bridges, Doors and Windows, Dams etc.)

i. Timber used as a base of building

These buildings were constructed on a platform raised about a 1’-0” from ground level. Four logs of timber were placed transversely on four or more stone pillars or rock boulders. Stone pillars can be short or tall or it can be a boulder. In these buildings superstructure could be timber or wattle and daub.

Example for above are

Temple on Pillars (Tampita Vihara)
Way side Resting Places (Ambalama)

Temple on pillars (Tampita Vihara)

This is the most interesting wooden construction. These are shrine rooms that are constructed on grid work of timber beams placed over large boulders or stone pillars. These stone elements support to protect the timber from insect attacks and the damp. The height of stone pillars varies from building to building. The shrine room was covered with Mud walls (Wattle and Daub) and both sides of walls were painted with Buddhist stories.

The roof erected on wooden pillars were fixed to horizontal timber beams. Clay tiles were used to cover the roof. About 1000 of this type of Tampita Viharas are in Sri Lanka. Most of them were conserved by the Department of Archaeology.
Way side Resting Places (Ambalama)

Another interesting wooden structure in Ancient Sri Lanka is the Ambalama (Rest Hall). The construction is slightly the same as above described Tampita Vihara. These buildings were the resting places built by the side of ancient high ways, under a big tree or on a flat rock in a paddy field for those who travelled by cart or on foot in Ancient Sri Lanka.

Ambalama is normally square in shape. Four stone boulders are placed on a rubble platform or on flat rock and huge wooden beams are stretched over it. These beams are used to sleep or as benches to sit. The roof was constructed on timber posts, which are fixed on beams. Most of the timber parts except huge wooden beams were carved. The roof are covered with clay tiles or thatched. The fine example of such structure is the Ambalama at Panavitiya.

ii. Timber used for superstructure

In this case, two or more rows of timber columns that are fixed on a raised platform to hold the roof. Most common examples are the Audience hall in Kandy built for kings and the Dancing/Drummer’s Hall of “Embekka Devalaya”. Most of the wooden elements are carved.

iii. Timber used for the roof where the superstructure can be any material

In above types and other buildings of masonry, the roof structure is made of wood and clay tiles laid on it. Examples: Shrine Rooms

iv. Other

In addition other elements of these buildings such as doors, windows, railings, columns and some other timber parts are carved. Among these the popular decoration motifs are there.

The only evidence of an ancient timber bridge is situated in the hill country in the village of Bogoda. The three large beams, which are spanned on two cliffs, are placed across the stream and are supported at the center. The span of the bridge is approx. 30m. Timber pillars that are fixed to above beams are supported to construct the tile roof.

The Dam which is made of timber logs has been found in Mahamankada, Anuradhapura. A wooden Gallows belongs to British period was found in Hambantota.
Cultural landscapes of wooden buildings
Cultural landscapes of Sri Lanka with wooden structures comprises of Temple Complexes and Villages.

Temples Complexes
Buddhist temples are the most prominent group, among the landscapes of timber buildings. Most buildings in living temples are made of timber elements.

Buddhist temples are looked after by the neighbouring villages. Therefore, community participation was an inherent component of the maintenances of the temples. It is the community who are called Dayaka or upasaka who on a regular basis attend to the restoration of dilapidated temples.

There is also a major reason for the communities to engage in restoration of Buddhist temples. That is any activities related to construction, repair, restoration of temples is considered as gaining merits. Therefore the communities not only volunteer to work but also provide necessary materials like timber for repair and restorations.

It was on this basis that when the Temple of the Tooth relic was bombed on 25 January 1998, authorities were able to collect 100 million rupees although the requirement was much low.

It is stated in inscriptions and historical tales that the King / Government and general public intervened for restoration and maintenance work of temples and shrines.

Not only construction but also protecting and maintaining them was considered as a special responsibility of Kings. At that time, some villages were offered to people after constructing a temple for its maintenance. They were provided living accommodation in certain villages, by the shrine or the rulers, and their duty was the maintaining the shrine. The earnings received by this village was used to maintain particular temple and villagers participated it. Because of this conception, our supreme monuments like image houses, stupas, are protected from the past till today.
Living Religious Monuments
The competency of Sri Lankan Architecture has been shown by mainly Buddhism and their building tradition. Most of the wooden heritage buildings in Sri Lanka are Religious monuments and 90% of these are living monuments. Buddhism and Hinduism are two major religions that have transformed the cultural traditions in Sri Lanka. The community performs all the relevant rituals and practices till now.

As learning of Buddhism, constructing shrines and related buildings, attending repairs for them, regular maintenance and hold a rituals, considers as a meritorious act. Therefore people of vicinity of ancient monuments have donated materials for restoration and they themselves participated in repairs and restorations as well.

Continuity of Tradition
This system is still continuing from past in more or less. This is being used by the government Department of Archaeology in restoring buildings. When the department is starting conservation procedure of some ancient monuments, the people in that village participate in various ways such as donating materials, involving conservation works, and even giving foods for workers as well. In this manner Bikkus (Priest in temples) involve these procedures too.

Villages
Villages comprise of many timber buildings which are repaired and restored on a regular basis. Ancient Sri Lankan society has totally community based system. Community participation (We called “Shramadana” – literary called donate of self labour) is a very popular conception of Sri Lankan society. Ancient people were supporting each other of their special activities as well as day to day works without any compensation.

The most famous examples of this is farming. Traditional farming is very unique that they were followed rituals, customs etc, with all farmers in certain rice terraces. Every operation of paddy cultivation, gang of men – neighbors give their utmost support (self labour) for ploughing, planting and harvesting.
Community based system is also being used in repair and restoration of houses. The cadjan, straw and palmyrah thatching used in vast majority of ancient rural houses. The main problem of this kind of roof is less durability of roofing materials because of that there had been replaced in certain time periods. In this occasion of thatching, whole village participate with house owner without any compensation.

Case Study: Temple Associated Village Complex, Embekka Devala – Community Participation
A best example of community participation, interaction between temple / monument and village is shown in Embekka Temple, and village.
It is situated in Kandy district of central province. The Temple in Embekka is dedicated to the worship of popularly known as God Kataragama. Supposed to have been built during the Gampola period, 14th century AD, Embekke Devalaya is a monument par excellence of the Sri Lankan Architecture. It has been mentioned that a three storied devalaya had been constructed by Henakanda Biso Bandara, the queen of King Vickramabahu I with the assistance given by a drum beater of the village. Though there is nothing left of the construction, the devalaya and dig-geya with timber carvings and the pekada (Column heads) on eminently carved timber pillars and cross beams, built during the reign of King Rajadhi Rajasingha remain at the site today.
Embekka is unique, because it owns some of the greatest carvings in Sri Lanka. The carvings, which decorate the wooden parts of the drummers’ hall, as well as the “Vahalkada” (the entrance porch of the temple, which is said to be older) are some of the best examples of Sinhalese art. The roof itself has significant features. The rafters radiated above from a kind of wooden pin called “Madol Kurupa” which fixed rafters together.

**Temple Associated Village**

At Embekka, the temple associated village, consists of devala (temple) as a main property. It contained several religious components. An entire shrine complex is surrounded with a stone wall. There are six buildings called gate house, devala, image house, granary and kitchen situated in this premises with sacred Bo tree too.

Main temple is fronted by a long open hall called drummer’s hall with wooden pillars. A vahalkada or entrance porch provides access to the temple from main street. The atuwa or granary / rice store is situated facing the main temple. The secondary temple is located to the south of main temple. The depositary is located at the end of the main street from the entrance. The ruins of the Ambalama or Wayside Rest at Embekke can be found in a paddy field near the Embekke Devala. Though the pillars only remain at the site now, its history goes back to the time of the Embekke Devala.

This kind of building type Ambalama (Resting Place), played vital role in ancient Sri Lanka. This served as a meeting place for village functions, assembly of administrative needs, tax gathering, cultural performances, or a place where they simply exchanged gossip and talked politics.

The village is organized around a single main street, or vidiya, which is approximately 190 m long. Two pavilions relating axially to one another mark the ends of this street. At the west end is the wahalkada, the entry portal to the temple. At the east end is the depositary (rittage), the ceremonial reliquary.

