Exploration on Planning Compilation of Characteristic Protection Villages from Perspective of Village Renewal: A Case Study of Gaozhai Village in Xing’an County, Guangxi

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Abstract. The theory of village renewal originated from Germany, which has rich experience in theory and practice of village renewal. From the perspective of village renewal theory, the authors explores the planning compilation method of characteristic protection villages in this paper. Taking Gaozhai Village in Xing’an County of Guangxi as an example, the authors discusses the planning compilation strategies of characteristic protection villages from the aspects of data collection and current situation investigation, orientation and goals of village development, land space of life, production and ecology, ecological environment protection, renovation of villager’ residential areas, layout of industrial development, public service infrastructure, and consultation so as to provide reference for the compilation of village planning.

1. Introduction
In the process of rural development, village planning is the legal basis for carrying out land space development and protection activities, implementing land space use control, issuing planning permission for rural construction projects, and carrying out various constructions[1]. Different villages have different requirements for village planning because of their special geographical location, social environment, economic development, cultural background and so on. In January 2019, five departments including Central Agricultural Office, Ministry of Agriculture and Rural Affairs, Ministry of Natural Resources, National Development and Reform Commission and Ministry of Finance of the People’s Republic of China clearly proposed that villages with rich characteristic resources such as famous historical and cultural villages, traditional villages, special villages of ethnic minorities and famous tourism villages with special landscape should be classified as characteristic protection villages in Opinions on Comprehensively Promoting Village Planning[2]. Different from other types of villages, more attention should be paid to protection in characteristic protection villages, and large-scale demolition and construction activities should be avoided. In the process of gradually accelerating urbanization, it is a difficult problem that many countries are facing or will face to compile village planning in scientific and reasonable manners so as to protect the characteristic culture and resources of the villages and promote the villages’ prosperity and development[3]. The practice of village renewal in Germany has realized coordinated progress of inheritance protection and economic development, which is a good reference for the planning of characteristic protection villages and provides enlightenment for reasonable and effective development of village planning.
2. Village Renewal
The concept of village renewal originated from Germany. In 1954, the government of West German promulgated *Law on Land Administration*, which clarified the basic principles of rural renewal, emphasized the construction of new villages and the improvement of infrastructure. With the deepening of the concept of sustainable development, the rectification and governance of ecological environment have attracted much attention. In 1976, Germany revised *Law on Land Administration* and explicitly included the “village renewal” into the legal provisions[4], emphasizing the characteristics and development potentials of the village itself, tapping and giving full play to ecological, cultural and economic values, and making overall plans for protection and development. Over 20 years’ practice confirmed that village renewal is an effective way to solve Germany’s dual problems -- the adjustment of agricultural and economic structure and the development of rural population[5]. Today, the content of village renewal is constantly enriched. As a task of sustainable development in rural areas, it is included in the whole planning system[4].

Rural areas in China and Germany have their own characteristics and there are obvious differences between them, but they have the same development goal, which is carrying out rural renewal and reform through village planning and realizing harmonious development among ecology, economy and society. Village renewal in Germany emphasizes the protection and the participation of residents, and proposes that the plan should be adapted to local conditions and conform to rural reality, and that the implementation of the plan needs to be constrained by measures and guaranteed by laws and regulations. It is in line with China’s requirements in constructing beautiful countryside and new village. Especially in the characteristic protection villages, the improvement of existing production and living and the long-term sustainable development should be realized on the basis of protection. The effective integration of village renewal into the compilation process of village planning is conducive to realizing key protection and special shaping of characteristic protection villages.

3. Compilation of Village Planning
Village planning is the detailed planning of rural areas in the land space planning system. The integration of village land use planning and village construction planning is the legal basis for carrying out land space development and protection activities, implementing land space use control, issuing planning permission for rural construction projects, and carrying out various constructions. Opinions on overall promotion of village planning defines the overall requirements on village planning, and points out that the compilation of village planning generally needs seven steps: preparation work, current situation investigation and analysis and evaluation, determination of planning goals, determination of planning scheme, consultation of villagers’ opinions, review of planning demonstration, and report of the plan.

