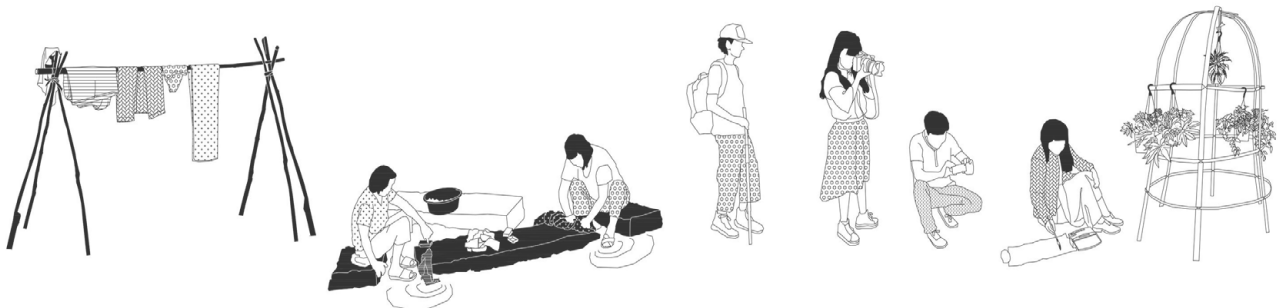
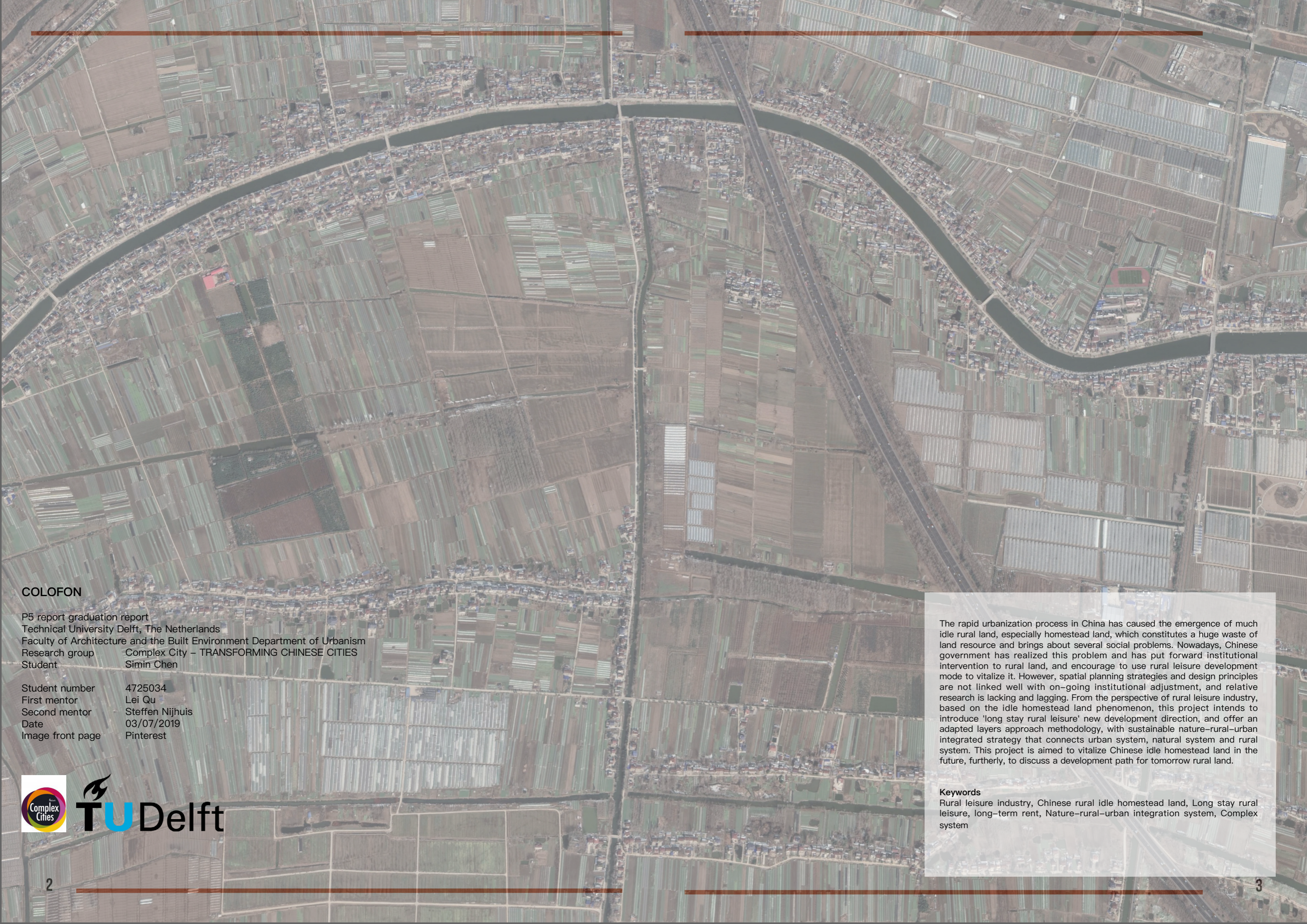


TOMORROW RURAL LAND

---VITALIZE CHINESE IDLE HOMESTEAD LAND THROUGH LONG-STAY RURAL LEISURE DEVELOPMENT





COLOFON

P5 report graduation report
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The rapid urbanization process in China has caused the emergence of much idle rural land, especially homestead land, which constitutes a huge waste of land resource and brings about several social problems. Nowadays, Chinese government has realized this problem and has put forward institutional intervention to rural land, and encourage to use rural leisure development mode to vitalize it. However, spatial planning strategies and design principles are not linked well with on-going institutional adjustment, and relative research is lacking and lagging. From the perspective of rural leisure industry, based on the idle homestead land phenomenon, this project intends to introduce 'long stay rural leisure' new development direction, and offer an adapted layers approach methodology, with sustainable nature-rural-urban integrated strategy that connects urban system, natural system and rural system. This project is aimed to vitalize Chinese idle homestead land in the future, furtherly, to discuss a development path for tomorrow rural land.

Keywords

Rural leisure industry, Chinese rural idle homestead land, Long stay rural leisure, long-term rent, Nature-rural-urban integration system, Complex system

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1. INTRODUCTION

1.1 Motivation

2018 is a super important year for Chinese rural area because the rural collective land reform happened, which leads to the rural land function and property adjustment. Especially rural homestead land and crop land are facing a huge revolutionary development potential from social, environmental and economic aspects, and it will inevitably greatly influence the life of every Chinese farmers and urban citizen(especially in metropolitans)

I live in Nanjing, China for over 25 years but I have never been to bagua island before. The reason is that this island was mainly rural homestead land and cropland, which was rural non profit oriented construction land, and was restricted to develop for commercial leisure function. However, this land reform now obviously changes the future land development possibility of Bagua island, which means this island can be conditionally developed for leisure function etc., thus I am eager to know what would it bring about:

As an urban planner and urban designer, I eager to know what spatial strategies and planning principle should be adopted in order to positively response the policy adjustment;

As a Nanjinger, I eager to know what changes will it bring to every nanjingers' life, not only the urbanites' but also the villagers' life;

As a Chinese, I eager to know what's going to reflect to other Chinese rural land, not only in Bagua island, not only in Nanjing, but also in areas in different situations.

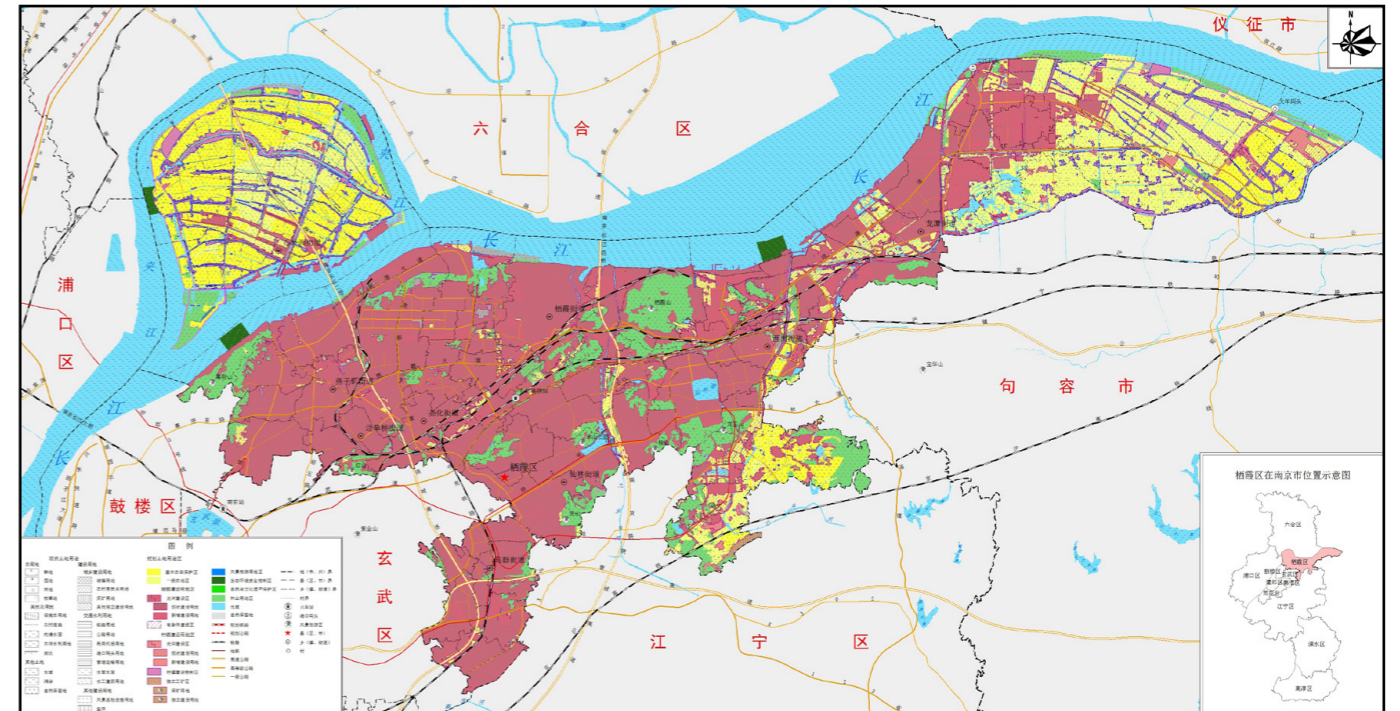


Figure 1-1. Land use map of Qixia district
Source: Qixia district urban planning department

1.2. Rural homestead land

--What is rural homestead land?
 --What are the Chinese characteristics of rural homestead land?
 --The problem of current homestead land. Why so much idle homestead land?

Rural homestead land (figure 1) means the land for rural housing construction, owned by the rural collective, and allocated to rural households (farmers) for an indefinite period as living houses. It is the result of Chinese planned economy time, together with allocated agriculture land (crop land), homestead land is seen as a welfare program to meet rural people living demands (Bangguo Wu, 2004).

According to Chinese policy, rural homestead land ownership belongs to the rural collective (not to the government or individual), and it cannot be sold, (while the other Chinese land including urban land is mostly owned by the national government of China and its use right can be least out for 70 (or 50) years in the free estate market). Rural collective has the right to distribute their rural homestead land under 'one family, one house' principle to each village household (Baiming Chen; Xiaoping Zhou, 2007). Basically, because of the lack of management ability, Rural farmers often build various types of houses at a very low cost to meet their requirements respectively without any overall professional design/planning regulations. With urbanization growing, although rural population pouring into the city, 'rural homestead land cannot be sold' principle still remains, and rural people have the stereotype that homestead land can only be used for residence, thus, a large number of idle rural homestead land is abandoned, and there is no one help to manage or maintain this huge resource right now.

In recent years, due to the high speed of urbanization in China, more and more migrant farmers are pouring into the city to work, leave their homestead and cropland behind. Thus, plenty idle rural homestead land appears. Current Chinese idle rural homestead land is 2 million hectares in total, and new-increased idle homestead land per year worth 500 billion euro converted to market price. According to the sample survey data, idle homestead land accounts for about 10%–15% of the total rural land (Fangfang Zeng, 2013). However, at the same time, some people (include individual investors, real estate developers) is trickly calculating in the consideration of rural land "low price, big area, loose policy", and they are carrying out crazy new constructions based on large-scale demolition of rural existing constructions, resulting in the rural traditions disappearance, arable land occupation, village development negative clone phenomenon, even disturbing real estate market.



Figure1-2. What does Chinese homestead looks like?
 Source: Xinhuanet



Figure1-3. Only a few elderly farmers stay in rural area under nowadays urbanization process (Pan'an village)
 Source: Ctrip.com



Figure1-4. Idle rural homestead land phenomenon
 Source: Weibo.com

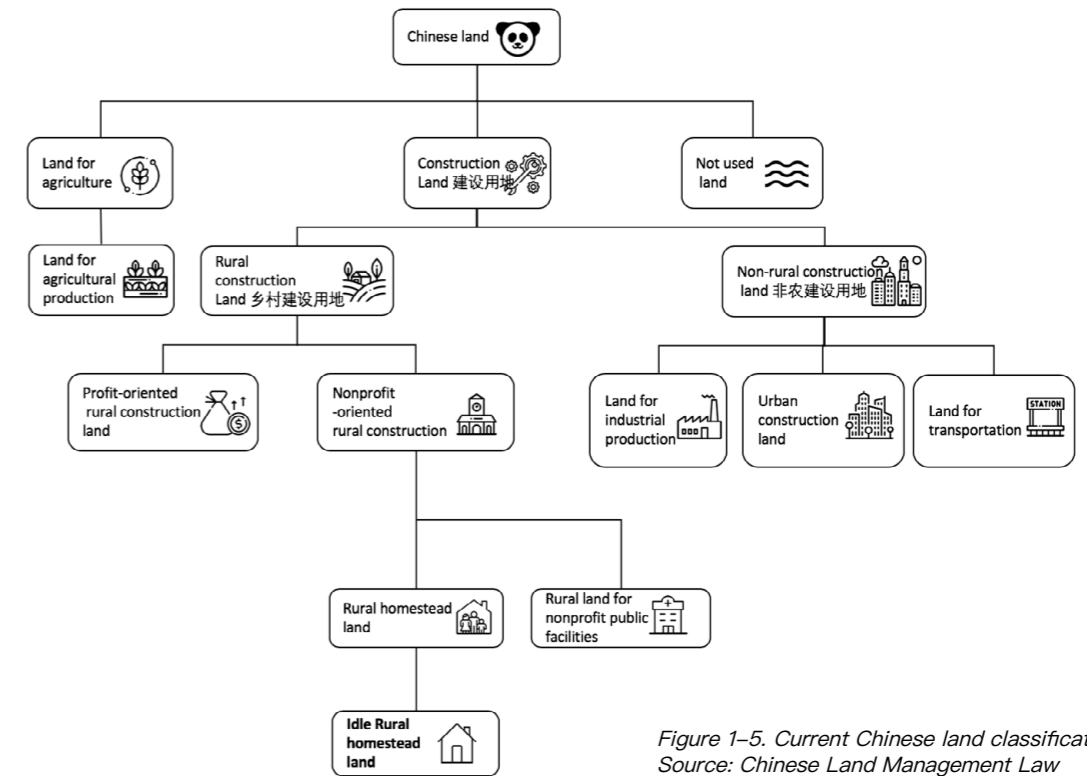


Figure 1-5. Current Chinese land classification categories
 Source: Chinese Land Management Law

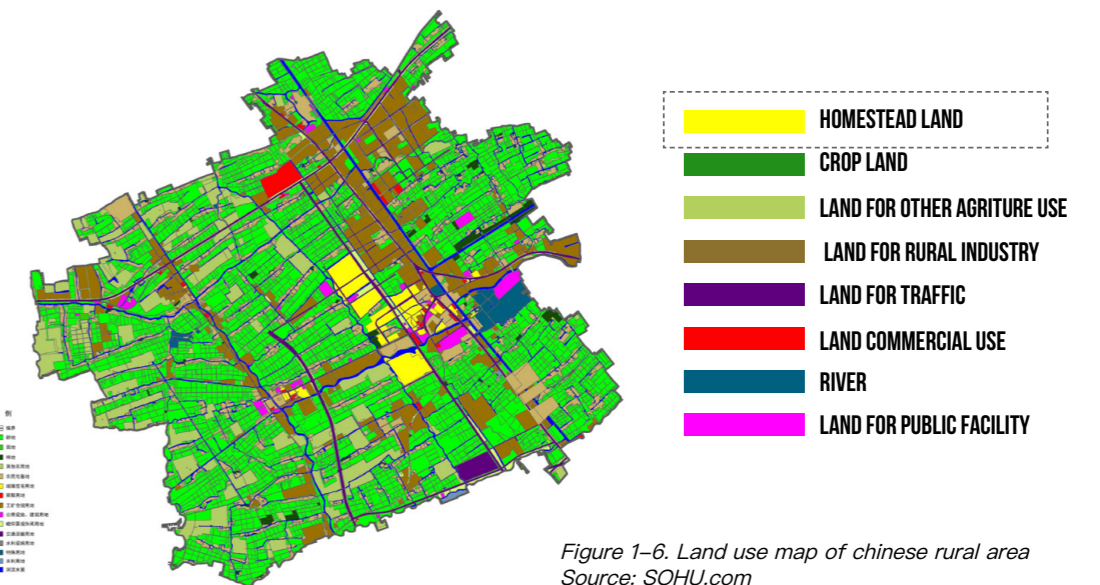


Figure 1-6. Land use map of chinese rural area
 Source: SOHU.com



Figure 1-7. Urbanization process
Source: Zhenghe Zhang

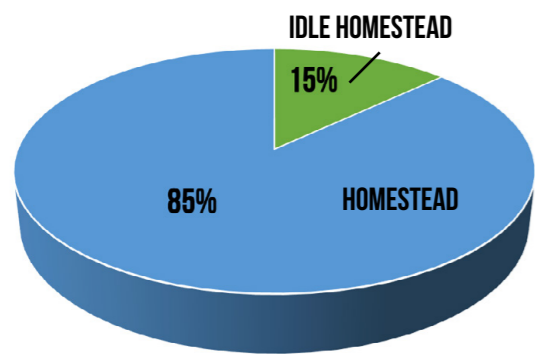


Figure 1-8. Proportion of idle homestead land in total homestead land
Source: Fangfang Cai, 2013

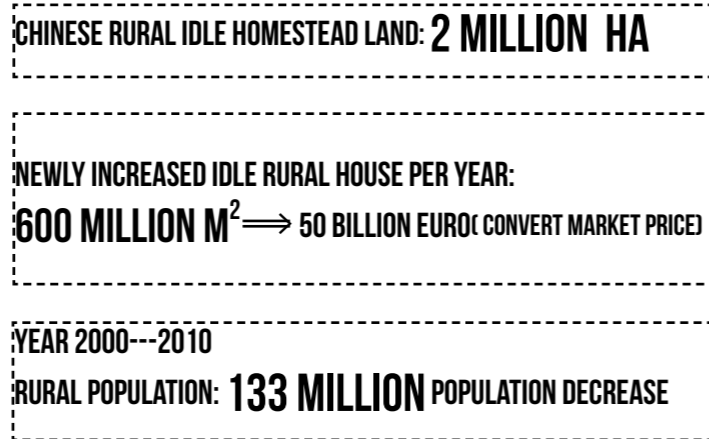


Figure 1-9. Chinese homestead and rural houses change statistics
Source: Chinese rural development document, 2017

1.3 Urbanite's demands for homestead land

--Why urbanites are interested in homestead?
--Is it feasible to buy and move into rural homestead land?

From the perspective of consumers demands, many urban residents are boring with fast speed of city life and high-rise skyscrapers and they want to escape to rural peaceful landscape (Yanbin Bai, 2001). Whats more important, out of the pressure of high housing price, the urban consumers eager to buy cheaper rural house instead. In terms of infrastructure, peri-urban transportation is already covered by urban construction, as convenient as city. In a word, for urbanite, they are quite interested in the rural homestead resource.

However, according to current Chinese policy as explained before, it is illegal for urbanite to buy rural hosue. Since the demand requirement is existing all the time, this high demand causes the existence of the rural collective developed rural house buying and selling market, which is actually illegal because rural house does not have free transferring rights. Rural collective developed rural house has a Chinese name called '小产权房', which is aimed at urbanite buyer, and operated secretly through local rural collective, sometimes even local government. However, since these kind of rural house is not protected by Chinese law, so it does not have the same selling right with common urban commercial houses, and is demolished gradually by national government. Urbanites were not aware of the law regulation in the past, which led to many selling conflicts with farmers. The new land policy adjustment is considered as a good attempt to solve the conflict problem and bring positive impact to the rural house market.

After the land policy adjustment, the maximized rental term is 20 years for rural collective land. Long term rental land is actually similar to 'selling 'the land, which can replace 'rural collective developed rural house 'legally, and meets consumers' requirements. In addition, long stay rural leisure construction is rural leisure industrial oriented, consumers can enjoy the rural landscape and traditional rural lifestyle, treat homestead as the second home. Consumers have the right of using, thus they have more power than before to participate in planning and design process.



Figure 1-10. Urban commercial apartment & rural houses
Source: SOHU.com

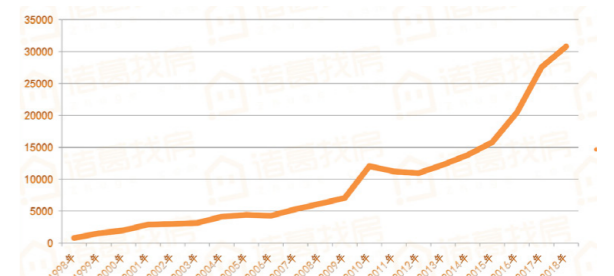


Figure 1-11. Increasing housing price in past 20 years(Nanjing)
Source: SOHU.com



Figure 1-12. Rural houses do not have buying or selling rights on the Chinese land market
Source: SOHU.com

1.4 Chinese Rural land reform

- What is the Chinese rural collective land reform?
- How to understand the meaning of the land reform?
- What are the potential results in the future?

In March 2018, Chinese government realized this resource waste phenomenon actually has a big potential behind and began to intervene/guide the use of rural homestead land. In 2018, At the Third Plenary Session of its Eighteenth Central Committee, the Communist Party of China introduced the new principles called 'Separation of Three Rights relating to Agricultural Land' in a purpose of making the best use of rural homestead land. This principle confirms that the rural collective has the ownership of land, rural farmers have the right of membership, and the nation would moderately relax the restriction of rural homestead land use right'. From the perspective of spatial planning, 'the moderate relaxation of land use right' means rural farmers can rent (long-term/short-term) their homestead land to anyone(like urban people or groups) as long as it is not for sale, and rural people can spontaneously become shareholders to enjoy the legal dividend while investors and users have the right to repair the existing idle houses and manage/operate rural homestead land and enjoy the profit, which would achieve a win-win situation (figure 2).

The land reform actually relax the management and using restriction of rural homestead land and crop land. recently, there are increasing rural homestead land has transferred their management right to public society (figure 5). It means that rural collective is more clear about how to vitalize this resource and earn money based on land premium.