The two side of the main street housed the high priest and staffs. The lands belonged to temple are distributed to the serfs whose houses also lined up the main street as allotments for specific services to be rendered to the shrine. The staff and serfs while depending on the crops of such land property had to provide services to the temple on an annual or regular basis.

In an ancient Sri Lankan Society, there was a traditional continued maintaining process exists from past for religious places. The King /Ruler or Shrine provides people to land property called devala village and these people’s state duty was to maintain, protect, temple and hold rituals, customs and various services.
Ancient Community participated Activities

Considering this particular temple environs, the Community of Embekka village can be divided into three categories such as functional, spiritual and aesthetic. Some people execute protection and maintenance, some group harvest for temple to provide grain, some people provides services and rituals, some are commissioning for arts and crafts. The community had done these kind of activities not only for state duty but also they believed that they would have been blessed by God. Therefore this tradition continually transferred from generation to generation. So that as this continuation of traditional act, the monument or temple was continuously cared.

**Functional Activities**

This kind of group has a responsibility of conducting maintenance, repairing, cleaning environments. For an example if there is any restoration to be carried out, they used their own timber logs which planted by their lands. Not only that paddy was cultivated for the temple and portion is stored in granary at temple. The income of these grains will be used for the temple functions.

**Spiritual Activities**

There are so many religious festivals held in this temple such as new rice festival, annual procession and blessing the newly born etc. In the annual procession held in July/August there are so many activities undertaken by relevant groups with their trades. In addition people come to the temple for advice and guidance in their present lives.

**Aesthetic Activities**

This village is most popular for wooden crafts and carvings in Sri Lanka. That kind of craftsmen and artists practice their trades still now. In this way craftsmen, musicians, dancers all owed goods and services to the temple in return their livelihood.

**Challenges**

Most of Sri Lankan living heritage monuments has tangible as well as intangible aspects. Due to past social system of ancient community, the tangible and intangible heritage have been well preserved. This temple associated village system, has faced so many challenges. The system existing from the past is being changed rapidly now a days due to

i. Open economy (change economic system)

ii. Mind change

iii. Urbanisation

iv. Current laws prevailing on conservation

In the past the temple governs the entire village and gave them houses and paddy lands, in return for services to it, but today temple’s collection has been greatly reduced and few villagers involved its operation.

i. **Open economy (change economic system)**

Introduction of open economy in 1980, the remarkable change happened to the social, economic and political system in Sri Lanka. It effected to life pattern, employment or trade and even meal pattern too.
ii. Change of mind
The younger generation left the villages for seeking jobs instead of doing traditional trades in village as done by their elders.

iii. Urbanisation
The villages are rapidly developed and urbanized therefore the agricultural and bare lands were converted to the Industrial and commercial purposes. Hence income can not be collected by the shrine.

iv. Current laws prevailing on conservation
Because of the prevailing act and laws for conservation, people are not allowed to attend maintenance or any other activities for any monument without supervision of relevant authorities. Therefore the people face difficulties, when they try to maintain or conserve their monuments as well as holding the rituals etc.

Conclusion
The connection between living religious heritage property and the community, has a powerful relationship. When this relationship disconnects the heritage property faces danger.
Mainly the conservator must understand the people and owners’ needs. Conducting public awareness program will help to educate the local community. Conservator always consider the tangible aspects of monuments. When intervening the living religious monuments, they should consider the spiritual values and intangible heritage too.

Conservator should always work with owner/people and also listen to their voices. If we can use community participated conservation process, local community can be properly managed.
Finally the community participation should be recognized and stabilized and as a conservator, it should be encouraged. In this way, we can get a chance to reduce the impact to the living heritage and therefore the heritage will be better protected and assured.

Bibliography
I. Background
The national intervention for heritage conservation in the west had started with an effort on setting out legal framework during the 18th and 19th century. Historical studies and the understanding of monuments had played an important role in establishing national identity at the birth of modern nation.

Two iconic persons in the conservation world of these times can be mentioned: an English writer John Ruskin (1819-1900), the one who advocated conservation and a French civil architect, Viollet-le-Duc (1814-1879) who supported and practiced in favor of restoration. It is not coincident for these two contemporary figures to be mentioned and remembered in conservation history.

Their footprints are still visible in the field even after hundred years since their deaths. Alois Riegl (1857-1905) who appeared next had developed the idea on the value of heritage dealing with new concepts of newness, present-day, and relative values. His perspective has extended the scope on the types of heritage values. With the development of science since the 19th century, a scientific approach has been introduced in the conserving heritage as well. However there are concerns to warn that we can fall into an almighty science due to the lack of scientific philosophy and ethics. Such concern is also equally applicable in heritage conservation.

As Cesare Brandi (1906-1988) argued, the constant training of philosophical thought is needed to determine the means of conservation. He himself could not avoid such problems in the conservation world, especially in the art conservation. He has showed a way of dealing with the problems of patina and lacuna, which are Italian terminology, in conservation.

The two problems of conservation, namely lacuna and patina, are important aspects to be considered not only in object conservation but also in the architectural conservation because similar change and loss are apparent in traditional villages and historic cities.

In particular, the understanding of the way how to handle such important issues can help conservators to preserve traditional villages with valuable cultural landscape.

Therefore based on my experience and knowledge, I herewith would like to briefly address such problems in the conservation of traditional villages with wooden structures in South Korea.
Furthermore, it is hoped for this presentation to provide readers a sort of inspiration about the conservation world.

II. Questions of the conservation world
South Korean has eight designated traditional village as a national cultural property so far. Several common problems are happened in the conservation of traditional villages. With a closer examination of these issues, anyone would be able to agree with that it reflects the current social problems.

Therefore the following questions are required to be revisited in terms of fundamental problems which involve the negative points or the vulnerability of conservation.

1. Are the key concepts of the world heritage understood properly in the conservation field?

The key concepts like authenticity, Integrity, and Buffer Zone, etc. are well known in the conservation field. Among them the architectural restoration practice seems to deal more with the terms of authenticity.

On the other hand, the terminology of Integrity and Buffer Zone was mainly used for the conservation of traditional villages of cultural landscape. At the same time it is mainly asked “the judgment of historic and artistic value” in the conservation site as well.

In particular, such judgment displays the level of understanding of heritage values and philosophical consideration. Accordingly, the judgment on historic and artistic values directly reflects the practical problem of Lacuna and Patina. More careful consideration is needed in the process of such judgment because the two problems occur in the historicity of time.

In the conservation of traditional villages, we tend to look at the distant past with generous perspective whereas the recent days in more strict one. Conservation architects in some cases tend to discard the near past in the restoration. They then would always pursue restoring distant past in the name of authenticity. At the end in worst case, they create an imaginary place which leads to distortion of...
The Yangdong traditional village, for example, had shown the typical misinterpretation on its values. Before being designated in the World Heritage List, the Cultural Heritage Administration decided to demolish a 50-year old modern church building in order to recover the lost authenticity and integrity of the village even though this church had had many meaningful stories related with modern history of the village life. For that in return, the new stealth building of church was built away from the earlier site. This case displays the case that the best judgment is not possible to be made if professionals, craftsmen and conservation architects have lack of skills in assessing values.

2. Does the World Heritage contribute to the preservation of the traditional village with cultural landscape?

It has been long that important traditional villages have been protected at the national level not only in South Korea but also in many other countries. The title of World Heritage in some cases, tend to be activator to make them a victim of regionalism and nationalism in spite of its positive enhancement of traditional villages. In particular, excessive financial investment and national interventions are causing some conflicts between small communities in the village.

Moreover, it could be an obstacle in implementing the sustainable conservation policy because it can discontinue the traditional decision-making process of the village community itself. And tourism is becoming popular instrument in reviving traditional village. Tourism in world heritage sites looks like the two side of coin with bringing out economical effect and social conflict.

The excessive intervention can change traditional spaces and life and it can leads to the loss of authenticity and integrity. Thereafter, it would not avoid bringing reconstruction project to the village for maximizing visitor’s experience. The enhancement of World Heritage, in particular, tends to be focused on the advocacy of nationalism and tourism for economic benefit in the region. The so-called Cleanliness which incidentally accompanied by the work of purism would be a high risk to damage cultural heritage and distort cultural landscape. Therefore it is necessary to think over patina and lacuna in conserving traditional village with cultural landscape.