The concept of village renewal should be integrated into the specific seven-step compilation process when characteristic protection village planning is compiled. The first step is to organize mobilization meetings in counties, collect basic data from relevant departments and make planning base map, fully know about the planning object, and make preparation in aspects of organization, technology and fund in the early stage. In the second step, villagers participate in the whole process of basic investigation, analysis and evaluation. Know about the village’s history and culture, local conditions and the villagers’ development demands through on-the-spot household visit and investigation. Then jointly analyze the current situation of the economic development, land use, ecological environment, the development potentials and ideas. The third step is to repeatedly discuss and determine the development orientation and goals of the village, and on this basis, make overall arrangements for the land space of the village, clarify spatial layout of production, life and ecology, determine various land use indicators according to the upper land spatial planning, comprehensively consider the ecological livability, characteristic protection and industrial development, and arrange the infrastructure construction of village roads, water supply and drainage, power, sanitation and so on. The fourth step is to invite virtuous and capable persons to participate in the whole compilation process of the village planning scheme, using multidisciplinary expertise to carry out the compilation.
The fifth step is to organize all villagers to hold a consultation meeting after the completion of the planning scheme so as to ensure that the plan meets the villagers’ wishes and can be implemented. The sixth step is to consult experts’ opinions to supplement and revise the planning contents. The seventh step is to report the planning scheme to the superior for approval and record after the announcement, and update the database in time.

4. A Case Study on Village Planning of Gaozhai Village

4.1 Overview of Gaozhai Village
Gaozhai Village is subordinate to Huajiang Township, Xing’an County. It is located in the north of Huajiang Township and at the south foot of Maoer Mountain, the first peak in South China. It is known as “the first village under Maoer Mountain”. It is located at the source of Li River and is an important ecological protection functional district. It is 15 kilometres away from government of Huajiang Township, 67 kilometres from government of Xing'an County, and 90 kilometres from center of Guilin City. Gaozhai Village is a gathering village of ethnic minorities, represented by the Yao Nationality, Gaeml and Hmong, and people of the Yao Nationality accounts the majority. It retains strong traditional culture of the Yao Nationality and its rich folk customs have become a major feature. Panjiazhai has been selected into the second batch of traditional villages in Guangxi.

There are 10 natural villages, 350 households and 1162 people in Gaozhai Village. The average natural growth rate of population in recent three years is 3.2‰ (according to government statistics). The total land area of the village is 4137.5514 hectares, including 3963.460 hectares of agricultural land, accounting for 95.79% of the total village land area; 47.5430 hectares of construction land, accounting for 1.15% of the total village land area; and 126.5476 hectares of other land, accounting for 3.06% of the total village land area. The basic industries of Gaozhai Village are agriculture and forestry. Some villagers develop and operate farmhouse entertainment, and breed native chickens and ducks. However, due to the low benefits of agricultural and forestry management, most of the families’ income mainly comes from migrant work, with an average annual income of 30000 to 40000 yuan, to basically maintain normal living expenses.

4.2 Compilation Process and Strategy

4.2.1 Data Collection and Investigation and Analysis of Current Situation.
Mainly collect data of population, social insurance (pension and medical treatment), tourism planning, overall land use planning, industrial planning, surveys on current situation and changes of land use, as well as basic data such as the number of methane generating pits, residential land area, the height of houses, the scope and scale of public service facilities. Make the survey base map according to the data of the third land survey and the image map of Gaozhai Village, and carry out the household field survey. Know about the history and culture of Gaozhai Village, the progress and demand of village construction and the villagers’ willingness about planning compilation through questionnaire and interview. Finally, analyze the main problems existing in the current situation. The residents participate in the process of investigation and analysis from the beginning to the end. Carry out household survey to collect data, know about the situation, and listen to the villagers’ demands and development suggestions. For example, when investigating Panjiazhai, there were only two brother families in the mountain. At the beginning of the consultation, they were not willing to go down the mountain. After many times of detailed introduction of the layout and development of the village planning, with consideration of their actual situation and demands, and combined with the actual situation of local villages, the implementation rules of the scheme was immediately adjusted until an agreement was reached.