This rural land policy adjustment will bring about huge change. Another serious problem is that, because of the 'Separation of Three Rights relating to Agricultural Land' policy, more stakeholders involved appears. There are more and more rural collectives set up, in order to control the management rights of homestead land (figure). If one piece of land belongs to too many stakeholders, while is Under-sized with fragmentation, then it might go against overall land transfer and management development. With the increasement of the amounts of rural collectives, ownership allocation has been divided into small pieces gradually. If the ownership and space allocation have been evolved into small scale, while actually general use of collective land is still at an overall large scale, then 'fragmentation dilemma' would happen.

In the past, Chinese leisure agriculture can only be constructed in the rural profit-oriented construction land, which means, real estate companies or other developers can buy the rural

land from central government (have the right of ownership in 50 years), and design/build/manage the construction autonomously. However, since the new institutional adjustment, nonprofit-oriented rural construction land can also be used for leisure agriculture. The biggest question is: the developing strategies shouldn't be the same because developers can't buy it nor intervene it directly. Compared to urban construction land and primary natural landscape land, homestead land actually stands in the middle, and it is influenced by both urban side and urban side. Research theories of development in urban construction land (industrial layout theory, stakeholder theory, leisure industry theory etc.) are abundant, but the theories of construction/development in homestead land is now lacking in china academia. What a pity, because urban investors/developers don't have ownership of nonprofit-oriented rural construction land, and they don't understand the real rural situation, they need more concrete and tangible theories to guide them, to look in to the existing rural process and structure, and to the next step, to vitalize rural land wisely in a sustainable and systematic way.



Figure 1-13: Change of transferred rural collective land
Source: js.people

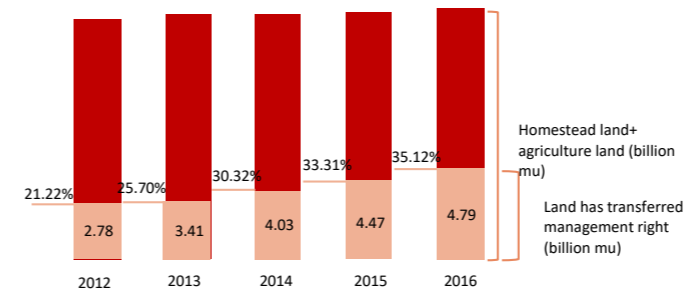


Figure 1-14. Change of transferred rural collective land
Source: Yong Guo, 2013

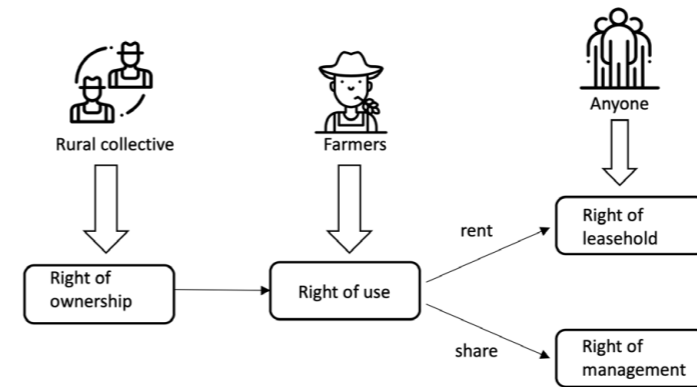


Figure 1-15. Separation of three rights relating to rural collective land
Source: Studies on land legal system of China

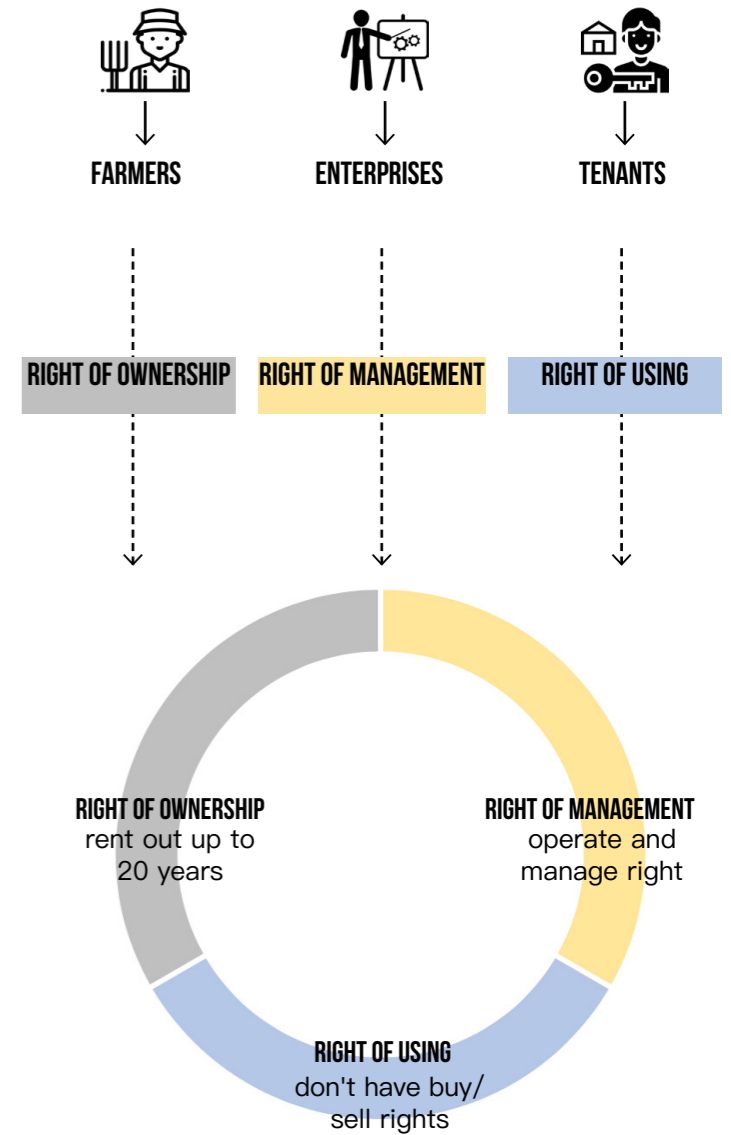


Figure 1-16. Three rights interpretation
Source: Studies on land legal system of China

1.5 Rural leisure industry

- The definition of rural leisure industry.
- Rural leisure development prospect in China.
- The current rural leisure development situation.

Rural leisure industry is originated in the 1960s in Europe and the United States. With the rural leisure projects evolution and development, theoretical definition of it is constantly updated and completed, in the English language has the rural tourism, agri-tourism, farm tourism, green tourism and other words, in Chinese context, it is called ‘观光农业’、‘旅游农业’、‘乡村旅游体验农业’、‘农村生态旅游’、‘农家乐’... Although there is not yet form a unified definition of rural leisure industry, the characteristics of rural leisure industry has been formed consensus. Its essence is a service industry, that combines agricultural production, marketing and leisure tourism industry. It mainly relies on agricultural production, based on farmers' interests, on the condition of natural ecological protection, to meet the consumer demands: an agricultural management pattern(Fangfang Zeng, 2013).

In China, rural leisure industry emerged after 1978. It developed fast although started late. In 1990s, China already realize sightseeing is given priority to visit to the combination of the development of tourism and leisure agricultural tourism in the transition of the leisure agriculture tourism. coming into the 21st century, as the economy, the great changes of market environment, consumption mode, rural leisure development faces a good opportunity and has a rapid development, has widened into function to sightseeing, entertainment, experience, vacation, specification and operation stage of learning, health, and comprehensive functions. The development of leisure agriculture has made the country's 20 million people out of poverty, an important force in driving rural economic prosperity and development, especially in recent years, leisure agriculture industry development attaches great importance to by the central state for effective measures to promote the benign development of the leisure agriculture industry, the No.1 central document(Figure. 1-18) emphasized several times that "positive development of leisure agriculture, the rural tourism, forest tourism and rural services, expand the rural non-agricultural employment space", in the same year in July, the ministry of agriculture and the national tourism administration signed a cooperation framework agreement, clear "jointly promote the development of leisure agriculture" theme, so to speak, At present, the development of leisure agriculture in China has a good background and development opportunities. In idle land development process, therefore, under the condition of the regional development conditions permit, development of leisure agriculture industry as the backing, giving full play to the advantages of rural unique

agricultural and ecological resources, promoting intensive land resources and agricultural production of multi-functional, build industrial growth innovation mechanism of the coordinated development of urban and rural areas, promote rural industry development ability, has the very strong practical significance.

For Chinese rural land, there are two kinds of land can be built for rural leisure industry. One is profit-oriented construction rural land, the other one is non profit-oriented construction land which includes rural homestead land. The former one is driven by profit and the land use right can be transferred on the free real estate market. The latter one is owned by common rural people and is developed in a spontaneous bottom-up way. Thus, most of the rural leisure construction is mainly built on profit-oriented construction land, and led by real estate developers and local government. Current developers tend to 'hit and run', and they are more into short-term profit business. It makes current leisure agriculture industry be similar and uncorrelated with local identities. Although the amounts of leisure agriculture attractions are big, consumers still don't have much diverse choice when they want to experience rural identities. As to the non profit-oriented construction land, the common development form is that rural collective organizes rural households to rectify their idle rural land spontaneously, and develop to small scale rural restaurant, rural bath hall and Majon hall etc.. Some far-sighted rural collectives may invite some architects to help them plan and design some iconic individual building to promote the local brand. This developemnt mode has much smaller scale and influence.

	SPATIAL LAYOUT	COMPOSITION	FUNCTIONS
RURAL TOURISM	Rely on local rural condition	Rural natural landscape	Rural landscape, rural tradition, rural life
URBAN FARMING	In urban or peri-urban area	Rural production	Pay more attention to rural product
RURAL LEISURE	No limitation in spatial layout	Include rural tourism and urban farming composition	Mixed fuction, pay attention to rural experience

Figure 1-17. The characteristic of rural leisure industry
Source: Kchance.com



Figure 1-18. Chinese No.1 document in 2018
Source: SOHU.com



Figure 1-19. Current Rural leisure construction is built on rural profit-oriented construction land.
Source: SOHU.com

1.6 Long stay rural leisure industry

- The definition of long stay rural leisure industry.
- The potential and challenge of long stay rural leisure industry.

Long stay rural leisure industry introduces rural leisure industry into rural idle homestead development(Fangfang Zeng, 2013) which is encouraged by national government. In current China, rural leisure industry also own promising development opportunity and institution background. In the premise of not changing the farmers land ownership rights, and based on the local rural leisure lifestyle, homestead long term rent, rural production industry, rural service, and rural landscape tourism etc. are included in long stay rural leisure functions. Similar to 'shared farm', long stay rural leisure industry relies on idle homestead development, introduces advanced social cultural idea, planning and design, investment and management methods into rural area, is a new comprehensive rural urban hybrid industry. However, the definition of long stay rural leisure construction is theoretical. Land property questions need to be answered during practice.

Although leisure agriculture is not a brand new industry, when we apply leisure agriculture to rural homestead land, it becomes a new and unique industry. Meanwhile, this new principle('Separation of Three Rights relating to Agricultural Land') was just put forward in March 2018, and has brought about plenty of comments in society, and have drawn many commercial ventures' attention especially experienced investors from the urban region.

However, there is no following theoretical support to guide actors to deal with it. The relative regulations are still ambiguous. Because of the large amounts of Chinese rural collective, it is urgent to organize and supervise their actions, otherwise, various development approaches would appear. When we combine this two topic together---applying leisure agriculture industry to rural idle homestead land, it becomes interesting because we can see promising prospect but also wicked problems at the same time. The idle rural house can be used as renting hotel, the idle rural garden can be used as edutainment farmland, and rural collective can offer folk traditional handicraft workshop (Fangfang Zeng, Chaozhi Zhu, 2012).

Potential of long-stay rural leisure development:

1. Its development model is diversified, which means homestead land can be used for living, commercial and business function etc.. However, this project considers living as the core function.
2. Renting idle rural house can help to increase farmers' income, invigorate the utilization of land resources, meet the needs of urban residents.

Challenge of long-stay rural leisure development:

1. The management mode is new and the main construction body should be supervised and controlled.
2. We should both preserve the countryside identity and introduce urban investment blood. Holistic thinking is needed.

As urban designers, we should keep in mind that unique ownership property problem asks for corresponding different planning strategies compared to other merchantable lands from the perspective of regional/landscape/rural planning/design. Meanwhile, agriculture is the foundation of the national economy and also is relatively a weak industry with lower interest, and it relies on landscape heavily, and it accords with the requirements of small-scale human construction because of the lack of ownership rights by developers and operators(Yinghui Huang, 2009). When we consider developing rural land, we should concern influence factors is in many ways, besides history, society, economy, governance, behaviors influential factors, landscape ecology cannot be neglected. Last but not least, rural homestead land is always binding with agricultural land, and sometimes can't be defined clearly, thus it is also necessary to select proper land parcel to conduct construction development in case of occupying cultivated land and environmental damage.



Figure 1-20. make use of homestead land resource
Source: Shangjie.com



Figure 1-22. preserve and respect local rural conditions
Source: SOHU.com



Figure 1-21. promote rural organic and healthy lifestyle
Source: Qijia.com



Figure 1-23. offer authentic rural service
Source: Zhihu.net

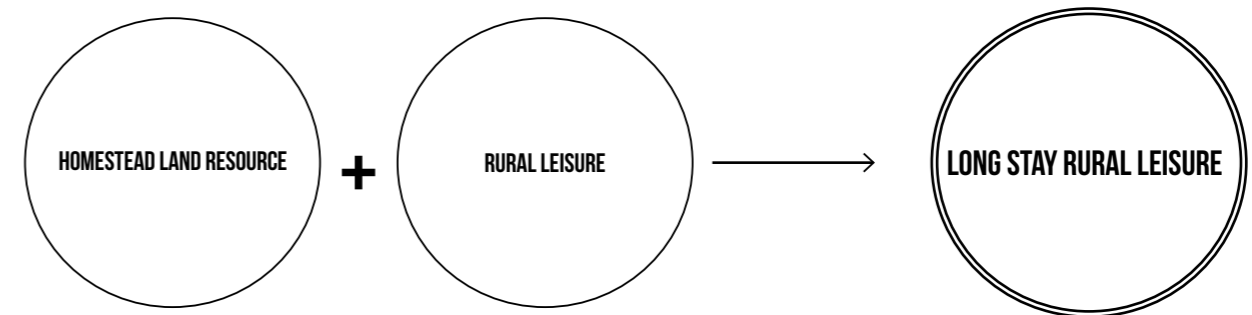


Figure 1-24. The formation of long stay rural leisure industry
Source: author





Figure 1-25. Current rural leisure development map
Source: author

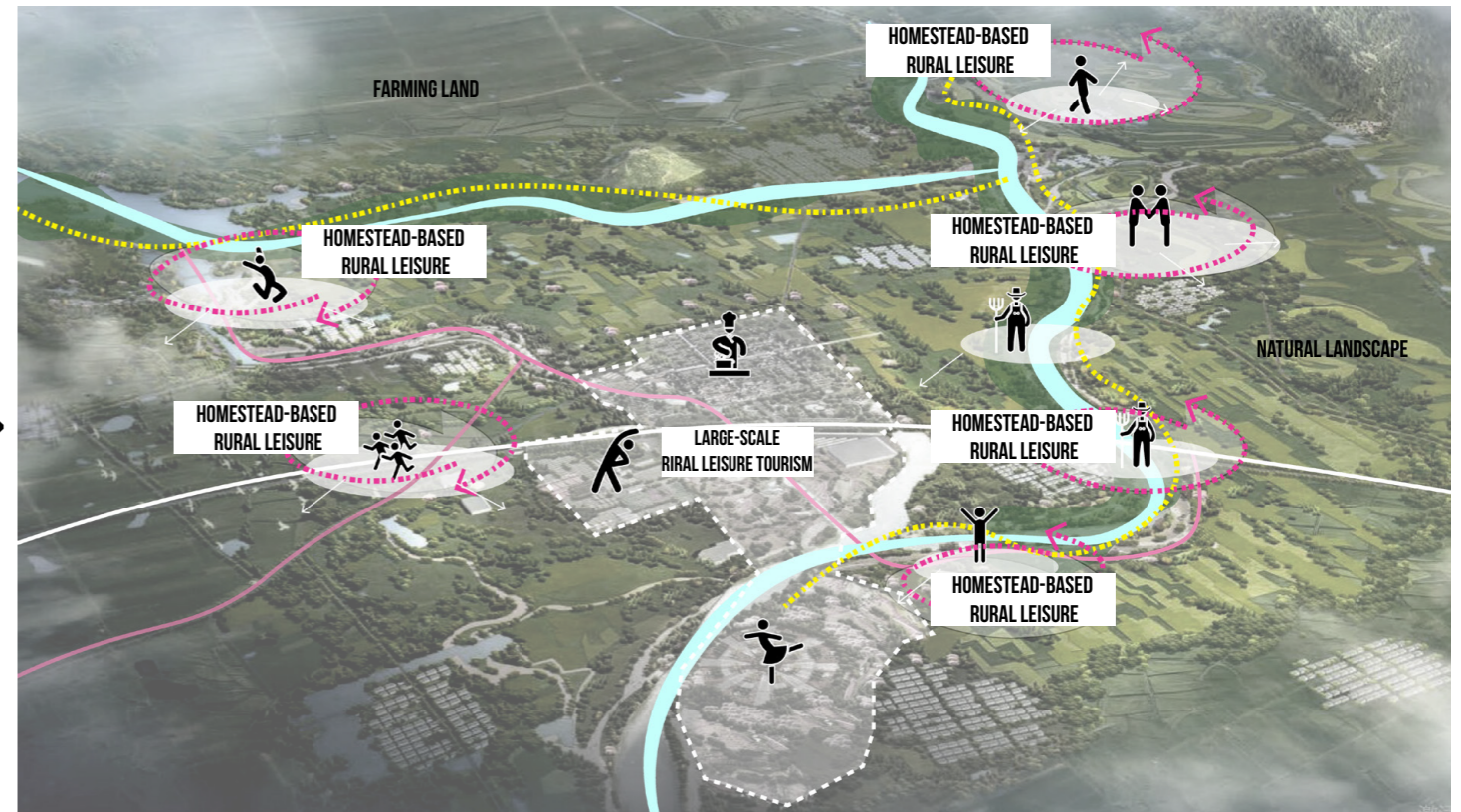
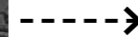


Figure 1-26. Future long stay rural leisure development map
Source: author

2.TOWARDS LONG-STAY

RURAL LEISURE

2.1 Problem statement

1. Idle rural homestead land is a huge resource waste and has brought about wicked problems: social segregation, environmental damage, rural–urban polarization, and real estate bubbles etc..

2. Rural leisure industry is now encouraged to apply in Chinese rural land. However, institutional adjustment is not well defined and still needs wide practical promotion, besides, relative research on this topic is lacking and spatial planning strategies/design principles are also deficient for rural non–profit oriented construction land.

3. New institutional adjustment (separation of three rights relating to agricultural land) is a good attempt for future Chinese rural land development. However, the current illegal disordered rural leisure agriculture construction has also led to rural–urban area development unhealthily, together with the tragedy of the anti–commons, the loss of rural identities (similar copies of rural recreational park), the damage to natural landscape (ignorance of natural landscape and idle cultivated land) etc.. Current leisure agriculture development can't combine urban system, rural system and natural landscape system into an integrated complex system.

In a word, due to Chinese rapid urbanization and rural population migrating trends, much idle rural homestead land appears, resulted in resource waste, social segregation, traditional village disappearance, rural–urban development polarization etc.. New institutional adjustment gives a relatively clear direction but needs to be more defined, and when it comes to rural non–profit oriented construction land implementations, spatial planning strategies and design principles and not well linked with current institution, and an integrated nature–rural–urban systematic insight is lacking.

2.2 Project aims

This project takes Bagua island, Nanjing as a case study, and see long stay rural leisure industry as a promising development direction for a better use of Chinese rural idle homestead land resource.

It aims at an institutional and spatial framework that involves new conceptual principles adding nature aspects to the rural–urban dual model. It thus intends to offer a sustainable nature–rural–urban integration strategy and invigorate idle homestead land.

1. Redefine the new policy about Chinese rural homestead land and offering a refined institutional framework of implementation system.

2. Applying Dutch layers approach in Chinese rural idle homestead development context and try to reflect in other situations.

3. Offer long stay rural leisure construction practical spatial principles (planning strategies, design suggestion, pilot projects and toolbox etc.).

2.3 Research question(s)

In order to vitalize Chinese rural idle homestead land through long term rental homestead construction, what is the Chinese rural homestead institutional framework, planning strategies and design principles from the perspective of integrated complex rural–urban–nature system?

Sub question 1

What is the formation mechanism of rural homestead land and what are the reasons for current homestead land much unused/idle?

Sub question 2

What is the system structure of long stay rural leisure, and how to define it?

Sub question 3

How to refine institutional framework of long stay rural leisure industry based on current policy adjustment?

Sub question 4

How to identify planning strategies and design principles for homestead–based long stay rural leisure under nature–rural–urban integration concept?

Sub question 5

How to use Bagua island as a pilot case to promote and reflect N–R–U concept model to Chinese rural collective land?

2.4 Social and scientific relevance

Scientific relevance

When the Chinese rural land adjustment policy was published in 2018, both rural and urban people were under big influence, and they eager to know the corresponding strategy. This policy change also overturns the perception that rural homestead land can not be operated by enterprise, nor used by urbanites. However, the development direction and management mode is a big question, and research on this topic is lagging and lacking. Besides, current scholar debates on the rural leisure topic is limited in profit oriented construction land, which is not suitable for homestead and relating rural collective land. Although some basic ideas are transferrable, the methodology needs to be redefined. Derive from the Dutch layers approach, this project offers a nature–rural–urban integration scope, hope to enrich the catalogue of future rural leisure industry, and Dutch layers approach in Chinese rural new era context.

Societal relevance

This research is not only focused on the market economic profit by Chinese rural land reform, but also focus on the harmony and integration of rural and urban development, and more importantly, focus on the current farmers without money or knowledge but only land resources, hoping to give them equal rights with urbanites. The rural problem in China is a wicked problem, the chain reaction can be unpredictable, thus paying more attention to the social effect is essential. In addition, 'long stay rural leisure' development mode is different from normal rural leisure development, it relies on the effort of multi factors. It is not only the duty of enterprises and government, but also the participation of farmers, rural collective and tenants. This project tries to build an inclusive, affordable, social friendly long stay rural leisure environment for people involved, to avoid the emergence of 'tragedy of anticommon'.

