

**KYIV NATIONAL UNIVERSITY OF CONSTRUCTION AND
ARCHITECTURE**

Urban and Spatial Development Faculty

Urban Economy Department

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GRADUATION THESIS FOR A MASTERS'S DEGREE

On the topic:

Master Plan of Xiangtan Shuifu Demonstration Zone in Hunan province

By student of the group 192 UPE

Ma Nandong

Specialty: 192 Construction and Civil Engineering

Educational program: Urban planning and economy

Supervisor **Alirza Mamedov**

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Introduction

Relevance of the Study. The development of rural and urban areas in China, particularly in demonstration zones like Xiangtan Shuifu in Hunan province, has become a focal point for sustainable economic and social development. The region, located in the heart of China's rapidly developing economy, represents a key area for testing urban-rural coordinated development models. With increasing pressures on urbanization and the need for rural revitalization, understanding the dynamics of such demonstration zones is critical to promoting balanced, efficient, and sustainable regional growth. This study aims to explore the strategies, goals, and challenges related to urban and rural integration in the Xiangtan Shuifu Demonstration Zone.

Objective of the Study

The primary objective of this research is to assess the feasibility and effectiveness of urban-rural coordinated development in the Xiangtan Shuifu Demonstration Zone. The study will focus on identifying the key strategies, models, and implementation measures that can be adopted in the region, providing valuable insights for other regions undergoing similar transformations in China.

Research Tasks

1. To analyze the spatial, social, and economic characteristics of the Xiangtan Shuifu Demonstration Zone.
2. To explore the development models used in the zone and their impact on both urban and rural areas.
3. To assess the challenges and opportunities for urban-rural coordination in the region.
4. To propose practical solutions for enhancing urban-rural integration and promoting sustainable development.

Object of Study

The object of the study is the Xiangtan Shuifu Demonstration Zone in Hunan province, focusing on its urban-rural development integration and the strategies employed to foster this process.

Subject of Study

The subject of this study includes the policies, strategies, and development models applied in the Xiangtan Shuifu Demonstration Zone. This involves examining spatial planning, infrastructure development, industrial integration, and public services within the urban and rural context of the zone.

Research Methods

1. **Qualitative Analysis:** Review of existing literature, policy documents, and case studies related to urban-rural coordination in China, with a particular focus on demonstration zones.

2. **Case Study Approach:** Detailed examination of the Xiangtan Shuifu Demonstration Zone as a case for urban-rural integration.

3. **Comparative Analysis:** Comparing the Xiangtan Shuifu model with other similar demonstration zones to identify best practices and lessons learned.

4. **Survey and Field Research:** Collection of primary data through interviews and surveys with local authorities, residents, and experts involved in the development of the demonstration zone.

The information base for this study will include official documents and reports from the local government, urban and rural planning policies, academic articles, and statistical data on the development of the Xiangtan Shuifu Demonstration Zone. Additionally, data from previous research on urban-rural coordination in other regions will be used to provide context for the analysis.

The concept of urban-rural coordinated development has been widely studied in various parts of China. Previous research has focused on regions such as the Guangdong-Hong Kong-Macao Greater Bay Area and the Chengdu-Chongqing Economic Circle, where integrated development models have been piloted. Similar studies have also been conducted in rural revitalization zones across China, including those in Zhejiang and Jiangsu provinces, which offer valuable insights into the challenges and successes of urban-rural integration.

Chapter 1: Urban-Rural Coordinated Development: Theoretical Foundations

1.1 Urban-Rural Coordinated Development Means

The construction of “Two-oriented society” is the fundamental way to solve the problems of resources and environment in China, the important platform to implement the scientific outlook on development, and the way and form to realize the construction of ecological civilization. Co-ordinating urban and rural development is the fundamental solution to the problems of agriculture, rural areas and farmers.

1. Two-type society: “Resource-saving and environment-friendly society”.

Resource-saving society-refers to the whole social economy is built on the basis of saving resources. The core of building a resource-saving society is to save resources, that is, in the production, circulation, consumption and other fields, through the adoption of comprehensive measures such as technology and management, the development model of strict economy, continuous improvement, high efficiency of resource utilization, minimization of resource consumption and environmental costs, and satisfaction of people's growing material and cultural needs at a cost.

Environment-friendly society-a form of society in which human beings and nature coexist in harmony. Its core connotation is human production and consumption activities, and sustainable development in harmony with natural ecosystems.

Urban-rural co-ordination refers to the unified planning and strategy between city and city, city and countryside, Countryside and countryside. To promote the coordination and development of urban and rural economy and society, and to shape the characteristics of urban and rural overall planning in Hunan province. We will focus on five key areas to promote coordinated urban and rural development: coordinated protection of the urban and rural ecological environment, coordinated development of urban and rural industries, and simultaneous development of urban and rural areas, equal employment of urban and rural labor forces, and basic public services between urban and rural areas, equal access to public services. The Shuifu

Demonstration Zone is set to become a new model for the coordinated development of urban and rural areas in Hunan province.

At the 16th CPC National Congress, the Central Committee proposed that the economic and social development of urban and rural areas should be coordinated to solve the “Three rural issues”. The fourth plenary session of the 16th Central Committee put forward the famous “Two trends” argument, pointing out that China has entered the stage of subsidizing agriculture by industry and rural areas by urban areas; Formally called for “Building a new socialist countryside”. The 17th National Congress of the Communist Party of China put forward the important task of building ecological civilization. At the 18th CPC National Congress, the fundamental way to solve the problem of “Agriculture, rural areas and farmers” is to promote the integration of urban and rural development. We will intensify efforts to balance urban and rural development, promote integration in urban and rural planning, infrastructure and public services, and promote the equal exchange of urban and rural elements and the balanced allocation of public resources, forming a new type of relationship between workers and peasants, between urban and rural areas, between workers and peasants, and between urban and rural areas. The report of the 19th National Congress of the Communist Party of China (CPC) stressed that priority should be given to the development of agriculture and rural areas, in accordance with the general requirements of flourishing industry, eco-friendliness, rural civilization, effective governance and well-being, we will establish and improve the urban-rural integration development system, mechanism and policy system, and accelerate agricultural and rural modernization. The institutional mechanisms and policy system for urban-rural integrated development cover all aspects of urban and rural development.

In 2007, the central government officially approved the greater Changsha metropolitan region of Hunan province as a pilot area of comprehensive reform for the construction of a “Two-oriented society”. On December 12, 2011, the greater Changsha metropolitan region was officially established as a pilot area for comprehensive reforms to build a resource-saving and environment-friendly society,

according to the Municipal Party Committee's Document No. 31. On the whole, China's construction of a "Two-oriented society" has made initial achievements, but it also faces many outstanding problems, such as the people's ecological concept still needs to be strengthened, and the extensive economic development mode has not been fundamentally changed, there is a long way to go for energy conservation and emission reduction. In order to promote the construction of "Two-oriented society", we need to actively explore new ideas.

From the national level, the two-model comprehensive reform and urban-rural co-ordination has become a top priority. Planning Urban and rural development as a whole is to change the dual economic structure of urban and rural areas, is a major decision made from the overall construction of a well-off society. Although we always attach importance to the problem of "Agriculture, rural areas and farmers", the gap between urban and rural areas and between workers and peasants is still expanding for various reasons. The weak foundation of agriculture, the lagging development of rural areas and the slow growth of farmers' income are still the outstanding problems to be solved urgently in China's economic and social development. Therefore, the urban and rural as a whole, urban and rural coordinated development, to solve the three rural issues, promote social and economic, all-round development, building a harmonious society is of great significance.

Shuifu Demonstration Zone was established to give priority to the protection of the ecological environment, to seek development in the protection and to promote protection in the development. The present situation is dominated by agriculture and industry, the dual structure of urban and rural areas is obvious, the problems of three rural areas need to be solved, and the obvious gap between urban and rural areas makes it more difficult to coordinate the urban and rural areas and coordinate their development, therefore, it is necessary to study the urban-rural coordinated development and comprehensive reform of the demonstration zone in order to build a typical two-type demonstration zone in Hunan and even the whole country.

With the construction of the city of Qizhi and the development of the tourism of Shuifumiao Reservoir, it is inevitable to bring new development opportunities to

the development of the demonstration area, this topic can provide a scientific reference for the development of the demonstration zone and even Xiangtan, and for the formulation of the development strategy.

It provides scientific basis for regional facilities, space control, resource sharing and integration

Regional Infrastructure, Space Control and resource sharing and integration are important means of regional coordinated development. This topic can provide scientific basis for this.

To provide a scientific basis for the overall planning of the demonstration area and the preparation of community plans.

At present, the general plan is being drawn up in Chizhi and Maotian towns of the demonstration zone, and the maneuverability of the general plan needs to be improved, it is imperative to draw up community planning for the master plan of Demonstration Area and town.

To provide a scientific basis for promoting the comprehensive reform of the two-type demonstration and building the new urban-rural integrated demonstration area

The study of the two-model comprehensive reform and urban and rural development as a whole, to achieve the materialization of the strategy, this topic can provide theoretical and practical reference.

The contents of this topic include theoretical research, status analysis, urban and rural planning goals and strategies, urban and rural space, villages, industries, public infrastructure and transport planning, two-oriented society construction, etc. . Combined with the development requirements of the resource-saving and environment-friendly society, the paper analyzes the present conditions of the urban and rural development of Shuifu Demonstration Zone, and sorts out the relationship between urban and rural development, from the angle of constructing the two-type society demonstration zone in Hunan Province, starting with the goal of constructing the new urban-rural co-ordination zone, drawing on the case studies at home and abroad, the urbanization development mode of Shuifu Demonstration Zone is

studied, this paper puts forward the urban-rural co-ordination measures of Shuifu Demonstration Zone to improve the integration of urban and rural development.

1.2 Origins of Coordinated Urban-Rural Development

There are many studies on the coordinated development of urban and rural areas in China. Many studies on the coordinated development of urban and rural areas are integrated into the study of urban and rural integration, rural urbanization and urbanization. Their common idea is to bring both urban and rural areas into a unified system of social and economic development, to change the situation of urban-rural segmentation, to establish a new type of urban-rural relationship, and to improve the functions and structures of urban and rural areas, to achieve a rational allocation of urban and rural production factors, coordinate urban and rural interests, accelerate China's industrialization, urbanization and modernization process, and gradually eliminate the urban-rural dual structure, reduce the urban-rural gap.

Overall planning of urban and rural development is the fundamental way to solve the “Three rural issues” at this stage.

The overall planning of urban and rural development is not only the concrete embodiment of implementing the scientific outlook on development and building a harmonious society, but also the central task of agricultural and rural economic work in the new era, planning Urban and rural development as a whole is not only the basic point and foothold to increase farmers' income, but also an effective way to promote the all-round development of rural economy and solve the problems of “Agriculture, countryside and farmers”. The difference between urban and rural areas must be solved through overall planning of urban and rural areas.

There is an imbalance of development in China. The biggest and most basic imbalance is between rural and urban areas. The vast majority of China's rural infrastructure, education, culture, health care and other aspects of the city have a great gap, we must pass, urban and rural co-ordination to solve.

Urban and rural development as a whole should solve urban and rural social and economic problems.

In terms of its connotation and essence, to plan urban and rural development as a whole is to take cities and rural areas, industry and agriculture, citizens and farmers, as a whole, into consideration in the unified planning of economic and social development, to study comprehensively the existing problems and their relations in the social and economic development of rural and urban areas, to solve them as a whole, and to establish a market and economic system conducive to changing the dual structure of urban and rural areas, the coordinated development of urban and rural areas, the promotion of agriculture by industry and the integration of urban and rural areas.

The concept of coordinated development between urban and rural areas originates from the typical “Dual structure” of urban and rural areas in China. After the founding of the People's Republic of China, the industrialization was carried out on the basis of the best growing point of industry—the city, and attracted a large number of rural population to the city. The required agricultural and industrial products, the original accumulation of industrialization can only come from industrial and agricultural products scissors difference, because of the weak foundation of agriculture, to 1956 can not provide further support to industry, industry. In order to achieve national accumulation, and also because of the inability of cities to accommodate large-scale rural-to-urban flows, the state severely restricted rural-to-urban flows in 1956-1958, and the formal formation of a system of urban-rural segregation and a dual structure, Chinese society was divided into urban and rural communities by an invisible wall. The dual structure plays a positive role in the national economic construction, but also has a series of serious consequences: the city itself, the body function is insufficient, can not play the role of radiation and drive the rural area; The rural area is limited to the low-efficiency and unitary land management, and the gap between the urban and rural areas is widening, both urban and rural economies are on the verge of collapse. At the same time, the reproduction of the labour force far exceeds the amount that can be

accommodated by employment. The state has been restricting the transfer of population and labour between urban and rural areas through measures such as urban development guidelines, the household registration system and urban employment management, china's urbanization has lagged behind for a long time. In 1978, the household-responsibility system was adopted as the main form of rural economic reform, and in 1984, the urban economic system was adopted, a new situation emerged in the economic and social development of urban and rural areas. However, since the mid-1980s, the relationship between urban and rural areas has become uncoordinated again. The urbanization of rural population has been slow again, and the development of urban and rural areas has fallen into a new unbalanced state. The development of the city is restricted by the relatively backward countryside, the city can not accept the increasing rural surplus labor, many state-owned enterprises are struggling, the city has many problems. In the study of cities, development issues are no longer confined to cities, but also take into account the relationship between rural and urban areas, urban issues and rural areas, rural issues provide an objective requirement and macro background for urban-rural coordinated development research.

In 2007, the central government officially approved the greater Changsha metropolitan region of Hunan province as a pilot area for comprehensive reform in the building of a “Two-oriented society”, which marks the substantive stage of China's “Two-oriented society” construction, in order to promote the construction of “Two-oriented society” in Shuifu Demonstration Zone, we need to actively explore new ideas.

1.3 Objective and Core Issues

The concept of urban-rural differences to eliminate, the development model in urban development, while the realization of rural modernization, functional emphasis on urban and rural integration, function, space and landscape ecology, urban and rural close contact and interdependence. In the construction of a two-oriented society, we should pay attention to the harmony between human beings,

between human beings, between human beings and society, between human beings and nature, between economic society and ecological environment.

Eliminate the disparity between urban and rural people in their participation in national policies and decision-making

Rural residents have the same income level, employment opportunity, education level, medical service, social security and living level as urban residents.

Cities and towns will play the role of intermediate ties in rationalizing the distribution of urban and rural industries. The countryside accepts some of the functions of the city and becomes the functional body of the town. Modernization and efficiency of agriculture. The three major industries are widely united between urban and rural areas, and the urban and rural economies are permeating and complementing each other, so as to prosper the urban and rural economic situation together and form a unified market system between urban and rural areas, thus making the urban and rural areas attractive to each other, to ensure the smooth development of urban and rural areas.

3. Coordinating Spatial Planning for urban and rural development

Do a good job of“Four areas”, actively create conditions to promote urbanization, give full play to the rural areas of urban radiation drive. The contrast between urban space and rural space is homogeneous on a larger scale, which improves the overall environment and space quality of the demonstration area, and establishes a perfect and accessible, fast transportation and communication network between urban and rural areas, urban-rural connectivity is orderly.

Coordinating Infrastructure

To give greater priority to the needs of rural economic and social development in fiscal, financial and industrial policies, to accelerate the construction of an infrastructure network covering both urban and rural areas, and to promote the extension of urban infrastructure to rural areas, we should pay attention to supporting infrastructure construction such as water supply, power supply, sewage discharge, communication and garbage disposal, so as to improve the production and living conditions in rural areas.

5. Integrate urban and rural ecosystems

Take the low carbon, the green construction as the idea, adopts the low impact development pattern, promotes the ecological civilization construction. Advocate the development of recycling, economy, strict control of pollution sources, protection of species diversity, so that the urban ecological environment of rural ecological civilization.

6. Urban-rural integration

Channeling the surplus rural population, improving the technological level of farmers, and promoting urban employment. We need to fundamentally change the abnormal state of population segregation between the rural and urban populations. Urban and rural residents can move and move freely. There are no restrictions on the system between urban and rural areas, residents and farmers.

7. Cultural integration between urban and rural areas

Efforts to improve the cultural level of rural residents, so that all members of society can fully enjoy the modern spiritual civilization, fundamentally eliminate the urban and rural dual phenomenon.

Urban and rural population is the object of urban and rural co-ordination, the key is to classify the population and urban and rural residential areas, to take different ways, respectively;

Orientation of industrial development and guidance of spatial layout

The core of urban-rural co-ordination should be to solve the problem of urban-rural economic rupture, so that urban-rural economic co-ordination, so as to achieve the real balanced development of urban and rural;

3. Comprehensive transportation planning

Urban-rural co-ordination and the primary problem to be solved is comprehensive transportation, so that urban and rural contact close interaction, urban and rural integration, village access, access to finance;

4. To build a supporting system for the harmonious development of urban and rural areas

The difference between urban and rural public service facilities and infrastructure leads to the gap between the living standards of urban and rural residents.

Chapter 2: Urban and Rural Development Analysis and Planning

2.1 Characteristics and Problems of Urban Development

The demonstration area is located in the central part of Hunan Province, the southwest of the greater Changsha metropolitan region, and the western border of Xiang Xiang, from Changsha, Zhuzhou, Xiangtan, Shaoyang, Loudi, Yiyang, Hengyang seven major cities in 1.5 hours by car. Xiangtan Shuifu Demonstration Area has developed traffic, high-speed, high-speed rail and the main line running through the area, the region is beautiful, fertile land, rich resources, lush primitive vegetation, the Shuifumiao reservoir, known as the “Pearl of Hunan”, covers an area of 45 square kilometers, with a shoreline of 431 kilometers and more than 100 bays and 34 islands.

Shuifu demonstration area and the total area of the coordination area of 290 square kilometers, is now under the jurisdiction of two towns, namely the town of chess and Mao Tian town. There are more than 92,300 permanent residents. The adjustment of industrial structure in the demonstration zone is progressing slowly, with the primary industry increasing instead of decreasing, the secondary industry decreasing, the tertiary industry fluctuating, and the industrial and agricultural production still in the traditional development stage.

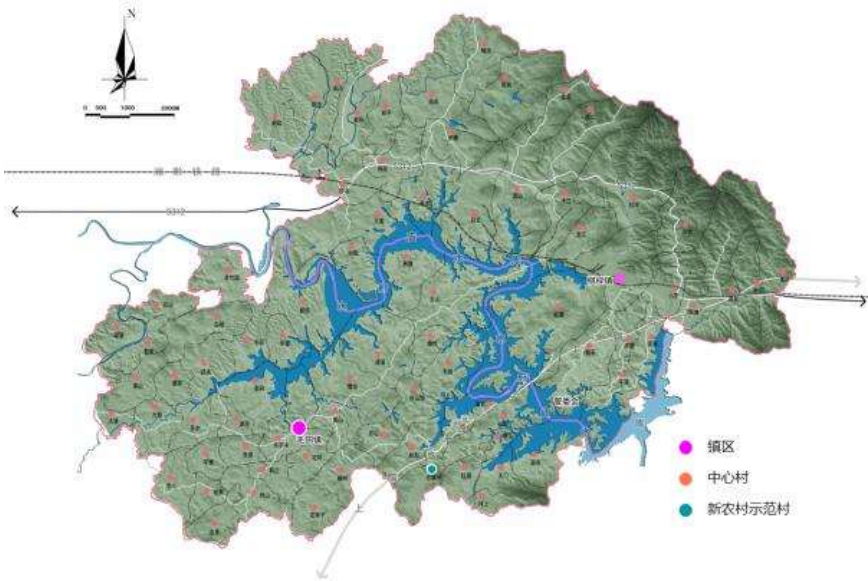


Figure 1 current urban system layout

The Shuifu Demonstration Zone currently governs two towns, namely, Qizhi Town and Maotian Town. Qizhi town is the economic, cultural and transportation center in the southwest of Xiangxiang, and it is one of the “Top 100 towns” in Hunan province and “500” pilot towns in China. Qizhi town is located in Changzhu, Tan District in the future spatial growth direction of the sub-axis of the secondary dense development axis.

With the development of changsha-zhuzhou-xiangtan integration and the influence of Xiangxiang City and Loudi City, Qizhi town has a bright future.

1. Low level and slow speed of urbanization

In 2022, the urbanization level of Qizhi and Maotian towns was about 42.6% and 7.5% respectively, and the overall urbanization level of the demonstration area was about 20.7% , basically equivalent to the level of China in the early 1990s and lagging behind the national level by about 20 years. According to urban theory, the demonstration area is still in the initial stage of urbanization. Moreover, the rate of urbanization is slow, and it has been stagnant since 2008 to 2022. We should upgrade and strengthen the preponderant building materials industry, expand the industrial chain, develop the tertiary industry, transform the rural surplus labor force rapidly and speed up the urbanization process of the demonstration area.

2. The existing cities and towns are not fully functional and focus on the cement industry

Due to the small population of the demonstration area and the small size of the town, the function of the town is affected. Central Business District to take into account the administrative functions, residential functions, more crowded, most of the production and living areas of enterprises mixed, industrial area function is not sound. At present, the industry and commerce in the towns of Qizhi and Maotian are underdeveloped, and they lack community services. The proportion of the non-agricultural population in the towns is not high, and it is difficult for the towns to form the urban management and service functions that they should have, economic radiation capacity is extremely limited, in infrastructure, urban services, economic,

agglomeration, and other aspects, is still at a very low level. Considering the development of the towns of Qizhi and Maotian from the perspective of the areas of Xiangxiang, Changzhutan and Loudi around the demonstration area, through analysis, demonstration and comprehensive comparison of the development potential of different directions and areas, for the future development of cities and towns to leave a full flexibility of the spatial structure of the circle. There are few industries in the demonstration area, the main component of which is relying on rich, high-quality mineral resources of the cement manufacturing industry. Although the overall decline, but because of its large base, the cement manufacturing industry in the future for a period of time is still the main industrial demonstration zone. It is a common phenomenon that small-sized enterprises develop faster than medium-sized enterprises, light industry faster than heavy industry, and state-owned enterprises are declining.