Moreover, since such practice and process of managing them can bring a large impact on the sound development of history, we need to keep more careful attention on the decisions and judgments. When the unique and valuable meanings and messages that heritage deliver to us are misunderstood, the idea of and judgment in the conservation would become more confused.

3. Does it need a modified conservation theory in the conservation world?

The conservation of cultural heritage has been practiced in the institutional and legal framework of each country. Therefore, ideas of conservation tend to be presented by experts. However the final
shape of conservation tends to be determined along with the national intention. On the other hand, it is said that the voice of politicians and public administrators gradually can strongly affect to the decision. Although “conservation is fundamentally targeted to an existing”, sometimes the delusional conservation pursues to regain the lost past.

As nationalism and localism is emerging behind tourism, some politicians and administrators tend to focus on reconstruction projects and maintenance project of heritage.

Eventually the need for reconstruction is often considered as a priory in conservation, but unfortunately it is inevitable to include the story of our time as well. Only when it is indispensable to recover the lost material aspects for the sake of the survival of heritage and when it remains within the memory of the living people, reconstruction should be recognized as the legitimate method.

One of the example cases is the restoration project of Sungnaemun gate located in Seoul after it suffered fire destruction in 2007. In most other cases of the similar project as Sungnaemon gate, experts have tried to avoid the controversy of restoration project with using various terms of reconstruction, rebuilding, representation, etc at the beginning of the project. As a result of it, the restoration project became to be confused and unprofitable because of using mixed concepts in practice.

The evidence on that the changing landscape of the village are caused by the abuse of touristic approach can often witnessed everywhere. Previous gates which were opened to welcome visitors in traditional village houses are closed at present. New parking area has been built and restaurants, toilets, trash bins, and other facilities for tourists cause the fast change of the landscape of the village.

In particular, a change of landscape is being generated in accordance with the principle of supply and demand for tourism. However such changes should be examined more as contemporary risk than potential threat. The local communities’ opinion and their traditional ideas and live also tend to be excluded in conservation because it carries out by an authorized company with standard techniques than respecting local characteristics. Here we need more diverse way of thinking than static mechanism in conservation.
4. Can we against ongoing risks in the conservation world?

South Korea has been called as “Compressed society” achieved through rapid economic growth during the past half century whereas Western countries had experienced for a long time. The result of such experience leads along with the word “discontinuity of tradition” in conservation. And the term “recovery of the tradition” throws a kind of dark shadow in the conservation world.

Although the definition of tradition is not clear, it is commonly used in the conservation world and has a tenacious vitality. But here creativity is also needed in the field of restoration like that of the concept of tradition. In other words, the conservation world may ask creativity than fake tradition in near future at least, but it is accepted as a negative approach at present. In recent the fallacy of “traditional methods” became a social debate in South Korea during the restoration project of Sungnaemun gate. It became controversial issue because the loss of traditional materials and techniques had been recognized in common society.

Above all, the deep obduracy of the traditional ideas of conservation in spite of missing them must have been questioned completely. Finally the inconvenient truth about tradition was likely appeared at unwished place and time. On the other hand, there is a need to focus primarily on the basic elements that make up and decide them than to preserve each wooden structure in traditional villages as well.

Traditional villages face the problem of aged and solitary residents, empty houses, new residents, new construction, the change of social class (the collapse and reversal) and lifestyle, employment of urbanization, and etc. In order for them to cope with such problems caused by town hollow, we need to introduce carefully the changing elements from the outside world into traditional villages.

In order to examine inside these problems, it needs a form of “social movement”, which has become an indispensable element in the conservation world. Eventually it may be a destined role of conservation activists like John Ruskin had a strong personality as a social activist.

In recent the idea of vulnerable heritage to disasters has emerged in the changed society like traditional villages, and it is necessary to consider how we can deal with such issue in the conservation world. In particular, it has been understood that the vulnerability of traditional villages lies in the risk of fire, flood, and landslide. However the change of social structures makes traditional societies more vulnerable than such disasters.

In addition, the destruction of the landscape by insects, pine-wood nematode should be regarded as ongoing threats. In particular, since the pine mainly used as architectural material and part of landscape in South Korea, the problem of conservation of it can become more serious one, and sometimes it can be threatened seriously by unexpected matters.
III. Conclusions as a turning point

How far could we be honest in the conservation world? In order for traditional villages to cope with the new challenges and threats, more flexible thought than rigid one is required by creating new concept. Now a creative thinking is likely needed to preserve the cultural heritage. Probably this may also leads to reinterpreting on the existing conservation ideas. And this can be a turning point in the contemporary conservation. Nevertheless, such attitude is likely to be regarded as a passive idea in heritage sites and even as negative one.

Especially the constant review of authenticity will indicate a new methodology and possibilities in spreading creativity in conservation. Only through this new methodology, we are able to pursue a variety of conservation.

But at the same time, there is a need to evaluate various conservation theories that have been discussed in each region and each country. Some warning and signs in the course of limitless review on authenticity show us that the result of Nara document likely opened a Pandora’s Box in the conservation world and especially in thought of authenticity at least. Therefore it is necessary to review the unclear and excessive meanings included in authenticity of Nara document. If the concept of authenticity develops in this way, nobody can indicate its way resulting to the ambiguity in meanings in the field of conservation. Since such problems ultimately depend on the level of ethics and philosophy of stakeholders, education and training, it is absolutely necessary to think over in the conservation world. However the discussion on such perspective has not been made enough up to the present.

We tend to focus on dealing solely with the object when working with the conservation of single buildings in traditional villages. However, there is a need to consider how to accept changes in the traditional societies that make up the essential foundation in the conservation world. And we should be ready to evaluate the patina and lacuna in traditional villages in terms of tangible or intangible aspect. Also we need to recognize these challenges as a question of our time and to understand the cultural landscape with the various elements that exist in traditional villages.

Eventually these perceptions allow us to realize careless lost in traditional villages. There is the saying that “Lock the stable door after the steed is stolen(“亡牛補牢” in Chinese)”. Such can be happened in conservation field often. Unfortunately we are used to realize the precious value after losing them. Therefore, we should always be awake and keep communicating each other because nobody surely knows where conservation would go to.
Challenges for Protecting Wooden Cultural Heritage in Living Historic Urban Areas with a Cultural Landscape Approach: Challenges from India and Nepal

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The contemporary understanding of urban heritage has extended from single historic buildings to entire traditional neighbourhoods, urban morphology and associated socio-cultural activities. In fact, the living dimension of urban heritage in India and Nepal also includes space for fulfilling collective social and religious functions of communities. Therefore these open spaces have often stayed intact due to associated beliefs and practices, although the built fabric may undergo physical transformation. In many historic cities in India and Nepal, open spaces are widely used for religious activities. These activities and associated rituals and processions are crucial for the protection of historic urban fabric.

The world is passing through great urban upsurge. The number of people living in cities equaled those in villages in 2007 and is rising ever since. According to one study, 1.29 billion people would be added to our cities during 2007-25 and 48 cities in the world would reach density level of more than 15000 per sq. km. All of them are in developing countries especially in Asia. Such a rapid pace of urbanization has put urban heritage in India and Nepal under tremendous pressure and increased its vulnerability to disasters. Also many heritage structures have changed relationship to its urban surroundings both in physical and social terms due to transformation processes as well as social change because of immigration of people from small towns and villages. The essence of urban heritage is so closely connected to the local communities that social change also negatively effects the integrity of urban heritage defined by associated tangible as well as intangible values. Also resulting changes in the usage pattern is causing loss of intangible values associated with built form.

Another challenge in many historic centres that are engulfed by rapidly urbanizing cities in India and Nepal is that traditional neighbourhoods are abandoned as younger generation does not prefer to stay there due to poor infrastructure and services that are often out dated, overburdened and unmaintained and also since these are perceived as old fashioned and out dated. As a result the historic fabric is left to decay and slowly disappear only to be gradually taken over by builders who completely replace the historic physical fabric with contemporary structures with no link with the past. The issue of underutilized or abandoned urban heritage is also seen in many small and medium historic towns in India where people are forced to move to big cities in search of better livelihood opportunities thereby leaving the historic urban fabric to fall into disuse and decay.
It is important to mention here that larger urban planning process in India seldom recognizes the significance of small but culturally significant spaces in the city. As a consequence many of these places are lost due to new development projects. Take the case of Bangalore and Mumbai, where such spaces are disappearing at an alarming pace.