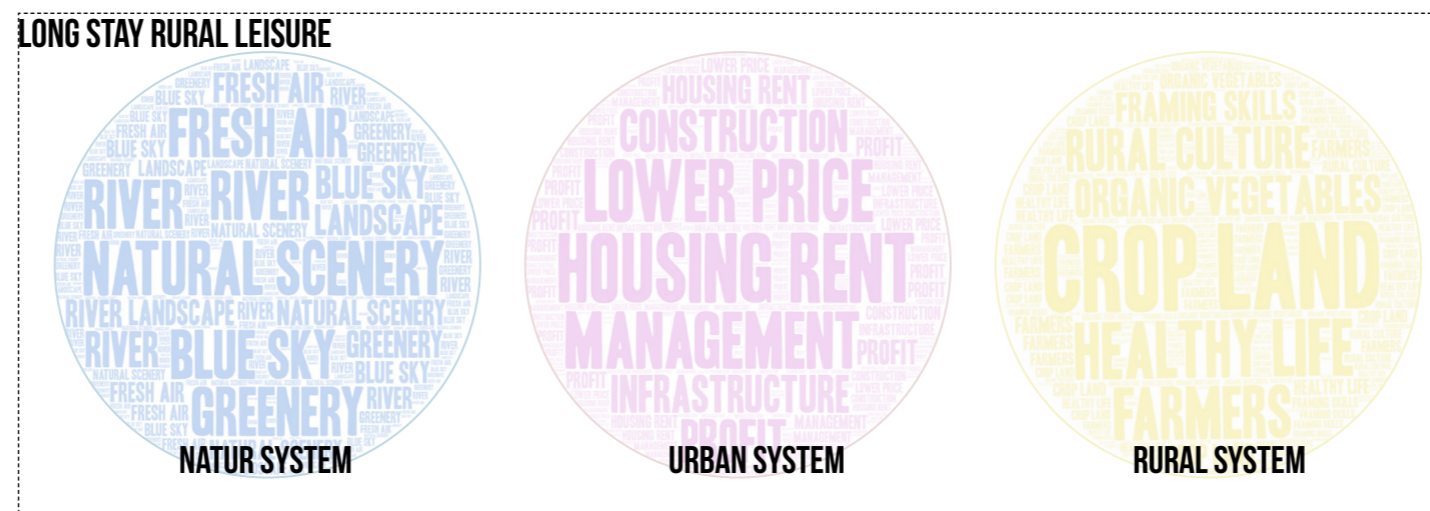


Figure 2-1: Nature–rural–urban complex system
Source: author

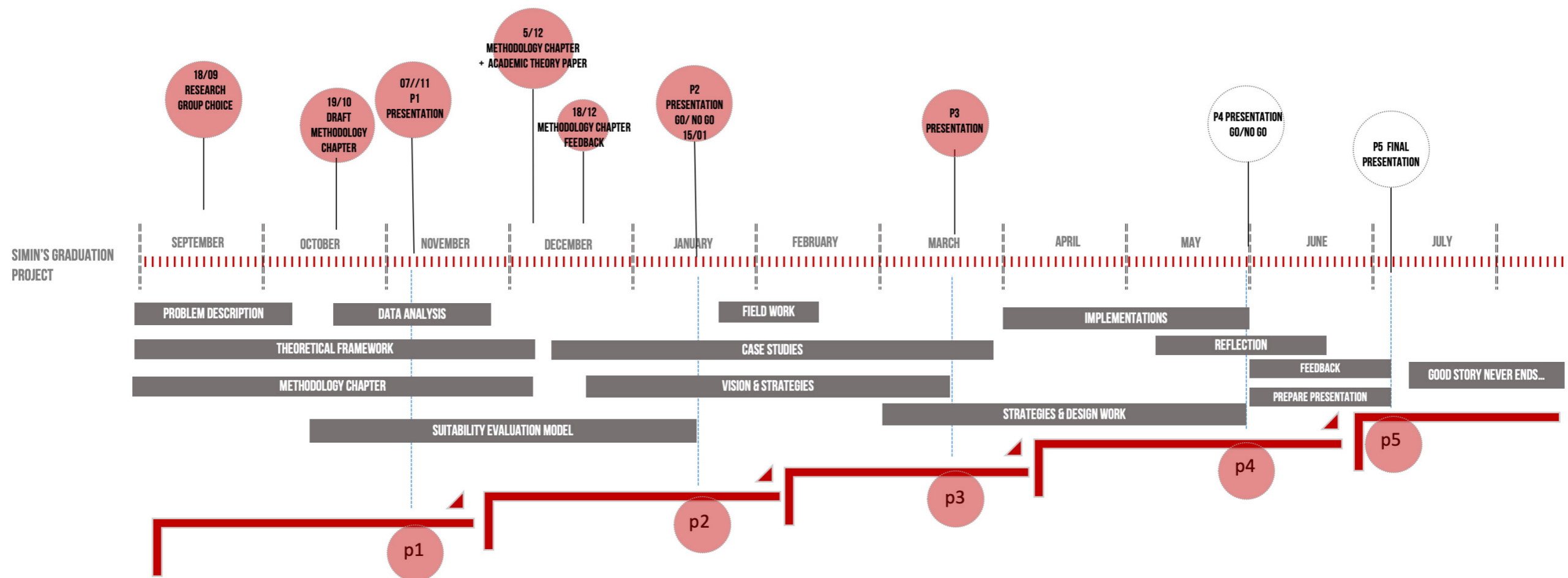


Figure 2-2. Time-working plan
Source: author

3.METHODOLOGY

FRAMEWORK

3.1. THEORETICAL UNDERPINNING

Based on the aboving introduction, 'long stay rural leisure construction' is put forward by author as a possible direction. However, a concrete theoretical underpinning is necessary. Although nowadays, nongovernmental proposals such as 'shared farm' and 'long stay rural leisure' are popped up, a strong argument can help to promote and apply it in the future.

In this part, author hope to explain the reasons behind the long stay rural leisrue construction, from the perspective of stakeholder relationships. It is structured in 3 paragraphs. The first part is the introduction part, introducing the reason why I carry out my research from the perspective of stakeholders. and explains the stakeholder theory and power interest matrix. The next part analyzes the possible stakeholders involved in long stay rural leisure development one by one, and argues that long stay rural leisure development mode can balance the stakeholders 'benefits and interests. In the last section, writer proposes corresponding stakeholder engagement strategies, and explain the stakeholder relationship building process.

3.1.1. Stakeholder theory

In the early 1960s, the term 'stakeholder' was firstly put forward by Stanford Research institution. In the following three decades, stakeholder theory gradually developed into a complete system with the efforts of Mitchell, freeman, Blair and other scholars, and this theory has also become a new branch of management science. The core thought of stakeholders theory is mainly reflected as 'if a project wants to achieve development, the indispensable key factor is the active participation and input of each stakeholder, and what the project pursues is the interests of every stakeholders, rather than the interests of an individual or a unit'. According to stakeholders' requirements on the interests and their power to safeguard their interests, stakeholders are often located in different position in the power-interest matrix diagram.

On the top right of the figure are key stakeholders who are most interested in expressing their opinions and have the greatest power to safeguard their interests. Their recognition of organizational development decisions largely determines the final formulation and evaluation of projects. On the upper left of the figure are stakeholders with more power and less interest, such as government departments. They are not active in the development, but if their rights and interests are underestimated, they may use their power to obstruct the development decisions of the organization. On the lower right of the figure are stakeholders with less power and greater interest, who have greater requirements on the interests and are interested in decision-making of the organization, but do

not have enough power to protect their own interests, such as community residents and non-governmental organizations. Such stakeholders should be guaranteed to obtain sufficient information about the development. On the lower left of the figure are stakeholders with little power and interest. For such groups, organizations often pay little attention to them and make minimal efforts.

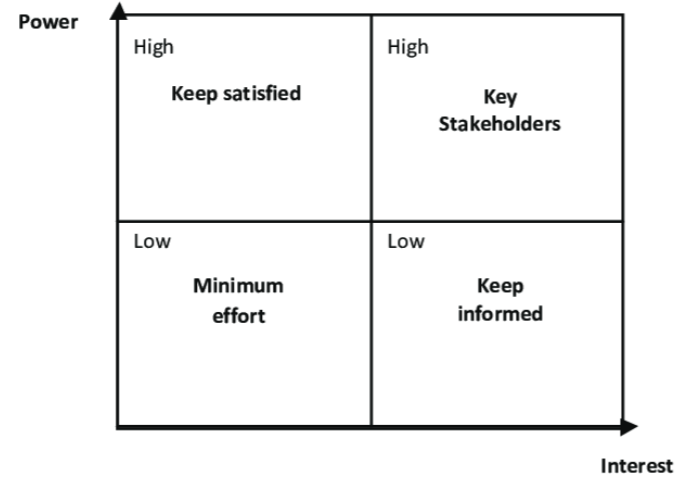


Figure 3-1. Identification and positioning of stakeholders: power and interest matrix
Source: author

3.1.2. Stakeholders involved in long stay rural leisure construction in Bagua island

Based on the above explanation of long stay rural leisure industry(see in the introduction chapter), multiple stakeholders are involved in. According to stakeholder power interest matrix, stakeholders are dynamic, which means their power and interest would change with the organization develop. It is meaningful to analyze their power interest values, relationship and possible changes in new development mode.

4.1. Farmers

The farmer whose target is to maximize the revenue, is the economic man in the market economy. They have a clear benefit orientation. Under the condition of traditional rural technology, farmers rely on their entrepreneurial spirit to realize their value pursuit, by making the best of profitable

opportunities and resources. Although as the vulnerable group in urban-rural society for a long time, they are still the main body of agricultural production activity, and express their opinions on rural field land problems by own behaviors. Rural land is the production factor and living resource that farmers rely on, and the rights relating to rural land is the fundamental interests of farmers. They keep high interest in rural land development at any historical stage. In the past, farmers do not have power to make use of their idle land resource because the policy restriction. Long stay rural leisure development mode can help to give more personal power for each farmers to decide how to deal with their own property effectively and profitably. Besides the economic rental income aspects, it also attracts farmers' interests from social cultural aspects. Rural leisure industry can help to rebuild local self-confidence of farmers. What needs to mention is that farmers' attitudes towards long stay rural leisure development could differs in different situations and different time stage.

4.2. Rural collective

On the issue of Chinese rural homestead development, rural collective, as the ultimate subject of the ownership right, represent interests of multiple actors. On one hand, rural collective is the rural representative of national government and district government, to execute the policy from higher level authority, and protect their interests. On the other hand, determined by the villagers' voting system, rural collective also must take farmers interests into account, and consider issues from the perspective of local conditions. However, the current situation is, village collective has excessive administrative tendency. According to the research of Chen wentong (2006), as the representative of rural collective economic organizations, rural collectives have administrative rights over farmers. The collective economic organizations is actually controlled by a few village leaders/cadres, which leads to the phenomenon such as, encroaching on the interests of farmers in the name of rural land transfer management fee, occupy the rural homestead land and secretly sell to real estate companies, land hoarding tendency etc.. The new homestead development mode needs to minimize rural collective's power, which should shifts to local farmers and general users. Long stay rural leisure development mode can help to balance the power in a way, in that long stay rural leisure is a complex project supervised by multiple stakeholders. It is not a short term 'sell and buy' problem, so rural collective can not control the cash flow by themselves. On the contrary, the seperation of rights relating to idle rural land actually open the management power. In addition, long stay rural leisure can upgrade the local agricultural industry, increase the farmers' income, improve agriculture benefit, as well as improve rural sustainable economic development, which would also increase

rural collectives' interests, from the perspective of the authority reputation concern.

4.3. Government

Both central government and district government's pursuit of value is to maximize the public interest, which is realized through the system establishment and management. Therefore, the government appeals for a new way to maximize the public interest through homestead development. In addition, the government also calls for protecting the balance between land use and economic growth, maintaining the red line of 1.8 billion mu of farmland, ensuring national food security and obtaining other comprehensive benefits.

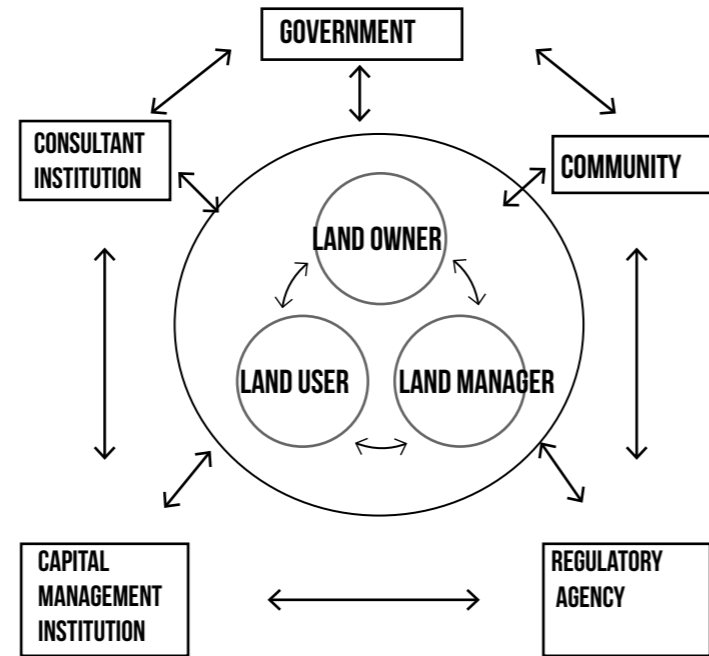
Current 'rural house spontaneous selling market' is actually a capital invasion without respecting and protecting the rural system. The model of long-term renting rural houses can solve the dual urban-rural differences in the process of promoting the transformation and upgrading of traditional agriculture by relying on the development of leisure agriculture and the unique functional characteristics of the first, second and third industries. This development mode uses rural land resources but does not replace or eliminate the rural system. This development model is particularly suitable for peri-urban areas (such as bagua island), which are located close to the main city and are greatly affected by urbanization. In this case, the government's interest has been significantly increased.

4.4. Social investment

In the past, social investment power is limited and even restricted in rural area. General enterprises were not allowed to enter the rural land market becuae of the land policy regulation. Therefore, homestead-based rural leisure was basically operated by farmers and village collectives themselves. However, due to limited capital and technology, short-term, low-end and moni services (mainly catering) were often provided without management and supervision. Nowadays with the policy relaxation, the interest and power of social investment are increased as well. However, enterprises tend to follow the principle of profit maximization, and this is still undesirable for long stay rural leisure construction, because rural houses are still farmers' property. The development mode of enterprises is completely different from that of urban construction land (for example, real estate companies can build commercial residential houses through bid, auction and listing market). At present, "build-operate-transfer" (bot) mode and "hand-over operate-transfer" (tot) mode are adopted in China to encourage private capital investment in development and construction.

For long stay rural leisure, farmers and village collectives

can form an interest connection by signing contracts with enterprises. Author suggest to introduce social enterprise to take place of the general developer/enterprise. The social enterprise is an up and coming phenomenon around the world. Social enterprises have both business goals and social goals. As a result, their social goals are embedded in their objective, which differentiates them from other organizations and corporations. A social enterprise's main purpose is to promote, encourage, and make social change. In Chinese case, social enterprise may have several subdepartments, which in charge of different mission, such as market, design, management, promotion etc. Farmers lease their idle homestead land to social enterprise, and then farmers, village collectives and social enterprise build a community to share risks and benefits, while social enterprise can negotiate with relative stakeholders to manage the overall construction and development work.



4.5. Urban consumers

Out of the pressure of high housing price, the psychological needs of rural life, the urban consumers eager to enjoy the rural leisure lifestyle. This high demand causes the existence of the 'rural collective developed rural house 'buying and selling market, which is actually illegal because rural house does not have free transferring rights. After the land policy adjustment, long term rental land is actually similar to 'selling 'the land, which can replace 'rural collective developed rural house 'legally, and meets consumers' requirements. In addition, Long stay rural leisure construction is rural leisure industrial oriented, consumers can enjoy the rural landscape and traditional rural lifestyle, treat homestead as the second home. Consumers have the right of using, thus they have more power than before to participate in planning and design process, while their interests are also increased.

3.1.3. System structure building and driving mechanism strategies

The system of long stay rural leisure development consists of those who own land, those who use land, and those who manage land. Among them, those who own rural land expect to transfer the land to obtain greater income while maintaining the ownership of the land. Users of land, as long term tenants, expect to realize their demand for rural living at a low cost and obtain reasonable investment returns through crowdfunding and sharing. Land operators, as contractors of construction, expect to obtain operating income by operating farms. System structure is shown below.

In this study, it is proposed that while the core concept of governance system is to solve the problem of "people" , which means stakeholders' relationships should be properly arranged. We should pay attention to exploring from the aspects of perfecting and formulating relevant systems, giving further power interest potential of the active role of all kinds of organizations and building the guarantee of capital investment, so as to form synergy, to ensure the good vision of long stay rural leisure realized in practice.

This paper sorts out the changes of power and interest of various stakeholders, explains why it is a reasonable and legal development model to develop long stay rural leisure construction in bagua island, and puts forward relevant suggestions of management model. The development design, operation management and maintenance should respect the rural conditions, with micro-intervention strategy and emphasis on nature. The specific design methods and strategies will be explained in the following report.

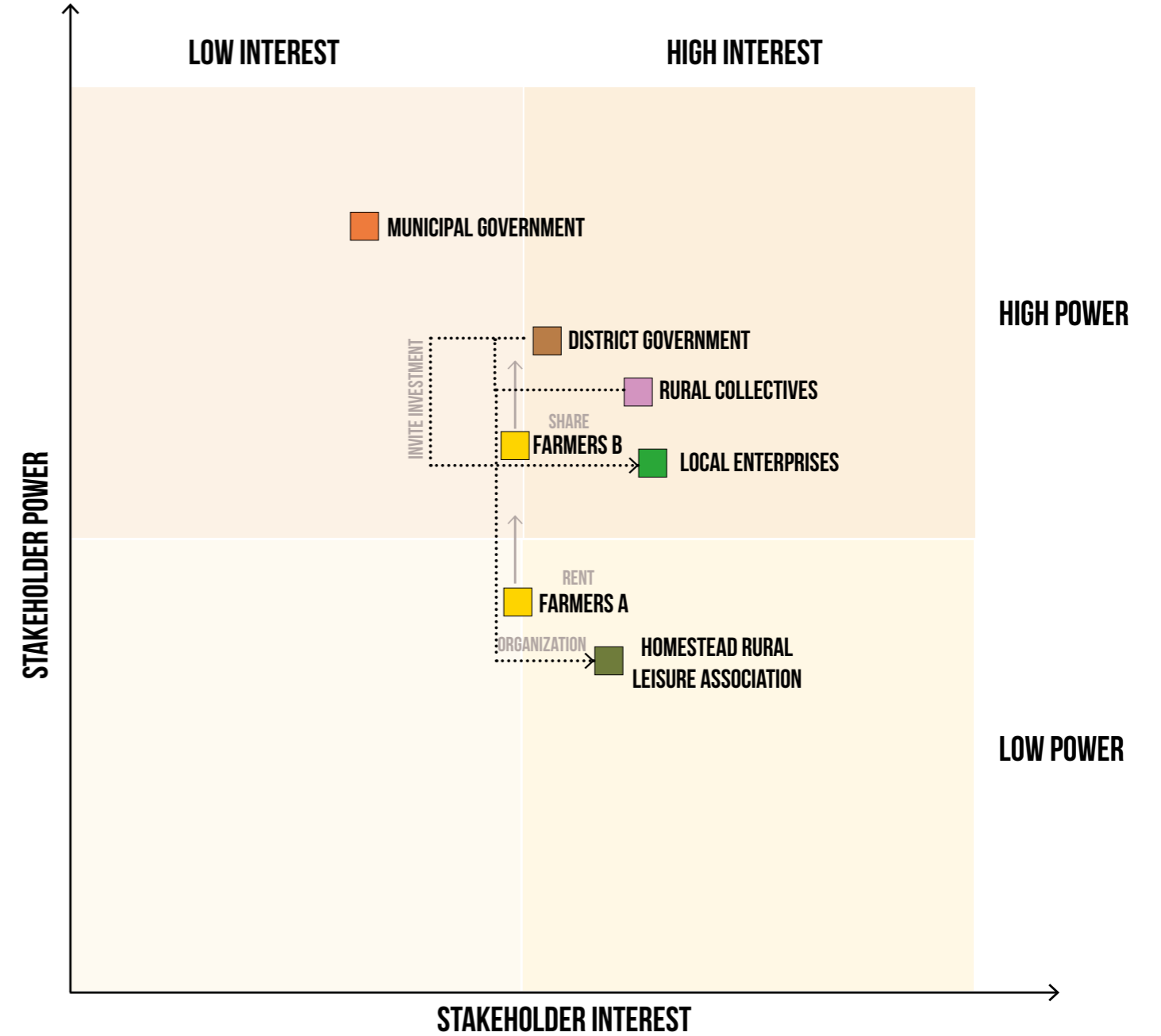


Figure 3-2. Stakeholder power interest matrix of long stay rural leisure development
Source: author

3.2. METHODOLOGY

3.2.1. A recap of research questions

My methodology is strongly related to my 5 sub-research questions and problems mentioned before, and it is a sum of the steps of the methods I am going to use in a coherent way. My sub-research questions are derived from the above-mentioned problems and can be divided into three parts: questions about 'WHAT' and 'WHY', questions about 'HOW', and questions about 'REFLECTION'.

Main research question: In order to vitalize Chinese rural idle homestead land through long term rental homestead construction, what is the Chinese rural homestead institutional framework, planning strategies and design principles from the perspective of integrated complex rural-urban-nature system?

1. What & Why

In this part, the most important thing is to figure out the essence of problems and the reasons behind Chinese rural homestead land. Sub research question 1 & 2 are answerable and would help me clearly clarify the problem context, problem analysis, and problem statement. Current literature is abundant and strong enough to answer research question 1&2, however when it comes to non-profit oriented construction land, some strategies need to be adjusted. These theories can inspire me to come up with my personal conceptual framework—a landscape complex system and a variation of layers approach to guide the following design during the research process.

2. How

Since I have understood the problems deeply, I come up with the main goal, which is the so-called research aim. After setting the aim, I plan to start answering 'how' questions in this stage, and it is the most important and demanding part of the overall project. This part is led by an analytical framework, which is guided by the conceptual framework, and includes refined institutional design, large-scale planning strategies, and small-scale design principles.

3. Reflection

Good research process always needs long-term reflection. For my project, I will use sub research question 5 to be my reflection stage and try to check if my planning strategies and design principles can be generally used in other cases.

3.2.2. Conceptual model formation

Before explaining my conceptual model, I want to explain the Dutch layers approach in advance, because my conceptual model is a variation of this layers model.

The nineteenth-century founding fathers of geography like Alexander von Humboldt and Carl Ritter recognized the landscape as a comprehensive system of systems. The landscape architect Ian McHarg introduced the "layer cake model" for reasons of spatial analysis and planning in his seminal work, *Design with Nature* (1969). He pleaded for a sound approach to landscape and ecology in planning major infrastructural work, using a layer approach to get a grip on the complex system of the landscape. A variation on the layer-cake model specific to planning practice is the 'framework model' or 'Casco concept' (De Bruin et al. 1987; Kerkstra and Vrijlandt 1988; Sijmons 1991). This more integrative approach is a plea for the design of strong "frameworks" in the urban landscape. Within the planning context on the Dutch national level, these studies developed into a comprehensive approach to the description and analysis of spatial developments known as *lagenbenadering*, or the layers approach (RPD 2001; Van Buuren 2003). The layers approach understands the landscape as a system of three layers, each with its own dynamics (figure). According to Meyer and Steffen's opinion, the three layers are substratum layer, network layer and occupation layer, and each layer has corresponding features shown below.