3. Urban functions are poorly divided and urban systems are poorly structured

The existing town has not carried on the plan design from the overall angle, has not considered its function and the localization characteristic from the whole, the whole. Due to the lack of unified planning, the function division of the two towns in the demonstration area is still vague, the industrial layout is scattered, the levels are unclear and the functions are not perfect.

4. The construction of cities and towns lacks characteristics, and the advantageous resources are not fully utilized

The town form lacks the characteristic, to the mountain, the water superiority resources utilization is not ideal, the town periphery mountain body, the water area existence is eroded, the erosion phenomenon. At the same time, the resources of Hunan culture with unique regional characteristics are not fully exploited.

2.2 Characteristics and Issues of Rural Development

The Shuifu Demonstration Area is currently under the jurisdiction of two towns, namely the town of Qizhi and the town of Maotian. There are 78

administrative villages and four communities under the jurisdiction. In 2022, there were more than 92,300 permanent residents, including 66,023 agricultural people. There are 1,484,840 hectares of land for village settlements, with an average of 225 square meters per person.

Table 1 village land use and population distribution in qizhi town

Name of village	Land for village settlements (HM2)	Total population (person)	Name of village	Land for village settlements (HM2)	Total population (person)
Xiangyang village	20.92	584	Xiashan village	22.12	985
Tai Fu Tsuen	48.10	1376	Zejiang village	14.18	700
Sugiyama village	43.19	1050	Longjiang village	13.66	584
Ming wo village	18.73	1025	Shan Ping village	31.87	1744
Yanchong village	15.79	943	Qi Zi village	9.47	383
Yuzhuang village	17.15	847	Xiao Luo village	12.72	977
Xinhe village	32.24	1748	Hedong village	11.54	617
Peace village	13.73	595	Yin Tong Tsuen	17.72	969
Plum Blossom Village	25.51	1011	Puan village	22.13	1193
Gushui village	22.43	672	Cheung Yuen Tsuen	8.98	396
Village	18.22	718	Wong Ling Tsuen	10.71	624
Lianshan village	25.18	1024	Ping Tong Tsuen	15.74	766
Jinlong village	13.01	520	Ping Wu village	18.04	593
Ho Fung Village	39.54	1625	Nixi village	20.05	665
Yu Fong Tsuen	37.30	1405	Cobblestone village	25.52	990
Nan An village	39.16	1521	Shetan village	31.67	1276
Baiyun village	40.27	1404	2 communities		23442
Total population 54,972, non-farm population 23,442,33 villages, 2 communities					

Source: Shuifu Model Area Management Committee

Table 2 village land use and population distribution of Mao Tian town

Name of village	Land for village settlements (HM2)	Total population (person)	Name of village	Land for village settlements (HM2)	Total population (person)
Xialiang village	8.21	555	Fengzi Chong village	12.87	554
Stone Mountain Village	9.02	604	Flower Pavilion village	15.17	707

Old Zhuyuan village	25.66	1110	Hammer tree village	11.28	645
Qin village	10.07	961	Tuo Ping village	12.12	541
Tan Shancun	15.39	851	Chongshan village	25.16	1239
Tam Ka Tsuen	16.47	676	Additional villages	32.16	1625
Tai Po village	10.74	660	Qixin village	8.28	569
Daxin village	18.37	983	Qingxi village	34.27	1435
Yue Nan Village	26.39	1058	Chau Tong Tsuen	20.82	746
Poplar village	23.22	1047	Wanshan village	48.59	1781
Mao Tiancun	14.27	854	Tobacco village	13.05	525
Xinhua village	22.76	1034	Shiyuan village	16.23	652
Wah Tong Tsuen	10.12	529	Shan au village	13.16	543
Kaneda	27.94	1216	Yanggu village	9.34	387
Lawn village	11.08	368	Changqing village	14.25	582
Fenshui village	17.31	864	Iron Mountain Village	6.40	128
Quanxincun	17.59	797	Snake village	13.06	573
Kau Tong Tsuen	12.26	567	Kutang Chong village	11.17	771
Yang Quan village	11.04	915	Red Flag Village	10.34	508
East View Village	15.32	669	Ping Sheung Tsuen	8.48	613
Ping Shan village	14.16	759	Tianmen village	14.87	640
Zhang Quancun	12.92	564	Xue Shi Cun	14.33	716
Hitachi village	12.24	372	2 communities		2806
Total population 37299, non-agricultural population 2806,45 villages, 2 communities					

Source: Shuifu Model Area Management Committee

The present situation of Shuifu demonstration area is that land use in villages is scattered, population density is low, land use is not intensive enough, so it needs to be integrated. The development of villages is mainly led by extensive rural development, which is embodied in the following aspects:

(1) the pattern of rural development changes gradually

With the rapid development of economy, the improvement of villagers' living standard, quality and skill quality, the traditional rural mode of villagers' life style,

thought and concept has changed gradually. The combination of traditional industry and efficient modern agriculture will be the road of urban-rural integration in the construction of “Two-oriented society” in the Demonstration Zone

(2) the distribution of residential land is scattered, the area is large and the land waste is serious

There are too many villages that are close to the status quo, and the status quo is distributed in a natural state. There is a phenomenon of “Blooming everywhere”, and land resources are seriously wasted. The low-density spread of rural residential land has restrained the improvement of rural living environment, environment, land use efficiency and urbanization to a great extent.

(3) residential area along the reservoir area infiltration, disorderly construction, serious damage to the ecological environment

The existing village settlements are built in disorder and lack of planning guidance and control, especially around the water body of the reservoir, the villagers' houses are badly built, and the reclamation and cage farming are chaotic, the villagers' lives and production have caused serious damage to the ecological environment

(4) lagging behind in the construction of rural infrastructure

Some villages are far away from urban areas, and due to the limitation of the demonstration area due to its location and the stage of economic development, the supporting facilities are insufficient, the public service facilities in the villages are backward, and the infrastructure such as roads and sanitation are seriously lacking, health stations, nursing homes, cultural centers, garbage compression stations and social parking are relatively lacking. Generally speaking, the living service facilities for farmers in the demonstration area are not complete and of low grade, which basically can only meet the basic needs of local residents.

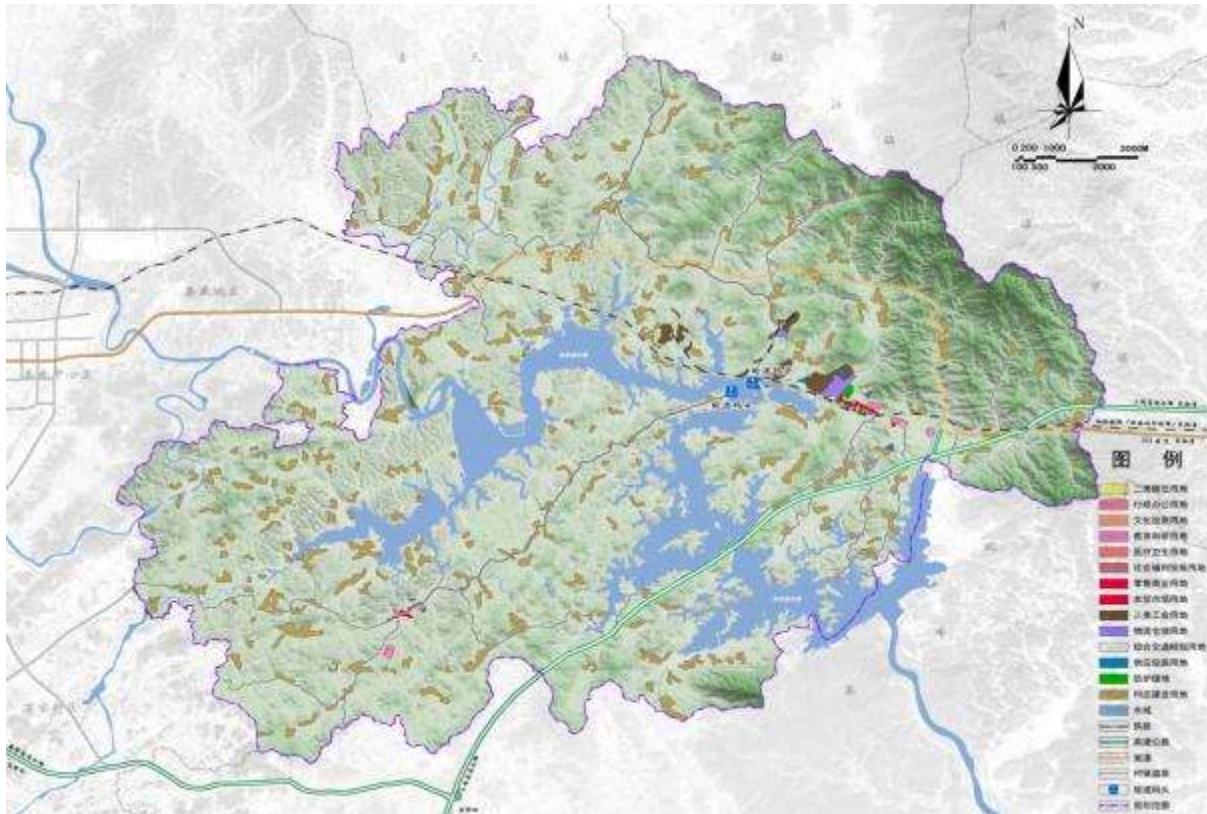


Figure 2

Characteristics of rural socio-economic development

Shuifu Demonstration Zone in 2021 total output value of agriculture, forestry, animal husbandry and fishery 590.53 million yuan, the primary industry is still the economic pillar of the demonstration zone. Agriculture, forestry and fishery are the main industries, among which grain, fishery and pig are the three pillar industries. Agriculture, is still in the traditional development stage, the main contradiction facing the countryside is the huge rural population pressure and the relative shortage of urban absorption, capacity between the contradiction.

(1) the income of farmers is growing slowly

In 2020, the per capita net income of rural residents in Hunan province was 5,622 yuan, an increase of 14.5 percent in real terms (according to the National Bureau of Statistics of the People's Republic of China) . The per capita net income of rural residents in Xiangtan City was 7,817 yuan, while the per capita net income of farmers in the demonstration zone was 5,770 yuan. From 2015 to 2020, the per capita net income of farmers in the demonstration areas will increase by about 10%

, while the growth rate of total fiscal income will be 25% . In recent years, the demonstration area has developed rapidly, but under the influence of changes in the economic environment at home and abroad, some old industrial enterprises have shown signs of economic recession, the emergence of a large number of laid-off workers has also limited the absorption of rural population by cities and towns. The total economic output of the demonstration zone and the per capita income of the farmers are pure, and their incomes are slow and unstable.

(2) the income gap between urban and rural areas gradually widened

Since 1985, when the focus of reform was shifted to cities, the income growth rate of urban residents has been increasing, while that of rural residents has been slowing down, and the income gap between urban and rural residents has been widening. With the development of social economy, the income growth of urban residents is faster than that of rural residents, and the income gap between urban and rural residents will continue to widen. Therefore, the key to control the widening income gap between urban and rural residents is to find ways to increase the growth rate of rural residents' income, which requires a series of effective countermeasures.

(3) the problem of farmers' security is becoming more and more serious

The demonstration area is dominated by agriculture, which accounts for 80% of the total population. The problem of farmers' security is a difficult problem, which makes the rural areas, which have a gap with urban life, even worse. First of all, the issue of land-losing farmers security, farmers once lost, the land, the loss of the material basis for survival, life can not be guaranteed; Secondly, there is the issue of medical security for farmers: the various indicators of rural health investment are lower than the national average level, and the vast majority of farmers are medical care at their own expense; also including farmers, people's old-age insurance: in 2020,1,011 people participated in rural old-age insurance in the demonstration area, accounting for only 1.4% of the total number of farmers.

(4) backward rural infrastructure

The demonstration area is limited by its location and economic development stage, with backward public service facilities, serious infrastructure such as roads and sanitation, and lack of, health stations, nursing homes, cultural centers, garbage compression stations and social parking are relatively lacking. Generally speaking, the living service facilities of the farmers in the demonstration area are not complete and of low grade, which basically can only meet the basic needs of local residents.

3.3 summary

1. Socio-economic characteristics of urban and rural areas

Through the above analysis and the summary of the field investigation, the base and the present situation of the urban and rural social and economic development in the demonstration area have the following characteristics:

(1) distinctive ecological base, excellent land and water resources

The base belongs to low mountain and hilly area, with high forest coverage and superior ecological environment. The nature of the mountain and water in the Demonstration Area is outstanding. There are lakes in the lake, mountains outside the mountain, and the mountains and water repeat themselves. The overall landscape resources have been well protected due to the relatively inefficient development of the current situation. The current situation of small-scale cities and settlements, can be used more abundant land, urban and rural space development potential is huge.

(2) the ecological environment is superior, water source and wetland are integrated, but the pressure of ecological protection is great

The development of urban and rural areas in the demonstration area has little damage to the ecological environment, and the ecological environment is better. However, the Shuifumiao water reservoir in the demonstration area is not only the water source of Xiangxiang and the reserve water source of Xiangtan, but also the core part of Shuifumiao Wetland Park, with the rapid development of urbanization in the future, there will be great pressure on the ecological environment.

Rich reserves of mineral resources, with superior economic development strength, but the need for industrial upgrading and transformation of the factory

The qizhi town in the demonstration area is rich in mineral resources. It has a famous limestone bed in geology-“Qizhi limestone”, with proved reserves of more than 600 million tons. Existing enterprises in Hunan province to create a well-known“Cement city”, “Shaofeng”, “Chi zi”, “Jingshan” and other cement brands well-known at home and abroad. But development is limited by the proximity of reservoirs and urban areas. Qizi has the advantage of large scale and economic development, but it needs to upgrade and transform the factory, and develop green building materials on the basis of environmental protection.

(4) the level of urbanization lags behind the level of economic development

The per capita GDP and per capita income of the demonstration area are higher than the national average level, but the urbanization level is obviously lower than the national average level. A large number of agricultural population gathered in towns, engaged in non-agricultural industries, but can not enjoy the urban residents, living and treatment, in a semi-urban state, the level of urbanization needs to be improved.

(5) the gap between urban and rural development is big, and the dual structure between urban and rural is obvious

The demonstration area is in the period of rapid urbanization. There is a big gap between urban and rural residents in employment opportunity, income, social security, education, life style and so on.

(6) the radiation of cities and towns is small, and the space of urban and rural areas is scattered and inefficient

The small scale of the towns in the demonstration zone and the lagging service facilities do not play a sufficient role in driving the rural development; moreover, the system of urban and rural residential areas is scattered, and the effect of population and industry agglomeration has not been brought into play, land and space use is inefficient.

(7) it is necessary to fully tap the superior multi-culture and shape the characteristic towns

Historical and Cultural Site Protected at the provincial level, there are many national and provincial-level cultural relics in the area, it fills the historical gap of the Southern Song Kiln, but the current situation of protection and utilization is worrisome.

2. The focus of urban and rural development should be coordinated

Based on the above analysis, the urban-rural coordinated development in the future should focus on the following aspects:

(1) taking the road of “Two types” of development, giving priority to protecting the ecological environment and strengthening the rational use of resources.

Although there are abundant land and water resources in the demonstration area at present, in the long run, we should follow the road of “Two types” of development, and carry forward our own advantageous traditions in the process of development, take full advantage of their own resources to develop comparative advantage industries. And labor resources are renewable and upgraded. Therefore, improving the efficiency of resource utilization, protecting ecological environment and traditional culture, and developing resource-saving and environment-friendly industries are the guarantee of long-term development.

(2) the upgrading and transformation of industry and the cultivation of new industries.

The demonstration area has traditionally relied on mineral resources, but is facing resource depletion and environmental pressure. Therefore, we should fully understand ourselves, learn the advanced experience of similar areas at home and abroad, cultivate new industries, achieve wetland efficiency industry, green building materials, modern agriculture linkage, and promote the development of urban and rural economy.

(3) improve the speed of urbanization, healthy urbanization.

The level of urbanization in the demonstration area is lower than the level of economic development, which can not meet the requirements of a large number of rural population to change their way of life, improve their quality of life. Therefore,

on the one hand, we should improve the speed of urbanization and expand the scale of cities and towns, on the other hand, we should ensure the quality of urbanization and the development of urban space should be planned first, improve the quality of urban infrastructure and public service facilities, improve community education, medical, cultural level, to achieve a healthy urbanization.

(4) interactive development between urban and rural areas to narrow the gap between urban and rural areas.

To develop modern and efficient agriculture, to protect the city and to promote the countryside with the goal of sustainable development of rural social economy, and to use the land wisely, in turn, the gap between urban and rural areas will be reduced in terms of social security and living standards.

(5) urban-rural co-ordination based on ecological protection to strengthen the control and efficient use of urban and rural space.

Based on the principle of centralized and efficient construction, through the high-quality construction of the new city of Qizhi, Maotian Town and central village of tourism reception and community service, improve the efficiency of space utilization, improve urban and rural space, layout, and narrow the urban-rural gap.

(6) joint construction and sharing of large-scale regional infrastructure.

In order to ensure the coordinated development of urban and rural space in the demonstration zone, it is necessary to have the guarantee of infrastructure in the demonstration zone and even in a larger scope, including transportation, energy, communications, water and water resources, environmental governance, tourism development, etc. , to carry out a comprehensive, inter-administrative, joint evaluation, decision-making and construction.

2.3 Urban-Rural Development Models and Strategies

1. The principle of overall planning

(1) respecting the interests and wishes of farmers, and guiding and helping to improve the living environment in rural areas;

(2) to respect local history and culture, and to establish a working mechanism adapted to the needs of rural areas and farmers at this stage;

(3) respecting the natural environment.

2. Development Goals To achieve urban-rural integration, human and natural coexistence, symbiosis, co-prosperity, to promote the conservation of energy resources, to achieve the friendly coexistence between human and nature, the natural environment.

Create “Two types” model of comprehensive reform, build a harmonious and unified new urban and rural areas, establish a new urban-rural relationship. We will break down the existing dual urban-rural structure and create an environment for coordinated economic and social development between urban and rural areas. To solve the problems of agriculture, rural areas and farmers, to improve the ecological environment, to make intensive use of land resources, to improve rural vitality and the living standards of farmers, to expand urban development space. We will draw on each other's strengths and draw on each other's strengths to achieve common development.

(1) the goal of urban development: exquisite and elegant, romantic and leisure landscape and leisure garden and green demonstration suitable for human settlement, new urban area.

Relying on the unique landscape resources, promoting the process of urbanization by tourism, strengthening the construction of a two-oriented society, making intensive use of land resources, reasonably controlling the intensity of construction, build “Refined and elegant, romantic and leisure” of “Two-oriented society” town, model new urban area, promote the overall image of Shuifu model area.

(2) the development goal of villages and towns: “One village, one brand, one village, one characteristic”.

Giving priority to the protection of the ecological environment, promoting economic development and the process of urbanization, improving the human

settlement environment in rural areas, promoting the appropriate concentration of villages and the intensive use of land resources, and facilitating the construction of supporting facilities, build a “Good ecology, production and development, a comfortable life, rural civilization, clean village appearance, management democracy,” the “Two-oriented society,” the new model of rural communities.

4.2 overall planning and development strategies for urban and rural areas

1. Overall planning of urban and rural areas

Idea 1: Eco-environmental protection and urban-rural integration of social and economic development

The unified guidance for the development of urban and rural ecological resources, in the ecological environment protection to achieve the interests of both urban and rural areas, for urban and rural development

Exhibition to build a unified ecological basis. In the social and economic development, through the benign interaction of “Taking the village with the city, promoting the city with the village”, the development gap between urban and rural areas is reduced, especially the improvement of the living comfort and the economic development level of rural areas, to achieve social and economic integration between urban and rural areas.

Idea 2: to make community life and landscapes more urban and rural

Under the premise of ecological, low-carbon and environmental protection, we should face up to the natural differences between urban and rural areas, and emphasize the unique landscape features between urban and rural areas, make the modern urban life, ecological nature and pastoral countryside in the 254 square kilometers of perfect coexistence.

2. Overall urban and rural development strategy

(1) take the countryside with the city, promote the city with the countryside

Tourism promotes urbanization, encourages farmers to enter cities and engage in secondary and tertiary industries in cities and towns, and promotes the development of rural areas through the development of cities and towns. We should

strengthen the construction of a two-oriented society, adjust the index of land use for construction, and strengthen the characteristics of rural areas as regional ecological background, so as to ensure a good ecological environment in urban areas.

(2) spatial agglomeration and differential development

“Three concentration” as the basic form, according to the new city, town, community three-level residential system planning, encourage the towns, and communities to gather development, intensive management, it encourages people to gather in well-developed settlements to replace land. The boundary of construction land development shall be delimited, and the geographical scope of towns and rural areas shall be clearly defined, so as to maintain rural characteristics.

(3) regional control and classified guidance

Taking full account of regional development conditions, ecological and environmental protection requirements, cultural and traditional characteristics and other factors, proposed different regional, rural development strategy, and put forward the corresponding classification guiding principles according to the different characteristics and types of rural areas.

(4) facilities advance and regional sharing

One of the primary tasks of urban-rural integration is to achieve, first and foremost, the sharing and connectivity of urban and rural infrastructure so that urban infrastructure can serve rural areas through the priority allocation of municipal facilities and service facilities in central communities, to guide the rural population towards the central and central communities.

(5) misplaced development and respect for culture

To guide the differential development between urban and rural areas, to concentrate the secondary and tertiary industries in urban areas, to develop only the primary industry in rural areas, and to develop the tertiary industry by utilizing its agricultural, ecological and cultural resources. Highlight the cultural characteristics of rural areas.

(6) equality between urban and rural areas and institutional guarantee

Give rural community residents and urban residents the same employment opportunities, eliminate rural and urban in, including health insurance, Social Security

And the system to protect them.

4.3 urban-rural development models and strategies

1, urban and rural overall planning, interactive development model analysis

In terms of long-term development, for the present situation of “Small towns and large rural areas” in Shuifu Demonstration Zone, to promote the construction of ecological culture, civilization and urban-rural co-ordination of the two-type society, we should absorb the necessary, experience and a rational development model should be selected. The following four models are typical of urban-rural development:

Mode one: “Dissolving Agriculture mode” of urban-rural integration

On the basis of the interaction and connection between urban and rural areas, the grey area-the blending area between urban and rural areas, which is produced when the integration state is reached, forms a unique pattern of urban-rural connection in this area. This model is rural industrialization, and urbanization, and the result is a complete transformation of rural areas into urban areas.