Internal densification of cities as well as planned as well as unplanned urban sprawl in fringe areas is also severely impacting land, which is a non-renewable resource, thereby affecting the local ecological systems as well as livelihoods of local communities that are often linked to the agricultural practices in the hinterland. In fact, there are plenty of examples to demonstrate how local traditional urban boundaries that were traditionally controlled through ritual paths and other practices are slowly disappearing due to urban pressure. Take for instance the example of Bungamati settlement in Kathmandu Valley, Nepal.

The eco-system based approach of historic cities also ensured adaptation to local environment and associated hazards such as floods. In fact there are plenty of examples to demonstrate that traditional settlements were planned and managed by living with risks associated with the place rather than merely resisting them. Take for instance the planning of settlements on the river island of Majuli in Assam, India where bamboo constrictions on stilts could be easily dismantled and rebuilt depending on the course of floods every year. Abandonment of these adaptable planning systems has only served to increase the vulnerability of these settlements to floods.

Historic cities when understood and managed with a cultural landscape approach ensured not only protection of their built fabric but also enabled their long term sustainability. However their protection and management would necessitate engagement of public as well as private stakeholders including local communities rather than mere preservation and control by official heritage custodians. Most importantly, it impresses upon the need to go beyond physical conservation of urban heritage by shifting from reactive to proactive planning, from static preservation to dynamic management of change and from mere physical Fabric to all aspects of living heritage.

Following questions need to be addressed in order to meaningfully protect and manage historic urban areas with a cultural landscape approach:

- What does today’s landscape and environment tell us about the area’s origins, development and character?
- Why has certain elements and characteristics of the area had a particular significance for the communities?
- Which heritage elements and characteristics are of heritage value, can they be retained and what is their tolerance to changes?
- How should the area’s heritage characteristics and resources be managed and developed through appropriate planning and development?

This calls for addressing the critical challenge of mainstreaming heritage in urban development process.
and aligning the heritage sector with other urban sectors such as land use planning, transportation, housing, infrastructure and services, environment and water, economy and livelihood, governance mechanisms and last but not the least, the social capital. This would require redefining and packaging of heritage concerns not merely as ‘elite artefacts’ but connecting them with the basic human need of improving the quality of life of inhabitants through regenerating traditional livelihoods and ensuring provision of basic services and protection of local natural resources. However this is a long term process and as a first step, existing stakeholders, policies and institutional systems should be mapped and gaps and opportunities should be identified and acted upon.
Two Townscapes That Constitute Part of the World Heritage Site “Iwami Ginzan Silver Mine and Its Cultural Landscape”

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Introduction
Japan has many historical towns with high cultural value, representative of which are the 100 or so locations designated by the national government as Important Preservation Districts for Groups of Traditional Buildings.

Towns and villages consist of buildings combined with fences and pathways, as well as greenery, trees, rice paddies and farmland. They are also inseparably connected with water bodies ranging from ditches to rivers, and, in some cases, the sea, while many of them have forests and mountains behind them. These elements, coupled with wooden structures, constitute unique local landscapes.

The designation of Important Preservation Districts for Groups of Traditional Buildings is a legal system designed to protect all these elements. The municipalities where the Important Preservation Districts for Groups of Traditional Buildings are located also enforce local ordinances to preserve and improve the landscape elements that are not covered by this legal system. Some of these municipalities preserve the local landscape under a residents’ charter established with the consent of local residents or through agreements between residents and businesses.

The site of Iwami Ginzan Silver Mine is comprised of fourteen locations where the unique characteristics of this historical site are well maintained and where residents are involved in the preservation of the local environment and landscape. I will focus on two districts: the Omori-Ginzan district, an old mining town; and the Yunotsu district, a port and hot spring town. I will discuss their current situations, ongoing efforts for the protection and repair of their historical assets, their association with landscape preservation, and the participation of residents in these efforts.

Though small in area, these two districts are an integral part of the history of the silver mine, which spans over 400 years, and the natural environment that is comprised of mountains, rivers and the sea. Here, efforts have been underway to achieve positive relationships among all stakeholders, including residents and governmental officers.
1. Omori-Ginzan Important Preservation District for Groups of Traditional Buildings

Year of designation by the national government: 1987
Year of additional designation by the national government: 2007
Area: 162.7 ha
Population in the preservation district: 345 people (159 households)

<table>
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<th>Omori-Ginzan District</th>
<th>No. of designated properties</th>
<th>Traditional buildings</th>
<th>264</th>
<th>No. of properties that have been repaired/renovated</th>
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The Omori-Ginzan district, which is comprised of the towns of Omori and Ginzan, began its development in the sixteenth century as a settlement of people engaged in silver mining and other related occupations. In this district, many traditional buildings still exist along the valleys.

The full-scale development of Iwami Ginzan Silver Mine started in 1526. In the early days of its development, towns were formed around mountains hosting silver deposits. From a pictorial map from the early seventeenth century, we can see that Ginzan Town had already enjoyed considerable prosperity by the end of the sixteenth century.

In the early seventeenth century, Iwami Ginzan Silver Mine was placed under the direct control of the Edo shogunate. The government fenced off the site where the entire silver production process was carried out from mining to refining, and regulated the access of people and goods to and from the site. (This site is called Sakunouchi, meaning “inside of the fence.”) Omori Town was formed in the area that bordered the fenced site on the north.

With the passing of time, Omori Town became prosperous as the seat of regional government, and took control of Iwami Ginzan Silver Mine and more than 150 villages around the mine throughout the Edo period.

Though most parts of Omori Town were lost in the great fire of 1800, we can still see how the land was used in this town in the early modern period. The town retains many historical buildings, most of which were built after the great fire, including the former magistrate’s office, residences of local and town officials, merchants’ houses, and inns, and they are part of the lives of local residents still today. On the other hand, Ginzan Town rapidly declined in the wake of the closure of the mine in 1923.

Today, there remain only a few traditional houses in the town, though boundary lines such as stone walls are well preserved, and remains of tombs and mine shafts are seen dotting the mountain bases.
2. Yunotsu Important Preservation District for Groups of Traditional Buildings

Year of designation by the national government: 2004
Year of additional designation by the national government: 2009
Area: 36.6 ha
Population in the preservation district: 304 people (140 households)

<table>
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<th>Yunotsu District</th>
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<th>No. of properties that have been repaired/renovated</th>
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Yunotsu is a port town with hot springs, which prospered as an outer port for Iwami Ginzan Silver Mine from the late-sixteenth century to the seventeenth century. From here, goods were transported to the silver mine; and the hot springs were visited by many people, including writers and artists.
Yunotsu Town is located along a valley with rocks on both sides, which extends from Yunotsu Bay. The original land-allotment and land-use patterns that are compatible with the natural terrain are well preserved today. Due to the narrowness of the valley area, residential lots, roads, stone steps, and caves were created by open-cutting and processing rocks at the back of each site.

Historical buildings that remain in Yunotsu Town today were built after the great fire of 1747. These buildings include mansions, storehouses, Western-style houses, three-storied wooden inns, temples and shrines, as well as a variety of folk dwellings, which date from the late Edo period to the early Showa period. They are well preserved and tell us how this town changed over these periods.