- (1) Substratum. At the bottom is the fundamental layer of the subsoil of the territory itself, with its natural characteristics of soil, water, etc. Here the dynamic of change is very slow: substantial changes take place in the course of centuries (100–500 years).
- (2) Networks. In the middle is the layer of infrastructural networks, which create conditions for settlement, economic activities, and mobility. Because of the technological complexity and expense of infrastructural works, the transformation rate (50 to 100 years) is much slower than the urban system, but faster than the natural system.
- (3) Occupation. At the top is the layer of human occupation: urban patterns, economic activities, etc. The dynamic of this layer is usually very rapid: substantial extensions or transformations can take place in 25 to 50 years. (Meyer & Steffen, 2013)

The layers themselves are changing and developing a different relationship with each other. What is a pity is that current design and planning practice lack the awareness of interaction between the layers. The layers approach offers a method for both design research (analysis of implemented designs) and

research by design (investigation of possible future spatial configurations). Thus, it is urgent to address the question of how natural landscape, rural system, and urban system layers are related to each other and how regime shift over time.

Chinese academics also have much arguments which are similar to 'Dutch layers approach'. According to Chaozhi Zhu, from the perspective of resource support for leisure agriculture development in homestead land, resources can be divided into 4 aspects, land resource, labor resource, capital resource and technological resource (Fangfang Zeng, Chaozhi Zhu, 2013). We can notice that, land (include rural homestead land, natural landscape, water system etc.) resource's transformation rate is very slow, while capital and technological resource has relatively fast dynamic change rate. Labor resource is mainly relied on the Chinese long-standing rural development and cultivation culture, thus it stands in between: its transformation rate is slower than capital and technological resource, but faster than land resource. Land resource belongs to natural landscape system, and labor system belongs to traditional rural system (because leisure agriculture operation mainly relies on local rural labors), capital and technological resource belongs to modern urban system. What's more important, all these resource are linked closely to each other, and no one can exist by itself. Only cooperation and mix together can boost their biggest value.

Fangfang Cai also gives out her thinking of rural leisure agriculture development. She analyzes from the perspective of suitability influencing factors for leisure agriculture construction (Fangfang Cai, 2013). She classifies into three main influencing aspects: location & facilities condition, natural resource condition and socio-economic condition. She thinks location & facilities condition is an important external condition for leisure agriculture development. It includes site geographical location, traffic condition, and infrastructure etc.. Similarly, natural resource condition is an important internal condition, which includes natural scenery, ecological landscape, rural countryside view etc.. Socio-economic condition is an important influential factors, which includes local economic level, investment level, surplus labor and farmers' willingness to participate etc.. We can still find that these suitability influencing factors can be classified into three systems (natural system, rural system, urban system). Location & facility condition can mainly represent the development suitability hardware conditions of rural system, and socio-economic condition belongs to and depends on urban system support, and obviously, natural resource condition can be seen as natural landscape system.

By these arguments, a new conceptual model (methodology approach) is gradually obtained, which specifically tackles with Chinese homestead-based long stay rural leisure development.

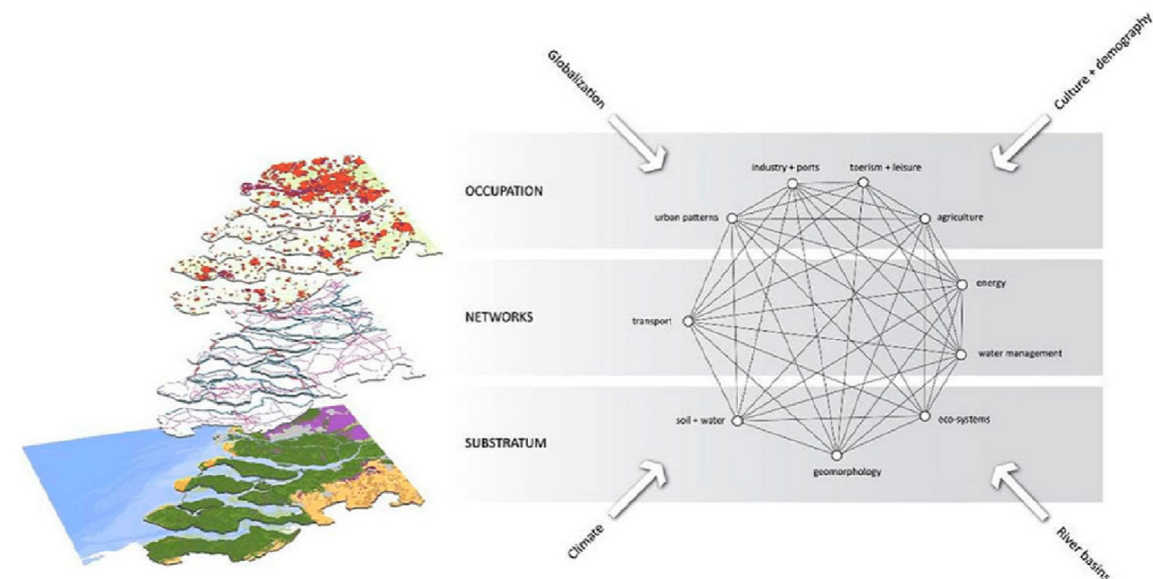


Figure 3-3. The delta as a layer (left) and complex (right) system
Source: Meyer & Steffen, 2013

This analogy can be used for my graduation project. According to Mcloughlin, a complex system is a set of interconnected parts, where each part may be seen as a system in itself, and where the whole system can be considered as but one part of a larger system (Mcloughlin 1969). For my project, I took Bagua island to reflect on the landscape complex system, and use this complex system as my project conceptual model (figure 5. bottom). There are three coordinate axes within the landscape complex system: natural landscape system, rural system, and urban system. Each part can be seen as a system in itself as well, we can refine and go deep into each system, in order to have a better understanding of the structure and process within inner interconnected parts. For natural landscape system, it represents primary environment which is not influenced by human, and when we go deeper, it represents the river sediment island in Yangtze River. For rural system, it can provide rural land resource, cultivated crops, and folk culture etc., and homestead is the essential core of my project. Last but not least, urban system can offer external investment, policy support, human construction and industrial development etc., and rural leisure agriculture industry is derived from general urban leisure industry. These three coordinate axes can also be seen as three layers as well. Based on the dutch layers approach model, I redefine three layers as natural landscape system, rural system and urban system layer (figure).

(1) Natural landscape layer: At the bottom is the fundamental layer of the natural resource and ecological environment. The dynamic change is very slow: substantial changes take place in the course of centuries (100–500 years). The Bagua island is the third biggest island in Yangtze river, and it is a floodplain island by modest transport of river sediments. Its natural resource includes characteristic soil conditions, vegetable and animal types. For future rural leisure agriculture construction, this natural landscape layer is the substratum layer of all interventions.

(2) Rural system layer: In the middle is the layer of rural system, and the transformation rate is from 50 to 100 years. Chinese agriculture civilization has 5000 years history and it represents the foundation of life in Chinese rural philosophy. Rural civilization has existed much earlier than urban civilization, and it has Chinese characteristic—small scale peasant economy. Rural system in my case includes farming culture, self-organized rural settlement, agricultural landscape etc.. It is worth mentioning that homestead land is the core of Chinese rural system because it records the rural people's life evolution. It is similar to the concept of infrastructural networks layer that creates conditions for settlement, economic activities, and mobility. For Bagua island

leisure agriculture development, homestead also plays an important role. When we observe the settlement layout, we can find homestead is always growing linearly along river, and each household homestead parcel is independent, together with their affiliated agricultural land and backyard. This spatial pattern is interesting in rural system, and will be kept and reserved during leisure agriculture development.

(3) Urban system layer: it is similar to the layer of human occupation, which includes urbanization, investment and management, industrial development, technical production etc.. The dynamic of this layer is usually very rapid especially in Chinese metropolitan area: substantial extensions or transformations can take place in 25 to 50 years. Bagua island is located in Nanjing city scope, with 20km to inner downtown. Thus it is inevitably influenced by Nanjing urban system. Moreover, leisure agriculture comprehensive development needs necessary external urban management and institutional support because existing rural system (homestead and agricultural production) is relatively weak and isolated to support it. Because of the recent relaxation of rural homestead management restriction, real estate developers are trickily calculating the land premium, it has caused environmental damage, urban-rural polarization and real estate bubble... issues. Thus it is necessary to reconsider the function that urban system layer plays specifically for rural leisure agriculture.

When we compare these three layers, we find that the layer of urban system is strongly determined by societal development, which is relatively fast and very difficult to predict or define. The layer of the natural landscape is strongly determined by soil and water conditions and by the climate, which is changing relatively slowly. In between, the layer of rural system has to take account of both processes: the fast social process and the slow natural process. Because rural system can still be seen as a system derived from, and rely on natural landscape, while the urban system is relatively contrary to natural landscape.

3.2.3. Methodology framework/workflow

The overall methodology framework is shown below (figure 3–6): This framework shows the main logic line: start from motivation, problem context, analysis and statement, and then, to research questions. Based on research questions and above problem statement, I come up with my conceptual framework, and use various methods approaches to answer the research questions.

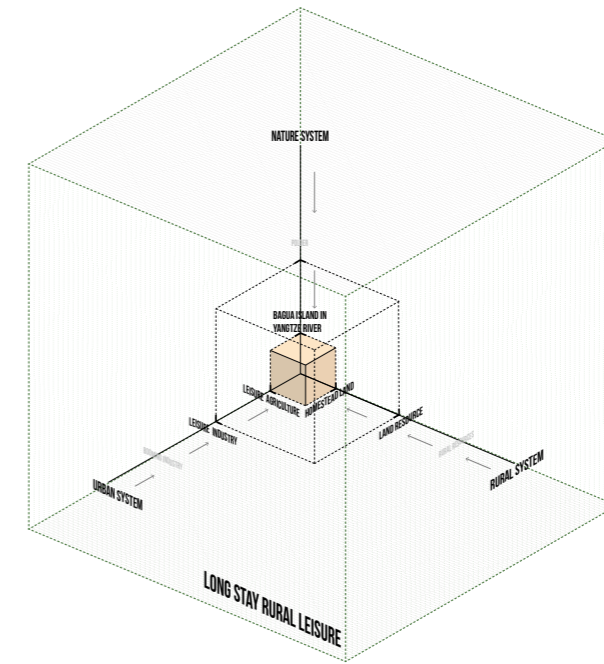


Figure 3–4. The delta as a layer (left) and complex (right) system
Source: author

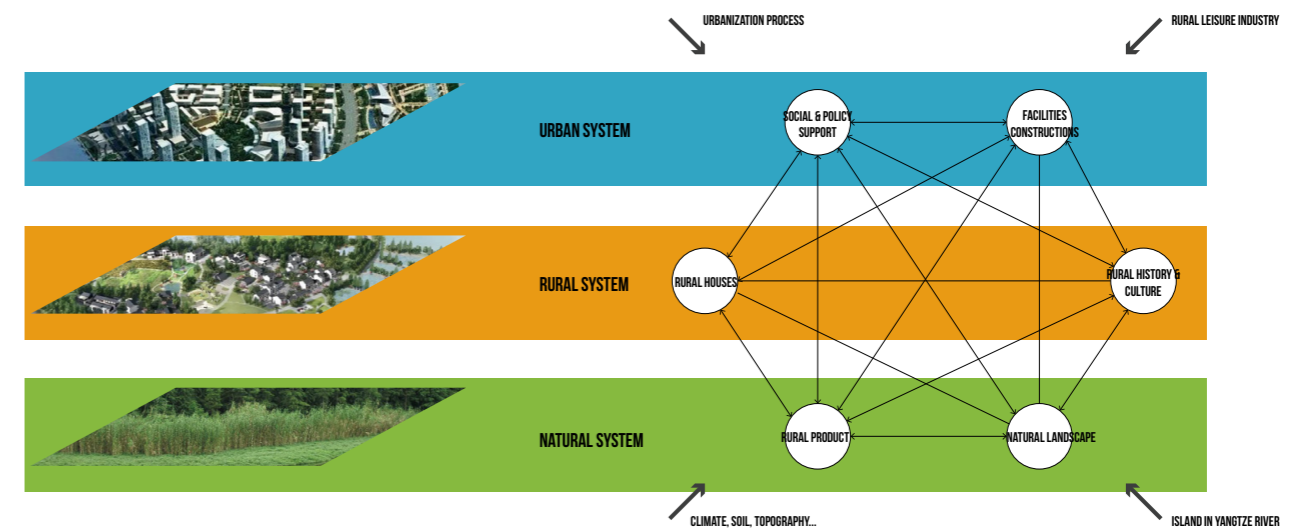


Figure 3–5. The long stay rural leisure construction as a layer (left) and complex (right) system
Source: author

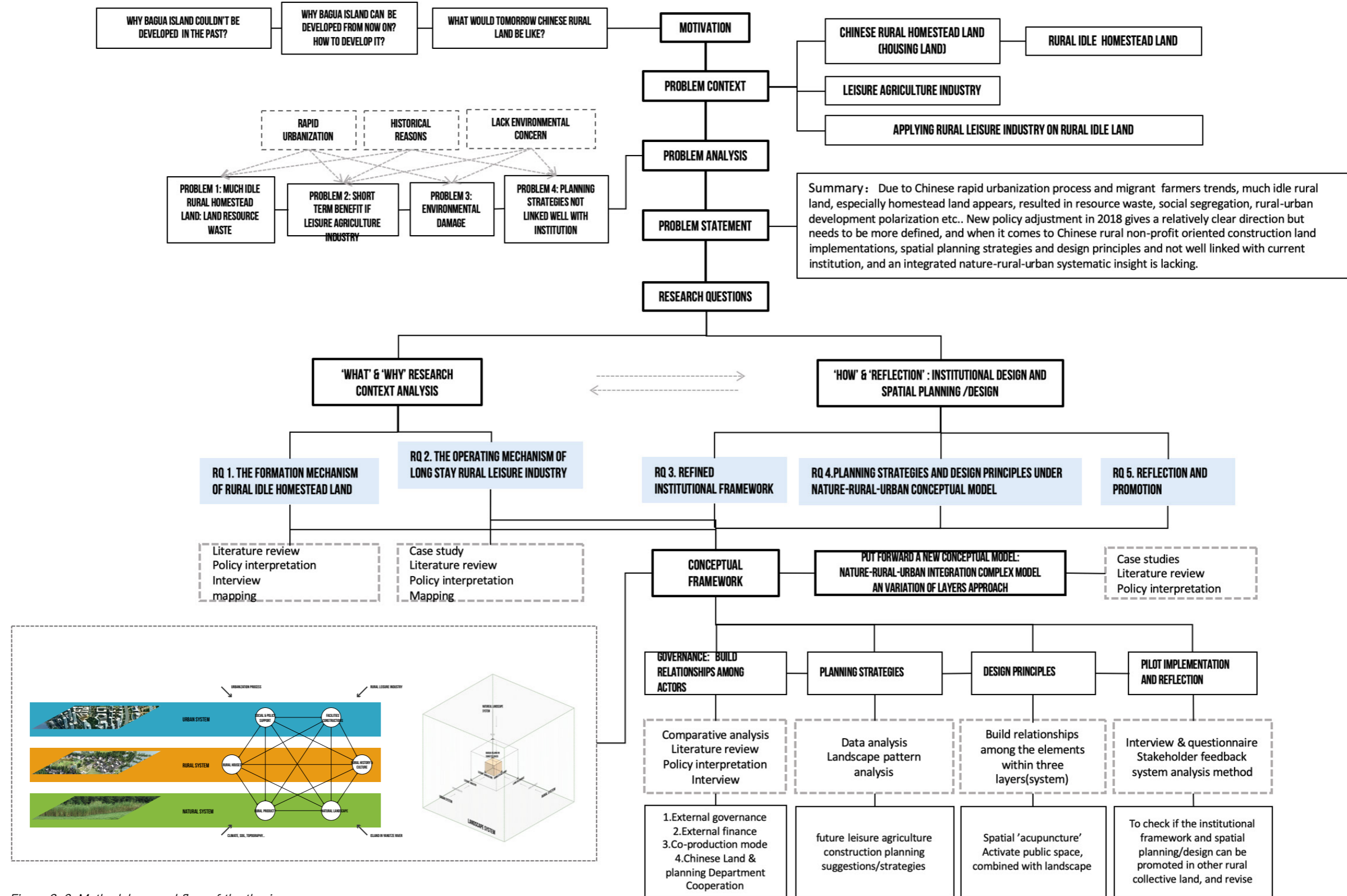


Figure 3-6. Methodology workflow of the thesis
Source: author

3.2.4. Methodology(approaches)

Since we have a general conceptual model now, how to use it as a guidance to lead to the following process? Author decides to deepen these 3 layers by subdivide the system. In this paragraph, author will introduce the methodology to solve the following 'how' questions, in another word, to answer the questions of institutional adjustment, spatial planning strategies, and spatial design principles. 6 pillars are proposed to act as refined lenses, now I will elaborate on these 6 pillars in detailed and explain the supporting rationale.

According to R-U-N conceptual model, each layer can be regarded as a system in itself. The layers are the parts, which are interconnected with each other, but each layer itself a set of interconnected parts(Meyer & Steffen, 2013). Thus, I select 2 elements from each layer respectively, hope to link each layer by linking each elements. I select the political/social support and rural leisure construction from urban system layer, rural houses and rural history/culture from rural system layer, natural landscape and agricultural production from natural landscape layer. These 6 elements are interwoven with each other in a complex way. When we try to put these 6 elements into landscape-rural-urban integration conceptual model, different elements can have different positions (coordinates) because of different features and properties. Besides their respective positions in the complex system, the writer also explores the deeper implication and the interactions among these 6 elements, which can help to guide the following planning strategies and design principles, and this part can also be seen as the starting part of the methodology approach.

In order to figure out the relationship among them, I use the diagram to link them in pairs. The question is, how to carry forward the advantages of each element in a systematic way, and how to get a mutual understanding and mutual promotion in the spatial process. These elements function as actors in the arena, and their interrelation can help to acquire a more comprehensive planning and design-oriented approach towards rural leisure agriculture development. For examples, the homestead concept includes idle rural house, which can be used as leisure accommodations after proper spatial design, and it is the first impression for people to think of. But when we broaden our sights and link it with other elements, it can be used in other functions: When it is linked with agricultural production, It can serve as a local restaurant that offers rural authentic food in order to promote agricultural production; when it is linked with leisure tourism industry, it can serve as long-term resort or rural experience campsite or workshops. Household traffic service (e.g. Airbnb events) such

as segway tour, cycling tour can increase the accessibility of homestead and attract tourists I return. These various kinds of interactions all together make the long stay rural leisure development as complex, dynamic and layered system. This layer approach also combines design, engineering and planning process integrated, and shows that differences in time as well as in scale of the changes in the different layers. Naturally, urban designers, planners, landscape architects, environmental designers and ecologists should have communication and integration for the reconsideration of setting conditions for sustainable spatial development.

Since my main goal is to connect three layers(systems) in order to achieve an integrated complex system. None of these keywords can exist independently in my project. Based on the analysis of Bagua island, naturally, My three main principles are derived from these relationships. Actually, any combination can develop into a principle as long as it connect rural, urban and nature system. It can have several combination possibility, and these possibilities all help me to get my planning and design principles. Principles should cover all the pillars in the end, thus I choose the most relevant and direct combination and organize them into three principles as shown in the following chapter.

3.2.5 Evaluation of methods

In this paragraph, I will list all the methods I used during the whole graduation projects and their advantages and limitations.

Policy interpretation and revision

Idle homestead land is an urgent problem in current Chinese society, especially in big scale urban and peri-urban area. In order to solve the problems, Chinese government gave policy adjustment in 2018. However, those policies are quite new and general, which have strong power to guide the future planning, but lacking refined interpretation and multilateral consideration. So the policy revision is quite important to instruct the direction and to guide the future spatial planning as well as the stakeholder relationship building.

Literature review

Leisure agriculture industry may have diverse developing paths in different countries. Current literature offers insights under current institutional background, and it can help to answer research questions 1 and 2. The literature review will also help author to reflect the knowledge gap and push to make the conceptual model more generally logical.

Interview & questionnaire

Interview method is fundamental and important to help to know the institutional context and find related instrument

since rural homestead land development relies on coalition planning, and shifting from government to governance, we need to build new relationships among all actors involved. There is no doubting that land is a big resource, however, the tragedy of (anti)commons may happen in the development process if the beforehand interview is not complete. An interview will even help to find indirect actors and to predict unintended consequence.

Fieldwork

Author carried out the fieldwork from 26th Jan. to 10th Feb. in 2019. During this period, author visited the Bagua island several times, and got more detailed and concrete information through observation, communication, mapping, interview, the survey questionnaire etc. methods. What is worth to mention is, the survey questionnaire is quite important for this project especially in the institutional design session, to refine the multilateral cooperation process in the premise of respecting current institutional framework.

Case study

There are lots of leisure agriculture development cases both in China and overseas that we can learn from, to know how these concepts can be implemented and what results they have had in locations with the same situation. However, since Chinese rural idle homestead land has the unique characteristic, author have to reorganize these cases and extract the principles behind.

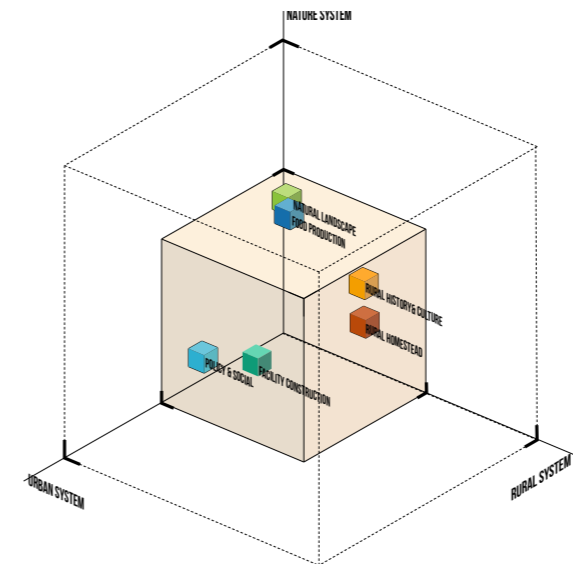


Figure 3-7. 6 elements within complex system
Source: author

PILLARS

DEFINED

ANALYSIS

STRATEGIES

IMPLEMENTATIONS

POLITICAL/SOCIAL SUPPORT

- macro policy
- supplier and demander
- management mode

- CHALLENGE**
- no legal planning advice, non-profit oriented construction land
 - anti-commons tradegy
 - cliche—agritainment is only for local food

- POTENTIAL**
- policy adjustment opportunity
 - community building/co-production
 - leisure industry booming

CONSTRUCTIONS

- public amenities
- traffic
- leisure tourism constructions

- only serve for local residents
- toll, traffic conjection
- homogenesis, hit and run, seasonal, large scale and rough

- support from rural collective
- free tunnel and highway
- increasing demands for rural leisure industry

PROGRESSIVE CONSTRUCTION

island scale
A green, native, leisure, rural island, with rural leisure functons for urbanite to eacape from urban hustle and bustle.

- Rural land property institution refining
- Long stay rural leisure industry regulations
- Extend functions of rural leisure industry
- Target in four categories of people
- Build interactive relationship among stakeholders
- Add/renovate livable infrastructure and facilities
- Towards island: improve external accessibility
- Inward island: slow traffic, set clear traffic grading
- Take 'long-stay rural leisure ' as supplement to current rural leisure projects

RURAL HOUSES

- island scale
- meso scale
- neighborhood scale

- abandoned, undefined
- not clear connected with cropland and nature
- need long time negotiation with farmers, poor housing condition

- local identity, balanced layout, evoke old memory, low land price
- different rural house cluster typologies
- high density, big spatial flexibility, has own courtyard

PRESERVE AND PROMOTE RURAL IDENTITY

meso scale
A harmonious, symbiotic, systematic, homestead-based organization.