The typical representative is that the economy of the Yangtze river delta or the Pearl River Delta is developed and has a good foundation for economic development. The cities have a strong role in driving the surrounding rural and rural areas. They extend the urban infrastructure to the rural areas and plan the urban and rural layout in a unified way, emphasis on farmers, farmers skills training to help farmers adapt to the new living environment, environment and working methods, effective transfer of farmers.

Applicable areas: apply to the suburbs of large cities, or urban agglomerations of the coverage area.

Mode two: “Back-feeding mode” of taking urban and rural areas

It emphasizes the leading role of the city, regards the urban-rural economy as a “Top-down” connection with the city as the center, and emphasizes the city as the center and the resources, factors from urban to rural areas brought by rural

development, the stronger the radiation capacity of the city, the stronger the effect of rural promotion.

This model is typical of the urban and rural development in Chengdu. Chengdu takes “Three centralization”-industry to industrial park, district centralization, farmers to town centralization, land to scale management centralization as the main pattern, and walks out of a top-down, urban and rural, to develop and prosper together.

Suitable areas: suitable for developed cities and backward rural areas.

Mode three: “Self-strengthening mode” of rural modernization

Depending on the rural industry and collective economy, the rural reform and development precedes, outpaces and outpaces the city, thus promoting and pulling the development of the city and even the whole region. Starting from the needs of rural development to promote urban-rural integration, it takes a “Bottom-up” road to develop rural areas to promote urban-rural integration.

This model is typical of the overall planning of urban and rural areas in southern Jiangsu. The rural collective economy in the south of Jiangsu province is relatively developed. The villages and towns, and a considerable part of the enterprises are village-run enterprises. Village-level economic accumulation has become the original accumulation of the development of township enterprises.

Applicable areas: towns and Rural Economic Development Foundation, the need for a certain degree of flexibility of the rural system, such as model areas, political preferential areas.

Model 4: the “Agricultural Reform Model” of comprehensive plastic surgery

By taking effective measures to change the rural living environment, economic vitality and other issues. On the one hand, the comprehensive development and construction of rural areas should be strengthened to improve the living environment and living conditions of the rural population; on the other hand, through the development of characteristic industries and industries in rural areas, reducing the

difference in employment opportunities between urban and rural areas and reducing the income imbalance between urban and rural areas.

The new rural construction in Ganzhou starts from the village renovation and the improvement of the living environment of the peasants. The most important characteristic of the “Ganzhou Model” is to find a feasible cut-in point, that is, to start with the “Three-qing and three-reform”, to seek the support and participation of farmers.

Applicable areas: this model is more suitable for the economic base, relatively weak, the proportion of agriculture in large agricultural areas.

2. Urban-rural development strategies as a whole

Strategy 1: Restore and protect ecological wetlands, towns, tourism facilities involved in the construction of rural areas to urban and rural areas, the integration of the “Dissolved agriculture model”-based.

The urban construction area, tourism supporting construction area and urban-rural integration area of Shuifu Demonstration Zone should be transformed on the spot, integrated into the city and developed together with the towns. Including Yintang Village, Xiaoluo Village, Qizhi village, Shanping village, eshi village, Zhangquan village, Xinli Village, Fengzichong, village and other villages, learn from the urban-rural integration of the “Dissolved agriculture model” mainly.

The development of rural areas, the realization of agricultural modernization. For the development of major projects in villages, the government-led, active guidance, rural community infrastructure construction, really protect the interests of farmers.

Strategy Three: the more partial region to the collective economic cooperation “Self-improvement model” and “Agricultural Reform Model” combination.

The remote villages in Shuifu demonstration area include Yangquan, Pingshan, Daxing and so on. This part of area takes the rural reform as the development opportunity The rural living environment has been transformed to improve the quality of rural life.

Strategy Two: the rural areas around the town of Qizhi and Maotian mainly rely on the “Back-feeding model” of the urban belt.

The surrounding areas of Qizhi and Maotian towns mainly include Pu'an village, Pingtang village, Xiashan Village, Hefeng Village, Yufang village, Lutang village, Xinhe village and Yuzhuang village. The traffic conditions in these areas are relatively good, relying on the developed urban economy, this region will drive the development of rural areas and realize agricultural modernization. For the development of major village projects, the government-led, actively guide the construction of rural community infrastructure, really protect the interests of farmers.

1. The implications of a “Two-oriented society” as a model for the development of new urban and rural areas

After “Overall planning of urban and rural areas”, “Two trends” and “Building a new socialist countryside”, the central government officially approved Hunan Changzhu, tan urban agglomeration as a “Two-oriented society” comprehensive reform pilot area. There is a very clear logical relationship among the four areas: “Overall planning of urban and rural areas”, “Two trends”, “Construction, new socialist countryside” and “Two-oriented society”. The urban-rural integration of a two-oriented society is a strategic idea, forming an integrated pattern of urban and rural economic and social development, and coordinating planning policies, public resources, infrastructure and industrial layout, is to implement the scientific outlook on development and promote the construction of a harmonious society.

2. A case study on coordinated urban and rural development

Looking at the overseas and domestic urban and rural construction movement, this section introduces the overseas case selection and the Shuifu Demonstration Area Rural, agricultural, characteristics have many similarities to Korea's “New Village Movement”, the domestic case introduction focuses on “Chengdu Model” and “Zhejiang Model” and is supplemented by the other three models.

(1) the foreign case-the new rural movement in Korea

The “New village movement” has played an irreplaceable role in the economic and social development of Korea, especially in coordinating urban and rural development and building a harmonious society.

1) background

South Korea is short of resources, only labor resources. Based on this situation, Korean policy makers agree that relying on people and human resources to develop the economy is the only way to achieve rapid and sustainable development in Korea.

South Korean scholars believe that in order to raise the level of two important factors of human capital—the national level of science and Technology and the national standard of living, the national standard of living must be improved through a kind of measure, to make it and the national economy and scientific and technological development, complement each other, to fully develop the rural economy and promote social progress. In the late 1960s, the Korean economy, relying on export-oriented development model, has been successful, the government has financial support for agriculture, to narrow the gap between urban and rural, workers and farmers, regions. This kind of social background, from the objective request the Korean farmer excites the spirit, diligently, the self-help and the cooperation, the official and the people unify, constructs the hometown, speeds up the rural economy development and the social progress.

2) the main contents and social benefits of the new village movement

Improving rural infrastructure

Increasing farmers' incomes

3 improve the degree of organization of farmers

3) success and lessons learned

South Korea's “New village movement” has not only promoted the development of agriculture, expanded the employment of rural labor, but also rapidly reduced the urban-rural gap, and achieved rural prosperity and stability. Looking at the whole movement, there are many aspects worth learning.

1 the economic and social environment is very similar to the current urban and rural situation in the Shuifu Demonstration Zone. Improving rural infrastructure, improving the level of farmers' organization, increasing farmers' income and so on are welcomed by farmers and the general public. We will build a financial feedback mechanism that promotes agriculture through industry and rural areas through urban areas. It is obvious that the subjective and objective conditions for urban-rural coordination in the Shuifu Demonstration Zone are already in place.

Economic Development, social development and people's transformation, Trinity, promote each other. The“New rural movement” takes ideological enlightenment and spiritual transformation as its starting point, organically combines economic and social development with People's transformation, and integrates it into the formulation and implementation of rural development policy objectives.

Train new farmers. Through farmers' associations and guilds, to improve the scientific and technological quality of farmers, support urban and rural coordination, coordination of activities, to ensure the healthy interaction between urban and rural sustainable development.

4 the leading role of the government. During the whole movement, the Korean government played an active leading role in the establishment of policy objectives, the leadership of policy promotion, the leading organization, the financing and arrangement, and the development of technology.

5 related lessons: the high level of urbanization has led to the scarcity and ageing of the rural labour force; the over-protection of agriculture by the government has made it uncompetitive and over-dependent on the government; The Korean government has no more effective countermeasures for the adjustment of agricultural structure, agricultural high-tech research, the development of benefit agriculture and the sustainable development of agriculture.

1) Chengdu model-take Sansheng as an example

Through the development of flower industry and rural tourism, Sansheng Township in Chengdu has realized a great leap in the construction of a new countryside, known as the“Sansheng Township model.”.

The government carries on the new village construction according to“the market leads, the base production, the enterprise management, the government service” the pattern, initially is the absolute leading force, the quantity and the active supporter;

The government through the creative implementation of the“Law reduction” subsidy policy, to attract external investment, a unified transformation of the original villagers' houses into western Sichuan homes, style, and elaborate planning of the scenic area environment, it has become a major attraction for farmers and residents

2 agricultural development

We should actively promote the industrialization of the flower-growing industry and develop an agricultural outlook

Light Leisure Tourism, expand the space for agricultural development, promote the development of related industries, forming a sound agricultural industry chain

3 regional development

Sansheng Township chose to develop agricultural tourism on the basis of characteristic agricultural production, and its income changed from single planting income to multi-income system, which achieved considerable economic and social benefits.

4 lessons learned

Adapt to local conditions, dislocation development

Making full use of the geographical advantages of big cities, in line with local conditions, to create“Five golden flowers” rural tourism products.

Towns and townships to create a landscape, urbanization

The old rural houses will be landscaped and transformed according to the principle of "Farmers' investment and government subsidy", and the rural infrastructure will be improved and the rural supporting facilities will be modernized. The rural landscape should be built ecologically, the land should be managed on a large scale, and the land should be consolidated by means of combining hospitals and hospitals, demolishing enterprises and entering gardens, building new ones and demolishing the old ones, etc. .

We will extend the agricultural industrial chain and strengthen the operation of agricultural industrialization

Improve the agricultural industry chain, break through the original production of crops-sales of the industrial chain, to flowers

To develop agricultural tourism and leisure tourism on the basis of planting; to inject modern cultural factors into agricultural tourism and increase the cultural added value of traditional industries; to strengthen the operation of agricultural industrialization, we will vigorously support leading enterprises in agricultural industrialization.

2) Zhejiang model-take Anji County as an example

Anji County, Zhejiang province, adhere to the ecological county strategy, creating the primary industry from "One after another" to "Cross-two into three" development mode, known as the "Anji model.

1 main content

Planning first: the formulation of the "Overall plan for the construction of China's beautiful villages," the "Implementation of China's Beautiful Villages," The implementation framework, evaluation criteria, assessment methods, incentive policies and long-term management mechanism of "China's beautiful countryside" were clarified.

Classification Guide: According to the characteristics and basis of each village, classification guide. And in accordance with the level of creation, set a "Quality

village”, “Key village”, “Feature village” three levels, for the creation of each village to provide a phased goal.

Project Driven: the Government has set up a special fund to reward and supplement, attracting a large number of social capital into

Environmental Improvement: Focus on the implementation of rural environmental improvement“Four projects”, “Five transformation” to improve rural production and living environment.

2. Learning from experience

Adhere to the agriculture-oriented, cross-two into three, the realization of new rural construction, leapfrog development

Anji focused on the two leading agricultural industries of bamboo and white tea, vigorously developing the secondary and tertiary industries, while vigorously building the county economy as a whole brand advantage, then make agriculture in“One after another” at the same time to achieve“Cross-two into three”, to achieve a new rural construction leap-forward development.

We must put ecology first and promote sustainable development in the new countryside

Ange is good at excavating and protecting ecology, and is good at managing ecology. Through excellent ecology and high-quality service, he transforms ecological advantages into ecological benefits, turning green mountains and green waters into mountains of gold and silver, and producing green GDP, and embarked on a path of sustainable development.

We have taken the road of connotation-based development and achieved scientific development in the construction of a new countryside Anji, based on the nationality, ecology and speciality of cultural consumption, makes a good article on rural cultural consumption. Through unceasing excavation and inheritance, vigorously develop the“One village, one product” rural culture, forming the development of rural tertiary industry, attracting urban tourists a major selling point.

3) Wenchang City, hainan-rural culture

Taking the construction of ecological environment, the establishment of ecological culture and the development of ecological economy as the main contents, we will carry out activities to establish civilized ecological villages.

Level guidance: according to the fact that the development level of rural economy and culture is unbalanced, the standards for the establishment of provincial-level civilized eco-villages and municipal-level civilized eco-villages are determined respectively.

Integration Force: give full play to the role of social support and participation, civilized eco-village construction has a good “Inspiration effect” on the local people at home and abroad, the vast number of overseas Chinese and expatriates support the construction of civilized eco-village.

4) the Qingxian model of hebei-management democracy

The core of the “Qingxian Model” of rural democratic governance in Qingxian County, Hebei province, is “Party branch leadership, the village Congress, the village committee”.

Village governance structure: The Villagers' Congress establishes the chairman. The party branch is the core of leadership, the villagers' representative meeting is the decision-making, supervision, organization, and the village committee is the Executive Organization of village affairs management, carrying out the decision-making of the villagers' representative meeting.

Working Methods: the party branch focuses on the big and the small, the party branch from the past management of financial management of the administrative, business-oriented leadership to plan, overall, the direction, the management of People's heart up.

Operational mechanism: to bring the work of village administration into the track of legalization, institutionalization and standardization, to establish the work rules of each organization, to clarify their respective duties and procedures, so that the management of village affairs can be rule-based, standardized and orderly.

(3) rational reference

Under the background of urban-rural co-ordination, building a two-oriented society, through the above cases, the Shuifu demonstration area to carry out village construction, there are mainly the following points for reference:

1) unified planning, classified guidance, phased development

The new rural construction area is vast, each village difference is very big, the construction goal is also different, formulates the unified plan to be very important. Plan first, guide the construction of villages in the demonstration areas, set appropriate targets according to the characteristics of each area, classify them, provide guidance, and set development schedules according to the degree of difficulty of development and the amount of financial resources that can be invested, the development will be carried out by stages, and the new development of rural areas and villages will eventually be realized.

2) the government makes necessary upfront investments to improve infrastructure

Compared with cities, the capital investment in rural areas has been insufficient for a long time, and the infrastructure, such as water, electricity, roads and gas, is generally poor, and the management and services are not in place, which restricts the development of rural areas to a considerable extent, the government should invest a certain amount of capital in the early stage of new rural construction to improve these infrastructures and improve the conditions for rural development.

3) give priority to ecology, adapt to local conditions, extend the industrial chain, and“Cross the two into three”

According to the principle of ecological priority in the demonstration area, village construction should follow the development characteristics and laws of local agriculture, rural areas and farmers, as well as their own development needs and processes, and extend the original industrial chain outward, increasing industrial value added. In the process of extending the industrial chain, we should pay attention to the priority of ecology. We can go over the secondary industry which is overproduction and big pollution, and enter the tertiary industry which has a broad

prospect and little pollution, for example, the development of agricultural tourism, organic agriculture, and so on, while improving the technical literacy of farmers, developing rural areas, democracy, farmers' organizations, women's participation, rural education, Rural Health, technology promotion, agricultural trade, cultural construction, urban-rural exchanges and other activities.

4) comprehensive environmental improvement and land consolidation

Because of the lack of garbage and sewage treatment facilities, the garbage is piled up at will, and the sewage is discharged on the ground, the living environment in rural areas is common and poor, so it is urgent to carry out comprehensive renovation, and to increase the sanitation facilities and the corresponding management system. Due to the scattered management of farmers, house, land, land more scattered, land use is not economic, it is urgent to sort out, promote residential concentration and land scale management, improve, land use rate.

5) introduce preferential policies to attract external investment

New rural construction also needs a large amount of capital investment, purely rely on government financial investment, obviously difficult to meet the needs. Therefore, it is necessary for the government to introduce a series of preferential policies, such as incentive funds and subsidies for the renovation of rural dwellings, to use government funds as the seed to attract more external funds to enter, to provide adequate sources of funds for new rural construction.

6) seize the nearby urban consumer market and launch targeted products

New rural construction can not be on the countryside, but should jump out of the countryside, from the overall situation of urban and rural planning, fully develop the city's consumer market. Rural areas should aim at the market demand of nearby cities, launch marketable products, increase income, improve their own economic strength, attract economic factors, enhance the conditions of their own development.

7) have the courage to innovate

To stimulate the enthusiasm of farmers, expand income, improve agricultural efficiency, narrow the gap between urban and rural areas must be from the

mechanism of innovation. To improve the degree of agricultural organization, the establishment of cooperatives, associations, villagers' councils as the carrier of New Economic Organizations, the establishment of joint purchase and marketing system and mutual fund system.

2.4 Urban-Rural Spatial Planning

On the premise of inheriting the urban and rural traditional characteristics and local culture, we should push forward the comprehensive reform of urban and rural integration development, coordinate the artificial and natural space as a whole, and adjust urban and rural space resources, to organize and allocate the physical space resources, such as ecological space, industrial space, human settlement space and landscape space, in a rational way, so as to realize the efficient and intensive utilization of urban and rural space resources and the natural ecology of urban and rural areas, the coordinated development of environmental system will promote the overall sustainable development of social economy and urban and rural construction in Shuifu Demonstration Zone.

1. Spatial selection of urban development land

Comprehensive land construction conditions and comprehensive assessment of urban development conditions, planning clear demonstration of New Town, Maotian town, industrial park, and tourist resort development direction:

Model new town-the model new town consists of two parts: the city of Qizhi and the tourist town. Based on the existing Qizhi and town areas, the Qizhi city area will be developed to the north and south, relying on the Hunan-guizhou railway, reaching the upper-rui expressway in the south and the ecological mountain in the north, south to the Shuifumiao Reservoir along the north to the high-speed, full combination of reservoir landscape resources, the development of tourism services.

The development of Maotian Town, which is based on the existing towns, relies on Shuifu Avenue to develop to the north and south.

Industrial park-considering the environmental impact of industrial development on the demonstration new town, the plan maintains the current status of the old industrial park in the near future, and in the long term, relying on Louxiang Avenue and the Hunan-guizhou railway, the industrial park will jump out of the old park and build a new park to the north,

tourist resorts-tourist resorts develop mainly along the corridor of Shuifumiao Reservoir, considering the connection with the existing towns, according to the land use condition, reservoir resource environment and the project intention, the project will be divided into two parts: one is located in the lower reaches of the reservoir, the demonstration west of the new city, which will be built as a cultural and leisure group; The other is located upstream of the reservoir, to the north of the town of Maotian, and will be built as a health-preserving holiday group.

2. The choice of development land space in central village

(1) development strategy of central village

Rural Settlement of Russia will be integrated into the city with the development of land and form the urban community, while the rural settlement of Russia will be the central village. The plan focuses on building a number of high-standard new rural areas to achieve intensive land use, improve quality, facilities to share, and effectively support the development of rural areas.

(2) principles for selecting central villages

This plan will select the current larger-scale, better conditions of the village as the central village, through the relocation of the village point, the plan, the poor conditions of the village will be gradually transferred to the central village.

- 1) based on the existing administrative villages;
- 2) the current situation of the central village should have a larger population scale;
- 3) the village should be close to the main roads;
- 4) the central village should be equipped with more comprehensive public facilities;

5) the distance between the village and the farmland should be 1-1.5 km.

(3) the choice of development land space in central village

Through the comparative analysis of the relevant conditions, selected Changyuan village, Lianshan Village, Nan 'an Village, Meihua village, Ming he village, Baiyang Village, Zengjia village, Wan Shan Village, Tan Shan village, Fenshui Village, Ping Shan village and Hong Qi village as the 12 existing administrative villages.

3. Policy-supported housing and rehousing

In order to attract high-quality talents, it is necessary to provide security for key talents. At the same time, ecological environmental protection and restoration projects, tourism development, urban roads and other public facilities projects, involving demolition, resettlement of residents to provide security.

The main locations for policy-supported housing and resettlement houses are located in central areas such as Qizhi City, Maotian town and tourist towns, and the supply is carried out, the service function of the central area is perfect, the traffic is convenient, the supporting facilities are perfect and the environment is beautiful.

It is of great significance for improving people's livelihood, promoting social harmony and stability to make overall planning for urban and rural residents to settle down, build policy-supported housing and return resettlement housing.

5.3 prediction of land use scale for urban and rural development

1. Population scale forecast in planning period

(1) population status

By the end of 2022, the Shuifu Demonstration Zone has a population of 92,271, of which 26,248 are non-agricultural, accounting for 28.4% of the total population, the population density is 318 persons per square kilometer (according to the 2022 General Plan of Xiangxiang Municipal Public Security Bureau and Chizi and Maotian towns) .

Table 3 population statistics of Shuifu Demonstration Area in recent 5 years

Nature	2022	2021	2020	2019	2018
Resident population	92271	92967	92843	92434	92071
Non-agricultural population	26248	25126	24207	23697	22670
Agricultural population	66023	67641	68636	68737	69401
Move in	257	446	288	207	189
Move out	724	491	547	404	373
Floating population	891	490	414	375	351
Born	1126	811	1611	761	845
Death	1355	642	1102	431	579

Source: Shuifu Model Area Management Committee

(2) upper planning population forecast

1) Xiangtan City Master Plan (2020-2030)

According to the “Xiangtan City Master Plan -LRB-2020-2030)” forecast, Shuifu demonstration area has qizhi town Maotiantian to Qizhiizhi as a sub-center Xiangxiang City as a key town, the population size of 40,000-80,000 people, but Maotian is an ordinary town with a population of between 10,000 and 40,000. As a result, Shuifu's population will be between 50,000 and 120,000 by 2020.

2) master plan of Xiangxiang City (2020-2030)

According to the general urban planning of Xiangxiang City (2020-2030), the population of Qizi Town will be 80,000 in 2025, and that of Maotian Town will be 20,000 in 2025. Therefore, the population of Shuifu Demonstration Zone will be 100,000 by 2020.

3) conclusion

In summary, the urban population scale of Shuifu demonstration zone is predicted to be 5-100,000 by 2025 according to the relevant upper-level planning.