The basic configuration of the town consists of roads, a river and water channels and remains unchanged from that shown in the pictorial map of 1692. Near the port, we can still see the remains of large premises of prosperous marine transport wholesalers, while the eastern part of the town has a concentration of hot spring inns and bathhouses. Such a configuration and land-use pattern together constitute the unique historical landscape of Yunotsu Town, which enjoyed prosperity with hot springs and marine transportation business as it was closely associated with Iwami Ginzan Silver Mine.
3. Repair and landscaping: 2012
(1) Omori-Ginzan district

i) Main dwelling part of the house of the Kawakami family KoE22. Repair: Two-storied wooden building with a gable roof covered with sangawara tiles, and with a hirairi-style entrance (entrance on the non-gabled side)

In consideration of its structure, the building was repaired to maintain the condition based on the photograph of the front of the building taken in 1973.

ii) Storehouse of the Kawakami family KoE22. Repair: Two-storied wooden building with a gable roof covered with sangawara tiles, and with a tsumairi-style entrance (entrance on the gabled side)
iii) Annex to the house of the Kawakami family KoE22. Repair: One-storied wooden building with a gable roof covered with *sangawara* tiles

![before_after](image)

iv) Front gate of the Machinami Community Center SiW1 (Non-designated building). **Landscaping: Wooden building**

Landscaping was carried out as part of the renovation of the former Omori District Court building (constructed in 1890) into a community center.

![before_after](image)

(2) Yunotsu district

i) Main dwelling part of the house of the Asai family. Repair: Nakamachi (NS-11) Two-storied wooden building with a roof covered with *sangawara* tiles (Total floor area: 80.23 m²)

The building was restored to the condition shown in a photograph of the early Showa period.

![before_after](image)
ii) Annex to Nogawaya Inn. Repair: Nakamachi (NS-09) Two-storied wooden building with a roof covered with sangawara tiles (Total floor area: 97.92 m²)
The building is thought to have been constructed in 1911. It is still used to accommodate guests.

iii) Barn of the Ito family. Repair: Yumachi (YN-21-03) Two-storied wooden building with a roof covered with sangawara tiles (Total floor area: 51.70 m²)
The barn is located behind the main dwelling part of the house of the Ito family. Its exterior is designed like a traditional storehouse. Today, the first floor of the building is used for storage and as a laundry space, and the second floor as a drying space.

4. Principles and procedures for preserving and repairing traditional buildings

(1) Traditional dwellings, constructed between 1800 and 1950, are restored to their original states in principle. When building new dwellings, they are designed to harmonize with the surrounding landscape, but we will not reproduce the entire town as it was in the Edo period.

(2) Preservation is limited to the protection and maintenance of the structures and exterior appearances of buildings but without diminishing their historical significance. Municipal officers make a plan for the repair of each building to ensure that the building keeps its original identity, whether as a samurai’s residence, a merchant’s house, or a store. Repair work is undertaken by private contractors using traditional materials and traditional construction methods. For new landscaping, traditional materials are also used as much as possible.

(3) Prior to repairing a traditional building, details about its original state are made clear by means of itazu (a floor plan drawn on a piece of board), old photographs, and interviews. The records of repair are published in a summary report.
5. Importance of creating a harmonious landscape

Towns and villages consist of buildings combined with fences and pathways, as well as greenery, trees, rice paddies and farmland. They are also inseparably connected with bodies of water ranging from ditches to rivers, and, in some cases, the sea, while many of them have forests and mountains behind them. These elements, coupled with wooden structures, constitute unique local landscapes.

The designation of Important Preservation Districts for Groups of Traditional Buildings is a legal system designed to protect all these elements. The municipalities where the Important Preservation Districts for Groups of Traditional Buildings are located also enforce local ordinances to preserve and improve the landscape elements that are not covered by this legal system. Some of these municipalities preserve the local landscape under a residents’ charter established with the consent of local residents or through agreements between residents and businesses.

Specific measures taken are as mentioned below.

1. Buildings adjacent to traditional buildings are not always open to the public. For this reason, outdoor information signboards are not installed, with the exception of stores.
2. Bank and post office buildings are designed to harmonize with the folk dwellings in the vicinity. Materials reinforcing buildings and ATMs are covered with natural materials to screen them from public view.
3. In principle, traditional buildings are restored to their original states based on itazu floor plans or other drawings. Information about the original state, if insufficient, is supplemented by old photographs and interviews. Repair is carried out with traditional materials used in the first half of the twentieth century or earlier using traditional construction methods.
4. Electric wires are buried underground and roads are re-paved with asphalt without painting white lines on them. Ditches are repaired with stones and other original materials as much as possible. Even if the addition of new materials is required, natural stones are used in the places that are visible to the public.
5. When repairing roofs, new tiles have to be used, because current construction methods do not allow old tiles to be laid over the entire roof. However, the edge of eaves is always laid with old tiles.
6. Farmland and forests at the back of buildings are not altered except for the purposes of farming and management.
7. To repair bridges, wood and stones are used in the exposed places, and reinforcing materials are provided in places hidden from public view.
8. Modern structures such as fire hydrant cabinets, air conditioners, ground electric equipment, and electric meters are placed in wooden boxes.
6. **Awareness, participation and cooperation of local residents**

(1) All the residents of Omori Town have joined a local group established to preserve cultural properties since 1957, and the group continues to this day.

(2) Another local group established to promote tourism has joined efforts to preserve cultural properties.

(3) The decline of the mining industry led to depopulation and many houses were abandoned. Upon the designation as Important Preservation Districts for Groups of Traditional Buildings, however, people came back and new residents also settled in these districts, attracted by a government subsidy that covers up to eighty percent of housing renovation costs, though the
coverage is limited to the repair of housing structure and exterior appearance.

(4) Businesses and NPOs located in the Important Preservation Districts for Groups of Traditional Buildings pay for renovation of abandoned houses. Renovated houses are used as company houses or offered for rent or sale.

(5) Temples that no longer have chief priests of their own or danka (supporters) are being restored and maintained with donations of local residents and government subsidies.

7. Impacts of the designation as a World Heritage Site on the local cultural properties and towns

(1) Before the designation, this area was visited by 100,000 to 200,000 tourists a year. After the designation, the number of tourists increased to 800,000 to 1,000,000. (Today, this area receives around 500,000 tourists a year.)

(2) The designation also caused various problems such as tourists entering private houses; residents feeling uncomfortable about hanging their laundry out; tourists speaking loudly; an increase in garbage; and traffic congestion.

(3) To address these problems, residents act in the following ways.
   i) Residents meet with governmental officers to discuss solutions.
   ii) Residents and the government act in collaboration to take various measures (e.g., controlling traffic, providing places for tourists to rest, and putting up “No parking” signs.)

(4) Workshops and the Iwami Ginzan Collaboration Council were established to involve all residents in discussions and exploration of solutions.
   - The existing harmony among the historical heritage, nature and living environment should be protected.
   - To this end, the Iwami Ginzan Action Plan was formulated, defining the roles of residents and the government and cooperative actions to be taken.

(5) The most effective of all the solutions was the introduction of a Park and Ride system and a Park and Walk system.
   - The introduction of these systems was effective in limiting the number of buses entering the districts; reducing visits by private car; and allowed for one-way traffic in the districts.

(6) Residents established a charter on their own to make clear the philosophy that cannot be defined by laws, ordinances or regulations.

Charter of Residents of Iwami Ginzan Omori Town
This town is a place for us to live.
As residents of this town, we take pride in our town as one of the best in the world.
We will continue to live in this town and hand down community ties and the heritage of Iwami Ginzan Silver Mine to future generations.

Towards the future, we will strive for the following:
1. Protect the local historical heritage, remains, and nature
2. Enhance the local environment for safer and more comfortable living
3. Build a community that is both tranquil and lively
The World Heritage designation resulted in a rapid increase of souvenir shops, restaurants and cafes that open temporarily and are aimed at tourists. As their business practices cannot be effectively restricted by regulations, residents take an initiative to call for good business manners as shown below.

Basic Concept of “Business Manner in Omori Town”
1. As depopulation is a serious issue in Omori Town, both employers and employees are encouraged to live in the town area so that the opening of a new store could be followed by a population increase.
2. As members of the community, both employers and employees are encouraged to have rich communication with the local residents.
3. As it is a business that exists within the Iwami Ginzan Silver Mine site, both employers and employees are encouraged to participate in preservation activities.
4. In any business activity, please pay full attention to the environment (natural and living) and landscape.
5. Each store is encouraged to develop and sell its own attractive products and goods with originality and philosophy.

At an elementary school in the Important Preservation Districts for Groups of Traditional Buildings, a group of children named the Junior Association for Preservation of the Iwami Ginzan Site was established in 1969. This group has since continued activities to deepen understanding of local cultural properties and preserve them.