- Set clear development direction and zoning plan
- publish overall homestead design policy/guideline
- Form homestead corridor(cluster)
- Introduce Long-term rent
- Quadrangle courtyard design
- Prototype based detached house design

RURAL HISTORY/CULTURE

- rural history
- rural life/culture

- not inherited from history
- not handed down from past generation
- rural traditional skills and knowledge

- bagua story trace back to song dynasty
- Nanjing brocade, paper-cut art ect.
- dragon boat festival, Chinese new year market

HOMESTEAD VITALIZATION

Neighborhood scale
Small and beautiful, authentic rural characteristic, mixed-use, affordable, strong social interaction, mainly long-term rent mode.

- Add folk museum
- Preserve rural cultural element
- Historical education and promotion
- Homestead-based rural life experience and skills education
- Define wild picking/fishing routine and area
- Introduce neighborhood planting-cooking-eating
- Provide neighborhood shared vegetable plots
- Extend rural production chain

RURAL PRODUCTION

- natural wild potherb/fish
- manual planted orchard/fishpond/vegetables
- rural eating habit

- spontaneous, disorganized picking wild herbs
- nearly abandoned in fallow period, low productivity

- strong social intraciton, coexistence
- rural product brands foundation

NATURAL LANDSCAPE

- wetland
- yangtze river
- main river courses

- too wild, no access, seasonal flood
- blood flukes, cargo ship
- water quality, seasonal water level control

- seasonal view, natural scenery, wild animals
- observation tower, three visual corridor
- main riverway, beautiful river scenery

- Wetland landscape view redesign
- Improve the function of reservation of flood, decomposition of pollution
- Improve Water quality monitoring and management
- Riverbank moderate redesign
- Overall river patterns management
- Improve livable riverside space

4. ANALYSIS

4.1. BASIC INFORMATION

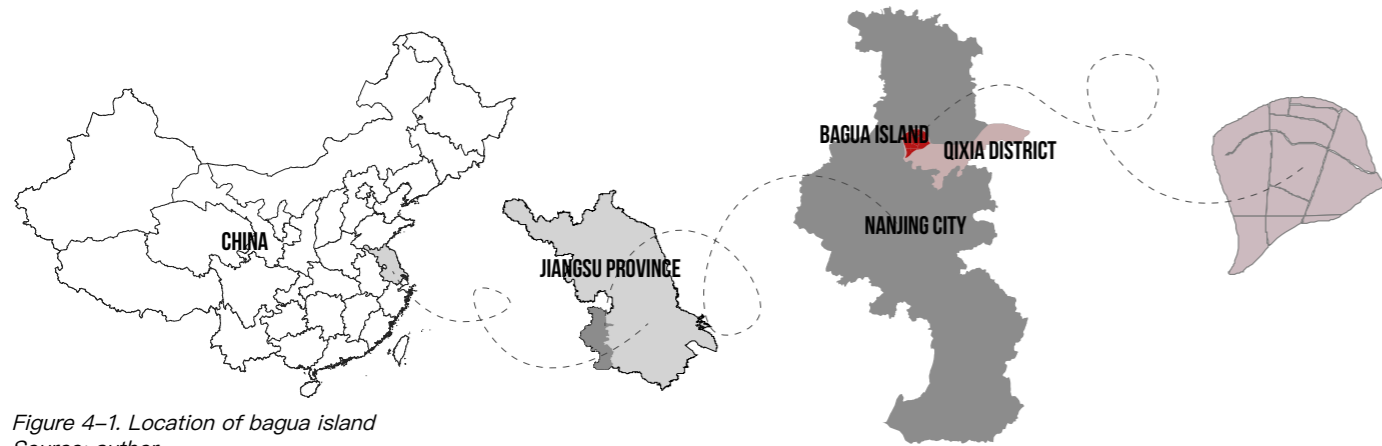


Figure 4-1. Location of bagua island
Source: author

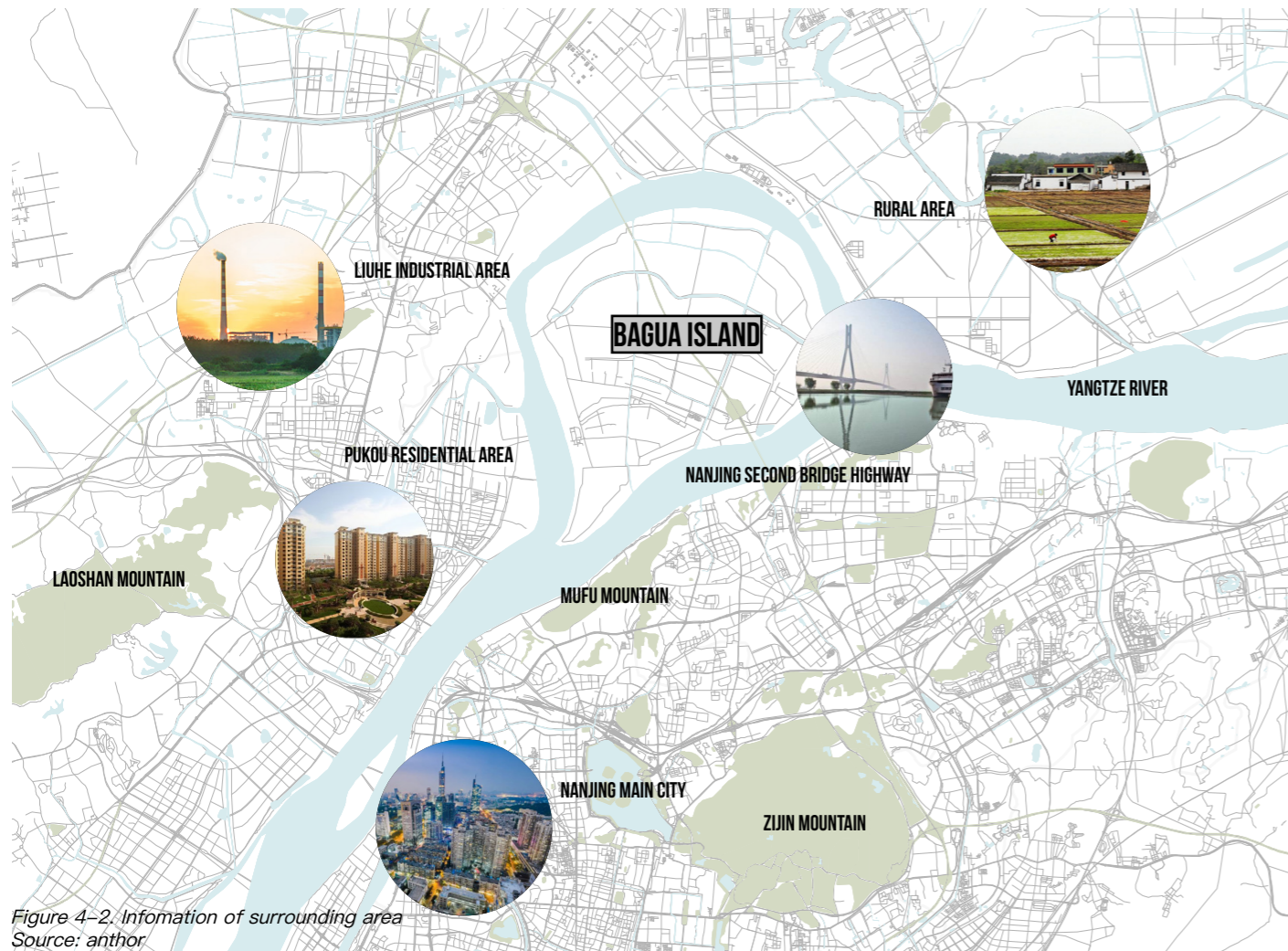


Figure 4-2. Information of surrounding area
Source: author

Baguazhou island is located in the northwest of Qixia District, Nanjing City, separated with Yanziji, mufu mountain by Yangtze river. In the north, it faces the Liuhe District across the river. In the southeast it faces the external trade dock across the river. It owns an area of 56 square kilometers. It is generally acknowledged that bagua island is an isolated and abandoned rural island inside nanjing city, although close to the downtown. Since my graduation project focuses on homestead-based leisure agriculture development, I am curious about the future path of bagua island, and in this chapter I will analyse the island from six aspects below, to figure out the challenge and opportunities of leisure agriculture industry. These 6 aspects can be seen as main pillar of my overall project, which are derived from urban system, rural system, and urban system.

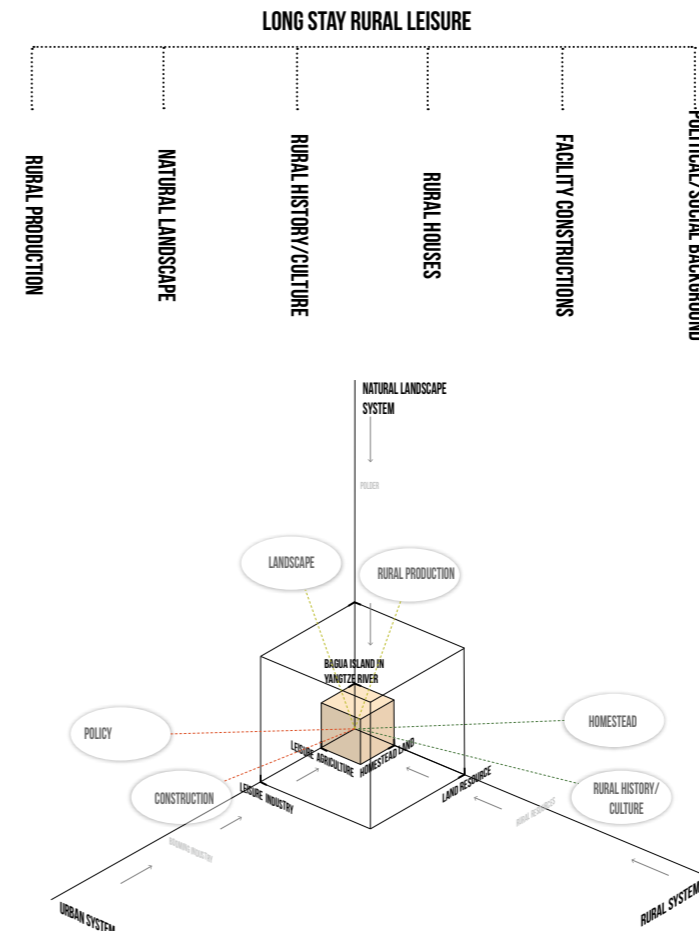
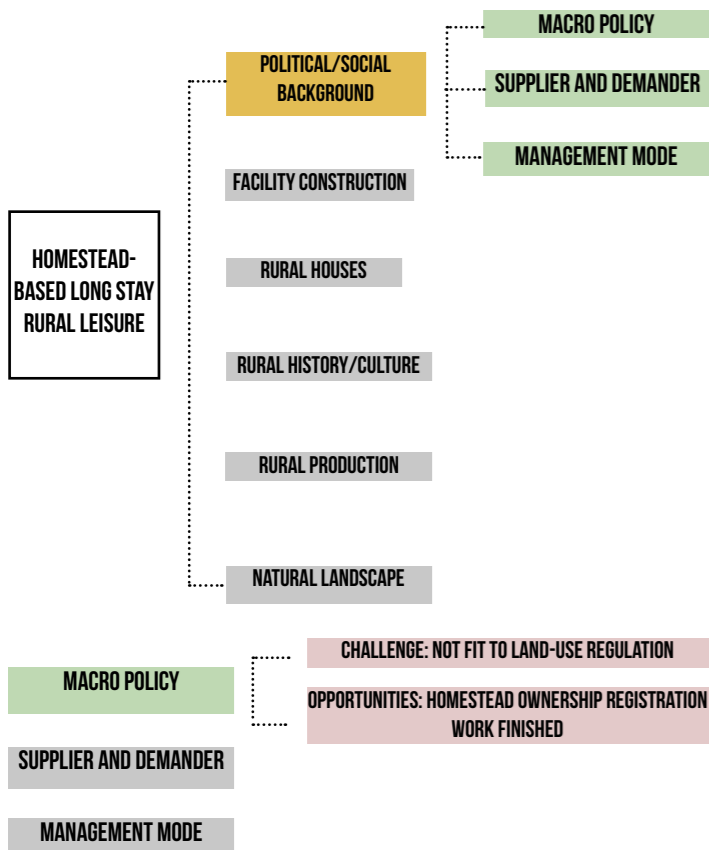


Figure 4-3. Six pillars of long stay rural leisure development
Source: author



Figure 4-4. Impression of bagua island
Source: Ourjiangsu.com

4.2.POLITICAL/SOCIAL BACKGROUND



Although existing rural leisure projects are mainly conducted on profit oriented construction land. In 2016, the Chinese No.1 Document pointed out vigorously developing rural tourism and leisure industries. Meanwhile, recommended sightseeing tourism, healthcare, rural cultural industries etc. as suitable development typologies. Nanjing is one of the first cities to response the policy and Bagua island operated rural carnival festival every year. Thus, the social support and the vision of bagua island is fit.

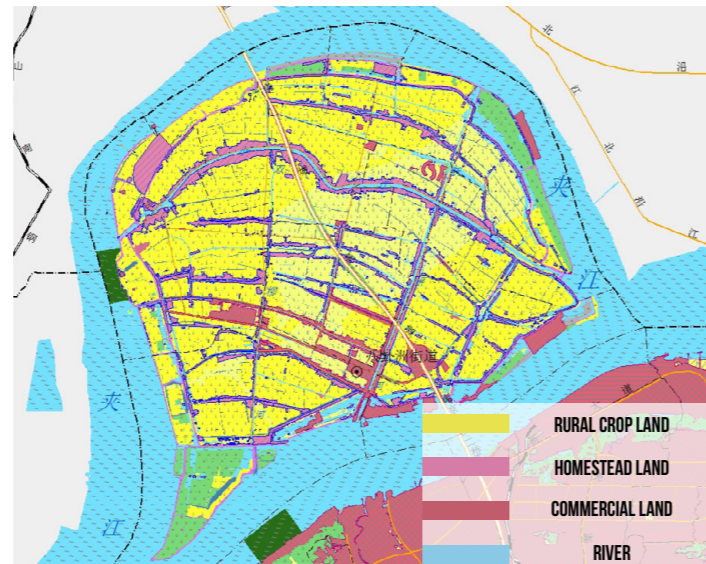


Figure 4-5. Land use map in Bagua island
Source: Qixia district government



Figure 4-6. Nanjing government promotes rural leisure industry in bagua island
Source: Zhonglubide design institution

4.2.1. Macro policy

Political and social background is essential and decisive for the long stay rural leisure industry development. From the perspective of rural land property, Nanjing is the first group of pilot cities to promote the land policy adjustment (Separation of three rights). Qixia district, which bagua island belongs to, has already finished the rural land property registration confirmation work, and encourages farmers to transfer their idle rural collective land. The land use map is clear and enforced as law. According to figure 4-5, we can know that most land is rural crop land (rural non-construction land) and homestead land (rural nonprofit oriented construction land). Long stay rural leisure is based on homestead land, influenced by natural landscape, commercial land and crop land etc.. We could say, the rural land property is suitable for long stay rural leisure development. As to the rural leisure industry aspect, In 2014, Nanjing government indicated bagua island as 'urban garden' function.



4.2.2. Demanders and Suppliers: demanders

The common impression of Chinese homestead-based rural leisure is called '农家乐', which means agritainment (agri+entertainment), with the functions of relatively poor-quality accommodation, cheap rural food, and small-scale rural leisure experience. According to Maslow's hierarchy of needs theory (figure 4-8), nowadays homestead-based rural leisure experience in bagua island mainly stays at the basic needs section—with low-end rural service and short-term operation.

In bagua island, homestead-based rural leisure once appeared 17 years ago because of the impact of the large-scale rural tourism construction (desert amusement park). Led by 'desert amusement theme park', spontaneous homestead-based rural leisure construction developed mainly in waisha village. Together with desert theme park, it was once famous and attracted local and non-local tourists, even attracted peers to learn this leisure agriculture development experience. However, with bad management, the desert amusement park lost market gradually in 2003. Directly influenced by the tourism decline, Waisha village homestead-based rural leisure construction was faded out quickly as well. The biggest reason for this failing is that homestead-based rural leisure deeply relies on the surrounding large-scale leisure tourism project, rather than improve or extend its own quality.

According to 'Maslow's hierarchy of need' theory, consumers' demands for traditional homestead-based rural leisure stays in basic needs layer, such as food (rural food), rest (accommodation), security etc. Actually, if we can change our cliché, to extend our cognition of homestead-based rural leisure, we can find that it actually includes various developing typologies: long-term rent, short-term home stay, local rural restaurant, agricultural farming experience base, folk cultural workshop, rural-urban shared space etc.. Actually, long stay rural leisure is a rural lifestyle, we should consider to level up from basic needs layer to psychological and self-fulfillment needs layer. Especially under the new policy background, homestead-based long stay rural leisure industry gets more and more possibilities and potentials.

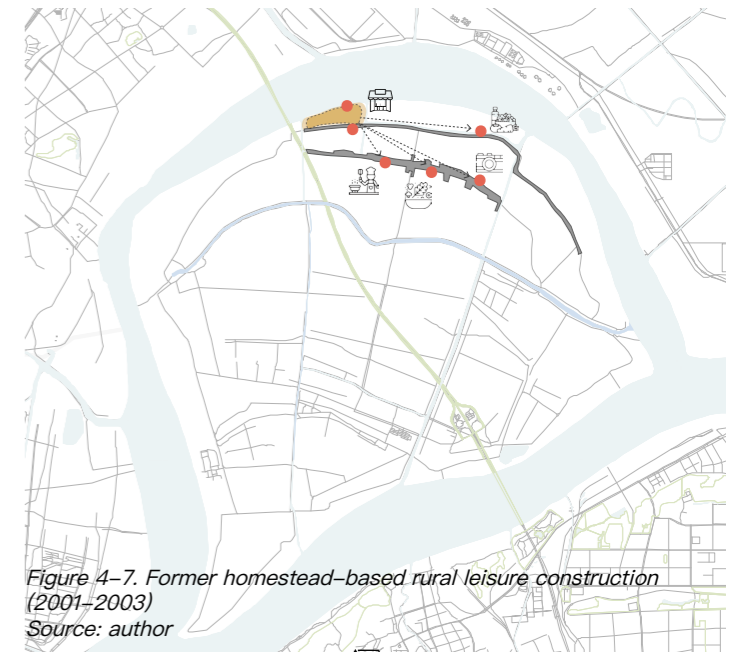


Figure 4-7. Former homestead-based rural leisure construction (2001-2003)
Source: author

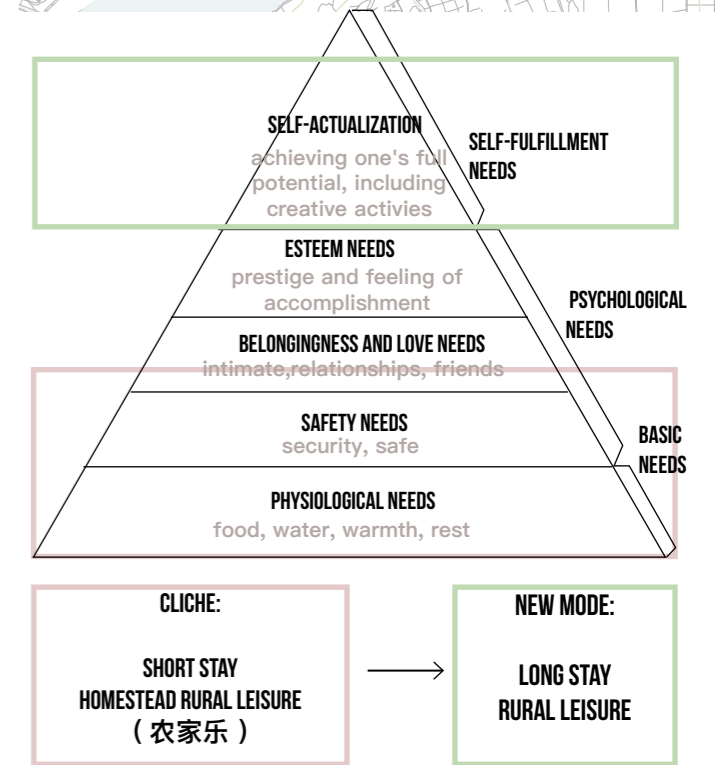


Figure 4-8. Applying Maslow's hierarchy of needs theory in long stay rural leisure industry
Source: author

Who are potential target group for homestead-based long stay rural leisure industry? Here writer will give 4 types of people group according to internet and market investigation. What needs to be mentioned is that, the following analysis(from other aspects) may influence the target group judgment and choice in bagua islands well, so here is only as list of optional groups, and the planned proportion should be decided in the end of this chapter.

a. Middle-aged and senior people

Aging of the population is a serious problem in nowadays China these years, especially in metropolitan, which also causes urban land and service shortage especially for the elderly group. Elderly people can be classified to group 55-70 years(seek for healthy and collective life) and groups over 70 years(mainly seek for specific medical healthcare). For the former group, they seek for leisure, diverse and healthy group life, rather than specific medical healthcare life like the latter. Besides, they don't want to put extra burdens on their next generation in aspects of time and money cost. They prefer to move out of their family in urban area, to live separately with their children, and to plant/cook organic healthy food by themselves. Whats more, they eager to enjoy a group living mode with their old fellows , to chat, play chess, do exercise, take care of each other. For this group, rural homestead is a perfect place for them to get a long stay leisure life after retirement, before going to healthcare center.

b. Young couples


Nowadays, the top 1 stressing thing for Chinese young couple groups are the housing price, especially in metropolitans. High housing price is much beyond the average affordability. More and more young people are thinking: Should we rent or buy a house? For this group, rural homestead long stay is also suitable and attracting. As a transitional period, young couples can rent homestead at lower price for 2-5 years, and focus on work to save money meanwhile. Their rent term is relatively shorter than middle-aged and elderly people.


c. Young family with children


Fierce urban disease includes high housing price, air pollution, traffic congestion, social segregation, etc.. Especially for children, many of them are suffering from respiratory system disease. Besides, high density of buildings make them have no space to step on the natural ground, or to enjoy the childhood time with friends. High urban housing price also makes their family living space limited and poor quality. Some young parents choose to move to countryside close to urban area, which is convenient, affordable, less polluted. They even plan to rent a rural house and DIY into a cozy, beautiful, natural-friendly, sweet home, company kids to grow up.


d. Start-up companies

These years, Chinese central government positively promotes and encourages 'Public entrepreneurship, innovation' plan. Thus, a large number of start-up companies spring out in 1/2 tiered Chinese cities (Nanjing is new 1 tiered city). However, urban business land is limited for registration. In addition, start-up companies are mainly made up by younger generation, who are prefer to choose co-working mode, with flexible, creative, transparent, classless, environmental friendly working space. Homestead long stay can meet requirements perfectly to some extent.

- 

1.Middle-aged and senior people(50-65 years), who don't need medical care, but seek for leisure, healthy and long-term group living after retirement.
- 

2.Young couples who can't afford urban housing price, see long-term homestead rent as their transition stage.
- 

3.Young family with children, hope to create an eco-friendly and livable lifestyle for children's growing up, physically and mentally.
- 

4.Start-up companies who can't find place for company registration in urban area, and seek for more creative and transparent business environment.