4.2.2 Determination of the Village’s Development Orientation and Goals.
Gaozhai Village is a characteristic protection village, located at the south foot of Maoer Mountain, the
first peak in South China. With unique climate conditions and good ecological environment, Gaozhai Village is a village where traditional farming culture, folk culture of the Yao Nationality, red revolutionary culture and forest ecological culture are integrated and developed. The historical and cultural relics to be protected mainly include relics (including ancient buildings, ancient structures, ancient cultural sites, ancient tombs, ancient wells, ancient post roads and so on), ancient and rare trees (rare plants), intangible cultural heritage, terrace landscape, red sites and so on. It is selected into China’s third batch of famous towns with characteristic landscape for tourism.

Based on the theory of village renewal and the rich resources and great environment of Gaozhai Village, its unique climate conditions, good ecological environment, rich tourism resources, profound culture of the Yao Nationality and other resource conditions should be made full use of in the future development, so as to make it a new modern tourism village and a rural tourism demonstration village in Guilin with rural tourism as the leading, characteristic planting and breeding as a new growth point, the traditional culture of the Yao Nationality as the feature, the ecological environment as the advantage, and the agriculture as the basic guarantee.

4.2.3 Reasonable Arrangement of Land Use Space for Production, Life and Ecology.
According to the results of “evaluation on carrying capacity of resources and environment and evaluation on suitability of land space development”, and combined with the investigation of villagers’ willingness, reasonably arrange the land use layout of Gaozhai Village. The production space is mainly composed of cultivated land, garden land, forest land and other areas with agricultural production function. Arrange the high-quality cultivated land in the village area as basic farmland and carry out special protection policy. After optimization and adjustment according to the delimitation results of the superior basic farmland, it is planned to be a basic farmland protection area. The rest cultivated land and garden land are planned to be general agricultural areas. The rest of the woodland outside the Maoer Mountain reserve in the northeast of the village is planned to be forestry land, and under-forest economy can be planned to develop. Living space is mainly urban-rural village construction land and rural village construction land, which is used for the construction of rural residential areas, villages and market towns including parking lots, farmhouse entertainments and other service infrastructure. The ecological space is mainly distributed in Maoer Mountain reserve in the northeast of the village, with ecological protection and water conservation as the leading function, and it is planned to be the ecological security control area of Gaozhai Village.

4.2.4 Strict Implementation of Ecological Environment Protection System.
Development is the goal and protection is the foundation. Gaozhai Village is located in the source of Li River and the periphery of the National Nature Reserve of Maoer Mountain. It plays an important role in ecological protection. The principle of the ecological layout is protection, with ecological restoration as the means, and water security and forest protection as the core. In formulating economic and social development plans and various special plans, it is necessary to strictly manage the sensitive areas in ecological environment and important areas with ecological service functions according to the ecological function zoning, and to prohibit developing resources in extremely sensitive and important ecological areas. The division management and classification guidance are adopted to coordinate various functions in the ecological space. Planning should clarify the ecological protection tasks in different ecological function areas, and orderly manage the construction activities in the ecological space[6]. At the same time, attention should be paid to the environmental protection in the production and living space in the village, and be paid to protecting and restoring the original natural landscape in process of development and construction to avoid damages to the original biological habitat.

4.2.5 Moderate Renovation of Villagers’ Residential Areas.
At present, the rural residential areas in Gaozhai Village are along the roads and rivers, and around the farmland, relatively concentrated but separated from each other. Among them, the four natural villages named Gaozhai, Qingdian, tangfangbian and Liangjia are concentrated on both sides of the main roads
in the village, and the other natural villages are concentrated themselves and connected with each other through the inter village roads.