(3) population size forecast

1) urban-rural population forecast

According to the comprehensive increasing rate method and the non-agricultural population proportion method, the total population size of Shuifu demonstration area is determined by the planning forecast as follows:

Years	Total popul (10,000)
Status Quo (2022)	9.23
Planning recent (2028)	10.0
Planning Forward (2035)	12.0

2) forecast of urbanization level

The urban population of Shuifu demonstration area is forecasted by trend extrapolation method, and combined with the urbanization trend of the demonstration area, the total population size of Shuifu demonstration area is determined as follows:

Years	Total popul (10,000)
Status Quo (2022)	2.63
Planning recent (2028)	3.8

3) the forecast of tourism reception population scale

1 current tourist size

Since the establishment of Shuifu tourist area, tourists have always maintained a steady growth, development momentum is good.

Table 4 statistics on the number of visitors to Shuifu tourist area in the past 11 years

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Reception (10,000)	6	7	8	10.5	11.2	12.15	12.15	12.36	17.1	19.8	24.1
Growth rate (%)	—	17	14	31	7	8	0	2	38	16	22

Visitor size forecast

The planning adopts two forecasting methods, the maximum capacity estimation method and the market prediction method, to forecast the tourist capacity of Shuifu Demonstration Zone, the scale of which is as follows:

Table 5 comprehensive forecast of tourist arrivals

Type of prediction	Recently (2022-2028)	Forward (2029-2035)
Maximum capacity backward method (10,000 person-times/year)	404	538
Market forecasts (10,000 person-years)	140	370
Integrated equilibrium theory (10,000 person-times per year)	270	450

Travel accommodation and direct services forecast:

Table 6 forecast of direct service personnel required for travel

	2028	2035
Number of beds	12300	40500
Direct bed attendant (person)	9225	30375
Direct catering personnel	4612	15187

4) conclusion

Based on the above calculation, the total population size of the demonstration area is determined by the planning forecast as follows:

Years		Total population (10,000)		Total urban population (10,000)		Urbanization by country (%)
Status Quo (2020)	Chizizhen	5.50	9.23	2.35	2.63	28%
	The town of Maotian	3.73		0.28		
Planning recent (2028)	Chizizhen	6.0	10.0	3.4	3.8	38%
	The town of Maotian	4.0		0.4		
	Chizizhen	7.2	12.0	6.2	7.0	58%

Planning Forward (2035)	The town of Maotian	4.8		0.8		
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(4) urban-rural population balance

1) population transfer

Transfer of urban population-receiving the transfer of agricultural population in the district, the inflow of migrant workers from outside the district, receiving the tourist population;

Rural population transfer-the gradual transformation of the agricultural population in accordance with the goal of overall planning of urban and rural areas.

Table 7 the near-term and long-term population profile of the Shuifu Demonstration Area

Year	Total popul: (10,000)	Urban popul: (10,000)	The population (10,000)	Urbanizatio rate (%)
2022	9.2	2.6	6.6	28.5%
2028	10.0	3.8	6.2	38.0%
2035	12.0	7.0	5.0	58.3%

2) ways to transfer rural surplus labor

On-the-spot transfer-developing rural tourism, leisure and vacation, agricultural production base; on-the-spot transfer-developing ecological industry cluster in Shuifu Demonstration Zone.

2. Forecasting the scale of urban and rural construction land

(1) indicators of per capita construction land use

On the basis of the current per capita urban construction land of 121 square meters/person, according to the requirements of the national“Urban Land Classification and planning, construction land standards”, the index range of per capita construction land allowed in the planning is $\leq 110.0 \text{ m}^2/\text{person}$. Shuifu shows that the per capita construction land will be controlled within $110.0 \text{ m}^2/\text{person}$ during the planning period

With the progress of urbanization, the rural population will gradually transfer to the city, the remaining rural population will mainly concentrate in the center, the village. On the basis of the current per capita rural construction land of 225 square meters/person, according to the requirements of “Hunan province new rural construction village, regulation and construction planning guidelines (temporary)”, the target range of per capita construction land is 120.0-140.0 m²/person, and the per capita construction land of villages will be controlled within 140.0 m²/person during the planning period of Shuifu Demonstration Zone.

(2) prediction of land use scale

1) land for urban construction

According to the population scale forecast, the urban population will be 38,000 in 2028, and 70,000 in 2035 at the end of the planning period. According to the standard of per capita construction land in cities and towns, the demand for urban construction land will be about 4.1 square kilometers in 2022 and 7.7 square kilometers in 2035 at the end of the planning period, including 6.8 square kilometers in the eastern comprehensive development area, the Leisure Development Area in the west is 0.9 square kilometers.

2) land for village construction

According to the population scale forecast, the rural population will be 62,000 in 2028, and 50,000 in 2035 at the end of the planning period. According to the standard of rural construction land per capita, the demand for rural construction land was 12.2 square kilometers in 2028 and 7.0 square kilometers in 2035 at the end of the planning period.

3) land for tourism development and construction

According to the forecast of tourist size, the demand for land for tourism development and construction is about 5.5 square kilometers.

4) conclusion

Based on the above calculation, the planning forecast determines the total scale of construction land in the demonstration area as follows:

Years		Total population (10,000)		Total urban population (10,000)		Land use scale (square kilometers)			
						Town	Travel	The village	Total
Status Quo (2022)	Chizizhen	5.5	9.2	2.4	2.6	3.2	0.1	14.9	18.1
	The town of Maotian	3.7		0.3					
Planning recent (2028)	Chizizhen	6.0	10.0	3.4	3.8	4.1	2.0	12.2	18.7
	The town of Maotian	4.0		0.4					
Planning Forward (2035)	Chizizhen	7.2	12.0	6.2	7.0	6.8	6.0	6.9	20.6
	The town of Maotian	4.8		0.8					

5.4 urban-rural spatial control planning

According to the 11th five-year plan for economic and social development of the People's Republic of China, the Nationality Law of the People's Republic of China clearly states that in accordance with the carrying capacity of resources and the environment, the existing development intensity and development potential, taking into account the future distribution of population, economic distribution, land use and urbanization patterns, the land space will be divided into four categories: optimal development, key development, restricted development and prohibited development, we should adjust and improve regional policies and performance evaluation according to the main function orientation, and standardize the order of space development.

Planning will “Co-ordinate the development and protection of land and resources” planning principles throughout the space control, based on the SHUIFU model, regional land ecological suitability evaluation, construction land conditions evaluation, environmental protection, urban groups ecological isolation, water protection, historical and cultural resources protection, major municipal engineering construction requirements, the whole area will be controlled by built-up, built-up,

restricted and prohibited zones, and by four zones. According to the different functions, the forbidden area is divided into ecological protection area and Agricultural Protection Area. Based on the actual situation in the planning area, the planning restrictions are as follows:

1. The built-up area

The scope of urban construction land is the built-up area of the city, and the built-up area of Shuifu demonstration area is about 18.22 square kilometers, accounting for about 7.2% of the planning area, and areas covered by urban infrastructure.

Prohibited zones

The prohibited area covers about 141.56 square kilometers (including 45 square kilometers of water area of Shuifumiao Reservoir) , accounting for about 55.7% of the planning area. It mainly includes the ecological high sensitive area, the ecological barrier belt, the high hills and mountains with slope over 25 ° , and the water source, protected areas, relatively concentrated and contiguous basic farmland, important wetlands, flood discharge areas, flood storage areas, flood detention areas and other areas prohibited by laws and regulations to develop. The protection and cultivation of ecological resources is the main task in this area, and the natural state of the original ecology is maintained, in principle, construction of projects unrelated to the object of ecological protection and harmful to the ecological environment shall not be carried out, and existing development projects shall be rectified and relocated.

3. Restricted areas

The restricted area covers about 71.20 square kilometres, accounting for about 28.0% of the planning scheme area. The area is within the buffer zone around the exclusion zone, it mainly includes eco-sensitive areas, areas where the foot of riverbank back water slope on both banks of reservoir and its main tributaries extends less than 20 meters to the outside, hilly and mountainous areas with slopes between 15 ° and 25 ° , eco-fragile areas, and all kinds of suitable areas beyond the scope of the preceding paragraph, agricultural land and other areas where development is restricted by laws and regulations. In restricted development zones, protect and utilize existing ecological and ecological resources as far as possible, enhance the ecological service functions of the area as a whole, strictly control the blind expansion of construction land, and on the basis of not endangering the regional ecology and ecosystem security, we should adopt industrial adjustment strategies, carry out guided moderate development, and develop green industries such as facility agriculture, tourism and Recreation, and ecological health preservation.

4. Developing suitable areas

Deducting the scope of built area, forbidden area and limited area, it is suitable area, which is the choice of development space of urban and rural construction land. The area covered by the Shuifu demonstration area is about 23.26 square kilometres, accounting for about 9.1% of the planning scheme area. It mainly includes non-ecological, sensitive areas, relatively flat terrain and present conditions have a greater potential for utilization of the region. This area can adopt the development to raise, the promotion strategy, guides the urbanization development, controls the space to increase the boundary.

Table 8 area statistics of Shuifu Demonstration Area

	Built-up area	Prohibited Zone	Restricted area	Built-in areas	The planning scheme area
Area (km ²)	18.22	141.56	71.20	23.26	254.24
Percent	7.2	55.7	28.0	9.1	100

5.5 urban spatial planning

1. Urban spatial system planning

Planning and constructing “Key town-general town-central village-basic village” four-level urban and rural spatial development system.

Key Town 1, namely model new town, including the city of Qizhi and tourism town, is the Shuifu model area administration, culture, commerce, commerce, tourism, vacation, industry integrated service center, the core area of industrial cluster development, the total population in 2035, 62,000 people, urban construction land size of about 6.8 square kilometers.

One general town, Maotian Town, is the main tourist reception service area of Shuifu Demonstration Area and the community service center of its western villages. In 2035, the total population size was 0.8 million people, 0.9 km² of construction land.

There are 12 central villages, which are the management center, service center and residential center within the village area.

The basic level village 29, is the center village outside the reservation village, the plan controls its development scale, carries on the local optimization.

Table 9 urban spatial system classification summary table

Key Town (1)	Model New Town (including Chizi city and tourist town)
General Town (1)	The town of Maotian
Central Village (12)	Changling village, Lianshan Village, Nan 'an Village, meihua village, Minghe village, Mao Tian Village, Shuangtan village, Fenshui Village, Zengcun, Wanzhou village, Dongping village, Hongqi village
Grassroots villages (29)	Pu'an, Xiao Luo, Shui Fu, she tan, Long Jiang, Ze Jiang, Xia Shan, he feng, Yu Fang, Lu Tang, Bai Yun, Gu Shui, Xin he, Yu Zhuang, Yan Chong, Shan, Lao Zhu Yuan, Qin Jia, Yue Nan, da Xing, Shuang Quan, Quan Xin, Ping Hua, Xiang Fu, Chong Shan, Qing Xi, Shui Fu Xin, Gu Ba, Tian Men Shan

2. Urban spatial structure planning

Guided by the concept of urban and rural development as a whole, and guided by the concept of “Two-oriented” social construction, the plan gives priority to the protection of the ecological environment, the optimization of industrial structure and the integration of villages, giving full play to the urban-rural radiation drive, intensive use of land resources and overall planning of urban and rural spatial development in the demonstration zones. Taking the wetland ecological protection as the premise, fusing the regional characteristics of “Mountain-water-field city”, as a whole, constructing the overall spatial structure of “One city, one center, two districts and two belts”.

One city-a model new city, including the city of Qizi and a tourist town;

Two districts-the eastern comprehensive development area and the Western leisure development area. The eastern comprehensive development area includes the demonstration, Fanxincheng (including Qizhi city and tourist towns) and eco-industry groups; the Western leisure development area includes the Maotian town, culture, leisure groups and health-preserving vacation groups;

Two zones-wetland ecological protection zone and Western Leisure Service Zone. The wetland ecological protection belt includes the Shuifumiao water, the reservoir water and the wetland natural protection shoreline, and the Western leisure service belt includes the cultural leisure, the sports leisure, the ecological leisure and so on.

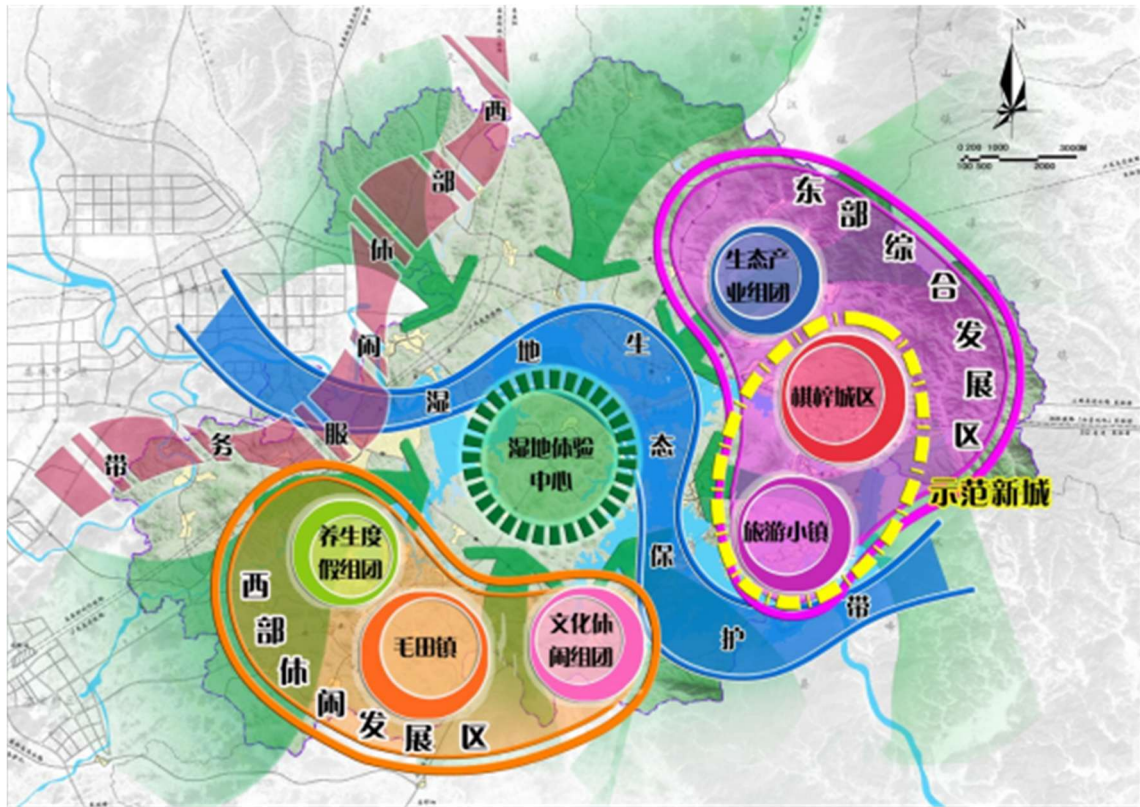


Figure 3 layout diagram

3. Land use planning

Planning Shuifu Demonstration Area by the end of 2035 long-term urban and rural total land 255.25 square kilometers, of which 60.28 square kilometers of construction land.

Table 10 summary of urban and rural land use by 2035

Serial number	Land, code	The name of the category	Area (HM2)		Proportion of total land use in demonstration zones (%)	
			Status Quo	Planning	Status Quo	Planning
1	H	Construction land	5744.94	6028.05	22.51	23.62
		Among them				
		Construction land for urban and rural residential areas	1813.14	2008.51	7.10	7.87
		Among them				
		Land for urban construction	318.32	768.07	1.25	3.01
		Land for village construction	1484.84	690.05	5.82	2.70
		Tourist sites	9.98	550.39	0.04	2.16
		Land for regional transport facilities	321.64	403.68	1.26	1.58

			Regional utility land	3492.03	3497.73	13.68	13.70
			Mining Land	118.13	118.13	0.46	0.46
2	E		Non-construction land	19780	19496.89	77.49	76.38
		Among them	Water	76.45	76.45		
			Agricultural and forestry land	17056.25	16973.70		
			Other non-construction land	2647.3	2446.74		
Total		Total area	25524.94	25524.94	100	100.00	
			Coordination area of total land use	29057.43	29057.43		

Note: the planned urban population of the demonstration zone in 2035 will be 70,000.

Chapter 3: Implementation of Urban-Rural Integration and Infrastructure Development

3.1 Village Coordination and Development Strategies

The paper puts forward the following five goals for the construction of new urban-rural co-ordination areas:

1. Improve the functions of industries

Relying on the resource advantages of National Wetland Park, we should develop leisure agriculture, ecological fishery and fine agriculture, increase the added value of agriculture and industry, and improve the industrial function. At the same time, scientific and effective introduction of different development models, the development of eco-efficient agriculture, pay attention to protection in development, protection in development.

2. Optimize spatial patterns

Based on the development characteristics and resource characteristics of different villages, different development zones are divided according to the development types of industry, which forms the spatial pattern with different characteristics and interaction.

3. Improve the road network framework

Build a sound road network system to achieve village access. Through traffic guidance, improve the external and internal service level, change the scope of the development of the village traffic situation.

Improve public facilities

We will improve standards for supporting public facilities and provide multi-level, omni-directional and convenient supporting services. Around the construction of Maotian and Qizhi, the main public service centers, with each central village as a secondary service network, build a rational layout, inter-connectivity, urban and rural integration of rural community services network.

5. Implement municipal facilities

Focus on sewage and sanitation facilities in villages. We will make use of the latest sewage treatment technology and technology to basically harness rural domestic sewage, improve village sanitation facilities and improve the environmental sanitation management system, we will promote further development of village environmental sanitation.

6.2 integrated village development strategy

1. Function optimization strategy

Depending on the development characteristics and resource characteristics of different villages, set up different development direction and optimize the function of different villages. The villages along both sides of the qi-gao highway and within the Shuifumiao Wetland Park are mainly to develop sightseeing agriculture and tourism services, while the villages in the northeast and northwest of the demonstration area are mainly to develop economic trees, the other mainly to ecological food and vegetables, vegetables and livestock breeding-based, forming different development zones.

Transportation support strategy

We will speed up the construction of transport facilities around and within the planning area, realize the diversity of Transport Service modes through traffic guidance, improve the service level both externally and internally, and completely change the current situation of poor traffic development in the planning area villages. And the formation of planning and construction, unified standards, goals and measures, “High-speed connection, low-speed life”, to build a good living atmosphere.

3. Supporting facilities strategy

To build new countryside with the standard of urbanization public facilities, to promote the overall planning of urban and rural areas with community management, to provide multi-level and all-round convenient supporting services for public service facilities within the demonstration zone, forming four levels of supporting standards: Qizhi urban area-maotian town-central village-grass-roots village. At the same time, according to the principle of regional management, the

demonstration area to the central village as the core, the formation of a number of new rural facilities service centers. Build a rational layout, inter-connectivity, urban and rural integration of supporting facilities and services network. Take the public service center as the platform, improve the public service system, effectively cover the party building work, coordinate regional, social management, provide public and social services for all kinds of organizations and the masses.

4. Image-building strategies

The shaping of the image of the local features of Shuifumiao will provide positive promotion for the development of the countryside, and the planning and design of new, node areas and complete public spaces form a rural spatial identification system associated with environmental characteristics to create a perfect and conscious, eye-catching image of Shuifu Temple:

Gateway Corridor: the use of high-speed rail lines as an important access, through its construction of agricultural tourism along the line, outstanding, special landscape image

Public Space: the villages near the entrance of the reservoir area and the scenic spots will concentrate on creating public space, through the reorganization of the existing landscape, elements, forming a unique local landscape space.

Human node: the ancient houses in Chongshan, the ancestral hall of Liu family, etc. belong to the protection of cultural relics, as well as a large area of historical features, the obvious areas for renovation and re-use, strengthen the historical characteristics of the area.

At the same time, the whole package of the resource elements and the media are used to promote the image of “Wetland Village” in Shuifu Demonstration Zone.

5. Think inside and out

To build a number of key construction projects with emphasis and purpose through land consolidation and village environmental improvement, to create conditions for the introduction of new industries, and to pay attention to external publicity, through the use of “Wetland park”, “Ecological convalescence”, “Tourist

attractions” and other comprehensive promotion of the area's visibility, to attract investment.

6. Ecological conservation strategies

Carry out a comprehensive ecological construction plan to lay the Ecological Foundation for the sustainable development of the planning area. Setting ecological control lines to strictly limit the encroachment of rural construction on natural mountains and rivers; raising the threshold of entry for projects to put ecological protection first; and using new technologies to carry out ecological transformation of infrastructure, to build a new ecological countryside, establish new standards for rural construction, through artificial, wetland ecological treatment of rural sewage, form a unity of landscape benefits, ecological benefits, economic benefits.

6.3 integrated village planning

According to the development characteristics of Shuifu demonstration area, it is suitable to adopt “Agriculture-dissolving model”, “Back-feeding model” and “Self-strengthening model” as the main ways of urban and rural integration. Among them, the model of dissolving agriculture is mainly aimed at the development of urban functions, the matching of tourism vacations, the construction of sets of villages and the restoration and protection of ecological environment, while the model of back-feeding is mainly aimed at the tourism services located in towns and districts, in order to realize the coordinated development of the rural areas around the center and Loudi Wanbao New Area, this model can be adopted, and the self-strengthening model is mainly aimed at the rural areas in more partial regions, we should combine the “Self-strengthening model” of collective economic cooperation with the “Agricultural Reform Model”.

(1) integration of the agricultural solution model

1) the restoration and protection of wetland eco-environment involves abolishing villages and merging them into urban and rural central communities.

According to the plan of Shuifumiao Wetland Park in Hunan province, this paper puts forward the principles of protecting, restricting and controlling the scale

of development of villages which have destroyed the natural landscape and ecological environment, involving 8,508 people in 8 villages, about 85 hectares of land have been saved, and 240 hectares of land have been saved, involving a total of 9,130 people in 13 villages in urban and rural central communities.

2) urban function expansion and tourism supporting construction involve canceling villages and merging them into urban areas.

Urban function expansion and tourism facilities construction area, involving rural areas to urban-rural integration of the “Dissolved agriculture model” mainly, involving 8 villages, 6453 people, saving land 135 hectares.

(2) the combination of back-feeding and self-strengthening mode

1) optimizing the villages involved by creating agri-tourism parks and tourist lines in Shuifu.