In the wake of the designation of Iwami Ginzan as a World Heritage Site, the group has further deepened their learning, focusing on studying at school, learning with residents, tour guiding, and reviewing their experiences at school.

At local junior high schools, students are engaged in inquiry-based learning to make a comparison between shrines that have been restored and those with obstacles regarding their restoration. The results of their learning are made public through presentations at school meetings or by other means.
The majority of historical buildings in the Kathmandu Valley are brick structures with timber doors and windows, timber interiors and roof frames. The dominant roof type, best illustrated by the well-known multi-tiered roofs of pagoda temples, are typically covered with timber planking, a mud bed and diminutive interlocking tiles. Wood carvings of the pagoda temples constitute one of the richest and most characteristic expressions of Nepalese art. Thousands of images on the doors and windows, opening frames, niches, pillars and struts contribute to a complex, sometimes inscrutable and often unique iconographical program.

There are no structures made entirely of wood, but wood is one of the basic materials used in Nepalese traditional architecture. There are two types of wood that are used widely: sal wood (a very hard wood, similar to teak; Shorearobustain latin) which is used for decorative and structural members, and pine which is used for regular uncarved members. In some places magnolia has been used as well, mainly for small decorative members.

The main reason for the deterioration of these buildings is water penetration from the roofs, due to faulty historical detailing and put to a difficult test each year by three months of heavy monsoon rain. Once minor damage takes place on the roof, the cycle of deterioration is remarkably speedy. A small leak leads part of the roof structure to collapse, and the masonry and timber structure, left unprotected, is structurally compromised within a few years. Thus the first priority of a restoration project is to implement targeted roof repairs that guarantee the survival of the historic fabric and prevent the need for large-scale reconstruction in the future.

Conservation Challenge
We should not ignore the fact that, in Nepal all the monuments are living monuments that are used by people from the local neighborhood as well by the public at large. They are managed by local people and most of the time even repaired and rebuilt by the community with widely varying levels of conformity to international conservation conventions. Most of the time people do not respect such conventions. Historic materials are often replaced with modern materials such as cement concrete, and historic woodcarvings are often discarded in favor of new ones. This is done according to the traditional practice of giving votive offerings to the monument and the deity housed within it. Charitable offerings made for religious merit take place at many scales in Nepal, ranging from the offering of small gifts to building substantial additions and even reconstructions. This has been happening for centuries. However, today such offerings pose a threat to traditional materials and
techniques. For most caretakers of historic monuments, the religious conception of a living monument is more important than an antiquarian appreciation of its materials. Modern materials are seen as the most durable option. This is why monuments tend to get modernized once people have the financial resources to intervene.

But in the West it is mostly not active monuments (I called it dead monument, except some churches, even some of those are under government management), controlled and manage by government - normally people are not attached sentimentally to those monuments, they have to follow the guidelines. So they are well maintained as well easy to apply rules. People visit those places as a museum. But in Nepalese monuments, there are more worshipers/ devotees than visitors - this is the different between western culture and eastern culture. Every year there will be more and more devotees, obviously will increase in numbers means more damage. How one can stop the living tradition?
**Reusing damaged historic elements**

I am sure we won’t disagree by reusing existing historic elements with some cleaning, repair or structural reinforcement or consolidation, if necessary, is the best way of preserving the any of historic elements. We believe more to save as much as historic patina. This is also the most simple way as well economic way to conserve and satisfy all kinds of international charters we used to take reference for historic preservation.

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**pic 4. Radha Krishna Temple, Patan Durbar WHS. 17th cen.**

One of the struts was broken in three pieces, when roof was collapsed. They were joined with copper wires and fixed to the timber board at the backside with stainless steel bracing to hold load from the roof, since this is one of the structural timber member of the roof structure. Photos: 1993.

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**pic 5. Left and Middle: ItumBaha, Kathmandu. 11th cen.**

The upper and lower parts of this corner strut were damaged due to wet rot. Damaged sections were recarved to fit on original strut and installed on monastery. Photos: Thomas Schrom, 2003.

**pic 6. Right: Radha Krishna Temple, Patan Durbar WHS. 17th cen.**

This Bhairav strut was recovered from debris during the restoration of Radha Krishna Temple. It had been replaced with plain timber strut in last restoration in early 70s because the head was broken. The lost upper third (head of the deity) was recarved based on other comparable struts to complete the strut and place it in its original location. Photo: 1993.
This Bhairav strut was recovered from debris during the restoration of Radha Krishna Temple. It had been replaced with plain timber strut in last restoration in early 70s because the head was broken. The lost upper third (head of the deity) was recarved based on other comparable struts to complete the strut and place it in its original location. Photo: 1993.

In Nepali culture we don’t worship damaged or broken images (main idol in the temple), since they are considered inauspicious. Similarly, people do not want to reuse broken or damaged elements when an old building is restored. Historic preservation is not valued in the context of living monuments. When people repair monuments or even their houses, no interest is shown to preserve historic elements or patina. The culture lacks the kind of romantic attachment to the historic fabric and to old worn out surfaces. People tend to prefer newly carved, sharp-edged details. In many occasions historic carvings are replaced with new ibes, even they are structurally sound. In fact, when an upper layer was chipped off from big wooden section to replace the outer layer in Santaneswor Mahadev Temple (pic. 2), the temple was structurally weakened. In some occasions, even if the government wants to preserve historic elements, there is pressure from local community and sometime even political pressure to replace them with new elements.

People prefer to rebuild a whole monument rather than make small repairs, regardless of funding. During the past two decades of observation, I have found that financial resources are more damaging to historic fabric. People often make the argument that they do not have enough funds to preserve historical monuments due to the expense of wood and unavailable of the proper craftsmen. However, this is a ready-made answer that belies the fact when the same people have enough money for preservation they prefer to undertake a complete rebuilding. In other words, cultural attitudes towards historic materials are clearly at odds with accepted international conventions of monument preservation.

pic 7. Mul Chowk doorways, Patan Palace. 17th cen.
This doorway was unused for past few decades and had been closed with brickwork. The ground level was higher and the lower sections had been badly affected by rot. Rotten sections were replaced with new members and the missing crown of the door was recarved to complete the door based on the other remaining door.
Leave Plain or Reduced Carving

What I feel personally is this the easiest solution, no need to do any research or investigation, just put plain piece of wood where ever any element is missing. Of course this makes everybody’s life easier, also make satisfied western vision of conservation that following international norm or charter.

While we are working in RadhaKrishan Temple in Swotha, Patan Durbar WHS (in 1992-93 one of KVPT’s first project), we did face lots of pressure from local people to produce replicas for all the lost wooden elements. Most of the lost wooden elements were from the ground level, built in wall, were already stolen and filled with brick works to cover the broken hole on the wall. We have investigated and interviewed about the lost images with many local people, no one could tell the exact image even they have seen all their life. Even the argument between them are inconsistency, but still want to fill with carved pieces. When we interviewed numerous people, such as priest, carvers, and religious historians in an effort to determine what figure would be appropriate. Some how we came to know from historians/ iconographist basic information, but no one could able to tell the details. So we decided to leave plain.

After long conversation we were able to convince local people to keep neutral carving where ever we have typical carving without images. But areas with images, not typical as on other sides, which was close by brick work after images were stolen, replaced with plain timbers. After this project by KVPT, in many of the project adapted this principal as restoration standard. But in some places mostly by the local community, in funny way without any logic and explanations.

Left: Many of new panels and niches left uncraved as there were no historic evidence of the lost images. Photo: 1992.
Right: New blind niche.
To complete all the wall elements, new blind niche reproduced based on other sides. Main sculpture in the middle left plain, because not easy to identify the god, but rest of the regular typical carving were carved to match remaining niches. Photo: 1992.
pic 9. Ibahabahi, Patan.
Missing wooden cornices were replaced with plain.