Based on the principle of protection priority, one house for each household and avoiding large-scale demolition and construction, according to the actual situation of Gaozhai Village and the villagers’ development demands, reasonable planning is made for the construction, demolition and reduction of villagers’ houses and relocation of dangerous old houses. In disposal of the old houses, the old buildings with strong ethnic characteristics are preserved through repair and reinforcement, which are used as sightseeing or tourist accommodation. The villagers’ new houses should be integrated with the surrounding natural environment and cultural background, and keep the national characteristic symbols according to the unified planning requirements. As for villagers living in the marginal areas with inconvenient transportation, poor infrastructure and public service facilities, guide them to move to the concentrated areas with relatively good conditions during the planning period, and finally form a spatial pattern in which the natural and cultural environment complement each other.

There are 523 peasant houses in Gaozhai Village, including 78 old houses with protection value. During the planning period, 93 dilapidated and old houses with potential safety hazards will be demolished, 97 old houses meeting the safety requirements will be renovated and reinforced, and 255 new brick concrete structure houses will be reconstructed with national characteristics. Through the residential renovation, the rural residential land is reduced from 22.6699 hectares to 20.2174 hectares. The withdrawn construction land is used for the increase and decrease of the linked index transaction, and the funds obtained are used for the construction of rural infrastructure according to the national requirements.

| House type | Old houses | Buildings to be demolished | New brick-concrete buildings | Old brick-concrete buildings |
|------------|------------|----------------------------|----------------------------|-----------------------------|
| Number     | 78         | 93                         | 255                        | 97                          |
| Total number | 523        |                            |                            |

4.2.6 Strengthening Guidance of Industrial Development Layout.
Gaozhai Village has rich folk customs and distinctive traditional culture of the Yao Nationality. Relying on National Nature Reserve of Maoer Mountain, it has a good natural landscape. Through the in-depth excavation of its resources advantages and potentials in location, resources, environment, ecology and culture, shape the village’s ethnic customs of the Yao Nationality and natural landscape characteristics. Implement differential development in all areas outside the ecological protection red line. As a leading industry, rural tourism is distributed in the whole village, forming a tourism industry. Special planting and breeding including under-forest planting and breeding is planned to be a new growth point, and modern agriculture is the basic industry. At the same time, the benefits of forestry and agriculture are low, and the villagers’ enthusiasm is not high. But from the perspective of food security and ecological security, priority support and protection should be given to them to ensure the sustainability of their development.

4.2.7 Optimizing Layout of Basic Public Service Facilities.
On the basis of the household field investigation in Gaozhai Village, combined with the actual situation of resources and infrastructure in Gaozhai Village, plan the construction of infrastructure projects. In terms of roads, it is necessary to build fast roads connecting with the outside world, and to reasonably arrange parking lots and matching road traffic facilities. As for water supply and drainage, the water consumption should be predicted, and the water intake point of water diversion project should be located in the river section which ensures free flow and less human disturbance. The principle of draining highland water in high land and lowland water in low lands implemented to avoid mechanical lifting and reduce costs in operation, management and maintenance. The separate drainage system of rainwater and sewage is adopted in agricultural irrigation construction. In terms of power
supply, adoptable radial power supply in main residential areas and use dual power supply. The wires are straightened out or arranged along the road in the near future, which are all laid overhead. In the long term, it will be gradually changed to be buried in forms of cable trench or through-pipe bury. Access data network in communication planning. In terms of sanitation, in combination with the village scale, set up a garbage collection station in each natural village, vigorously implement the toilet improvement project, and gradually increase the popularization rate of harmless toilets in rural areas. Water flushing public toilets are arranged and constructed in the natural village concentration areas.

4.2.8 Consultation and Argumentation Review.
Villagers participate in all aspects of planning compilation. After the completion of the planning scheme, hold a villagers’ forum again to introduce the village planning scheme in detail so that the villagers can know about the specific content, significance and actual benefits of the plan. Organize the villagers to fully express their opinions and conduct discussions. Combined with the review opinions of the planning review group, supplement, correct or modify the planning results again. Before the plan is submitted to the people’s government at a higher level for examination and approval, it must be publicized in the village after being deliberated by the villagers’ meeting or the villagers’ representative meeting, so as to ensure that the plan conforms to the villagers’ wishes and that the villagers are willing to take the initiative to implement the plan[7].