Figure 4-9. Demands from yong family with children Source: SOHU.com



Figure 4-11. Demands from start-up companies Source: Tuliu.com



Figure 4-10. Demands from middle aged and senior people Source: Weibo.com



Figure 4-12. Demands from young couples Source: Kknews



4.2.2. Demanders and Suppliers: suppliers

From the side of supplier, we also can see big potential and opportunity to develop homestead-based long stay rural leisure.

From the perspective of resource supplier, farmers and rural collective can offer land resource, enterprises can provide investment support, government(including national government and local district government) has the strongest power and investment. Homestead-based rural leisure association serves as consultancy and management factor. What needs to mention is that, writer consider land owner a and landowner b are different suppliers, because the landowner a can provide much land resource while the landowner b can provide less land resources but more rural service.

1. Landowner A: work and live in nanjing, hardly back to bagua island. Homestead and farming land hasn't been used for many years, want to rent it.

2. Landowner B: still live in rural houses in bagua island, still farmers, also want to benefit, prefer to share it, without huge lifestyle intervention.

3. local enterprises: has strong investment ability and interest, but didn't have management and operation right for homestead in the past.

4. rural collective: has much idle homestead land resource, and has strong interest in rural leisure development, pay attention not to becoming land seller.

5. Government: has strong power, eager to vitalize idle homestead land, reduce rural urban development gap, and control the housing price.

6. Associaton: act as advisor, nonprofit-oriented agent, help to plan/manage/operate/maintain/promote homestead rural leisure development.

a. Landowner A

These group of people are actually so-called new citizen in Nanjing city--they work, live and have bought new house and set family there. They keep the former rural homestead out of respect for ancestors family, waiting for land value increment. They barely come back to use homestead or farming land, so this land is completely abandoned. Based on the communication with them, they expressed high willingness to participate in the homestead-based rural leisure construction. They hope to add value to their houses and land through professional redesign and planning, and don't mind big spatial transformation, as long as to keep the land area.

b. Landowner B

These group of people are current resident population in Bagua island, and their occupation are mainly farmers. Most of them are over 50 years, while their children are landowner A. Since they still live in rural houses and use their homestead and cropland at present, it is inconvenient to put big spatial intervention to their homestead. However, they also show strong interest and hope to benefit from homestead long stay rural leisure industry. They hope to 'share' the homestead, rather than 'rent' it. What needs to be mentioned is that, they can offer more daily service attached to rural leisure, and they own more local rural skills. Most of them are elderly people, they eager to rebuild local cultural confidence, and return to work state, and make life diverse, meaningful.

c. Local enterprises

The most important thing is: the local enterprises don't include real estate company. As we all know, Chinese real estate company mainly control all urban construction land for residential, commercial and industrial use. However, homestead and farming land is rural land, which is beyond the reach of real estate companies. Instead, it needs small-scale, moderate, local construction, which is actually controlled by local enterprises actually. Even so, chinese local enterprises have enough investment power and long-term influence. Homestead-based long stay rural leisure has a long term return on Investment(ROI), and the return lower than general rural tourism projects. Thus, it is a challenge for local enterprises to apply rational development strategy and control the future knock-on effects. Another challenge is that enterprises lack professional management talents, since homestead-based long stay industry is a relatively brand new business type, and the planning/design/management/operation/maintenance etc. approach are quite different.

d. Rural collective

There are 13 rural villages in bagua island, thus with 13 rural collectives. Rural collective take control of the rural land and allocate it to farmers, based on 'one family, one plot' principle. However, some land property is confused and can not be confirmed after years of segmentation. Nowadays, in Bagua island, rural collective is actually the biggest land owner of homestead and cropland. For future homestead-based long stay rural leisure development, rural collectives should avoid transforming into land seller or land developer, and keep in mind that farmers are the only land owners of homestead. Polical authority and land market should strictly restrict rural collectives to charge the management enterprises for an unstandard price out of private profit making intention.

e. Government

There are two scale of government is concerned in homestead-based long stay rural leisure. The one is municipal government, and the other one is the district government(Qixia district). For the government, they care more about the overall goal, like to reduce the rural urban gap, social segregation, and urban housing price. For the Qixia district, they care more about the local land finance income. However, Qixia district understand that they can't sell rural homestead land at present, but they can vitalize the homestead land and relative rural land in order to increase the value increment. Both these two scale governments are powerful and have big interest in this project.

f. Homestead-based rural leisure association

At present, there is an association named 'Qixia modern agriculture industrial park' served as an advisor for rural leisure development in bagua island, but it is affiliated under Qixia district government, and stands in upper-down external position. On the contrary, homestead-based rural leisure association should be different from general tourism association because homestead is still rural collective land, so it will be much more derived from local rural system in the future, rather than urban system. This association should be built upon local farmers and rural collectives, rather external business investors.

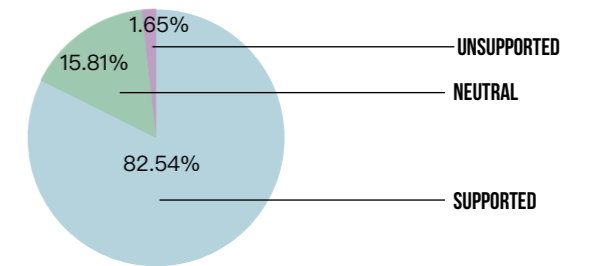


Figure 4-13. Residents' attitude to long stay rural leisure industry in bagua island
Source:author



Figure 4-14. Current rural leisure association in bagua island
Source: qxmap.com



4.2.3. Management mode

Because there is no homestead-based long stay rural leisure construction in bagua island at present, writer try to analyse the management model of general rural leisure tourism instead. In addition, writer try to use stakeholders' power-interest matrix and actual interview information, to analyse the management mode of future homestead based long stay rural leisure industry.

Nowadays, in bagua island, management system of rural tourism projects is mainly controlled by 'Qixia modern agriculture industrial park' association, which is profit oriented-- attract enterprises through public investment promotion. However, in this kind of model, big enterprises take control of all projects eventually, while farmers are definitely kicked off because of lack of capital competitiveness, which leads to instability and short-term management.

According to the interview of Jingjing Xu (figure 4-15), farmers in bagua island are more likely to participate in rural leisure development under guide of government and rural collective, and hope to have their own rural leisure construction association. Most of people are voted for the 'government+company+rural' leisure association, and 'government+rural collective+farmer' management model, which means they hope a cooperation among suppliers.

According to stakeholders' requirements on the interests and their power to safeguard their interests, stakeholders are often divided into four categories, as shown in figure 4-16.

On the top right of the figure are key stakeholders who are most interested in expressing their opinions and have the greatest power to safeguard their interests. Their recognition of organizational development decisions largely determines the final formulation and evaluation of projects. On the upper left of the figure are stakeholders with more power and less interest, such as government departments. They are not active in the development, but if their rights and interests are underestimated, they may use their power to obstruct the development decisions of the organization. On the lower right

of the figure are stakeholders with less power and greater interest, who have greater requirements on the interests and are interested in decision-making of the organization, but do not have enough power to protect their own interests, such as community residents and non-governmental organizations. Such stakeholders should be guaranteed to obtain sufficient information about the development. On the lower left of the figure are stakeholders with little power and interest. For such groups, organizations often pay little attention to them and make minimal efforts.

When we analyse the stakeholders' power and interest matrix, we could find that, municipal and qixia district government are the most powerful actors, and they offer a upper political social background. However, municipal government more care about general question, like rural urban polarization, urban high housing price etc. Thus, its interest specifically for homestead based long stay rural leisure in bagua island is lacking. Local enterprise is profit-driven, thus it has the most business interest. Local enterprises were limited to have commercial activities in bagua island, and they have been waiting for policy relaxation over years. Meanwhile they are still strictly restricted from reckless implementation and mass construction. Different from urban enterprises (mainly real estate company), their power only exists in lease period, and needs to negotiate with local rural collectives and land owners. Homestead rural leisure association has the lowest management power, but as is functional combined with local rural collectives, thus it has equal high interest in homestead vitalization. There are mainly 2 types of farmers mentioned above. Both of them are landowners, thus with interest to participate in. For farmers A, since they have rent their homestead in a long-term to enterprises, their power is limited. For farmers B, since they still share the homestead with consumers, they have higher power to influence the development project.

To sum up, long stay rural leisure development mode can adjust the current unbalanced management mode into a relatively stable and balanced situation, especially can enhance farmers' power and restrict the dysfunctional competition among local enterprises. Thus, author suggest to reorganize the stakeholders relationships, and take it as a trade-off trigger to encourage the new management mode.

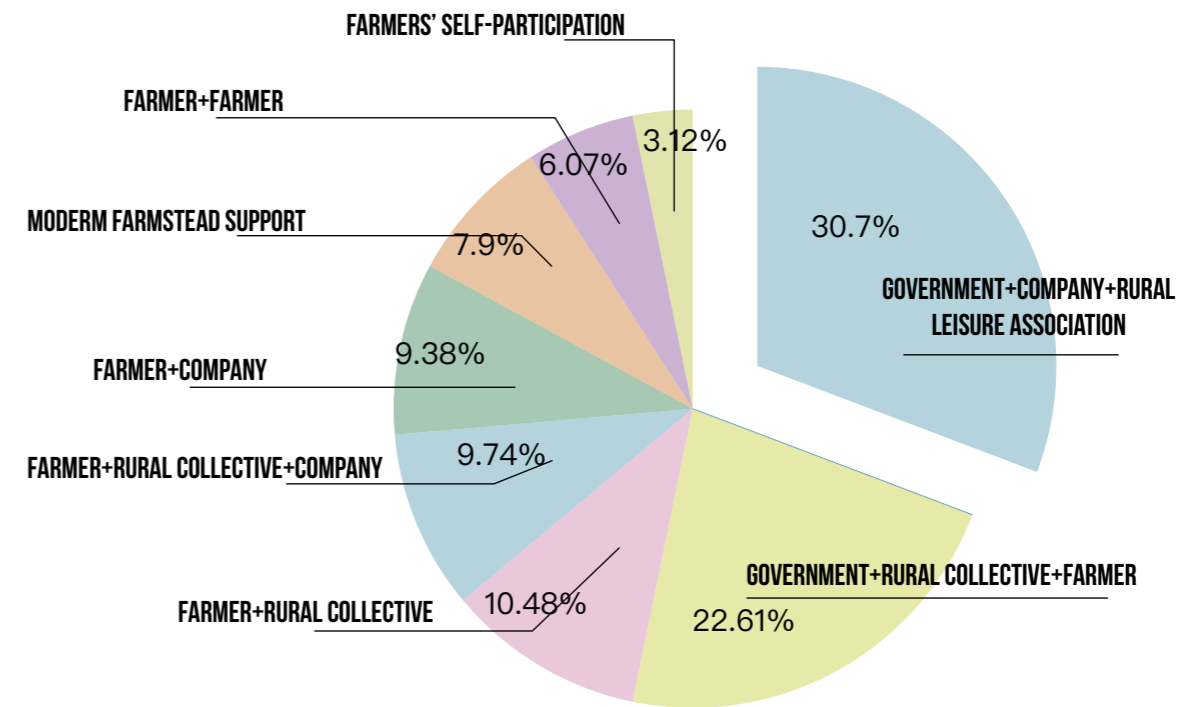


Figure 4-15. Tendency of residents' attitude towards rural leisure management model
Source: author

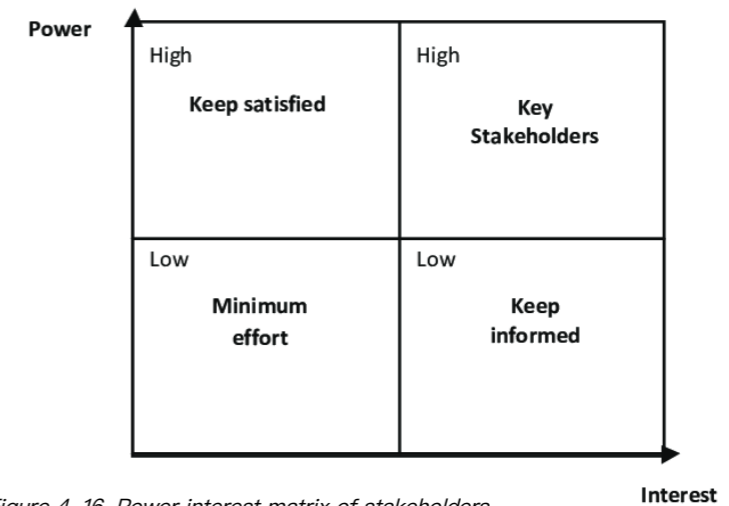


Figure 4-16. Power interest matrix of stakeholders
Source: Researchgate.net

4.3. FACILITY & CONSTRUCTIONS

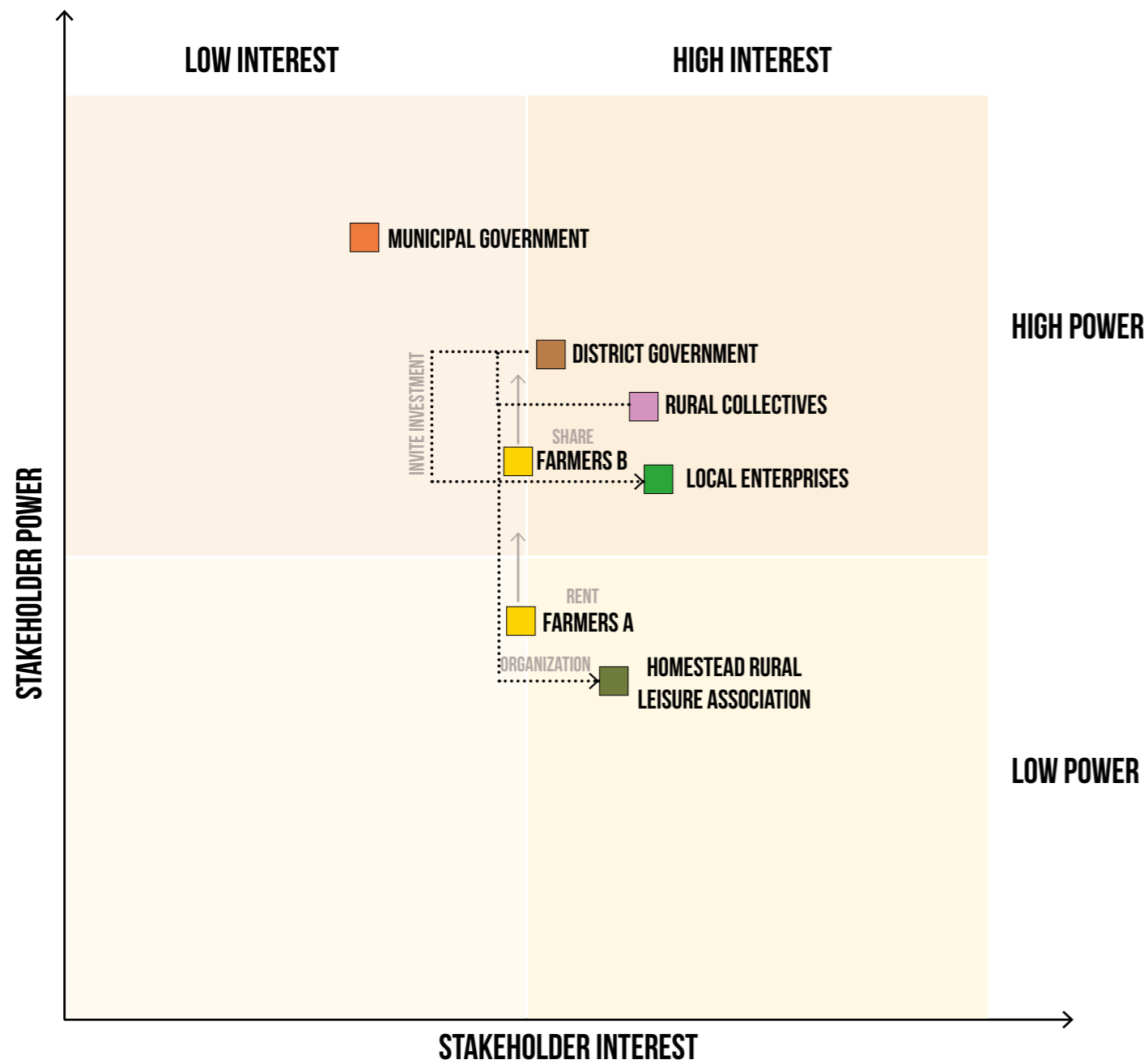
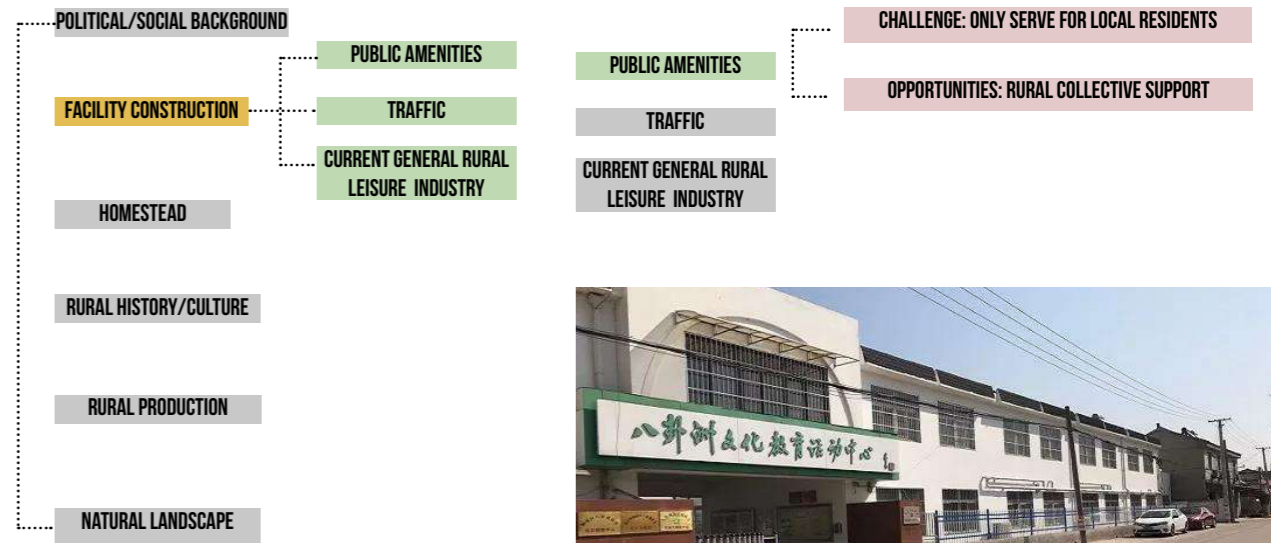


Figure 4-17. Stakeholder power interest matrix of long stay rural leisure development
Source: author



4.3.1. Public amenities/infrastructures

Current public amenities and infrastructure in bagua island are mainly built and maintained by local rural collective and Qixia government, which have high efficiency rational distribution, can satisfy needs of local residents, but not enough for future different kinds of long-stay new residents. For future homestead-based long stay rural leisure, It is necessary to improve the existing public amenities/infrastructure, rather than mass construction. Besides, some profitable amenities can suggested to be built by local enterprises.

Public amenities: Local kiosk, healthcare center, neighborhood activity center, public toilets, garbage collection points etc. are mainly concentrated distributed in Lidao road. Although the scale and quantity are small, but they are reasonable and efficient for the local residents' limited usage. There is no needed for large-scale parking lot construction, since most residents would choose to park cars at private courtyard. Public square is mono-functional and lack diversity. Neighborhood hospital, supermarket, social library etc. are supposed to be added according to actual future requirements. Sewerage system, communication system, and fire control system etc. are relatively technical backward. Some infrastructure is well connected with the upper system, however is lacked inward rural village.