“The new cornices were not decorated with carving for two reasons: the replacement motifs on the existing cornices were difficult to define and therefore not clear enough to serve as models for new carving, and it was decided leaving the new members plain and unadorned would make it easy to distinguish them from existing older members reused in the restoration. Where new balusters were required, they were patterned on those still found to exist on the balcony of the first floor of the main facade of the east wing. Where possible, existing coping was refurbished and reused or replaced by new coping where this has been lost.” Takayuki Kurotsu, Nippon Technical Institute. 1998.

pic 10. Left: Mahadev Temple, Panauti. Local comparables.
In the replacement strut made by the community, upper foliage was copied from other remaining struts from same temple; main area of the struts, middle part left plain; and on lower part on the left strut just used the overall outline of the figure and on right strut carved outline of the figure. Photo: 2004.

The replacement for the lost 15 cen. blind niche renders the new element on the right side, so that it looks time worn like the surviving mirror image. Photo: 1998.
Recarving of the Lost Carvings

For the western conservationist considering reproducing of copy of a lost original element, the amount of documentation is the critical determination. Moreover, the accepted rule is that one should not go beyond the point where conjecture begins to influence the restoration design. But in Nepalese monuments, built in brick in mud mortar and timber structure cannot be kept open to the long monsoon. So there is no way to preserve, maintain in the same physical condition as when it was received. So roof cover is most essential to preserve Nepalese monuments, and to hold the roof with large overhangs, struts are main structural members.

So here I want to mention the struts from Sulima Temple in Patan, which was restored by KVPT in 1997-1999. Before that in 1994 a local repair initiative erected scaffolding and even started to carve replacements and proposed replacement of all the time-worn 600 year-old carvings with new carvings. Somehow we always face the challenge to convince local people to conserve historical elements. Normally this is always a big debate to make people understand why it is important to preserve old elements, while taking into account their own beliefs and ideas.

Struts always visually jump out from the facade when they are left uncarved, and because this is the main element, it is very noticeable. Replacing damaged struts with uncarved ones is thus problematic. The Western practice of non-intervention, freezing time, is also not an option, since the timber elements are structural elements carrying roof load. Even using some neutral contemporary carving interferes with the temple’s historic appearance.

Most of projects always make new carvings, if the original carvings are lost. Most of the time this is not based on evidence or any other documents but simply on either the donor’s wish or carver’s opinion. Often, it is not just missing elements that are replaced with new replicas. Even plain timber
elements are found replaced with new carvings, a practice I used to call “beautification.” This happens quite a lot during some official event or important state visits.

Nepal is unique in that craftsmanship still exists and is still practiced at a very high standard of quality. This is what enables the fabrication of good replicas in instances where other options are not possible. It also helps that there is extensive historic documentation that can be used as evidence, particularly photographs taken by art historians of just about every temple in the valley. In the case of Sulima, we had varying amounts of information about the sixteen lost struts, the eight figurative struts at each of the upper and lower roofs. The four historic corner struts of a different design depicting mythological horses survive on both levels. For the lost struts we could determine their overall size from site measurements.

The question arises, is historical evidence enough? The answer is always no, because some of written sentences about description of lost elements often have inconsistencies and even photographs cannot depict the detail and depth of carvings. The fact is that the replicas do not aspire to be exact copies, but they do require a great deal of research and study that often takes as long as the actual carving of the replicas. We don’t want to claim that the replicas are perfectly carved as historic. They are carefully crafted replicas.

While working, we thought that one approach would have been to reproduce only those struts for which we had the highest quality head-on photographs and to leave the rest plain. The fortunate presence of the craftsmen able to achieve convincing artistic reproductions was critical. We noted that our carvers, working from the two upper original roof, could produce carvings of great beauty. Those
made from photographs were beautifully placed a greater artistic demand on the carver as he had to translate the image from two to three dimensions. While supervising the carving of the new struts, there were dozens of instances in which lack of clarity in a photograph or subtle questions of artistic judgment came into play.

After months and months of close collaboration with the carvers, we learned a simple lesson about historic recreation: conjectural design and subjective decision are unavoidable no matter how much historic evidence exists. It was very important to document examples of this process because so much literature in the field of preservation treats only the scientific and objective designs methods, not the practical issues. (these issues are discussed in detail on “The Sulima Pagoda, East meets West in the Restoration of a Nepalese Temple”. Edited by Erich Theophile and Niels Gutschow).
In some occasions new replicas were produced based on remaining historic elements, especially repetitive decorative elements, not images (images are never repetitive). But in most cases replicas do not match originals unless well-trained craftsmen are involved, with proper supervision. Since such details are normally hard to notice by unskilled eyes, they are often disregarded.

At first we followed western principles, as we learn from different literatures and international philosophy of conservation, international charters and norms. We also left most of the unidentified missing wooden elements plain, rather than making conjectural reproductions. But after working with craftsmen we realized that we still have craftsmen who are able to produce same quality as existing historic elements. Not to employ such craftsmen is to reduce their work and perhaps contribute to its future disappearance.
During the restoration of Sulima Temple, a project designed and produced for mock up three strut replacement options: an uncarved strut, neutral reduced design and reproduction based on historic photograph. Left: a surviving historic corner strut is flanked on the left by copies of lost originals and plain strut on the right side. Right: using decorative (reduced design) instead of plain strut. Restored by Kathmandu Valley Preservation Trust, 1997-1999.

One of the original roof struts was carefully documented in rendered and line drawings. The line drawings were glued on raw timber to guide the wood carver. Preparation of drawings took as long as the carving of reproductions.

Master carver in his workshop carving one of the struts from Sulima Temple. There is no school to learn such craftsmanship: it is transferred from generation to generation. One can say these particular skills are in their blood.
Conclusion
International practice always advocates the ideal freezing of a building in time, where tradition societies - feeling no such distance from a building or its evolution - remain ever ready to add to, modify, or even replace the building according to their present need. The application of international historic preservation principals or norms in Asian context is always a issue for discussion. Among other questions is a concern that the intellectual and modernist underpinning of western approaches to the historic buildings may not be appropriate to living cultures, where traditional values, building practices, techniques and craftsmen survive. Working in this field for more than two decades, I personally feel making a new replica of missing wooden carved elements are acceptable in our context, if there are evidences available, with minimal intervention to the building, and make the elements distinguishable on close inspection from the original. In the field of art restoration of damaged areas in the paining is sometimes acceptable, so why not in buildings?

Bibliography


The Sulima Pagoda. East meets West in the Restoration of a Nepalese Temple. Edited by E. Theophile and N. Gutschow.


Mr Rohit Ranjitkar was suddenly not able to participate in the Conference. We print his paper for reference with his consent.
III. Recommendation
Conclusions of International Conference 2014
“Revisiting the Philosophy of Preserving Wooden Structures:
Cultural Landscape with Wooden Structures and Local Communities”

1. The year 2014 marks the 50th and 20th anniversaries of Venice Charter and Nara document on Authenticity respectively, two important documents used by the international community to guide the safeguarding of cultural heritage. However, recognizing the complexity and increasing challenges on one hand and the need to respect cultural, regional, geographical and typological diversity on the other hand, ‘revisiting’ some of the existing ideas and developing more guidance and tools for effective conservation and management of our heritage is considered timely. The participants congratulated WHITRAP-Shanghai and ACCU Nara for organizing the International conference ‘Revisiting the Philosophy of Preserving Wooden Structures: Cultural Landscape with Wooden Structures and Local Communities’ held in Shanghai from 16 to 18 December 2014.

2. The participants highlighted the need to conceptualize and characterize wooden heritage in a more holistic manner. By recognizing wooden heritage as cultural products exemplifying the combined works of humans & nature often defined by spiritual relationships, which also signal the inherent processes of continuity & change and interaction among communities, participants viewed them as cultural landscapes. This holistic approach for wooden heritage extends beyond currently used definitions.

3. Considering the regular repair, maintenance and replacement as key ingredients which necessitate persistent engagement, application of knowledge and utilisation of natural resources through collective efforts, participants agreed that consistent community presence as empowered stakeholders in decision making be considered ‘sine qua non’ (essential) for the sustainability of wooden heritage.

4. Participants further agreed that the communities have mastered the knowledge, skills and techniques required for interaction with nature in utilising the available resources and providing contextual, sustainable and disaster resilient solutions for maintenance and development of wooden heritage. These important intangible aspects of wooden heritage were well established and time tested but either disappeared or got neglected in many countries. However, presentations revealed that they are still extant or recoverable particularly in the East Asian countries, where wood is a dominant feature of cultural heritage.

