Fall of Traditional Settlements and Countermeasures of Contemporary Planning

Seeking for balance between historic value and contemporary demands in the preservation of traditional settlement in Ancient Huizhou Area

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Key words: traditional settlements in Ancient Huizhou Area, classification methodology, preservation framework

Abstract: Over the past three decades modernization in China, the traditional sett
precious resources of both culture heritage and tourism have increasingly gained favor of tourism and entertainment. Consequently, the settlements gained profit for its resident while faced with a conflict from three aspects. First, contradiction between the residents demand for moder
and authentic feature continuation; second, contradiction between tourism s dema
and authentic feature continuation; thirdly, the authentic feature have to remain as exactly the core value and sustainable dynamics of this area. Therefore, planning have to consider an approach balancing resource conservation, economic development and living conditions improvement. The paper takes a comprehensive view of the development trend taking the traditional settlements in the Ancient Huizhou Area as an example, trying to build the framework for the traditional settlements preservation that well balances the three aspects mentioned and guide further projects. Framework building is based on careful investigation in which summarizes the central features and typology along with the all the settlements' layout database. Then the settlements are classified by their historical value to differentiate the preservation strategies guaranteeing the optimization. According to that we come up with differentiated planning countermeasures for preservation and optimization of their historical value and practical performance. It is concluded that the traditional settlements are classified to six types which are integrity-remained settlement, partially remained settlement, structural remained settlement, environment-remained settlement, limited authentic buildings remained settlement, decaying settlement. And for each typology specific planning disciplines and strategies are proposed.

Study background:

Over the past three decades modernization in China, the traditional settlements
resources of both culture heritage and tourism have increasingly gained the favor of tourism and

entertainment. In a consequence, the settlements gain profit for its resident, and in the same time, they are faced with a challenge balancing resource conservation, economic development and living conditions improvement. This study is subject to the National Key Technology R&D Program No. 2012BAJ08B01 and a Project supported by the National Natural Science Foundation of China (Grant No. 51378362) which taking a comprehensive view of the traditional settlements in the Ancient Huizhou Area as an example, summarizing the central features, typology and spatial structure. Then come up with differentiated planning countermeasures for preservation and optimization of their historical value and practical performance. For each typology specific planning disciplines and strategies are proposed to achieve sustainable development.

1 The historic process and value of traditional settlement in Ancient Huizhou Area

1.1 The historic process of traditional settlement in Ancient Huizhou Area

The traditional settlement originated from the Pre Qin period (before 221BC) then prospered in the Middle of Qing dynasty. (About 1750 AD) during which the main features of traditional settlement is developing with a strong planning consciousness rather than growing freely. The concerns or the function, integrity and symbolic meaning had been emphasized which is a reflection of the social needs, nationality and cosmos of the day when economy and culture were thriving.

1.2 The multi- layer historic value of traditional settlement in Ancient Huizhou Area

The historic value of traditional settlement in Ancient Huizhou Area can be measured in the following aspects: the environment around the traditional settlement, the spatial structure of traditional settlement, and the building communities of traditional settlement. The environment value lies in the "Fengshui" wisdom that ancestors in Huizhou Area used to guide their choice to the site of traditional settlement. The country landscape in Huizhou Area appears to be fabulous as the traditional settlement scattered beautifully in the countryside bring a rare sense of wealth and conscious gardening. The artificial space is well organized which represents the structure value of traditional settlement. The artistic space sequence starts form the nature then smoothly transit to the artificial public space, afterwards arrives in the space of private garden. Correspondingly the space are related to nature, streams of water, street and courtyard. The building communities of traditional settlement is of great architectural value that it even has a name called Huizhou Architecture. The typical architectures are village house, ancient temple and garden. Among above the traditional houses are of the biggest quantity and remarkable features as the location and planning structure reflect the influence from the mountainous landscape and Fengshui culture. Additionally the decoration style is a natural product of local aesthetic trait.

1.3 The differentiated situation of the historic value remains of Huizhou traditional settlement

Concerning the whole Huizhou territory, the historic value remains of the traditional settlements differentiates in several situations. The first situation is that, the authentic feature continuation of traditional settlements is perfectly preserved. Also are their integrity and harmonious unity. The village, the most common form of the traditional settlement, mainly consists of historical buildings. In the second grade situation, the authentic feature is basically maintained while new buildings merge within old ones. The historical buildings in the settlement is of certain preservation value. In the third grade situation, No original historical buildings remains while the traditional village structure is. The spatial structure and texture of old street and lane somehow survived. Following by the fourth grade situation in which the authentic architecture and original village structure are both lost but the harmonious surrounding environment is well protected. Although in such village the traditional architectural feature is not in significant level and the size of the village is usually medium or small, the relationship between the village and its environment is typical treasure given by the agricultural civilization. Finally, in the fifth village only several authentic buildings are still standing surrounded by other newly built ones. There is no a community of traditional buildings but single one of certain historical value.