In order to build shaoshui Avenue-shuifu Avenue special line for tourism and sightseeing, develop sightseeing agriculture and scale agriculture, and integrate the weaker and weaker villages along the line, a total of 23 weaker villages involving 19,624 people were optimized, about 155 hectares of land were saved.

2) better location, transportation, and basic conditions for the villages to merge with the surrounding villages to strengthen the central village.

The better-developed villages adjacent to provincial roads, highway entrances and exits should adopt a strategy of encouraging development by appropriately merging the surrounding villages, developing infrastructure of a higher standard and giving priority to the development of rural central communities, optimize 26 basic, weak villages, involving 22208 people, strengthen rural central communities, save land about 180 hectares

1. Village classification guide

(1) guiding principles of village classification

1) based on the requirements of eco-environmental protection

For the present situation is too close to the reservoir area, and its development has a negative impact on the ecological environment of the village settlements, planning, near to the central village;

2) based on the need of urbanization transformation

For the villages within the scope of urban construction land, we should realize the urban-rural linkage development, carry out the urbanization transformation at the same time as the urban development, and bring the peasants into the urban social service system, bringing rural community management into the urban management system. The interests of the rural collective economy and individual farmers should be properly dealt with, and efforts should be made to solve the problems of providing vocational and technical training and employment services to farmers in transition.

(2) classification of villages

Rural Settlement of Russia will be in accordance with the plan to adjust the transformation, relocation, settlement and control optimization of the 4 basic types of integration, building a new countryside.

1) adjusting the transformation type: it involves 8 villages, such as Yintang Village, Xiaoluo village, Qizhi village, Shanping village, eshi village, Zhangquan village, Xinli Village, Fengzichong village, etc.

2) relocation: a total of 29 villages will be involved. These villages are located in ecologically sensitive areas and within the scope of the construction of tourism projects and facilities. They have been relocated to cities, towns and Central Communities for co-development. These villages include 16 such villages as Ping Hu Village, Ni Xi village, Da Fu Village, Xinhua Village, Hua Tang village, Mao Tian Village, Jin Tian Village, Cao Ping Village, Zhou Tang village, Shi Yuan village, Shan Shan ao village, snake-shaped village, Yang Gu village, Chang Qing village, Tie Shan village, Xue Shi village, and so on. According to the office document of the leading group on the consolidation of administrative villages of Xiang Xiang City, the villages with poor foundations have been relocated to the surrounding better villages, and these villages include 13 villages, namely Huangling Village, Jin Long Village, Heping Village, Xiang Yang Village, Shi Shan village, Xia Luo Village, da Po village, Tan Jia village, Quanxin Village, Dongjing village, Hua Tingzi village, Lang Shu village, Ping Shang village, and so on

240 ha;

3) settlement type: it involves 12 villages, including Changyuan village, Lianshan Village, Nan 'an Village, meihua village, Minghe village, Baiyang village, Zengjia village, Wanshan Village, Tan Shan village, Fenshui village, Pingshan Village and Hongqi Village, and develops into a central community, which is a management center, service center and Residential Center within the village area;

4) control and optimization: 29 villages, including Pu'an village, Pingtang village and Shetan village, are involved in control development and optimization on the spot.

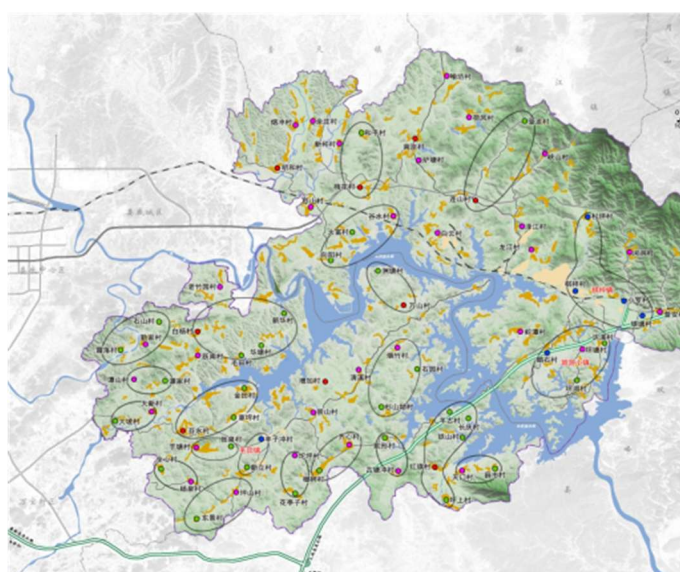


Figure 4 village integration strategy map

Table 11 village integration strategy guideline table

Type of village integration	Name of village
Adjust Transformation Type (8)	Yin Tang village, Xiao Luo Village, Qi Zi Village, Shan Ping Village, e Shi Village, Zhang Quan Village, Xinli Village, Feng Zi Chong village
Relocation Type (29)	Ping Wu Cun, Nai Xi Cun, Tai Fu Cun, Xinhua Cun, Hua Tang Cun, Mao Tian Cun, Jin Tian Cun, Cao Ping Cun, Chau Tong Cun, Shi Yuan Cun, Shan Shan ao cun, snake-shaped cun, Yang Gu cun, Chang Qing cun, Tie Shan cun, Xue Shi Cun, Huang Ling Cun, Jin Long Cun, Wo Ping Cun, Xiang Yang Cun, Shi Shan cun, Xia Luo Cun, da Po Cun, Tan Jia Cun, Quan Xin cun, Dong Jing Cun, Hua Tingzi cun, Lang Shu cun, Ping Shang cun
Residential Type (12)	Changyuan village, Lianshan Village, Nanan village, Meihua village, Minghe village, Baiyang village, Zengcun, Wanshan

	village, Tanshan village, Fenshui village, Pingshan Village, Hongqi village
Control optimization (29)	Huang Ling Village, Ping Tang village, she tan village, Hedong Village, Xia Shan Village, Ze Jiang Village, Long Jiang Village, he Feng Village, Yu Fang Village, Lu Tang village, Gu Shui Village, Bai Yun Village, Lao Zhu Yuan village, Qin Jia Village, Tan Jia village, Tian men village, etc.

2. Results of village integration

Through the integration of rural settlement of Russia, intensive use of land resources, the final form of integration

41 villages, housing 50,000 people.

(1) intensive land

The demonstration area covers an area of 14.84 square kilometers. The planned demonstration area covers an area of 6.90 square kilometers. A total of 7.94 square kilometres of land will be saved.

(2) integration results

The Present Situation Demonstration Area 78 villages, among them the plan adjustment transformation village 8, the relocation village 29, the control optimization village 29, the gathering village 12.

After planning and arrangement, there are 5 urban communities, including 4 in Qizhi and 1 in Maotian, and 41 villages, including 12 central villages and 29 grass-roots villages. Among them, the central village population, the scale of control in 1000-2000 people, the grass-roots village population scale of control in 1000 people.

Table 12 village scale statistics

Village level	Name of village	Current population	Planning population	The present situation village construction uses, the land area (hectare)	Planning village construction use, land area (hectare)
	Cheung Ling Tsuen	1020	1550	19.69	21.75
	Lianshan village	1544	1950	38.19	27.3
	Nan An village	1521	2000	39.16	26

Central Village (12)	Plum Blossom Village	1606	2500	39.24	33
	Ming wo village	1025	1500	18.73	21
	Mao Tiancun	1047	2000	23.22	26
	Shuangtan village	1527	1800	31.86	25.2
	Fenshui village	864	1500	17.31	21
	Additional villages	1625	2000	32.16	26
	Wan Chau village	1781	2000	48.59	26
	Tung Ping Tsuen	1428	2100	29.48	29.4
	Red Flag Village	1121	1800	18.82	25.2
Basic villages (29)	Puan village	1193	850	22.13	11.9
	Xiao Luo village	617	550	11.54	7.7
	Shui Fu Village	766	700	15.74	9.8
	Shetan village	1276	950	31.67	13.3
	Longjiang village	584	500	13.66	7
	Zejiang village	700	600	14.18	8.4
	Xiashan village	985	850	22.12	11.9
	Ho Fung Village	1625	950	39.54	13.3

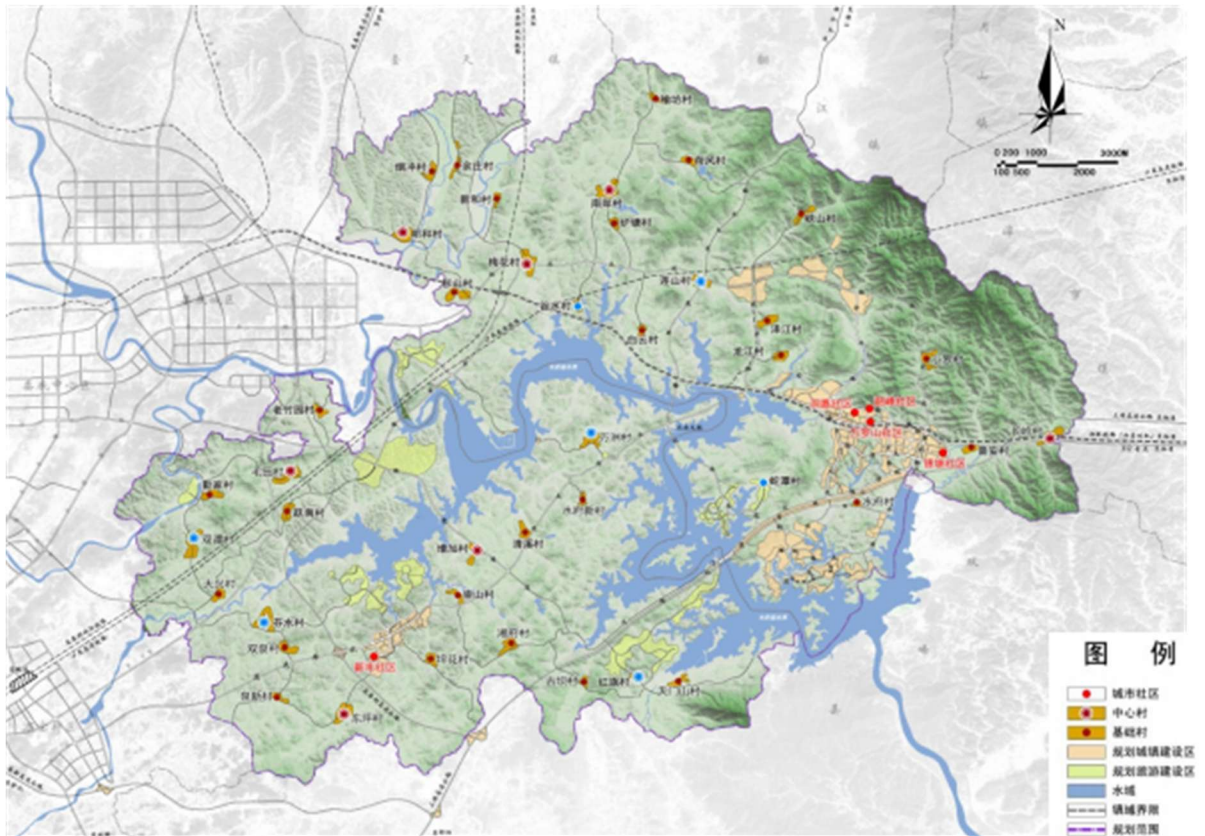


Figure 5 village Layout Plan

In view of the characteristics of agricultural leading types and resources in Shuifu Demonstration Zone, combining with the layout of villages, this paper constructs agricultural production regions and guides the leading industries of villages, the functions of villages in Shuifu Demonstration Area can be divided into nine types: ecological fisheries and forest restoration, planting, economic forest tree planting, food and vegetable planting, orchard planting, tea garden planting, medicine planting, rape flower planting, flower planting and green livestock breeding.

Table 13 statistical table of village function classification

Types of village functions	Name of village
Ecological Fisheries and Restoration, reforestation	Shuifu village, Longjiang village, Zejiang village, Lianshan village, Baiyun Village, Gushui Village, Zengcun village, Hongqi village, Guba village, Tianmen village

Economic tree planting	Changling village, Xiaoluo village, Hefeng village, Yufang village, Meihua village, Yuzhuang village, Nanan village, Yanchong village, Minghe village
Growing food and vegetables	Puan, Lutang, Meihua, Shan, Xinhe, Quanxin and Dongping
Orchards are planted	She Tan, Chong Shan, Xiang Fu and Ping Hua
Tea Plantation	Wan Chau village, Shui Fu New Village, Ching XI village
Planting of medicinal materials	Lao Zhu Yuan, Mao Tian, Qin Jia and Shuang Tan
Rape flower cultivation	Fenshui, Shuangquan, Quanxin, Yuenan and Daxing
Plant flowers	Lianshan village
Green livestock farming	Xiashan village

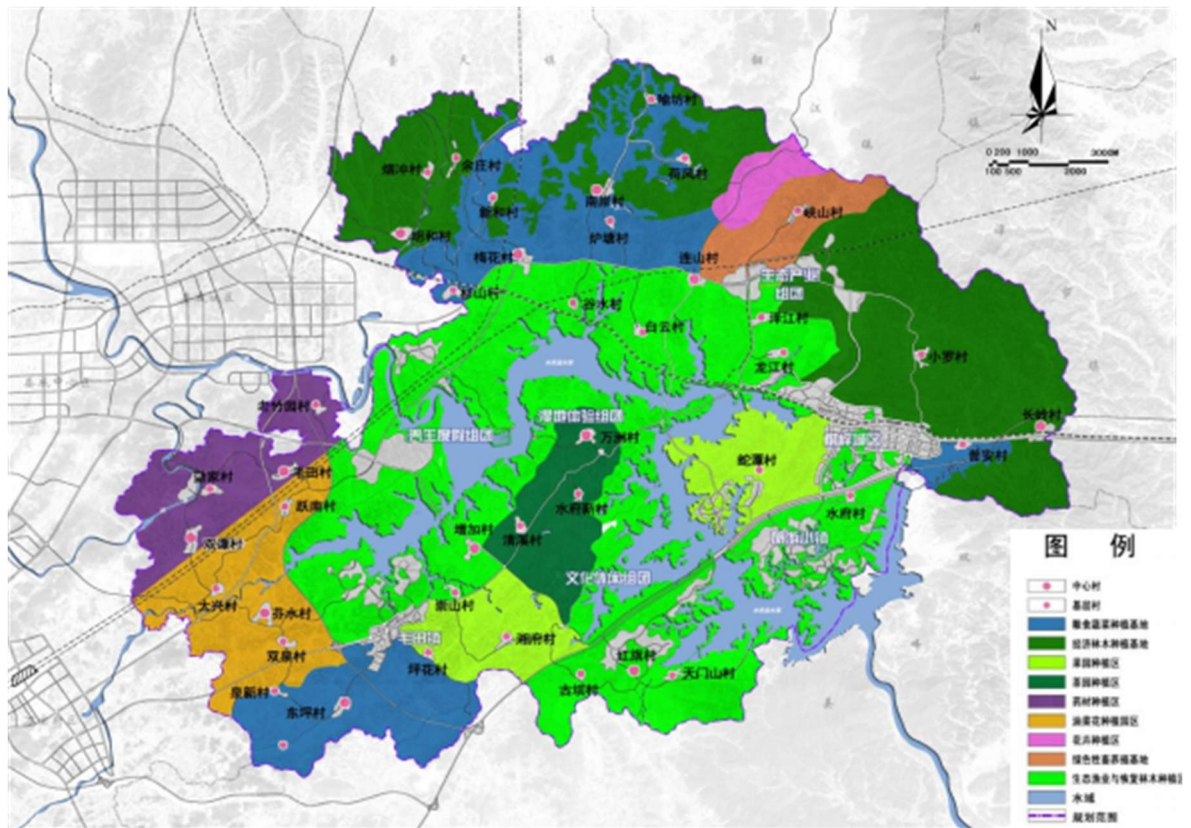


Figure 6 functional layout of the village

6.6 urban-rural co-ordination demonstration villages

Combined with the foundation of rural agricultural development and the positioning of Shuifu demonstration area as a leisure resort, planning tourism and sightseeing along Shaoshui line, along the route, seven villages, namely Shetan, Wanzhou, gushui, Shuangtan, Fenshui, Lianshan and Hongqi, were selected as demonstration villages to develop agriculture featuring fruit, vegetables, tea, medicinal herbs and flowers, forming a rural tourism industry system that integrates eco-tourism, pastoral experience, leisure and vacation, attracting tourists from around the region to visit, pick, Relax, work and experience the local customs, enjoy the rural fun; do a long demonstration area of strong Shuifu tourism industry chain; drive the development of surrounding villages.

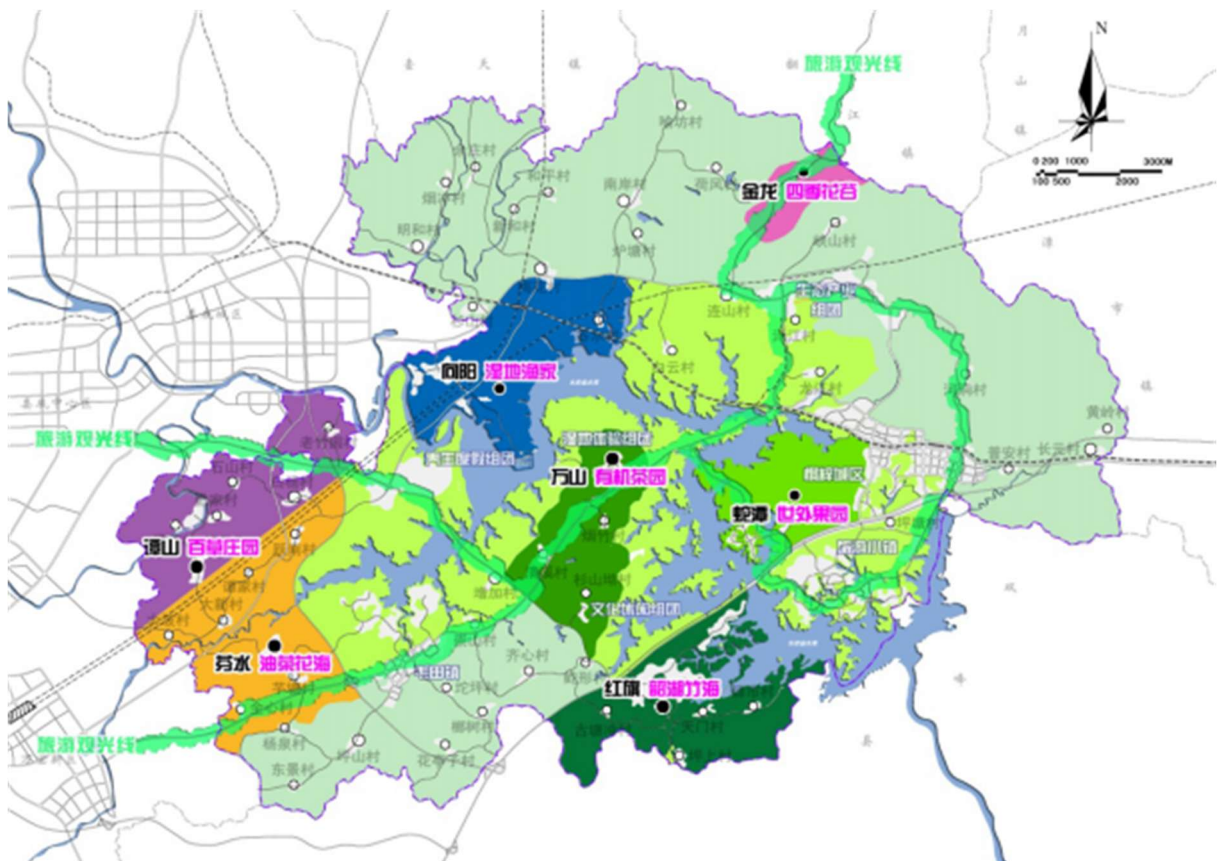


Figure 7 map of the village with tourism features

Table 14 urban-rural co-ordination model villages

Urban and rural co-ordination, model village	Tourism, scenic spots	Tourism features	Development objectives
Shetan village	Outlet of the world, the orchard	Seasonal fruit picking, green melons, fruit tasting, purchasing, and Farmville	We will develop a tourism system of "Picking seasonal fruits and vegetables, tasting green delicacies, experiencing local customs", and create exotic orchards along the shoreline of Shuifumiao to promote the development of tourism, the development of tourism in small towns and the city of Qizhi.
Wan Chau village	Organic, tea garden	Growing, sightseeing, picking, experiencing, and vacationing	The formation of organic tea cultivation as the core, Tea Garden Tourism, Tea Weng experience and tea garden, vacation equal to one of the tourism development system, promote wetland experience.
Gushui village	Wetlands, fishermen	Wetlands, forests, tourism, fishing	On the premise of wetland protection, the wetland eco-tourism system with the characteristics of "Going up and down and fishing" will be formed.
Shuangtan village	Herb, Manoir	Sightseeing, farming, health vacations, etc.	To form a tourism development system with organic cultivation of medicinal materials as the core, scientific research, tourism, accommodation and catering, Chinese medicine health care is equal to one, to promote health care holiday groups, tourism development.
Fenshui village	Rape flower sea	Rape flower sightseeing, pastoral experience, light and farm fun	Take the water as the link, with the health vacation group linkage development, forms "The flower sightseeing, the pastoral experience" as the characteristic tourism development system, constructs the domestic top ten rape flower sightseeing, the agricultural base, display the image of the gateway on the south side of the demonstration area.
Lianshan village	Four Seasons, Flower	Four Seasons Flower sightseeing, wedding	Take "Flower sightseeing, the countryside vacation" as the characteristic, develops "The flower economy", makes the traveling, the traveling special line north

	r Valle y	photography, folk tourism and so on	side portal space“The beautiful countryside”.
Red Flag Village	Shaoh u, Zhuh ai	Tourism, landscape photography, and local cultural experience	Based on the premise of reservoir ecological protection, the eco-tourism system with the characteristics of“Mountain sightseeing and cultural experience” will be formed, which will promote the development of the surrounding tourist resorts.