5. Conclusion
Characteristic protection villages emphasize “characteristics, protection and development”, while village renewal emphasizes protection, residents’ participation and village development. It is of great significance to integrate the concept of village renewal into the specific compilation process of village planning. In the construction process of beautiful countryside, planning first is an inevitable requirement. Gaozhai Village in Xing’an County, Guangxi is a characteristic protection village with strong ethnic tradition, which is located in the periphery of National Nature Reserve of Maoer Mountain. The village needs not only development, but also protection of ecological environment and traditional ethnic culture. In this paper, the author tries to find the breakthrough point of village planning from the perspective of village renewal, and integrates the idea of village renewal into the planning of characteristic protection villages, coordinates rural elements and discusses how to implement the village planning through comprehensive land and space renovation, with the goal orientation of realizing harmonious development in space of life, production and ecology, so as to comprehensively promote the construction of beautiful countryside, the development of rural industry, the improvement of living environment and the restoration of ecological environment. The results of village planning serve the villagers, and the villagers’ voice is the most important in the planning. Therefore, it is emphasized that the villagers should participate in all aspects of the village planning. On the basis of protection, shape the characteristics and explore an economic development path according to local conditions. Consider the spatial layout of “life, production and ecology”, reasonably arrange industrial development activities, actively guide the relocation and construction of villagers’ homestead, and strive to draw the “one blueprint” of village planning to the end.

At present, many areas in China have begun to implement village planning. Different villages have different characteristics because of their geographical location, natural endowment, historical and cultural differences, so it is required to adjust the village planning according to actual situation in process of compilation. The concept of rural renewal has been proved by practice in the process of rural construction in Germany, and the successful experience can be used for reference. The author attempts to integrate the concept of rural renewal into the planning compilation process of characteristic protection villages in this paper, hoping to provide beneficial thinking for the compilation of village planning. When planning such characteristic protection villages as Gaozhai Village, it is required to fully respect the nature, protect the ecological environment and reserve local ethnic characteristics, as well as to ensure the local economic development and promote the sound
development of rural areas.

Reference

[1] Zhang Xiaolei, Zhang Bao, Chen yanjie, JinZhifeng. Planning and Protection Suggestions of Characteristic Protection Villages in Jiangsu Province -- Based on Research of Typical Villages[J/OL]. Natural Resource Economics of China:1-8[2020-03-27] https://doi.org/10.19676/j.cnki.1672-6995.000442

[2] Li Yurui, Pu Changli, Cao Zhi, Liu Xuanhe, Liu Yansui. Village Classification Method and Empirical Research with Rural Revitalization Strategy[J]. Journal of Natural Resources, 2020, 35(02):243-256.

[3] Ye Xingqing, Cheng Yu, Yu Xiaohua. Industrial Integration and Development Promote Village Renewal: Experience from German Rural Revitalization[J]. Resources Guide, 2018 (12):50-51.

[4] Chang Jiang, Zhu Dongdong, Feng Shanshan. Village Renewal in Germany and its Reference to China's New Rural Construction[J]. Architectural Journal, 2006, 11:71-73.

[5] Qu Weidong, Karl Spindler. Implication of Village Renewal Planning in Germany[J]. China Land Sciences, 2012, 26(3):91-96.

[6] Wu Lijun, Wang Dandan. Study on Optimization of Rural Ecological Space Layout[J]. Environmental Protection and Circular Economy, 2018, 38(02):6-8.

[7] Luo Zheng, Fang Qin, Luo Gaigai. Exploration of Village Planning under Implementation of Rural Revitalization Strategy: A Case Study of Panlong Village in Hengyang County [J]. Natural Resource Economics of China, 2020, 33(04):51-55.