2. Factors and Criterion for Classification and Evaluation

2.1 Factors

Through the study of historical value in Huizhou traditional settlement, it can come to the conclusion that the historical value of Huizhou traditional settlement mainly in four aspects: (Table 1)

Table 1:The factors of historical value evaluation

Building Community	**Settlement structure**	**Surrounding environment**	**Historical buildings**
Historical authenticity	Spatial structure	Mountain	Historical span
Core scale	Spatial feature	River system	Cultural value
Historical street	Location theory	farmland	Craft value
Historical block	Traditional function	vegetation	Historical value
Historical building scale	Specific function	Nature relationship	Relic value

Value of building colony is the integrated form presented by the built environment of a settlement. Space factor of Huizhou traditional settlement mainly includes: the landscape pattern of natural environment surrounding the village; the integral pattern of the settlements internal built space; the core space settlements consists of public buildings and its gathering space in front of it, such as ancestral hall, theatre and academy; and common local-style dwelling houses as the settlement texture.

Value of settlement structure is the layout system of surrounding environment, site selection and construction, which reflect the Ancient Huizhou Philosophy of "oneness of man and nature ".

Including the location theory, spatial pattern, spatial characteristics, traditional function and special function, etc.

Value of the surrounding environment is the natural environment around villages which can fully reflect the traditional village farming culture and seclusion culture, including mountain, water, farmland, vegetation and the interaction relationship between settlement and nature.

Value of construction monomer is specimens represents the ancient Huizhou architecture, decoration art and construction technology. Evaluation factors include history length, cultural values, craft value, historical value and relic s value, etc.

Extract elements respectively from these four levels in both dimensions of its typicality value and preservation of the status quo.

2.2 Criterion

Classification evaluation is based on the above four value aspects, and followed the principle of integrity, so that it starts from the integrity evaluation of the authenticated building colony, and then evaluates the structure, environment, construction monomer in turn. Thus evaluate the integrity of each settlement, and its traditional characteristic.

Evaluation indicators extracted from the four values are synthesize and sifted, forming the index of the classification evaluation criterion. The evaluation index are selection by means of value metrizability and effectivity for thoroughly reflecting the value state. Therefore, the building colony value will judged by authenticated retained degrees as measured by percentage. Other values of structure, environment, and monomer will be evaluated into: Intact or Destructed and Death.

Value of building colony lies in the traditional mode of inhabitation settlement, namely to fully maintain the authenticity. With the purpose of evaluating the authenticity, the indicator being chosen is the proportion with area of historical building and the surroundings in the total settlement built up area. According to the data of the ancient villages in the UNESCO's world heritage list, proportions of historical buildings and surroundings with a total area in the whole village area are concentrated in more than 60% . Therefore, 60% will be a threshold value. Finally, evaluation standard of building colony is identified as area proportion of historical building and its surroundings in the village, which evaluated into three levels: more than 60%, 30% to 60%, 0 to 30%.

Value of settlement structure reflects in the pattern of organization order in settlements artificial environment which is mainly constituted by the streets and public spaces. The evaluation considers the integrity of the history street structure; the usability of lanes and streams traditionally serving as transportation in residents daily life; the usability of spatial structure of the settlement serving as special functions such as firefighting, water supply and drainage, security and defense; or incarnation

of classic traditional theory in site selection and spatial planning. So space features and intact is chosen as index evaluated into two categories: Well Preserved or Destructed.

Value of the surrounding environment lies in the wisdom of fusion between settlement and natural environment, and emphasize completeness of various natural elements surrounding settlements, as well as the harmonious relation between settlement and its surrounding environment. Therefore, harmonious degree of settlement and natural is chosen as evaluation index, evaluated into two categories: Well Preserved or Destructed. Destruction of harmonious between settlement and natural environment means that integrity of the natural environment has been destroyed, or environmental degradation, or new construction violating the original harmonious landscape.

Value of construction monomer reflects its historical value and academic value. The evaluation will take heritage registration system as an indicative consultation to confirm featured buildings as historical culture specimens which have important value in its history, culture, or construct craft. This value will be evaluated into two categories: Yes or No.

3. The classification and optimization principle of traditional settlement in Ancient Huizhou area

3.1 Value-based classification of traditional settlement in Ancient Huizhou area

Put the index mentioned in the second chapter According to each one's importance in a descending order, then we get a matrix showing the value in several index .Then from the Matrix we concluded in the following types of traditional settlement in Ancient Huizhou Area. (Table 2)

Table 2:The classification of traditional settlement

(Integrity value to Monomer value)

Settlement / Factors	Integrity-remained	Partially remained	Structural remained	Environment-remained	Limited authentic buildings remained	Decaying
Building Community	>60%	30 to 60%	<30%			
Settlement Structure	Well Preserved	Well Preserved	Perfectly Preserved	Damaged	Damaged	Damaged
Surrounding Environment	Well Preserved	Well Preserved	——	Perfectly Preserved	Preserved /Damaged	Damaged
Construction Monomer	——	——	——	——	Yes	No

Integrity-remained settlement, namely the historical buildings form a complete community and occupy more than 60% of the total built area in the settlement. Besides that the authentic feature and spatial structure are well kept. The houses, waterfront, squares, central buildings stay in the old harmonious relationship. With a natural beautiful environment, farmland matches perfectly with the settlement while the artificial works with the nature. In such type of settlement, it not a single historic building of high value but the community of traditional buildings so historically high-valued buildings is not a necessity.