3.2 Industrial Development and Spatial Distribution

The total economic volume of Shuifu Demonstration Area is on the low side. From the growth rate of recent years, the GDP is increasing year by year, but the growth rate is showing a slowing trend. GDP increased from 143 million yuan in 2005 to 1.415 billion yuan in 2022, an average annual growth rate of about 11% .

From the analysis of economic development in recent years, it can be seen that the secondary industry is still the main support of Shuifu demonstration zone, the proportion of the three industries is close to 50% , the three industrial structure presents the characteristics of two, one and three. Combined with per capita GDP, industrial growth, value and the proportion of industrial employees in the three industries, the overall level of industrialization in Shuifu is low.

- 1) the traditional agricultural economy is dominant, the industrial scale is small and the intensive degree is low

Shuifu demonstration area has long been dominated by traditional agriculture, forming a food, pigs, fisheries as the pillar industries. The area of land under cultivation is about 80,000 mu, or about 20% of the total area of the demonstration zone. Relying on the traditional way to promote agricultural development has been difficult, to continue, we need to find new ways to promote the development of large-scale production and management.

- 2) the relationship between agricultural production and environmental protection has not been established

The demonstration area has the wetland park this special resource, while pays attention to the development agriculture scale, should also pay attention to with the

environmental protection, the protection coordinated relations, it is necessary to establish the relationship between the sustainable development and the cage fish culture along the reservoir and the agriculture and livestock production around the wetland park.

3) the industrial structure needs to be adjusted and optimized in order to integrate into the regional tourism development pattern

The present agricultural development type of the demonstration area is single, and the structure needs to be adjusted and optimized, especially in combination with the development of tourism resources.

(2) secondary industry

1) weak industrial base and small-scale industrial enterprises

The second industry is the leading industry in the region, accounting for more than 70% of the region's total economic output. But the scale of industrial enterprises is small, the whole region, the scale of enterprises only 7, of which the output value of more than 50 million yuan only 1.

2) taking cement industry and other high energy-consuming industries as the leading industry, there are contradictions with the city and the environment

Current industries are dominated by the cement industry, with machinery and textiles developing side by side. Existing Enterprises, extensive management, especially in the cement industry shaft kiln and other backward technology and equipment still account for a considerable proportion (only Shaofeng cement used a new, dry technology) , resulting in high resource and energy consumption, environmental pollution is serious and sustainable development is facing serious challenges.

3) the industrial structure and product structure are unreasonable, so the industrial chain should be improved

The industry of the demonstration zone is mainly based on cement, with single industrial products, low scientific and technological content, low added value of products, lack of independent intellectual property rights and core technology, enterprise scientific and technological invention, technological innovation,

technological transformation, new product development, lack of core competitiveness.

4) the industrial layout is unreasonable and has an impact on the environment

The present situation of cement enterprises and other layout in the west of the town of Qizhi, close to the Shuifumiao Reservoir, the core resources, the layout is not reasonable, resulting in a negative impact on the ecological environment.

(3) tertiary industry

1) the overall development of the tertiary industry is weak

At present, the development of the tertiary industry in Shuifu Demonstration Zone is weak, and the growth is slow, and the traditional trade and tourism is the main industry. By 2022, the output value of the tertiary industry was only 312.97 million yuan.

2) tourism development is still in its infancy

At present, tourism is the main industry in the tertiary industry, but the tourism resources in the Shuifu Demonstration Zone have not been fully exploited, and the tourism industry is still in the initial stage of development, mainly by traditional tourism, leisure-based, only rely on a single project-driven development, has not yet formed an industrial cluster effect; Lack of core attraction, unclear market positioning, and difficulty in attracting investment.

7.2 overall industrial planning targets for urban and rural areas

Based on the Economic Development Foundation of Shuifu Demonstration Zone, the characteristics of industry development in the demonstration zone are analyzed, the external environment and industry development situation of the industry development are combined, and the related cases are used for reference to plan the industry development of the demonstration zone as a whole, to formulate development strategies, adjust and optimize the industrial layout, and give effective strategic guidance. To build two-oriented industrial types, to achieve integration and complementarity, common development, urban and rural industrial pattern.

7.3 ideas and strategies for the overall development of urban and rural industries

1. Industrial development system

Based on the analysis of the development of the three industries, the industrial system of “1 + 2 + 3” will be established in the future. One leading industry is tourism and leisure, the other two are upgrading. The industries are green building materials and eco-efficient agriculture. The three related industries are R & D, eco-logistics, agriculture and non-staple food processing.

Industrial development strategies

(1) the development strategy of the primary industry-to be especially strong

Relying on the good agricultural foundation and superior soil and water resources, and combined with the development of tourism, we should develop eco-efficient agriculture and leisure and sightseeing agriculture We will build a modern and new agricultural industrial system that integrates the primary industry closely with the secondary and tertiary industries, promote the optimization and transformation of the agricultural structure, and strengthen the primary industry in particular.

(2) the development strategy of the secondary industry-making green

Relying on the good agricultural foundation, combined with the development of Shuifu Demonstration Zone and the needs of the two-type society, to promote the status quo, building materials industry to fine, eco-oriented transformation, do fine secondary industry; We will vigorously support the development of agro-friendly industries, focusing on the deep processing of agricultural and sideline products and related industries, so as to create a green secondary industry.

(3) the strategy for the development of the tertiary industry-making it bigger and stronger

Full use of Shuifu demonstration area unique resource conditions and located in changsha-zhuzhou-xiangtan 1-hour economic circle location advantage, bigger and stronger, tourism and leisure industry, lead the economic growth of the demonstration area; Relying on the superior regional traffic conditions to develop transportation, warehousing, modern logistics industry, industrial development to provide productive services.

7.4 spatial distribution of urban and rural industries

1. Spatial distribution of industrial development

The overall layout of the industry fully takes into account the basic conditions such as traffic location, industrial development needs, ecological environment, landscape resources, etc. , at the same time, it fully meets the requirements of industrial development for location, transportation and environment, and takes the principle of relying on industrial development and taking into account the overall planning of urban and rural areas, and combines the urban spatial characteristics and the characteristics of industrial and industrial layout of Shuifu Demonstration Zone, based on the group structure and its functional layout planning, the factors of regional industrial coordination, land development potential, transportation infrastructure and environmental constraints are comprehensively considered, the industrial spatial layout structure of “Two belts, three parks and four districts” is proposed.

Two belts: along the Shuifumiao Reservoir to form a wetland experience leisure belt, relying on Loudi City to create a Western leisure service belt. Three parks: Green Building Materials Industry Park, eco-logistics park and Green Food Processing Park

1) Green Building Materials Industry Park: Combining Louxiang Road and away from the reservoir to develop, to form a comprehensive green building materials industry park which integrates ecological cement, green wall materials, building materials r & D, etc. . Thus, reduce the impact on the ecological environment of the reservoir, reflect the environment and ecology-friendly, while seeking space for industrial development.

2) eco-logistics Park: develop modern logistics combining with branch line of Hunan-guizhou railway to provide service for building materials industry.

3) Green Food Processing Park: it is a comprehensive agricultural and non-staple food processing park, which is mainly featured by fire-cultured fish, tea, citrus and other agricultural and non-staple food, and it integrates meat products and by-products, product processing, frozen processing of aquatic products, fish surimi

products and dry-salted processing of aquatic products, canned food manufacturing, etc. .

Four areas: urban comprehensive service area, eco-tourism Development Area, wetland comprehensive rehabilitation and utilization area, eco-agriculture, development area.

1) integrated urban service area: A comprehensive urban service area mainly composed of Qizhi urban area and Maotian town, providing integrated services for industrial enterprises, tourism and villages.

2) eco-tourism Development Area: taking the tourist town as the core, around the shoreline of Shuifumiao Reservoir, three characteristic tourism development areas are formed respectively.

(1) tourist town service area: it is the core comprehensive service area of Shuifu tourist area, and also the core carrier of the two models of Shuifu New Town. In the near future to build 4a-level tourist attractions as a goal, the long-term development of 5a-level tourist attractions, international-level tourism, tourism resort. Planning Integrated Administrative Office, Hotel Conference, religious experience, cultural creativity, shopping, dining, leisure and entertainment, function as one of the tourism service area, to provide integrated services for the development of the new town and tourism.

(2) cultural and leisure groups: located on the north and south sides of Shangrui Expressway, the experience and leisure areas with different cultural themes mainly include Shuizhai film and television base, rock climbing resort, Holiday Village and Yanggu Town.

(3) health vacation group: relying on the good ecological environment of the waterfront, combined with the gulf to form a multi-theme health-preserving community, at the same time the layout of Sanatorium to provide professional health advisory services. It is planned to form a small resort town in the northern part of Maotian town to provide supporting services for tourists and tourists.

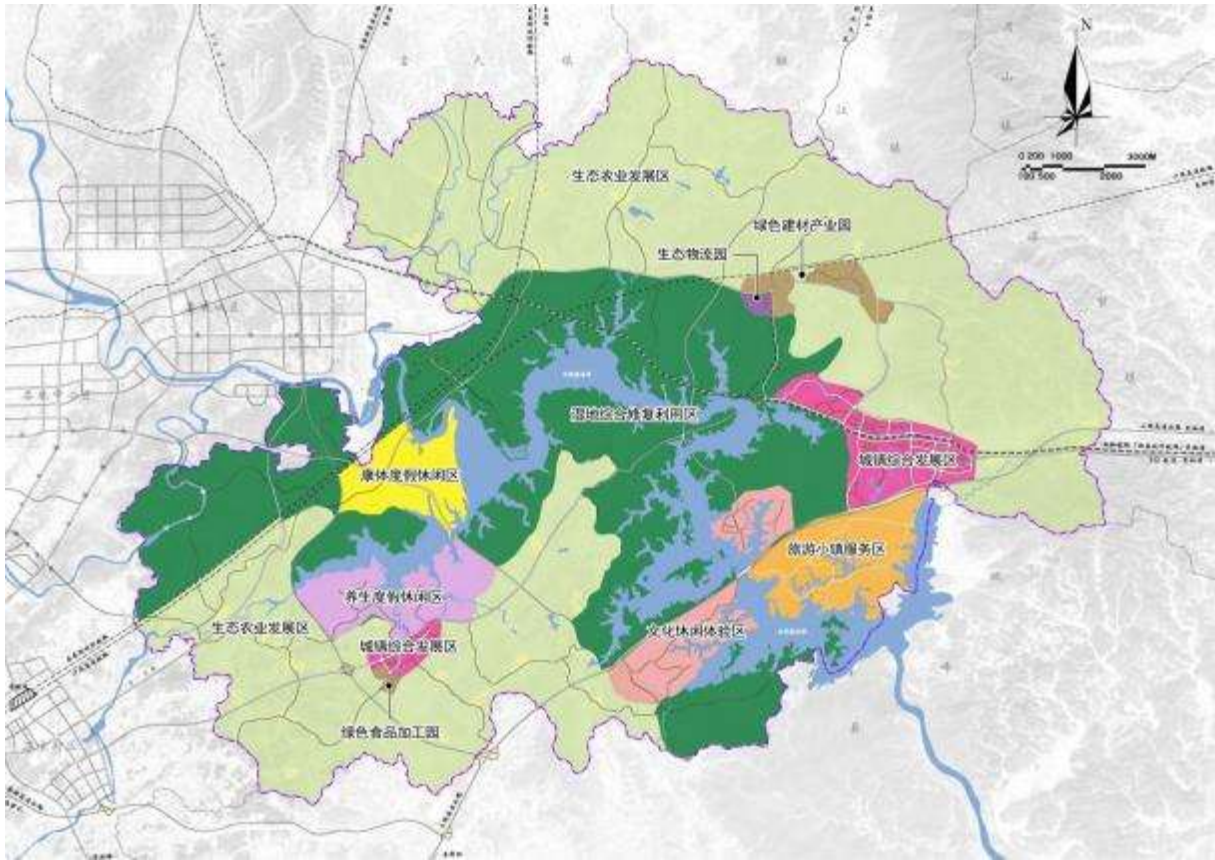


Fig. 8 sketch map of the spatial distribution of ecotourism development area

3) integrated restoration and utilization area of wetland: to maintain the ecological character of wetland to the maximum extent, to protect and restore the wetland environment while carrying out appropriate, reasonable and scientific development, so as to provide superior natural environment experience. In order to meet the needs of Loudi City, we should develop the tourism and vacation products by combining the waterfront resources and provide the necessary leisure services.

4) ecological agriculture development zone: take the vast countryside as the carrier, carry on the ecology, the high efficiency agricultural development, and forms the fine, the fine agriculture, the scale agriculture, the sightseeing agriculture and so on agricultural industry layout.

2. Spatial guidelines for industrial development

(1) guidelines for agricultural development

1) industrialization of agriculture

The future development of agriculture should, in accordance with the requirements of basically realizing agricultural modernization and rural modernization ahead of schedule, speed up the adjustment and optimization of the agricultural economic structure, and promote the transformation of agriculture into modernization, industrialization and scientific and technological type, the pattern of production and management of regional distribution, specialized production, industrialized management and socialized service of agriculture will be basically formed. At the same time, we should accelerate the transfer of rural surplus labor to the secondary and tertiary industries, encourage the transformation of farmers into urban residents, and promote the process of rural urbanization.

According to the characteristics of Shuifu demonstration zone and the present situation of rural industry development, the rural industry in the demonstration zone mainly develops fine agriculture

Scale agriculture and sightseeing agriculture.

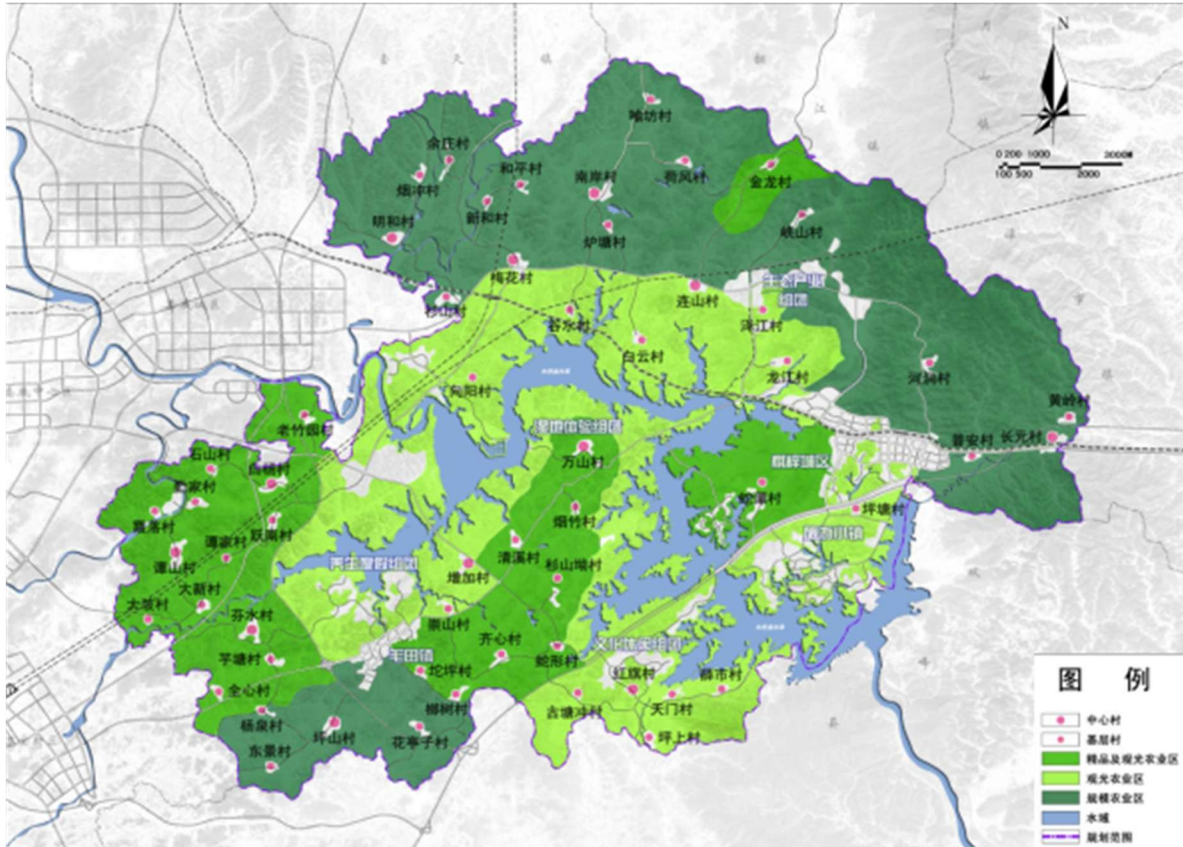


Fig. 9 the layout of the three agricultural regions

1 fine agriculture

In accordance with the functional requirements of agricultural development and the basis for the development of agricultural bases, we should vigorously develop agricultural bases and parks with distinctive features, including orchards planting, tea garden planting, medicinal herbs planting, rape flower planting and flower planting five major agricultural planting bases, for the region to provide the corresponding agricultural and sideline products; The development of agricultural base and urban agriculture, non-staple food supply in line with the needs of urban areas for a variety of agricultural products to determine the size of agricultural base and produce, the type of agricultural products. Fine agriculture in Shuifu Demonstration Area is mainly distributed in the southwest of the area near Loudi, to develop high-end, fine and green breeding industry, large-scale cultivation.

Table 15 distribution of characteristic agricultural bases in Shuifu demonstration area

Special agricultural base	Distribution
Orchards are planted	She Tan, Chong Shan, Xiang Fu and Ping Hua
Tea Plantation	Wan Chau village, Shui Fu New Village, Ching XI village
Planting of medicinal materials	Lao Zhu Yuan, Mao Tian, Qin Jia and Shuang Tan
Rape flower cultivation	Fenshui, Shuangquan, Quanxin, Yuenan and Daxing
Plant flowers	Lianshan village

2 scale agriculture

Around the grain, fruit and vegetable, animal husbandry and other industries that currently have advantages, the formation of grain and vegetable cultivation, economic trees, planting and green livestock farming-based agriculture of scale, we will vigorously promote the development of efficient agriculture on a large scale. We will actively support a group of leading agricultural enterprises with high scientific and technological content, large scale, good benefits, strong driving forces, and good prospects for development, through the combination of leading enterprises and advantageous industries, we will further raise the level of industrial operations in agriculture. The scale agriculture in Shuifu Demonstration Area is mainly distributed in the north of the area.

Table 16 distribution of scale agricultural bases in Shuifu demonstration area

A large-scale agricultural base	Distribution
Growing food and vegetables	Puan, Lutang, Meihua, Shan, Xinhe, Quanxin and Dongping
Economic tree planting	Changling village, Xiaoluo village, Hefeng village, Yufang village, Meihua village, Yuzhuang village, Nanan village, Yanchong village, Minghe village
Green livestock farming	Xiashan village

3 sightseeing agriculture

Cooperate with Shuifu Demonstration Area Leisure Resort positioning, the development of sightseeing agriculture, agricultural production and Tourism and leisure co-development. The agricultural land in the suburb is regarded as the green space for urban residents to enjoy close outdoor leisure, and some characteristic agricultural bases and tourism are combined to develop sightseeing agriculture, it is a good place for citizens to relax on holidays and for tourists from other parts of the country. In Shuifu Demonstration Area, the sightseeing agriculture is mainly distributed in the upper and middle reaches along the Shuifumiao Reservoir, at the same time, it improves product quality and added value.

Table 17.distribution of sightseeing agricultural bases in Shuifu demonstration area

Sightseeing agriculture	Distribution
Ecological Fisheries and restoration forests, tree-growing areas	Shuifu village, Longjiang village, Zejiang village, Lianshan village, Baiyun Village, Gushui Village, Zengcun village, Hongqi village, Guba village, Tianmen village
Sightseeing flower garden	Fenshui village, Shuangquan village, Quanxin village, Yuenan village, Shuangtan village, Daxing village and Lianshan village
Sightseeing Orchard, tea garden, Herb Garden	Shetan village, Chongshan village, Xiangfu Inch, Ping Hua Village, Wanzhou Village, Shuifu new village, Qingxi village, Lao Zhuyuan village, Mao Tian Village, Qin Jia Village, Shuangtan village

2) agricultural organization guidance

The agricultural industrialization organization is a kind of integrated management and industrial chain model, which can be set up in the process of the reform of the agricultural products production and marketing system. In this process, there are two changes: identity change: farmers-agricultural capitalists + agricultural workers; income change: Farmers' income-land contract rights, equity income + Agricultural Workers' labor income.

Its basic mode is“Company + peasant household” and“Company + base + peasant household”. The planning area should be chosen according to the specific situation.

1 the“Company + Farmer” model

Companies generally take the lead, controlling seed farms, feed factories, fertilizer factories, slaughterhouses and food processing plants, agricultural products usually, by contract farmers grow or feed. The model of“Company + peasant household” makes full use of the advantage resources of peasant household to reduce their own production cost. Wen's chicken is the most successful example of this model.

2“Company + base + Farmer” mode

Most of the bases are built by companies, but there are also bases built by farmers, which are rented back by the companies. Farmers use the land contract rights as an asset to buy shares, participate in dividends, and receive labor income. In accordance with the “Unified supply of seedlings, unified supply of materials, unified technical management, unified epidemic prevention, treatment, unified organization of sales” and other measures to unified management, sound security system, tying the interests of companies and farmers together to realize profits.

(2) industrial development guidelines

1) spatial pattern of development

According to the actual development of Shuifu Demonstration Zone and the law of regional economic development, as well as the spatial development pattern of “Two zones, three parks and four zones”, in accordance with the principles of resource integration, superiority play, dislocation development, centralized layout, ecological priority and other layout, and the layout ideas of base agglomeration and park development, the industrial development of the demonstration zone is divided into 2 industrial development zones: the eco-industrial zone on the north side of Qizi City and the green food processing zone in Maotian town.

2) industrial clusters

Using the existing advantages of Shuifu Demonstration Zone Project, the introduction of supporting the extension of the upstream and downstream enterprises, the formation of two demonstration zone, industrial clusters. Located in the northern side of the town of Qizhi Green Building Materials and technology research and development industry cluster and Maotian town of green food, food processing industry cluster.