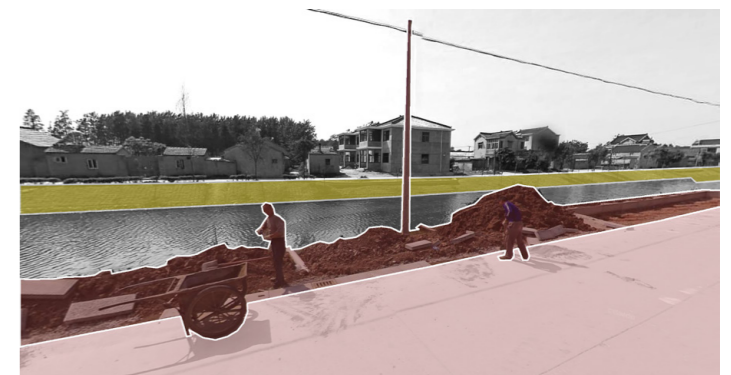


Figure 4-18. Facility constructions current situation
Source: author

4.3.2. Traffic

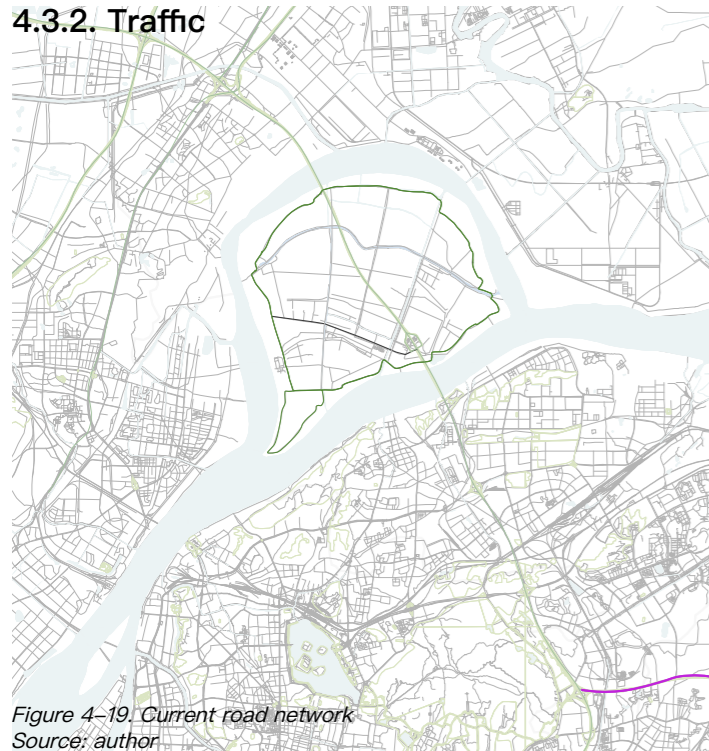


Figure 4-19. Current road network
Source: author

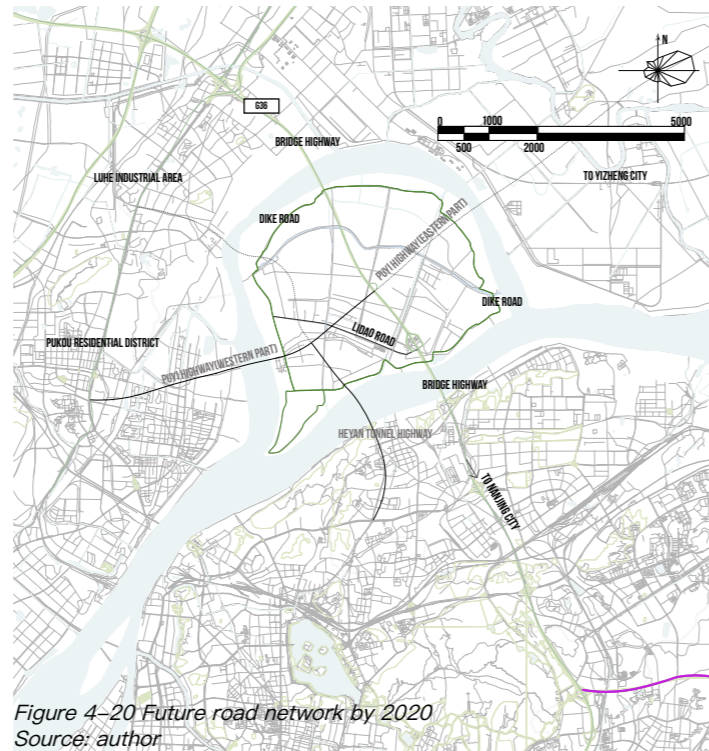


Figure 4-20. Future road network by 2020
Source: author

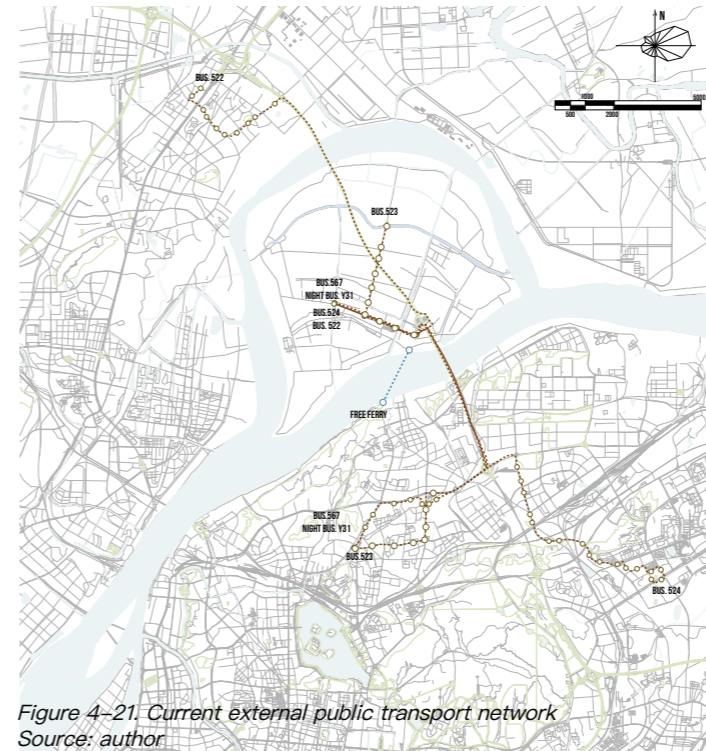


Figure 4-21. Current external public transport network
Source: author

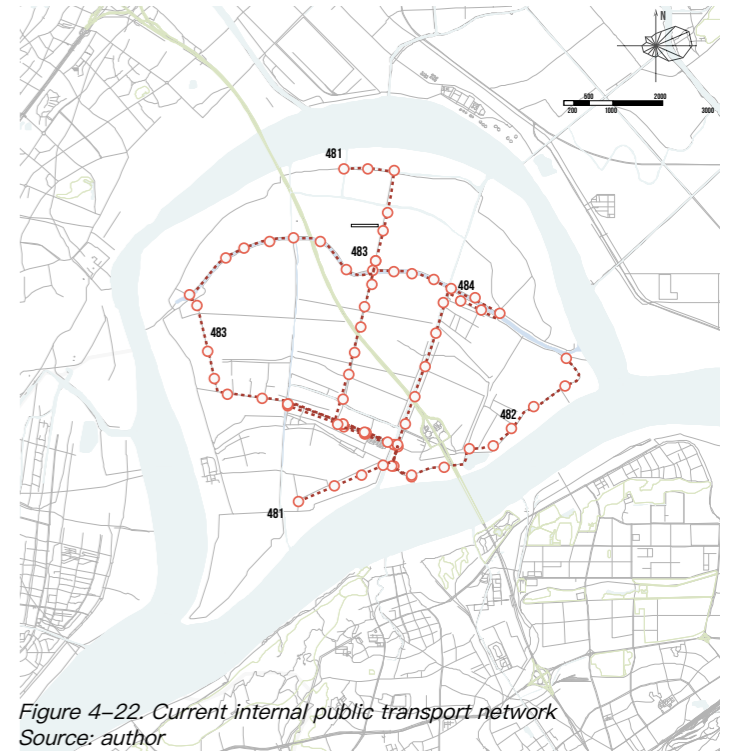


Figure 4-22. Current internal public transport network
Source: author

The current road network is not convenient enough, because the only accessible method by car is through bridge highway, with charged toll 20 RMB (but free for local long-stay residents). The bridge highway connects Qixia district, Nanjing, and Jiangpu district. However, the advantage is: It only cost 30 minutes to drive to Nanjing city center. It is actually quite close to huge consumer market compared to any other rural attractions. For current rural leisure tourists, the 20RMB toll indeed strongly restrict their interest to enter bagua island.

Inward bagua island, the only main road is lidao road, connected directly to the bridge highway. The landscape design is lacking at the road entrance area, making highway lost vitality. The rural paths attached to homestead are not bad, but can be improved from aesthetic perspective. The paths access to natural landscape are completely without planning or design. The only dike road is actually isolated people from wetland and yangtze river. The natural landscape in bagua island is mainly protected area, strictly restrict construction, which leads to poor accessibility.

By 2020, the western section of puyi highway and the southern part of Heyan tunnel highway construction will be finished. Puyi highway can connect Pukou residential district, Nanjing and Yizheng city (west to east). Heyan tunnel highway can connect Luhe industrial area and Nanjing main city (north to south). The highway service area will be shifted to the intersection of Puyi highway and bridge highway. Toll (20RMB) is still charged for tourists through bridge highway, but using Puyi highway or Heyan tunnel highway is free. The eastern part of Puyi highway and the northern part of Heyan tunnel are supposed to be finished by 2030.

Future road network will clearly separate the car flow of local long stay residents and general short-term tourists, mainly because of the toll arrangement. The western part of Bagua island will be planned for tourists to enter, while the main body of island will be kept for the local. For homestead-based long stay rural leisure industry, bridge highway, Puyi highway and Heyan tunnel highway are equally important for commuting. Future road network will hugely increase the accessibility and mobility convenience of Bagua island, that will even help to bring the people group from Yizheng, Yangzhou, and Zhenjiang cities (the destination of Puyi highway).

External public transportation (bus) is convenient and cheap, only cost 40mins, 2RMB from city center area to Bagua island, using the bridge highway. However, the bus quality is poor and departure interval is long (around 30mins). Nowadays, these buses are only used by local residents to commute to work, thus it is often congested during peak hour. Majority of the current short-term tourists to Bagua island would take car rather than bus. Actually, short-stay tourists are more likely to take characteristic public transport such as ferry, which has been abandoned nowadays unfortunately.

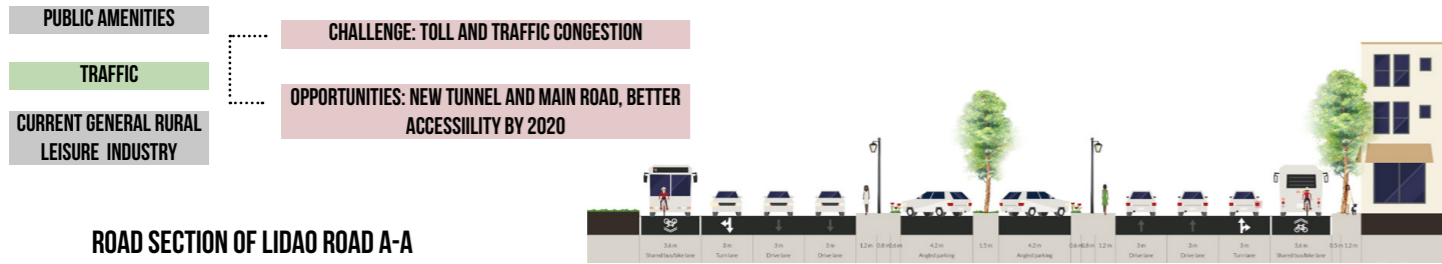
Thus, the normal public transportation should be enhanced for homestead long stay residents, and characteristic public transportation should be recovered and promoted for short-term tourists.



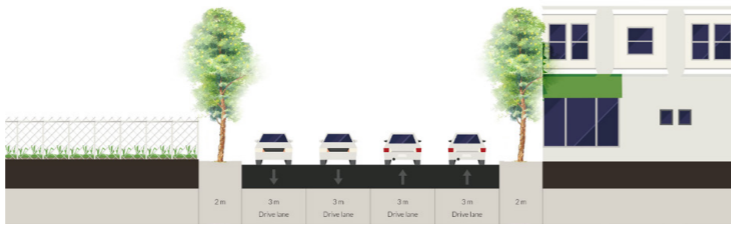
Internal public transportation is mainly mini shuttlebus. However, according to writer's observation, these minibuses are barely used. These shuttle buses are supposed to serve as supplement for the external buses, to help to transfer the passengers from the specific major bus stops (belongs to external bus line) to different minor stops. However, most of the current rural leisure tourists would choose to drive to bagua island instead of taking bus, and local residents would use private car or moped for daily mobility. Thus these mini shuttle buses are unused and needless.



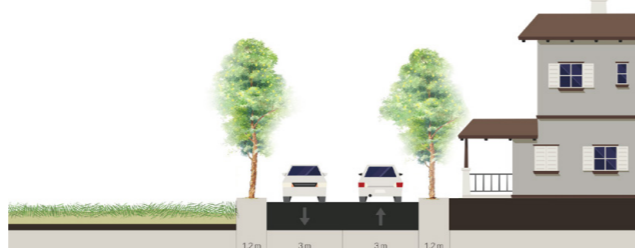
Figure 4-23. Public transportation in bagua island
Source: Baidu.com



ROAD SECTION OF LIDAO ROAD A-A



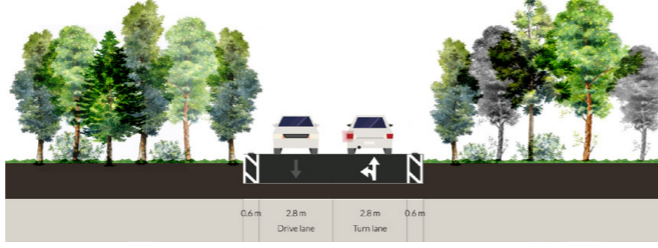
ROAD SECTION OF LIDAO ROAD B-B



ROAD SECTION OF YUEJIN EAST ROAD



ROAD SECTION OF CENTRAL ROAD



ROAD SECTION OF DIKE ROAD

Figure 4-24. Current road sections
Source: author



The road quality at the eastern part of Lidao Road is better because it is in urbanized new town area, where is influenced mainly by urban system. The road is continuously widened and are now eight-lanes wide. The middle of the road is designed as parking area and green space, which leaves room for future broadening. The disadvantage is that the poor road management results in unclear parking and walking flow, and uncomfortable walking experience.



Due to the distance to highway service area and urbanized new town area, the west part of Lidao road is relative narrow, with only four lanes wide and without street light. The landscape on both sides of the road is mostly farmland and scattered township enterprise factories. The disadvantage of the road is that there is no pedestrian trails. At present, there is only 2 metres planting isolation belt is set as buffer.



Yuejin east road is a north-south road (east side) branch road, connecting Lidao road and dike road, with two lanes wide. The roadbed is flat, but some roadside parking occupies the roadway. The disadvantage of the road is that there is no pedestrian trails. As a branch road, it is more suitable for slow traffic such as segway, cycles and electromobile.



Central road is a north-south road (west side) branch road, connecting Lidao road and dike road, two lanes wide. The road pavement condition is quite good, with Jianghe river on one side, homestead on the other. For future homestead-based long stay rural leisure development, The road quality should be improved, which includes a better waterfront landscape, more parking space, and road lights etc..



The only access to natural landscape(wetland, river marshland) is the dike road around the whole Bagua island. However, there is no extended path extended further, and the roadbed is heightened. According to writer's observation, some tourists have to trespass in private, which lead to life danger.

Figure 4-25. Road conditions in Bagua island
Source: Baidu Map



4.3.3. Current leisure agriculture industry

There are many leisure agriculture tourism construction in bagua island now, which includes agricultural farmstead, agricultural complex, hotel, rural cuisine restaurants etc.. Among these leisure agriculture tourism industries, agricultural complex is especially supported by government, with more investment support and promotion. For instance, these years, 'Blossom theme park' have undertaken 'Nanjing Agriculture Carnival' yearly, in order to establish and expand its reputation. The common characteristic of these types pf leisure tourism construction is: they are all constructed on the profit oriented construction land, and operated by enterprise(or governeimt and enterprise).These tourism projects have three main development problems:

1. Hit and run, short-term urban investment business activity; According to writer's field trip observation, desert amusement park and Sunerniang farmstead has disappeared, blossom theme park is seasonly closed down, Qili and Waisha household agritainment were also faded out years ago. In fact, current rural tourism projects in Bagua island are operated by some hit and run developers, and these developers don't want to contribute in a long term. Instead, they take these construction as a commercial investment activity.

2. These current rural leisure projects cannot attract people in a long term. People would not stay here, instead, they just come, take pictures and leave. Mingqi Zhou points out, real estate investment can continuously support and maintain tourism industry, just like blood transfusion, which means Bagua island needs long-term capital bonus value to support rural leisure industry.

3. Some rural leisure projects occupy the rural non-profit oriented construction land. Much farming land is now used for building parking lot and relating constructions. This behavior needs to be strictly supervised. For example, some hotel may occupy wetland(land for naural protection function) to build artificial forests.



Governeimt invested a lot into current rural leisure tourism projects in Bagua island. The image shows the masterplan of blossom theme park.



Current homestead-based rural leisure in bagua island is short-term, managed spontaneously, individually by local rural householder, without planning.



Although these rural tourism projects take up much space, according to field trip, current operation state is poor. There is little attraction to consumers.



Some pop rural leisure tourism construction becomes social media temporary check in spot. However, they are replaceable and short-term, which lack developemnt long-term strategy.



Figure 4-26. Problems of current rural leisure constructions
Souce: SOHU.com

Some rural leisure tourism projects in bagua island illegally occupy non-profit oriented construction land. This behavior should be strictly prohibited.

- 1. Household agritainment
Waisha village household agritainment
Qili village household agritainment
- 2. Multifunctional agritainment
Zhoushang integrated agritainment
Shede integrated agritainment
- 3. Agricultural farmstead/park
Hongdujuan eco-agricultural park
Paiyuan farmstead
Haochi fisheries and aquaculture
Junhong eco-agricultural park
Sunerniang agricultural production base
- 4. Agricultural complex
Blossom theme park
Desert amusement park
- 5. Hotel
Holiday hotel
Yingzun hotel
- 6. Rural cuisine restaurants
Zitengge restaurant
Baichuan restaurant
Lidao restaurant
River fish restaurant
...

- small scale
-spontaneous
-mono function--catering
- medium scale
-farmstead-based
-integrated function
- joint stock
-large scale
-has own agricultural production base
- the largest scale
-support by government
- mainly for accommodation
- restaurants along lidao road
-result of urbanization

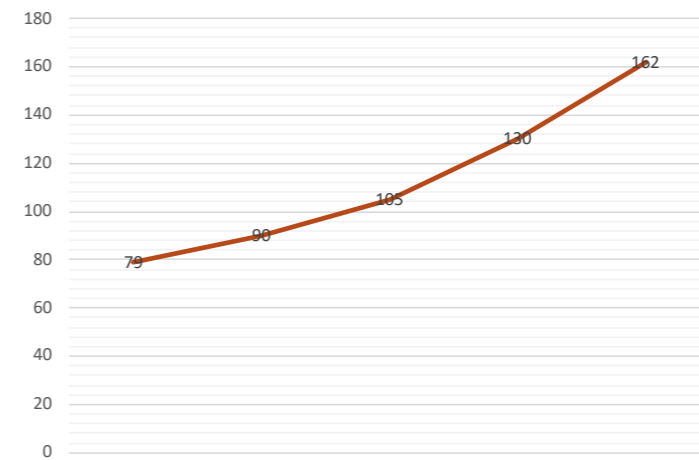


Figure 4-27. Tourism operating income from 2011-2015 (unit: hundred thousand yuan)
Source: author

Although current rural leisure construction are facing a lot of problems, leisure agriculture industry in Bagua island still has a strong development foundation. It has been tested by several times practical attempts.

According to the tourism operating income data from 2011 to 2015 in Bagua island, we can speculate a promising continuous increasement in the future. As to the homestead-based leisure agriculture, it belongs to leisure agriculture industry and It will definitely benefit from the overall booming. However, we should realize its particularity, and adopt suitable planning and design strategies after fully understanding of its operating mechanism.



1. Hongdujuan eco-agricultural garden: It is an important enterprise of Qixia district modern Agricultural Industrial Park. It includes amusement, leisure angling, fresh flowers arrangement, fruit and vegetable cultivation, ecological farming and sightseeing functions.



5. Desert amusement park: It is located in the Waisha village. It has a banquet halls fit for up to 500 people, high-end private and business rooms, as well as services: fishing cuisine, Chinese chess, KTV, bars, archery, desert barbecue, children's play facilities etc.. However it has been in bad management since 2003. Now it is purely waste land.



2. Shede integrated agritainment: It mainly offers fresh rural cuisine, fruit and vegetable, and other leisure agricultural functions. It is famous for its homemade wine.



6. Blossom theme park: Nowadays, It is the biggest leisure agricultural complex in Bagua island. The whole park covers an area of 1788 mu. It integrates sightseeing, leisure, entertainment, catering, purchasing, science, education, wedding, and exhibition functions. It holds agricultural carnival event once a year.



3. Zhoushangrenjia interated agritainment: Located in Guangming Village, it is a big leisure farmstead integrating leisure, vacation, catering, fishing functions. You can experience authentic rural cuisine and enjoy leisure countryside life.



7. Waisha village household agritainment group: The Waisha village is adjacent to the Yangtze River, relying on the Jiangtan Wetland. In the past, there were 20 household agritainment operators, offering 50 accommodation beds in total, with a daily reception capacity of 600 people. However, they are totally suspended these years.



4. Junhong eco-agricultural garden: Promoting the idea of 'facilitate agriculture by sustainable technology', it offers online farm management, fresh food delivery, agricultural tour etc.. It also devotes itself to introduce new types of fruit and vegetable.



8. Qili village household agritainment: The Qili village is located in the south of Bagua island, adjacent to the wetland park. In the past, there were more than 20 professional household agritainment, providing catering, leisure and accommodation services. However, they have almost been abandoned now because of no operation.



9. Holiday hotel is near bridge service area, with convenient transportation, pleasant scenery. It is a collection of catering, accommodation, meeting, leisure fishing, KTV, chess, etc..



10. Rural restaurants These restaurants are mainly concentrated along Lidao road, in urbanized new town area. They offers local fresh food. However, the operation type is common catering business.



11. Haochi ecological fisheries is located in Qili village, covering an area of more than 400 mu. This aquaculture farm uses cage fishing technology and standardized intensive fish ponds. There are more than 10 kinds of aquatic products nowadays.



12. Sunerniang farmstead is an integrated farmstead, which has its own vineyard, vegetables production base, and poultry breeding base. It covers an area of 100 mu, and has established the Long Yun fruit cooperation. However, it is downsizing rapidly because of bad management.

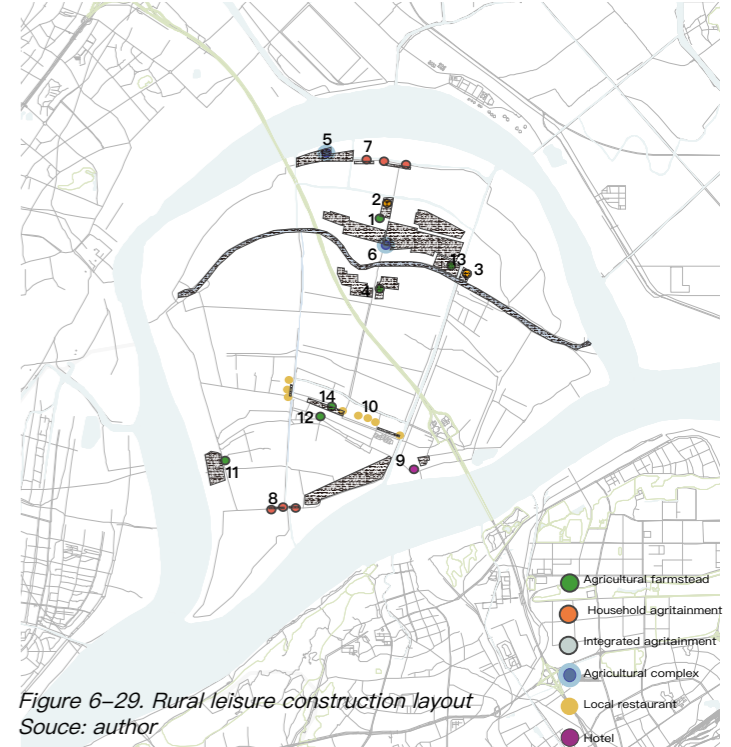


Figure 6-29. Rural leisure construction layout
Source: author



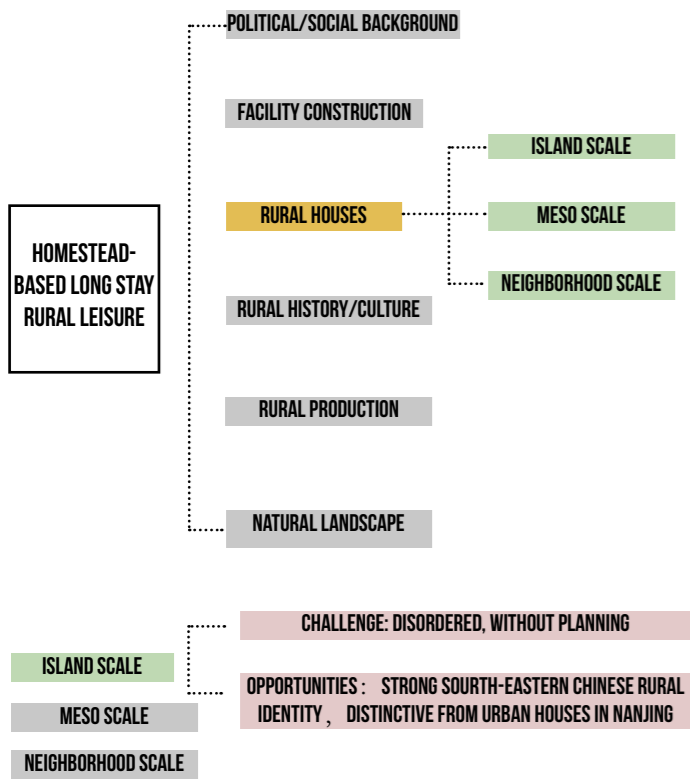
13. Located in Guangming village, Paiyuan farmstead is a big-scale farm with traditional Chinese riverside architecture. The farm integrates ecological catering, leisure fishing, organic vegetable picking, wild rare birds watching etc.. Paiyuan also has its own brand vegetable production cooperation as resource support.