The second type is partially remained settlement in which the historical buildings occupy 30% to 60% of the total built area in the settlement. Besides, in the community of historical buildings, the main original spatial structure remains and is easily distinguished. The surrounding environment hasn't been damaged yet. The artificial space and nature space form a coherent whole.

Compared to the integrity- remained settlement, the partially remained settlement share some basic feature such as its environment are well-kept but the degree to which the settlement integrity is protected is not in such perfect condition as the former.

As for the structural remained settlement, the historical buildings inside which cannot form a community as they could possibly scattered around isolated from each other. The built area occupied by the historical buildings is no more than 30% of the total. The settlement has gone through a renovation process during which most of the authentic buildings are replaced except the whole structure and street skeleton. Consequently, the fabric, building density as long with the average height of the village resemble that in the past days. The surrounding environment has been inherited .Wisdom can be learned from its smart location decision-making.

Environment-remained settlement are those in which the historical buildings inside which cannot form a community and even whole spatial structure is unfortunately lost. Space being out of order lacking systematisms. The surrounding environment has been inherited in harmony with the settlement or "village".

In the limited authentic buildings remained settlement, the historical buildings inside which cannot form a community and even whole spatial structure is unfortunately lost. The surrounding environment has been damaged consequently harmony with the settlement or "village" is lost too. The only value comes from several single historical buildings.

Decaying settlement, all the elements composing the central value of the traditional settlement is lost.

3.2 Optimization principle classified by historical landscape value of Huizhou traditional settlement

Settlement of different value of traditional features, adopting different optimization principles and measures.

Integrity-remained settlement complies with optimization principle of Conservation, namely taking "integrity conservation strategy, from the perspective of dynamic, fully protecting of the space of lanes and alleys, texture arrangement, spatial structure, holistic pattern, construction group, the surrounding environment and all the historical element factors in the settlement. Historical buildings must be repaired, by principle of repairing the old as old", in accordance with the same way as original. Simultaneously, external new constructions shall be conventional, and be harmonious with history atmosphere.

Partially remained settlement complies with optimization principle of Improvement, namely partitioning the complete traditional area as intensive reserve area, and preserving integrally all historical elements in the reserve area, the same as the Conservation " principle, and zones outside the reserve area can be new. New constructions shall follow traditional texture, spatial logic, and be harmonious with traditional architectural style inside the reserve area. Above all, the new construction shall take responsibility of fixing the deficient texture outside the reserve area. Residents have the permission to make a certain function change, on the basis of the life needs, in their own ordinary local-style dwelling houses. The change shall follow the no- damage principle of the traditional architectural style and its surrounding environment.

Structural remained settlement complies with optimization principle of Update, namely updating the suitability of modern life on the premise of conserving the traditional settlement pattern. At the same time of necessary facilities to improve residents' life, new constructions will be permitted on the basis of the life needs. New construction shall be strictly in line with the existing landscape, traditional texture, spatial structure, scale, density, height, and the relationship between architecture and core public space.

Environment-remained settlement complies with optimization principle of Renovation. First of all, preserve the surrounding natural environment and keep the traditional way of farming and crop varieties, in order to ensure that the surrounding natural landscape traditions can be conserved. Adjust architectural composition of the existing settlement, in the meantime, so as to create atmosphere of traditional life, and convenient residents' daily life. Priority among priorities is the control of settlement s scale and its relationship with the surrounding natural environment, to ensure the harmonious townscape.

For the limited authentic buildings remained settlement, the optimization principle is Guide. That is to primarily conserve important historical buildings and cultural relics with its vicinity, entirety repair following the principle of repairing the old as old", so as to keep traditional style of buildings and the surroundings. Then generally guide the constructions in the settlement, to restore historical atmosphere

of the settlement in aspects such as texture, scale, and architectures, and ultimately preserve the important historical buildings with the effect of atmosphere foils.

For decaying settlement, the optimization principle is new-built. That is to migrate and relocate, according to the needs of economic and social development, to save land, and implement other measures beneficial to the construction of residents' production and living, and economic development. The establishment of the new settlement shall take traditional planning theory as construction guidance.

4. Conclusion

It is concluded that the traditional settlements are classified to six types which are integrity-remained settlement, partially remained settlement, structural remained settlement, environment-remained settlement, limited authentic buildings remained settlement, decaying settlement. And for each typology specific planning disciplines and strategies are proposed that place differentiated priority on preservation, optimization, innovation, reparation, guided construction and construction. Such planning disciplines and strategies are to guide further preservation project or development project to guarantying the quality of whole structure and spatial system.

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