1 green building materials and R & D industry

Based on cement production, gradually expand the product system and drive the relevant industry chain, form a new green wall material as the leading product, while the development of machinery and packaging manufacturing for supporting development services, and the construction of Technology R & D Center to guide

industry, industrial upgrading and green production, the formation of a comprehensive green building materials industry park.

It is planned to control the development scale of existing cement enterprises in the near future, pay attention to the improvement of production technology and the isolation of ecological protection.

Green food processing industry

Give full play to the advantages of ecological resources and agricultural resources, the development of green food processing industry, in particular, the characteristics of green processing industry. Create characteristic brand, drive the production and promotion of Shuifu characteristic agricultural products, promote the development of Shuifu industry

Exhibition.

The plan relies on the good agricultural foundation of Maotian town to build agricultural and non-staple food processing park, with the emphasis on the development of characteristic agricultural and non-staple food processing, processing and manufacturing, and to create a processing park integrating intensive processing and recycling.

(3) guidelines on the development of the tertiary industry

Combined with the resource characteristics and industrial development potential of Shuifu Demonstration Zone, the development of the three industries in the demonstration zone mainly promotes the upgrading of the internal structure and industrial level of the service industry by actively cultivating new industries such as tourism and logistics. It will also foster new economic and growth points for industrial development.

1) tourism and leisure industry

The Shuifu Demonstration Zone is close to the core area of the greater Changsha metropolitan region. Several major tourism resources have already been formed around it. Combined with the development of several major resources around it, shuifu will become a leisure area with special features and development potential, because of its natural resources and the advantage of its later development.

Based on the unique“Lake” tourism resources and superior location conditions of the demonstration zone, the planning takes“Water” as the core, and focuses on ecological leisure tourism, health-preserving vacation and leisure, and cultural experience tourism, develop diversified and integrated leisure tourism industry integrating tourism, vacation, entertainment and culture. Shuifu demonstration area will be built into a linkage between Shaoshan, Hengshan, Dongting Lake and other Long-zhuzhou, tan core tourism circle of the important development of regional tourism core.

1 eco-leisure tourism

Relying on the good ecological environment and abundant landscape resources of Shuifu Demonstration Area, we will build an eco-leisure tourism base featuring water leisure experience, rural leisure experience and mountain forest leisure experience.

2 health-preserving vacation and leisure

Combined with the unique longevity culture, precious religious culture and rare“Lake” resources in Shuifu Demonstration Zone, we will develop core tourism vacation projects with the theme of“Health preservation and old-age care”, shuifu demonstration zone will be built around the core of changsha-zhuzhou-xiangtan tourism circle well-known, health resort.

Cultural experience tourism

Fully tap the rich historical and cultural resources of Shuifu Demonstration Zone, combine cultural experience with tourism industry, and create cultural experience tourism projects with Shuifu characteristics, form religious pilgrimage, folk heritage tourism and cultural industry tourism three major features of tourism, products.

2) ecological logistics industry

Shuifu Demonstration Zone has two major regional trunk roads: Shanghai-rui Expressway and Hunan-guizhou railway. In addition, Shanghai Kunming high-speed Railway and yiyang-loudi-hengyang expressway are under construction. With the improvement of regional traffic environment, the demonstration area can

develop modern ecological logistics industry, such as transportation, warehousing, etc. .

It is planned to develop eco-logistics industry and undertake the main logistics transportation of eco-industrial park by adding a new link line between Hunan and Guizhou to the eco-industrial park.

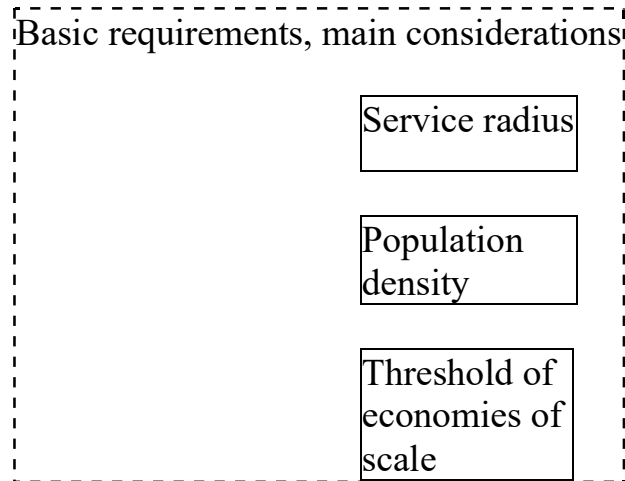
3.3 Public Services, Transport, and Infrastructure Planning

The public service facilities and infrastructure in Shuifu demonstration zone are relatively lacking. The existing public and infrastructure facilities are of low quality and lack of service scope. The resources and conditions that people can enjoy in their daily lives need to be improved. With the further development of cities in the future, population and land use further expansion, the demand for public services will gradually rise.

1. The principle of overall allocation

The allocation of public services should not only take into account the perfect needs and standard allocation in the scope of cities and towns, but also take into account the rights of villagers to enjoy public services. It is the starting point and focus of urban and rural public service planning to make the residents' right to enjoy basic public services fair and narrow the differences between urban and rural communities. But it needs to be emphasized that equalization does not mean equalization. Rural areas are vast and sparsely populated. The development of public service facilities also needs to consider the issues of investment and efficiency, and the layout of facilities, also need to take into account the agglomeration scale effect.

Combined with the planning and layout, when the public facilities of Shuifu Demonstration Zone are collocated, we should give full play to the radiation effect of the key town of Qizhi and the general town of Maotian in the process of urbanization, at the same time relying on the town radiation service node of the village, to provide education, health care, productive technical support services. In addition, the establishment of rural bus passenger transport system, strengthen the community, and community-to-town links, can ensure the accessibility and intensification of public services.



2. The idea of overall arrangement

An overall system of public facilities and supporting infrastructure covering both urban and rural areas will be formed.

- (1) based on the perfect demand and standard allocation of cities and towns;
- (2) tourism supporting services based on the construction of convalescent resorts;
- (c) co-ordinating the provision of public services to the villagers in the surrounding villages;
- (4) taking into account the scale effect of agglomeration and keeping the difference.

The planning puts forward the standard of establishing four-level urban system, and the allocation of public service facilities will depend on this system. The first level is Qizhi city district; the second level is Maotian town, tourism town, health-preserving vacation group, cultural and leisure group and eco-industry group; the third level is rural central community; the fourth level is rural grass-roots, community.

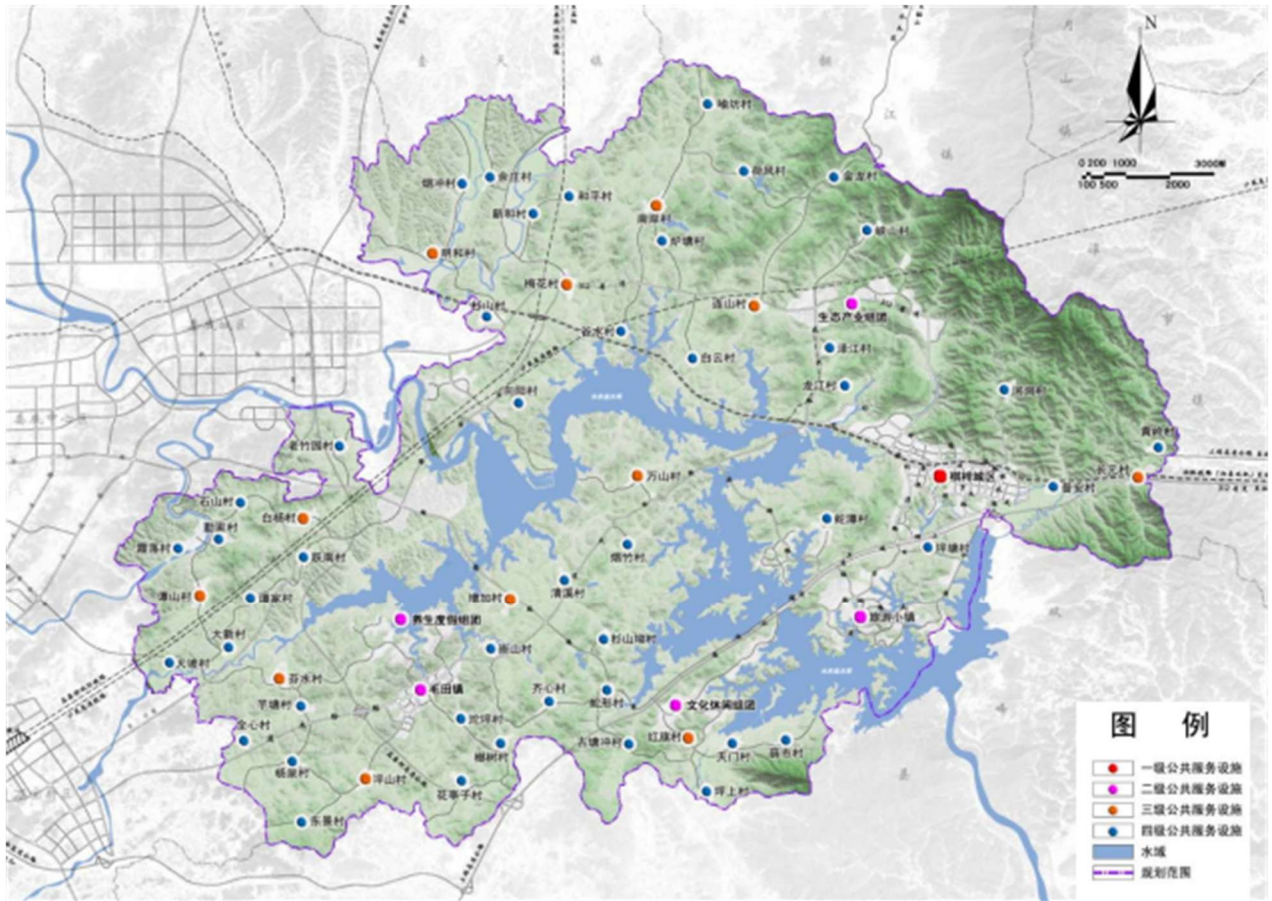


Figure 10 public service facility hierarchical setup layout

Combined with the function characteristics of Shuifu demonstration area, planning to build “A core, four characteristics” of public service facilities supporting system.

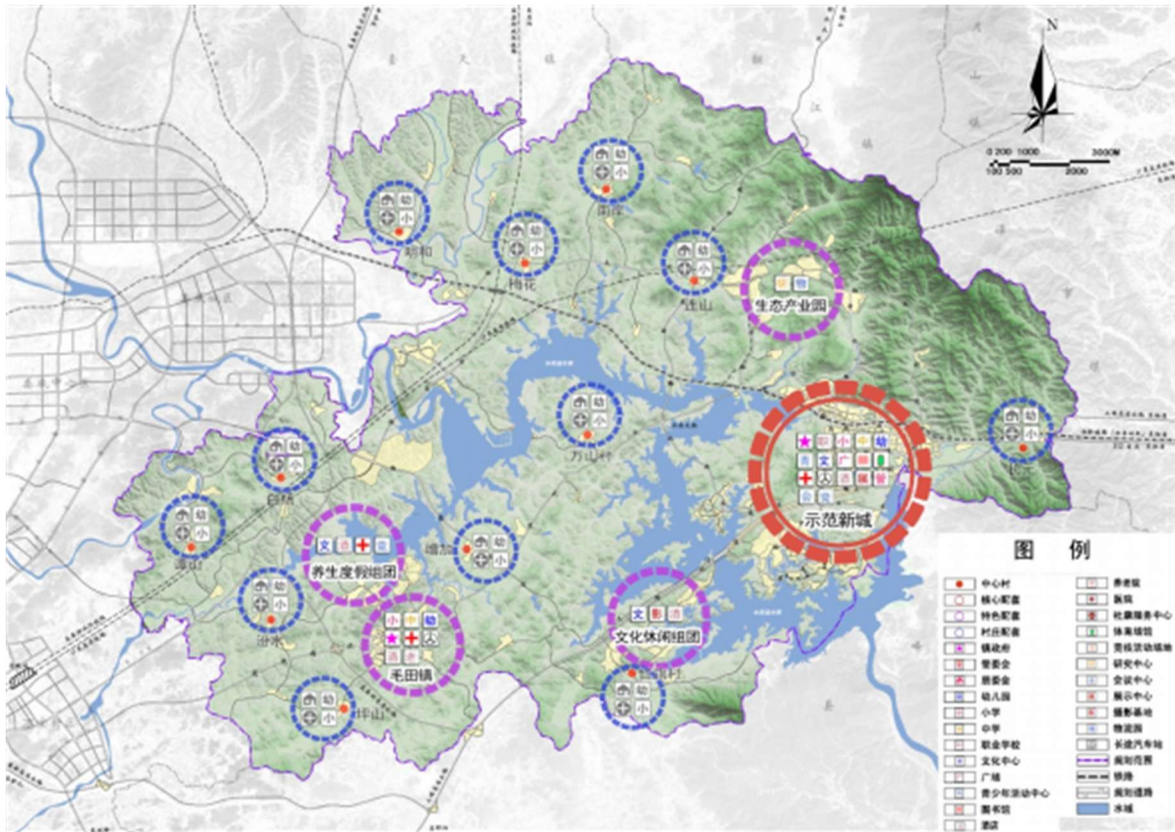


Figure 11 Public Service Facilities Plan

A core: demonstration new town

Including the city of Qizhi and the tourist town. Among them, the city of Qizhi is the core supporting urban areas, set administrative office, education and scientific research, sports business as one, for the demonstration area to provide comprehensive supporting services; Tourism town is a tourism service area with administrative management, Conference Hotel, tourism reception, cultural creativity, catering and entertainment, etc.

Four characteristics: including Maotian town, health and vacation groups, cultural and leisure groups, eco-industrial groups four characteristics of the group.

Maotian Town: Tourism reception, hotels and other supporting features, while taking into account the community integrated services-set villagers training, farm tools maintenance and repair, sales and display of agricultural products;

Health Resort Group: High-end Health Resort Hotels, recreation and leisure features, mainly supporting;

Cultural and leisure groups: Cultural Entertainment, resort hotels and other tourism and leisure-based, eco-industry groups: R & D, logistics and other industry-based services.

1. Guide the configuration of public service facilities

(1) public service facilities configuration standards

According to “Town planning standards (GB 50188-2007)” and “Hunan province new rural construction village improvement and construction planning guidelines (Provisional-RRB-”, the central village must set up neighborhood committees, primary schools, kindergartens, a series of village and town public construction projects such as secondary schools, cultural facilities, health centers, food stores, credit cooperatives, restaurants, grocery stores are suggested. Grass-roots villages were suggested to set up kindergartens, cultural stations, health centers, department stores and restaurants. See below:

Planning and constructing a “Comprehensive service area” for the villages mainly in maotian-integrating information receiving and sending, new product introduction, training service, industry conference, maintenance and repair, sales display, etc. , the introduction of out-of-school education base for young people, nursery fish scientific research show, district and other high-end services, improve the regional industrial chain, enhance regional visibility.

Table 18 Shuifu demonstration area public construction project configuration table

Category	Projects	Focus town	General Town	Central village	Grass-roots village
Administration	People's government and police stations	●	●	-	-
	Courts	○	-	-	-
	Construction and land management agencies	●	●	-	-
	Management of agriculture, forestry, water and electricity	●	●	-	-
	Business and tax offices	●	●	-	-

	Run a business	●	●	-	-
	Traffic Control stations	●	-	-	-
	Neighborhood Committees	●	●	●	-
Educational institutions	9. colleges	○	-	-	-
	Upper Secondary and vocational schools	●	○	-	-
	Junior High School	●	●	○	-
	Primary School	●	●	●	-
	Nursery School	●	●	●	○
Science and technology	Culture station (Room) , teenagers	●	●	○	○
	Theater	●	○	-	-
	16、 light the court Stadium	●	●	-	-
	Technology station	●	○	-	-
Health care	Central Hospital	●	●	-	-
	A Health Center	-	●	○	○
	Epidemic Prevention and Health Care Station	●	○	-	-

Category	Projects	Focus town	General Town	Central village	Grass-roots village
	Family Planning Guide Station	●	●	○	-
Business Finance	Department Stores	●	●	○	○
	Food outlets	●	●	○	-
	Means of production, building materials, grocery stores	●	●	-	-
	Grain stores	●	●	-	-
	Coal stores	●	●	-	-
	Pharmacy	●	●	-	-
	Bookstores	●	●	-	-
	Banks, credit unions, insurance agencies	●	●	○	-

	Restaurants, restaurants, snack bars	●	●	○	○
	Hotels, hostels	●	●	-	-
	Haircuts, bathrooms, and dyeing shops	●	●	○	-
	Photo Studios	●	●	-	-
	General repair, processing, and acquisition	●	●	○	-
Trading facilities	Grain, oil and native products market	●	●	-	-
	Markets for vegetables and non-staple foods	●	●	○	-
	Department Stores	●	●	-	-
	Markets for fuels, building materials, and means of production	●	○	-	-
	Livestock and aquaculture markets	●	○	-	-

Note: In Table ●—○ items that should be set up;

(2) scale of provision of public services

According to the population forecast scale, the town planning standard (GB 50188-2007) and the guidelines for new rural construction and reconstruction planning in Hunan Province (provisional), the per capita land area indicators for various types of public buildings are detailed in the table below:

Table 19 indicators on per capita area of public buildings

Village level	Scale, scale	Per capita land use for public buildings (sqm/person)				
		Administrati on	Educational institutions	Science and technology	Health care	Business Finance
Focus town	Large	0.3-1.5	2.5 to 10.0	0.8-6.5	0.3-1.3	1.6-4.6
General Town	Large	0.2-1.9	3.0-9.0	0.7-4.1	0.3-1.2	0.8 to 4.4
Central village	Large	0.1-0.4	1.5 to 5.0	0.3-1.6	0.1-0.3	0.2-0.6
	Medium	0.12-0.5	2.6-6.0	0.3-2.0	0.1-0.3	0.2-0.6

Note: The area of the trade fair facilities should be calculated according to the number of people attending the fair and the type of business.

Table 20 the scale of rural central community establishment

Category	Building name	Configuration requirements	Configuration requirements
Village management	Residents' committees	Construction area of 200-300 m ² , including Social Security, medical insurance, and other housing, police room about 50m ²	√
Education	Kindergarten	The average living area is about 10m ²	√
Health care	Health Clinics	Construction area 100-200m ²	√
Social Security	Protect your home	According to the per capita 0.1-0.3 M ² standard set, the area of 300-600 m ²	
Culture and sports	Culture Room	Including science and Technology Service Point, building area 100-200m ²	√
	The library	The building area is 50-100m ²	√
	Fitness facilities for all	Combined with small squares, centralized green space set, general land area, not less than 420 m ²	Check (can be reduced to 300 m ²)
Business Services	Market facilities	Covers an area of 50-200m ²	
	Convenience stores	Arrange 2-3 places, each building area of 50m ² or so	√
	Postal, telecommunications, communications, savings agencies	Combined with commercial service construction, the village postal station area should be larger than 20m ²	√

Table 21 the scale of rural basic community establishment

Category	Building name	Configuration requirements	Configuration requirements
Village management	Village management houses	Construction area of 100-200 m ² , including Social Security, medical insurance, and other housing, police room about 50m ²	√
Education	Day Care	The average living area is about 10m ²	√
Health care	The bathroom	Construction area 50-100m ²	√

Social Security	Protect your home	According to the per capita 0.1-0.3 M2 standard set, the area of 300-600 m2	
Culture and sports	The library	The building area is 50-100m2	√
	Fitness facilities for all	Combined with small squares, centralized green space set, general land area, not less than 420 m2	Check (can be reduced to 300 m2)
Business Services	Relax Shop	The building area is about 50m2	√
	Postal and savings agencies	Combined with commercial service construction, the village postal station area should be larger than 10m2	√

(3) classified configuration of public service facilities

1) administrative planning

Each central village set up neighborhood committee, each site area per 100 households by 80-120 square meters of calculation, the scope of its services, the central village area.

2) planning of educational facilities

Each village will have one kindergarten, each with an area of 0.5-0.8 hectares and a service radius of 300.500 meters. The allocation of primary and high schools (vocational and higher) will be balanced across the entire Shuifu demonstration area.

3) science and technology planning

Considering the development of tourism industry in Shuifu Demonstration Zone, cultural, sports and scientific and technological planning should not only meet the needs of nearby residents for physical exercise and exercise, but also meet the needs of foreign tourists for rest and entertainment venues and facilities.

According to the standard of 4-8 square meters per person, tourists will use 10 square meters per person, other tourists will use 50 square meters per person.

4) health facilities planning

A health service station is set up in each central village. The area of each site is 300-500 square meters/1,000 people, and its service area is the area where the central village is located, with a radius of 800-1,000 meters. Each village is equipped with health and medical service points to serve the villagers.

5) planning of commercial and financial facilities

Each village is equipped with convenience supermarkets, each site area per 100 households 60-100 square meters calculation, its service area, the central village area.

6) market facilities planning

A market will be set up for 2,000 to 5,000 people, and markets will be set up in each central village in the planning area, with an area of 0.1 hectare per 1,000 people, for areas with higher environmental requirements or existing vegetable markets with smaller land use, it is planned to be a clean vegetable supermarket.

7) build“Integrated service areas” in villages dominated by Maotian

With the upgrading of the agricultural industry in the demonstration zone, it is possible to build an integrated service zone with a matching scale, the integration of information receiving and sending, new product introduction, training service, industry conference, maintenance and repair, sales and display, is not only beneficial to the orderly development of the whole Shuifu Temple, agricultural industry, it will also promote changes in production patterns, management methods and marketing methods.

The integrated service area will also have an office for the trademark and brand construction of agricultural products, as well as high-end service institutions such as out-of-school education bases for young people and exhibition areas for scientific research on nursery stocks and fish. While improving the regional industrial chain, it could also play a publicity role and raise the visibility of the region.

8) senior housing

Facing the living problems of the young and middle-aged people who work in rural areas and the old people left behind, the planning suggests that the old people's apartments should be set up in the towns of Maotian and Qizhi.