5. Distinctive character of each cultural landscape and its wooden heritage depends much on its own indigenous designs and techniques. In the process of maintaining or enhancing such built elements of a cultural landscape, more attention should be paid to keep the diversity and uniqueness of knowledge inherited by the local community, in particular the skilled craftsmen.
6. Proactive planning using heritage legislations as well as other planning instruments are required to capture physical, social, economic and ecological dimensions of cultural heritage; both as tangible and intangible products as well as dynamic processes that are related to livelihoods and social activities and to promote their utilisation to ensure their continuity for the benefit of contemporary users

7. The reference to communities also highlighted the need to place due emphasis on providing livelihood opportunities for the local communities thereby ensuring the proactive role of heritage towards sustainable development. It is recognized that reciprocal benefits to both heritage and communities should be the aim and final outcome of all heritage management processes. Conservation or repair techniques should provide practical, economical and sustainable solutions for those engaged in care of their own places which are part of or within the domains of cultural landscape

The participants revisited wooden heritage and suggested conceptualizing it as cultural landscapes and based on this approach, recommended the following proposals for further documentation, research and outreach:-

a) Contemporary principles and approaches developed by the countries including critical review of them to understand shortcomings if any in the region

b) Traditional and established knowledge, skills and techniques including a critical review of their applicability in a changing and globalizing society.

c) Existing and creative approaches to improvement of livelihood of communities linked to wooden heritage

d) Management systems, both formal and traditional, for the protection of wooden heritage as cultural landscape and introducing and strengthening them where needed.
IV. Appendix
1. General Information on the Conference

International Conference 2014
“Revisiting the Philosophy of Preserving Wooden Structures:
Cultural Landscape with Wooden Structures and Local Communities”
(16 –18 December 2014, Shanghai, China)

1. Organisers

This conference is jointly organised by the Agency for Cultural Affairs, Japan (Bunkacho); Asia-Pacific Cultural Centre for UNESCO; National Institutes for Cultural Heritage, National Research Institute for Cultural Properties, Nara and Tokyo; WHITRAP Shanghai under the auspices of UNESCO; Shanghai Tongji Urban Planning and Design Institute; and College of Architecture and Urban Planning, Tongji University in co-operation with International Centre for the Study of the Preservation and Restoration of Cultural Property (ICROM), JAPAN ICOMOS National Committee, and the Japanese Association for Conservation of Architectural Monuments (JACAM).

2. Background and Objective

International Conference 2014 is the second in a series which began in December 2013, held once every year, under the general theme of “Revisiting the Philosophy of Preserving Wooden Structures”.

At the first conference, we discussed how wooden structures had been restored; especially the changes in the philosophy of preserving wooden structures and restoration methods for preservation after the formulation of the “Nara Document” in Nara in 1994. Cases of individual buildings were given as examples.

This year, rather than looking at individual buildings, we will focus on groups of buildings, such as town streetscapes and villages, and the surrounding environment. We will facilitate discussions on their relationship with the local communities that play an important role in preserving the landscape with wooden structures.

3. Dates and Venue

Dates: 16 to 18 December 2014
Venue: 3rd Floor, Wenyuan Building, Tongji University, Shanghai, P. R. China, and others

4. Schedule

Day 1  Tuesday, 16 December
09:00- Opening Session
09:30- Keynote Speeches I-III
13:30- Case Study Reports I- III

Day 2  Wednesday, 17 December
8:00-18:30 Participants visit Tongli Town and Pingjiang Historic District, Suzhou City
Day 3 Thursday, 18 December
09:30- Case Study Reports IV-VII
13:30- Summary of the Conference
13:30- General Discussion
16:30- Closing Session

5. Working Language

The working language of the conference is English. Simultaneous interpretation between English, Chinese and Japanese will be provided.

6. Financial Arrangements

The organisers will provide each of the participants with:
1) Travel expenses: A round trip air ticket (economy class) designated by the organisers between the international airport nearest to the participant’s residence and Shanghai International Airport.
2) Accommodation and meals for the duration of the conference.

7. Correspondence

All enquiries and correspondence concerning the conference should be addressed to:

❖ ACCU Nara Office
   Cultural Heritage Protection Cooperation Office,
   Asia-Pacific Cultural Centre for UNESCO (ACCU)
   Nara Pref. Nara General Office
   757 Horen-cho, Nara 630-8113 JAPAN
   Tel: (+81) 742-20-5001  Fax: (+81) 742-20-5701
   E-mail: nara@accu.or.jp

❖ WHITRAP Shanghai
   World Heritage Institute of Training and Research for the Asia and the Pacific Region under the auspices of UNESCO (Shanghai)
   3F Wen Yuan Building, Tongji University
   No. 1239 Siping Road, Shanghai 200092 P.R.CHINA
   Tel: (+86) 21 6598 7687  Fax: (+86) 21 6598 2507
   E-mail: y.qu@whitr.org
2. Schedule of the Conference

**Day 1** (Tuesday, 16 December)

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<td>Opening Session</td>
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<td>09:30-10:15</td>
<td>Keynote Speech I: Gamini Wijesuriya (ICCROM)</td>
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<td>“Wooden heritage as cultural landscapes with empowered local communities”</td>
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<td>10:40-11:25</td>
<td>Keynote Speech II: HAN Feng (China)</td>
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<td>“The Authenticity and Integrity of Rural Settlement Landscape”</td>
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<td>11:25-12:10</td>
<td>Keynote Speech III: MURATA Ken’ichi (Japan)</td>
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<td>“Traditional Techniques and Materials in Conservation and Restoration in Japan”</td>
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<td>13:30-14:05</td>
<td>Case Study Report I: ZHOU Jian (China)</td>
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<td>“The Diverse Practices of Preserving the Living Cultural Heritages: A Case Study of Tongli Water Town, Southeast China”</td>
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<td>14:05-14:40</td>
<td>Case Study Report II: Titi Handayani (Indonesia)</td>
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<td></td>
<td>“Safeguarding Kotagede Heritage District, Yogyakarta, Indonesia”</td>
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<td>14:55-15:30</td>
<td>Case Study Report III: Dale Puodziukiene (Lithuania)</td>
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<td>“Wooden Architecture and Local Community: Vilnius Case”</td>
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<td>18:00-20:00</td>
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**Day 2** (Wednesday, 17 December)

**Excursion:** Participants visited South Garden Tea House, Tuisi Garden, Chen’s House, Qinglu Guest House, the Former Water Resource Bureau and Its Restoration Project, and Chongben Hall in Tongli Town under the guidance of Mr LING Gangqiang, Vice Director of Lili Town Management Committee, and Mr CHEN Chunhua, Deputy Chief of the Construction Management Division, Tongli Town Management Committee. In the afternoon, they visited Li Geng Hall Restaurant, Suzhou Pingjiang Lodge, and Wang Xiaohui Art Gallery in Pingjiang Historic District, Suzhou City.

**Day 3** (Thursday, 18 December)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>09:30-10:05</td>
<td>Case Study Report IV: Rasika Dissanayaka (Sri Lanka)</td>
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<td></td>
<td>“Temple Associated Village Complex, Embekka Devala – Community Participation”</td>
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<tr>
<td>10:05-10:40</td>
<td>Case Study Report V: CHOI Byungha (Republic of Korea)</td>
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<td>“Some Problems of Patina &amp; Lacuna in Korean Traditional Villages, in View of the Conservation World”</td>
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<td>10:40-11:15</td>
<td>Case Study Report VI: Rohit Jigyasu (India)</td>
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<td>“Planning for the Intangible in Living Historic Urban Areas: Cases from Indian Historic Cities”</td>
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<td>11:30-12:05</td>
<td>Case Study Report VII: OGUNI Haruo (Japan)</td>
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<td>“Two Townscapes That Constitute Part of the World Heritage Site ‘Iwami Ginzan Silver Mine and Its Cultural Landscape’”</td>
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<tr>
<td>13:30-16:30</td>
<td>General Discussion: All participants</td>
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<tr>
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<td>“Revisiting the Philosophy of Preserving Wooden Structures”</td>
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<tr>
<td>16:30-</td>
<td>Closing Session</td>
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</tbody>
</table>
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