Case study

Jiashan apartment for the aged: the first pilot unit for the socialization of old-age care in Zhejiang province. The park covers an area of 50.3 mu, green rate of more than 50% , the park apartments have large, medium and small three types of

120 units, 135 rest rooms, can accommodate more than 500 elderly people at the same time. There are five functional areas, including apartments, rest rooms and medical treatment, center, elderly activity center, commercial service center composed of the“Garden” more perfect recreation, medical, entertainment, learning functions as one.

Rongcheng senior citizens apartment: there are more than 100 beds, single/Double, deluxe room, single/double ordinary room. All rooms are equipped with TV, telephone, air conditioning, heating, high-grade Simmons Bed, sofa, writing desk, wardrobe, etc. . At the same time, the apartment also has a restaurant, gym, infirmary, recreation room, reading room, activity room, public bathroom and karaoke hall and other services and entertainment facilities.

Municipal Infrastructure Configuration Guide

(1) sewage treatment

1) pre-treatment stage

Septic tank, B grid, anaerobic fermentation tank were used for pretreatment.

Septic tank: fiberglass septic tank equipment, mainly three format septic tank and five format septic tank two, of which five, type septic tank in addition to the traditional septic tank effect, but also has the anaerobic function, the effluent from the septic tank can directly enter the constructed wetland or micro-power treatment system. The combined high-efficiency septic tank can also be used to treat the sewage, and the effluent quality can meet the first grade standard of“Sewage comprehensive discharge standard”(GB -8978 -1996) .

Grille: there are a lot of large solid debris in domestic sewage, if not cleaned up in advance, will affect the later sewage treatment, treatment facilities and the operation of the treatment effect, so generally before the treatment facilities set up grille, in order to remove the pump unit and pipeline valve may block the larger debris, and to ensure the normal operation of follow-up treatment facilities. There are two methods of cleaning slag in grille: manual cleaning, mechanical cleaning and manual cleaning. The water from the grid is collected and treated in a septic tank. The anaerobic fermentation tank combines the sewage treatment with its

rational utilization, and realizes the resource utilization of the sewage. After anaerobic fermentation, most of the organic matter in the sewage produces biogas, and most of the organic matter is removed from the fermented sewage to achieve the goal of purification; The treated wastewater is treated in constructed wetlands or micro-power treatment systems, and can also be used as irrigation water and ornamental water.

(anaerobic/biogas digester) + constructed wetland technology this technology is on the basis of biogas digester or anaerobic fermentation, supporting the constructed wetland treatment technology, so that domestic sewage after strict anaerobic fermentation degradation, the water quality is further purified through the combined action of a selective substrate, plants and microorganisms, and through multi-layer filtration to degrade the pollution, the effluent can reach the class B standard of “Sewage treatment plant pollutant discharge standard for cities and towns”.

2) the main processing technology

The main treatment technology: adopt suitable rural sewage treatment technology, such as anaerobic/biogas tank + micro-power treatment technology, (anaerobic/biogas tank) + constructed wetland treatment technology, to the national “Sewage treatment plant pollutants discharge standards” level 2, above the standard.

(2) sanitation facilities

According to the specific conditions of each village set up 1-2 public toilets, improve the construction standards, according to the first, second standard construction, one, type of public toilets should account for 30% of the total in the near future, long-term up to more than 40% .

The collection point is no more than 70 meters away from the garbage collection point. The garbage is collected at the garbage collection point, collected at the garbage transfer station, and transported to the sanitary landfill. Daily cleaning and daily transportation of domestic garbage, the status of the garbage bins and other facilities for the transformation of the replacement of mobile garbage bins (bins) , the new addition of all garbage bins set to mobile.

Considering the characteristics of the distribution of resources, the distribution of productive forces and the current situation and trend of the development of social economy and transportation in the demonstration area, build a “Link up orderly, efficient smooth, green and harmonious” modern urban and rural transport system. It includes the establishment of an integrated traffic network with various traffic modes and different road grades, and the establishment of an efficient urban and rural traffic system. It will select and build a resource-efficient, environment-friendly, fair and equitable green transport system. In addition, to sort out and link up the original, there is a transport system, speed up the construction of urban and rural transport infrastructure, establish an efficient modern, sustainable development, with the regional economy, development needs of the transport system.

It plans to build a comprehensive transportation system covering the whole region and even towns and villages. The specific development strategies include the following:

1. Linking up regional transport systems and strengthening external links

Construct the main road network structure within the area, strengthen the Shuifu Demonstration Area and Xiangtan, Loudi, Yiyang, Shaoshan, Hengyang and other surrounding areas, adjacent urban transport links.

2. Connect the traffic arteries and develop the area in series

To construct the structure of regional trunk road network, connect regional traffic arteries, and form regional traffic and trunk network connecting each functional area.

3. To link up linearly and form a self-contained system

Through the link between urban and rural areas, the village road and the main road to link up, establish a sound access, fast traffic network.

4. Organize transportation in a rational way and divert passengers and goods

In order to separate the freight and passenger traffic, the internal traffic of the special line and the demonstration zone, the transit and the internal traffic of the demonstration zone, the goal of passenger and freight diversion is realized.

5. Advocate Green Transportation and encourage green travel

Combined with the functional characteristics of the area, to create a characteristic landscape boulevard, regional greenway, tourism bus and water bus and other green transport channels.

9.3 external traffic planning

Relying on the Hunan-guizhou railway, Shanghai Something Kunming high-speed railway, Hunan New Shaoshui Avenue, Shuifu Avenue, pottery niche road and song, Yao Road and other major roads in the area to achieve and Loudi, Xiangtan, Shaoshan, Shaoyang and other adjacent cities connected.

Shanghai-kunming high-speed Railway: Shanghai-kunming high-speed Railway runs through the demonstration zone from north to south.

Inter-city track: Hunan-guizhou railway and Hunan-loucheng inter-city railway in the planning area were set up Qizhi railway station, Hunan-loucheng rail station, two stations; There is a new metro station in Wanbao new area, which is adjacent to Maotian town, and a West metro station is planned at the intersection of Yilou, Hengcheng and Xianglou.

Expressway: Shangrui Expressway in the eastern city of Qizhi has formed an entrance, Planning Yi Louheng, the expressway will be in the western town of Maotian added a new exit.

Provincial Road: Louxiang Road east-west across the planning area north, planning to Louxiang Road and Shangrui Highway Connection, lane change, convenient highway freight.

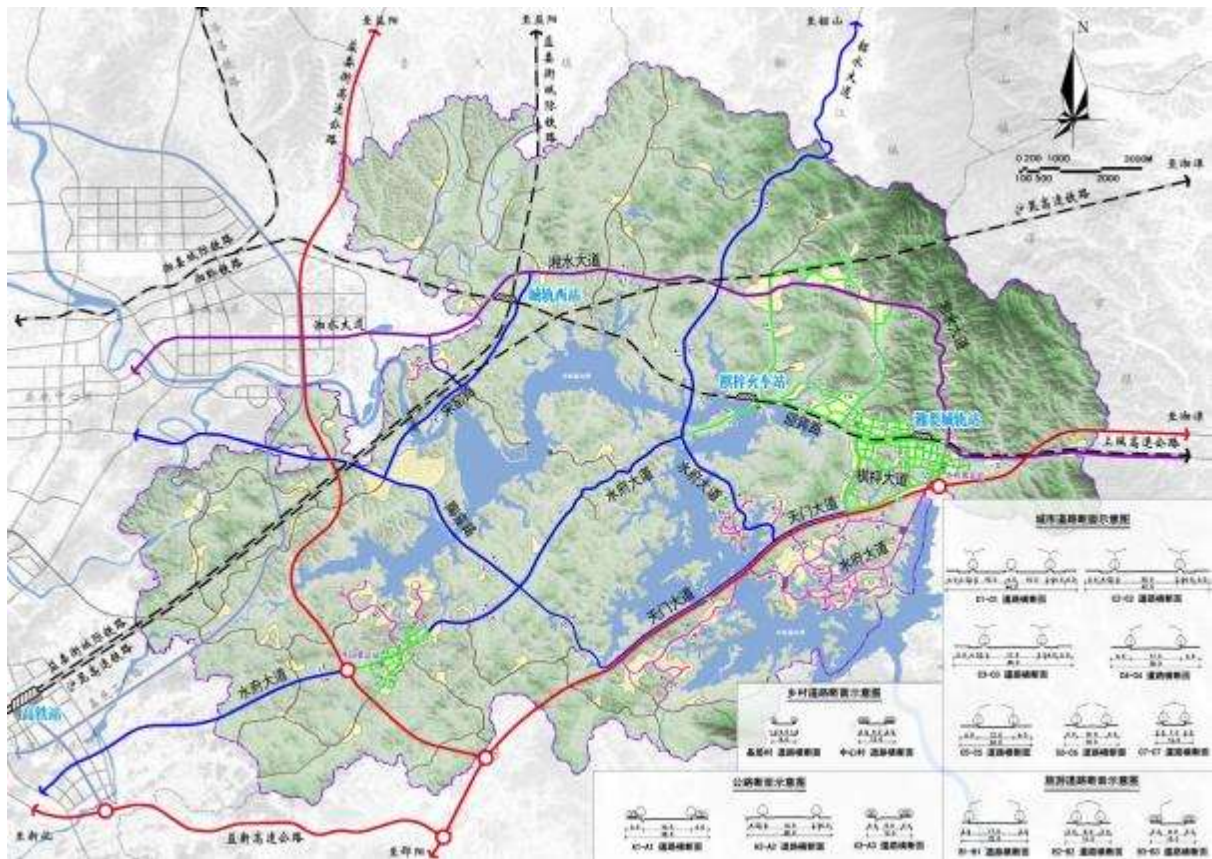


Figure 13 Road System Plan

1. Roads: the main function is to transport traffic between towns and tourist attractions. Except for the 15-meter red line width of the existing roads, the other newly-planned roads all have 28-meter red line width Including Shaoshui Boulevard, Shuifu Boulevard, Song Yao Road, Tianmen Boulevard, Tao niche road and other organic links to the functional areas of the road. Among them, Shaoshui Road, Lianyun Road, Shuifu Road with traffic, landscape and other functions, to highlight the Shuifu demonstration area features of the tourist landscape road.

2. Urban roads: divided into urban trunk roads and urban sub-trunk roads, of which, the trunk roads are mainly as urban groups, between the link channel, the width of the red line between 40-50 meters; The second trunk road mainly acts as the distributing traffic, and the width of the red line is controlled between 30-40 meters.

3. Tourist Road: it mainly serves as the internal traffic organization function of the scenic spot, including Shuifu Avenue, Lianyun Road, Sunrise Road, Xiaotang

Road, Xiafei Road, etc. , the red line width of all roads is 15 meters except the main road of the tourist town which is 28 meters.

4. Rural Roads: the roads which connect the villages, towns and scenic spots are mainly used for transportation. Among them, the width of the red line of the Central Village Road is controlled at 12 meters The width of the Red Line shall be limited to 8 meters in the grass-roots villages.

The planned transportation facilities include rail station, passenger station, passenger terminal and social parking.

1. Railway station: to retain the existing Xiangzi-guizhou Railway Qizhi railway station for freight demand, and plan to set up a Xiangloucheng railway station to the north of the center of Xiangloucheng intercity railway; At the intersection of Yiluheng intercity railway and Xianglou intercity railway, a west urban rail station is set up for passenger traffic demand in the west of Qizhi City and demonstration area.

2. Passenger station: it is planned to set up a Shuifu passenger station at the entrance of Shangrui Expressway in Qizicheng District, covering an area of about 1.23 hectares. It is planned to set up a passenger station at the entrance of the town to the west of Maotian Town, covering an area of about 1.00 hectares.

3. Passenger terminals: there are three passenger terminals and nine berths along the Shuifumiao Reservoir, which are located in three scenic spots, namely, health-preserving holiday groups, wetland ecological protection belt and tourist town.

4. Social car park: there are nine social car parks in the model new town and Maotian town, covering an area of 9.34 hectares. There are four social parking lots in the city of Qizhi and three in tourist towns, two social parking lots in the center of Maotian and four social parking lots in combination with tourist sites In the eco-industrial park, a social parking lot will be set up.

Facing the urban and rural planning of the construction of“Two types” society, the core goal of Shuifu Demonstration Zone is to explore a new urbanization road which is different from the traditional, economical and connotative development mode, to achieve economic, intensive and sustainable development in urban and

rural areas, social development and environmental protection. The plan will be guided by the scientific outlook on development and take the construction of a “Two-oriented” society as an opportunity, set up the “Ecological priority, industrial linkage, space-intensive” planning concept, will be the Shuifu demonstration area into huxiangte

Two types of color ecological new area.

1. Ecological priority-following the principle of ecological protection and ecological service priority, the ecological priority with the primary goal of green development and ecological development, the concept of priority, priority to ensure the protection of agricultural ecological environment and ecological tourism, the tour area develops healthily, realizes the economic benefit, the ecology benefit and the society, the benefit unification, constructs the SHUIFU demonstration area to become the Hunan province model, the model ecology civilization construction demonstration new area.

2. Industrial linkage-based on the premise of eco-environmental protection and the use of its own resource advantages, the selection of environment-friendly and resource-saving industries, the coordinated arrangement of infrastructure, industrial chain and, function layout, focus on promoting the interactive development of primary and tertiary industries, to achieve high-end, ecological, low-carbon and service-oriented industrial development, efforts to water, fu Demonstration Area to build a developed economy, urban and rural harmony, green civilization, leisure and health resort.

3. Space-intensive-on the premise of inheriting the traditional characteristics of urban and rural areas as well as the local and cultural conditions, we should push forward the integrated development of urban and rural areas in an all-round way with comprehensive support, reform, overall planning and coordination of man-made and natural space, and the deployment of urban and rural space resources, to organize and allocate the ecological space, industrial space, living space, landscape space and other physical space resources in a rational way, so as to realize the

efficient and intensive utilization of urban and rural space resources, the coordinated development of urban and rural natural ecological and environmental systems.

To establish a set of indicators system for Sustainable Urban and rural master planning, strengthen quantitative indicators for resource intensive and economical use, environmental governance and protection in urban and rural planning, and ensure scientific compilation of urban and rural planning, • effectively overseeing the implementation of urban and rural planning. Based on the analysis of the characteristics of“Two-type Society”, this paper selects the corresponding indexes reflecting the requirements of“Two-type society” from four aspects of economy, society, resources and environment, and divides them into control-type and guidance-type, the two-type urban and rural master planning indicator system is composed.

(2) building a safety-friendly ecological network

The abundant landscape resources are not only the precious landscape resources in Shuifu demonstration area, but also the important ecological base in the base. By drawing the basic ecological control line, the planning maintains and strengthens the continuity of the whole landscape pattern, and establishes a safe and continuous ecosystem network. In the spatial layout, through the rational land use arrangement, build the urban internal and external ecological corridors, and channels, to achieve the organic infiltration of nature and city.

(3) advocate intensive and efficient land use pattern

Combined with the traffic condition of Shuifu Demonstration Zone, the land layout is combined with traffic organization closely, relying on the guidance of mass transit, and the land is developed compact and efficiently It advocates the mixing and compatibility of functions, widening the gap of road network layout, guiding the rational allocation of construction quantity, and realizing the integration of man and nature in the layout of various facilities, the overall formation of“Green wedge centralization, blue vein extension, ecology first, group layout” of urban and rural spatial pattern, forming a compact urban land layout.

(4) build a green and low-carbon transportation system

Combined with the Urban Road Traffic Planning Network, through the introduction of efficient and ecological public transport, green and low-carbon slow traffic, and the characteristics of water transport and other diversified transport modes, to construct the comprehensive and traffic system of radiation area, covering the whole area, connecting the towns and villages, and realize the close combination of green traffic system and land use; Create low-energy consumption, low pollution, less land, high efficiency, high quality of service model of urban and rural green transport development.

(5) establishing an integrated urban-rural infrastructure and public service infrastructure system

We will continue to coordinate urban and rural development, realize unified planning for urban and rural infrastructure, build a comprehensive regional transportation network, integrate urban and rural areas, and provide power and telecommunications networks and water supply networks. We will also coordinate arrangements for public service facilities, a system of public facilities and infrastructure supporting overall planning and coverage of urban and rural areas shall be formed to guide the centralized sharing of resources and realize resource conservation.

10.2 a system of indicators to guide the development of both types of infrastructure

In accordance with the general requirements of the state on the construction of the two-type society pilot zone and the General Plan for the comprehensive reform of social construction of the two-type city cluster of the greater Changsha Metropolitan Region, the regional planning of the greater Changsha Metropolitan Region (2020-2035) , and the general urban planning of the greater Changsha Metropolitan Region (2020-2035) approved by the State Council, referring to Xiangtan Two-type office index system, combined with the actual development of Shuifu Demonstration Zone and future development needs, this plan determines economic growth, social development, resource conservation, environment-friendly, a total of 32 indicators to guide the Shuifu Demonstration Area of two-type social construction index system.

Table 22 two-type social construction indicator system

Classification	Sub-items of indicators	Unit	Recommended values of indicators (2028)		Recommended value of indicators (2035)		Index, attribute	
			Absolute	2020-2027	Absolute	Average growth from 2028 to 2035		
Economic growth (5 items)	1. GDP	Billion	35	12%	90	10%	Anticipatory	
	GDP per capita	10,000 yuan per person	3.5	10%	7.5	10%	Anticipatory	
	3. The three-stage industrial structure	%	20:45:35		12:38:50		Anticipatory	
	4. R & D expenditure as a proportion of GDP	%	3		3.5		Anticipatory	
	5. Value-added of the tertiary industry (tourism industry) as a proportion of GDP	%	35		50		Anticipatory	
Social, development (12 items)	Population size	Ten Thousand	10		12		Anticipatory	
	Urbanization rate	%	40		60		Anticipatory	
	Low-income families low-income housing, housing area	M ² /person	> 20		> 30		Anticipatory	
	9. Per capita residential building area in cities and towns	M ² /person	35		40		Anticipatory	
	Green travel	%	60		90		Binding	
	Road network density	Km/100 Square kilometers	150		170		Anticipatory	
	12. Per 10,000 college students	person	550		700		Anticipatory	
	13. Medical practitioners per 1,000 people	person	3		5		Anticipatory	
	Basic coverage of urban workers and basic insurance	Retirement	%	100		100		Binding
		Medical	%	100		100		Binding

	Unemployment	%	100		100		Binding
	15. Rural old-age insurance coverage	%	100		100		Binding
	16. Per capita disposable income of urban residents	10,000 yuan		12%		12%	Anticipatory
	17. Per capita net income of rural residents	10,000 yuan		11%		11%	Anticipatory

Resource Savings (6 items)	18. 10,000 yuan of GDP	Cubic metres/\$10,000	100	- 7.5%	75	- 8.7%	Binding
	Comprehensive water use per capita in cities	M ³ /year	150		150		Binding
	20 billion yuan of land for GDP construction	Per 100 million square kilometers	0.30	- 8%	0.25	- 7%	Binding
	21. Investment in new industrial land, intensity	Per square kilometre	19	7%	25	5%	Binding
	22. Energy consumption per 10,000 yuan of GDP	Per 10,000 yuan per ton of standard coal	0.65	- 2%	0.5	- 1.5%	Binding
	Share of renewable energy use	%	15		25		Binding
Environmental, friendly (9 items)	Forest cover	%	46		60		Binding
	Soil erosion rate	%	20		15		Binding
	Urban per capita public green space, area	M ² /person	> 12		> 15		Binding
	Urban sewage treatment rate	%	95		100		Binding
	Integrated and efficient use of industrial solid waste	%	98		100		Binding
	29. Recycle municipal solid waste	%	60		80		Binding
Quality of drinking water sources	%	100		100		Binding	

	Type II water quality in the Xiangjiang River basin, number of days	day	300		350		Binding
	City Air Quality Grade 2, number of days above	day	365		365		Binding

Conclusions

The research on urban-rural coordinated development, with a focus on the Xiangtan Shuifu Demonstration Zone in Hunan Province, highlights critical insights into the theoretical, practical, and planning dimensions necessary for sustainable integration of urban and rural areas. The study emphasizes the following key findings:

Urban-rural coordinated development is rooted in the need to bridge disparities between urban and rural areas, ensuring equitable access to resources, infrastructure, and opportunities. Historical evolution and global examples of urban-rural integration underscore the importance of strategic planning, policy implementation, and alignment with socio-economic objectives. Addressing core issues, such as land use inefficiencies and unequal distribution of services, remains central to achieving this balance.

The analysis reveals distinct characteristics and challenges in urban and rural settings. Urban areas face issues like overcrowding, resource depletion, and uneven industrial growth, while rural regions grapple with underdevelopment, population decline, and limited access to basic services. These disparities underscore the need for context-sensitive strategies, focusing on maximizing each area's unique strengths while addressing structural weaknesses.

A sustainable approach to urban-rural coordination involves clear principles and actionable objectives. These include:

Establishing inclusive policies that foster equal economic opportunities.

Promoting integrated spatial planning to optimize land use and minimize environmental impact.

Developing diversified economic models that leverage both urban industries and rural resources.

The adoption of practical urban-rural models and strategies, such as industrial clustering, village revitalization, and eco-friendly infrastructure, has proven effective in enhancing regional synergy.

Efficient implementation requires strong coordination mechanisms, stakeholder engagement, and modernized governance structures. The construction of interconnected infrastructure, development of public services, and promotion of industrial integration are critical enablers for sustainable urban-rural growth. Specific interventions, such as transport systems, public facilities, and industrial spatial distribution, create the foundation for long-term development. The Xiangtan Shuifu Demonstration Zone exemplifies the potential for success when these elements are aligned with regional goals.

The lessons from the Xiangtan Shuifu Demonstration Zone can serve as a model for similar regions in China and beyond. Integrating theoretical frameworks with practical solutions ensures that both urban and rural areas contribute to and benefit from shared development. The study reinforces the idea that urban-rural coordination is not only a solution to socio-economic disparities but also a driver of holistic regional progress.

In conclusion, urban-rural coordinated development represents a transformative strategy for achieving sustainable and balanced regional growth. By addressing challenges, leveraging opportunities, and fostering innovation, demonstration zones like Xiangtan Shuifu can pave the way for a more equitable and prosperous future.

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