14. Hongcai flower limited company introduces high-quality flower from Holland, America, Germany etc., and conducts research in order to develop new adaptive suitable varieties for Nanjing. There are over 100 varieties of flowers: Austin European rose, potted carnation, potted African chrysanthemum, hydrangea, clematis etc..

Figure 4-28. Rural leisure construction in bagua island
Source: Qixia modern agriculture industrial park website

4.4. RURAL HOUSES



4.4.1. Island scale

The overall impression of rural houses in Bagua island is completely different from Nanjing urban houses. Urban house is so-called commercial residential building that is mass developed by real estate company, while rural house is built gradually by rural land owners in Bagua island.

According to Tuzi Gui, the memory of Nanjing old houses is 'low density', 'shared courtyard', 'group living mode', 'red brick and grey roof'. However, it is expensive to buy a similar detached house in Nanjing urban area, which is impossible for normal urbanites. However, these houses are kept in Bagua island luckily. As shown in the figure 4-31, these rural houses are similar to old houses in Nanjing. For the older generation, they may growed in countryside at childhood, but with the urbanization process, such memories gradually fade away. From this perspective, Bagua island's potential lies in the fact that it has always kept its original appearance and evoked memories, while busy urbanites have no time to taste it. The average land price of Bagua island is much lower than urban area, which will directly lead to cheap housing rent. From the island scale, the overall idle rate of homestead is high. The idle rate is up to 15%. Thus, from the perspective of feasibility and consumer attraction, rural houses in Bagua island have big potential and development opportunity.

Homestead is distributes along the river growth, the plot ratio is smaller than 1.5, are basically two or three floor buildings, and completely different from the urban landscape. Nanjing, as the capital of Jiangsu province, is a metropolitan city whose urban landscape is made by skyscrapers and industrial construction. Moreover, due to the urban sprawl, the daily commuting route of urban residents stretch across different direction without green cluster. That is to say, for an ordinary office worker, he usually does not have any chance to see the rural landscape and rural houses during his daily life. The rural area and urban area is divided, and people do not have any co-existence chance. However, the rural houses in Bagua island are scattered and disordered, without any scientific planning and guidance.



Figure 4-29. Urban commercial houses in Nanjing
Source: SOHU.com



Figure 4-30. Old Nanjing house portray
Source: Guituzi



Figure 4-31. Rual houses in bagua island
Source: author



Figure 4-32. Homestead overall layout
 Source: author

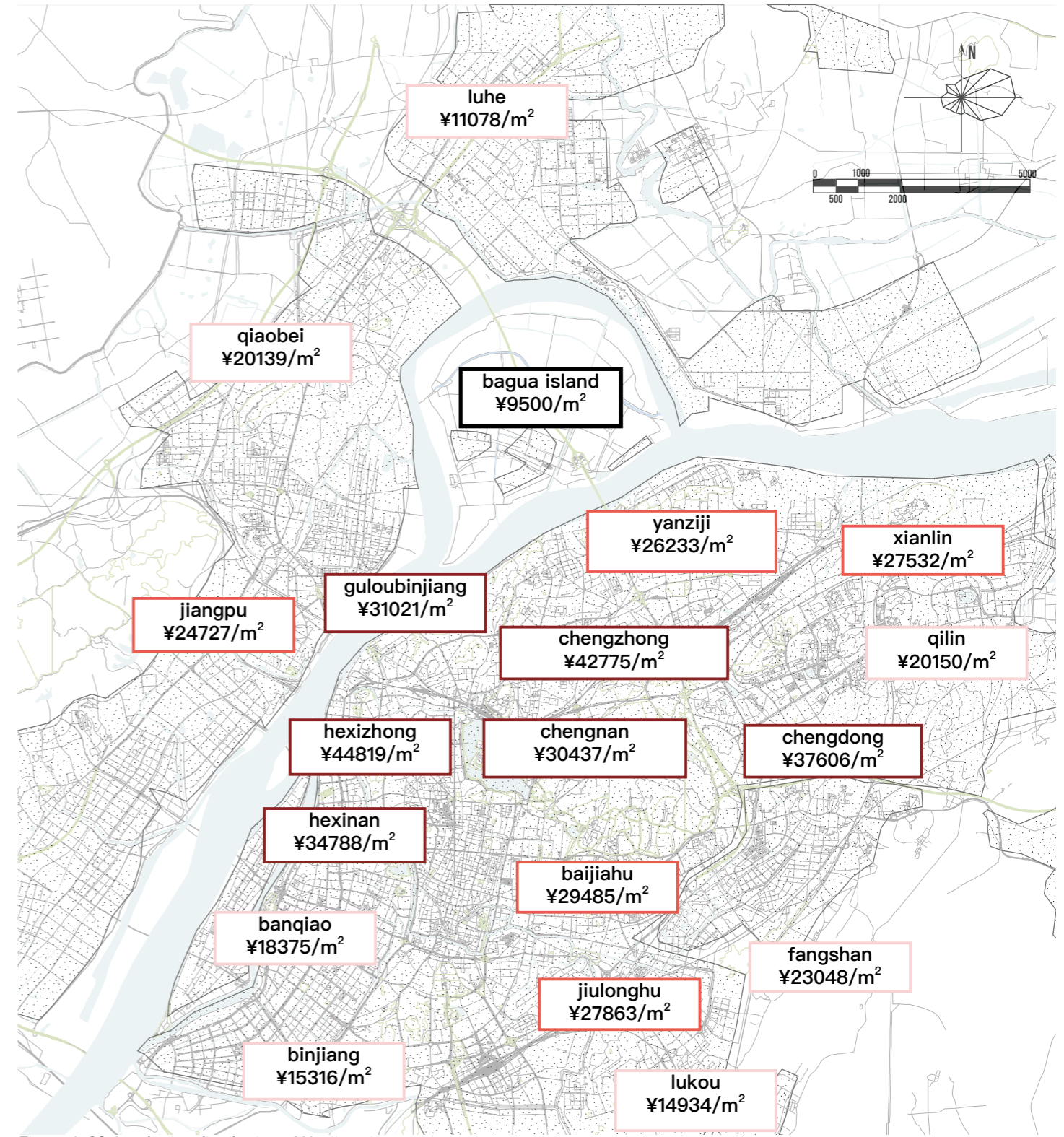


Figure 4-33. Land price distribution of Nanjing city
 Source: author



4.4.2. Mesoscale homestead

Compared to the rural homestead layout in Netherlands and USA, homestead in Bagua island has much higher density, and more typologies. Eye alt are fixed around 450m, there is only sporadic, decentralized 5 houses in Netherlands and USA because of the large scale technical production. While the houses in Bagua island as shown in figure 4-36 are much more diversified, centralized. In addition, no matter what typology it has, the relationship with water and land is clear, both in China and foreigner countries. It is interesting to play with the space in the future planning and design.

Author selects three typical village: Xinzha, Shangba and Waisha village as case study, to analyse the mesoscale rural homestead layout. It is important to understand and respect the existing layout, because in the process of urban and rural development, rural areas' right to use regional resources tend to be treated unequally. Bagua island did not benefit from the urbanization process of Nanjing, but made sacrifices for the urbanization. Construction of transit roads disturb the local rural house, and the development of leisure agriculture industry around the village also squeezed the agricultural land of the farmers and villagers.

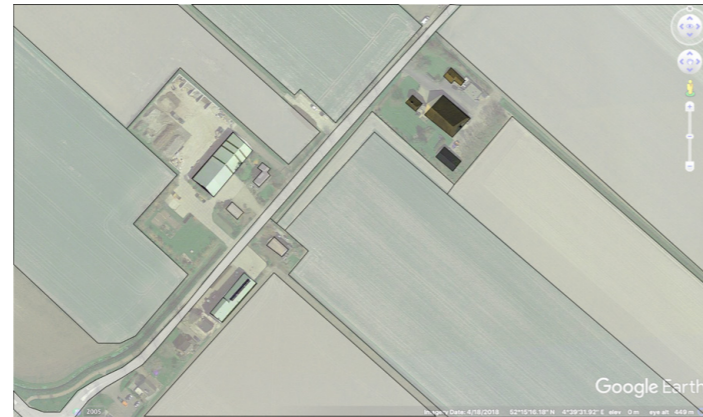


Figure 4-34. Homestead in Netherlands(eye alt: 449m)
Source: Google Earth



Figure 4-35. Homestead in Miami(eye alt: 447m)
Source: Google Earth



Figure 4-36. Homestead in bagua island(eye alt: 455m)
Source: Google Earth



Figure 4-37. Satellite map of Xinzha village
Source: Google Earth

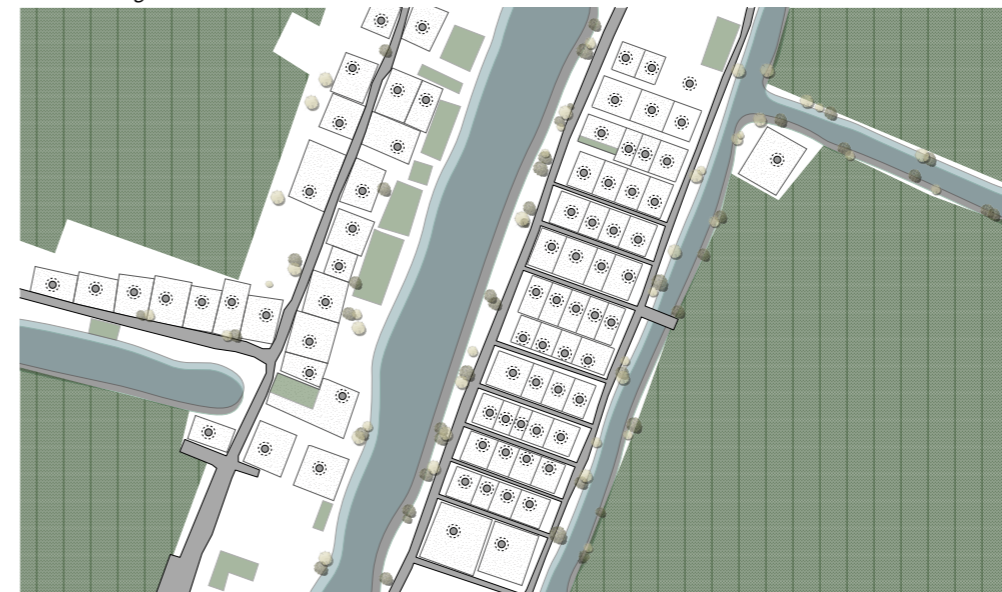


Figure 4-38. Homestead layout in Xinzha village
Source: author

This case is located in Xinzha village, close to highway and Yuejin east road. On the east side of river, there are many two floors row houses. Houses are distributed in very organized ranks, perpendicular to river. The layout is similar to urban neighborhood. There is no self-reserved vegetable plot.



Figure 4-39. Surrounding environment
Source: author



Figure 4-40. Satellite map of Waisha village
Source: Google Earth



Figure 4-42. Surrounding environment
Source: author



Figure 4-41. Homestead layout in Waisha village
Source: author

This case is located in Waisha village. It is a typical waterfront linear homestead area. Homestead is in a disordered spatial arrangement. The one side of homestead is rural road, and the other side is river directly. Thus, people can see river scenery from their house. There are a few self-reserved vegetable plot next to the homestead, mostly used for self-produced vegetables. Large-scale farmland is close to homestead, neatly divided.



Figure 4-43. Satellite map of Shangba village
Source: Google Earth

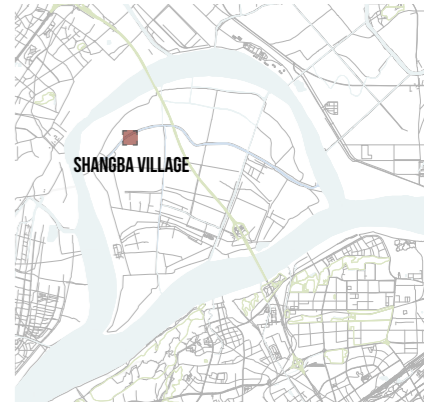


Figure 4-45. Surrounding environment
Source: author



Figure 4-44. Homestead layout in Shangba village
Source: author

This case is located in Shangba village. It is another typical waterfront linear homestead area. The difference with the above one is that river and homestead is separated by road. People cannot directly see river scenery from their house. There are a few self-reserved vegetable plot next to the homestead, mostly used for self-produced vegetables.



4.4.3. Neighborhood scale homestead

As urban designers, it is important for us to take the building construction as spatial intervention, to understand the built environment. In Bagua island, various building forms are one of the characteristics of self-built houses in rural areas. The integration of traditional style, practical value and architectural art constitutes its main architectural features, which can be reflected in the life history and environment of rural areas. "Harmony between nature and society" is the traditional proposition of rural architectural style in China. "quietness" and "privateness" are particularly emphasised in terms of living, and the environment is peaceful while the architecture is implicit. Both the independent detached house and the row house pursue the harmonious coexistence of human and environment.

There is twon building typologies of rural houses in Bagua island. One is the detached house, the other one is the row house. These two typologies of houses are distributed in different area. The advantage is that there are different types, local materials and so on, brick and concrete structures, and different people living there. There are a lot of vacant rooms in the building, which can be fully utilized. The disadvantage is that some homestead is dilapidated, no one to maintain it, each family only concerns the scenery within their own doors, there is no sense of cooperation, the public space hus became abandoned space.



Because of the Chinese culture and economy reasons, courtyard is usually blocked by tall fence. Each rural householder tend to enclosure private land, which is isolated, and invisible to neighborhoods.

Figure 4-46. Homestead typology 1
Souce: author



This type of rural house is called row house, constructed by village collective. Each building prototype is the same, with two or three floors. This is not attractive to urban tenants because it lacks rural residential characteristics.

Figure 4-47. Homestead typology 2
Souce: author



There is no unified building style regulation in Bagua island, so there are some antipathetic houses with its own building style out of place. Building style and typologies are decided by individual householders.



Row houses does not have big courtyard in front of the house. Sometimes, small scale courtyard is arranged in the back side. Several houses share a entrance access. This kind of rural housing typology is influenced by urban construction style.



This typology of house is mainly distributed on both side of Jianghe river course, in the northern part of Bagua island. Some poor quality homestead is abandoned, once served as storage house, which needs to be removed.



This typology of house is mainly distributed in Xinzha village, east side of Yuejin east road, because it is close to the urbanized area, and directly connected to the exit of the second bridge highway.

TYPOLGY 1



Figure 4-48. Rural detached house with own courtyard
Source: author

TYPOLGY 2



Figure 4-49. Rural row house without courtyard
Source: author



ONE LEVEL BUNGALOW



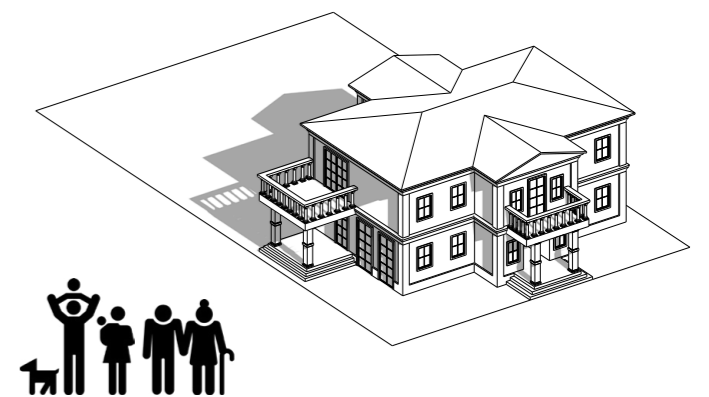
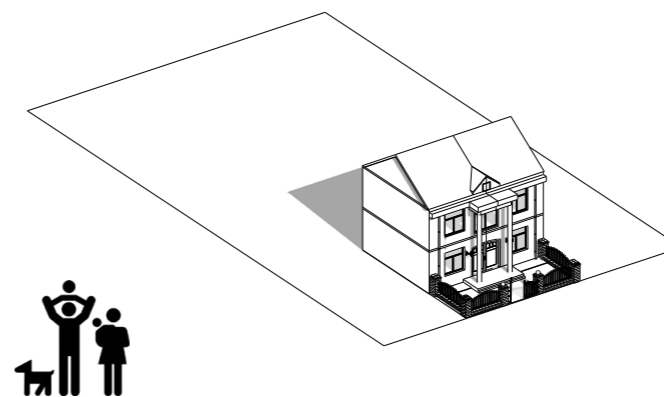
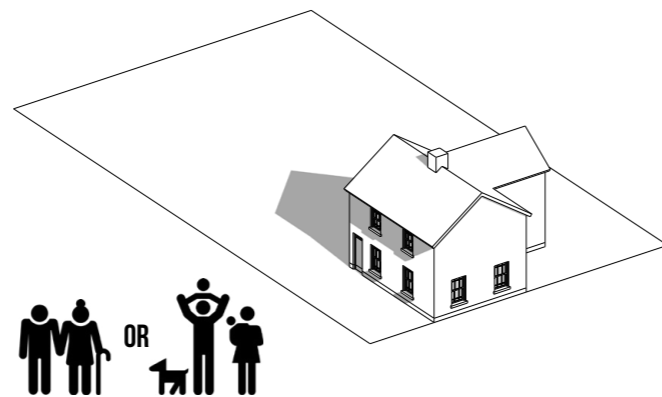
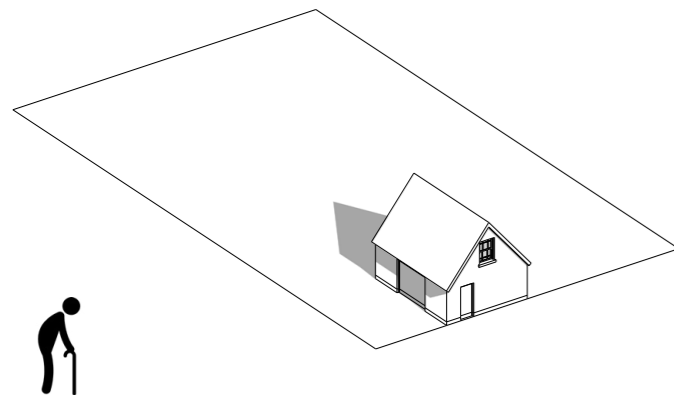
TWO-STOREIES ROW HOUSE



SHARED-COURTYARD DETACHED HOUSE



DETACHED VILLA



This typology is called one level bungalow. Basically, it does not have courtyard, but with private vegetable plot. Inhabitants are mostly the individual elderly, who does not need much living space compared to large family. With the development of times, this housing typology is not common seen in Bagua island.

From the rural leisure development concern, it is hard to organize or operate these bungalow. In addition, It needs much spatial improved to offer a modern and comfortable living condition for tourists who have accommodation demands.

This type of self-built house has public stairs. One staircase two families. Its design increases the land utilization efficiency, and is suitable to farmers in new era. It looks like the common row house in urban area, but actually it is more adapted to farmers's living habits, especially for the farmers who live in rural area but work in urban area.

From the leisure agriculture concern, it is not attractive for urban consumers in architecture exterior aspects.

Shared-courtyard detached house is developed from detached villa. Although it has courtyard as well, but this courtyard is shared with other houses, in order to enhance the land use efficiency. Basically, it is a house cluster that offers much co-existence.

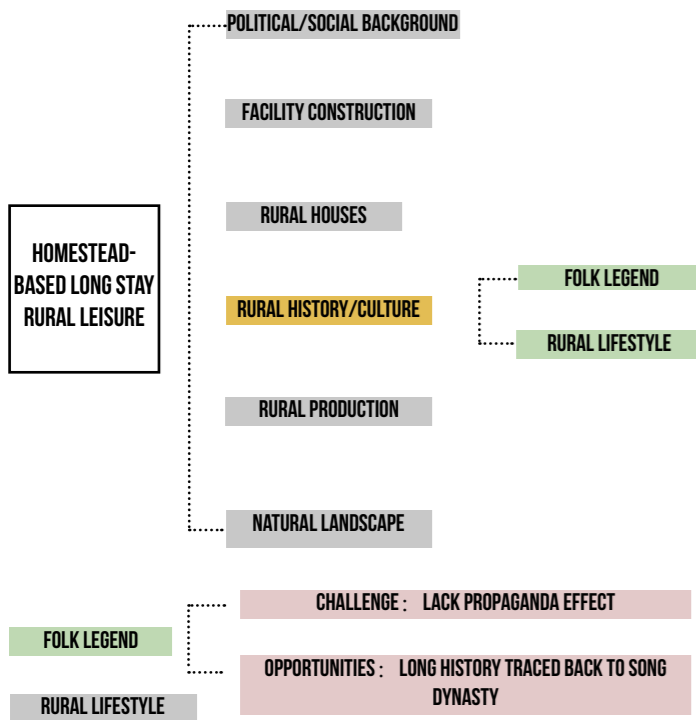
From the leisure agriculture concern, it is potential accommodation options by appropriate design and vitalization, with scale effect.

Most of the detached villa have 2-3 floors with independent courtyards. Inhabitants are mostly big families, with children and the elderly. Space in courtyard can be used for drying grain, raising livestock and stacking firewood. Space indoor can be used to store farm tools, means of production and articles of daily use inside the house. Original living habits of the rural family can be preserved to some extent.

It generally have more than five bedrooms and three toilets, which can be redesigned as guest room for tourists tenant. Comfortable and spacious living conditions are also attractive.

Figure 4-50. Other architecture styles and functions
Souce: author

4.5. RURAL HISTORY/CULTURE



this island 'cutting' the river into two branches, it became easier for people to ferry across the surging river. In order to find out the etymological origins of its name, it is possible to check through the ancient maps of Nanjing. It is said that the river and roads crossed in nowadays Bagua are evolved by the eight diagrams attached to the jade pendant. These historical legend are well known in each home of Bagua island, but not spread in Nanjing urban area.

[1]. There are not yet scientific publications on the historical toponymy of this island. The legend can be found in Baidu Baike, a Chinese online encyclopedia (available at: <http://baike.baidu.com/>).

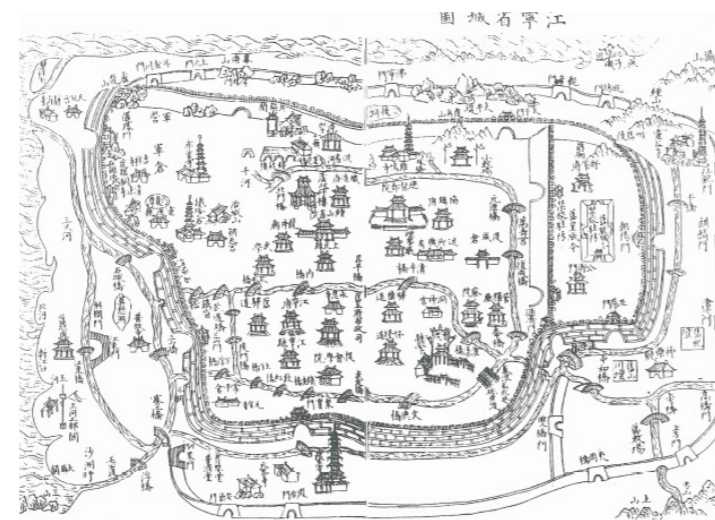


Figure 4-51. Historical map of Nanjing city
Source: Huang Zhijuan

4.5.1 Folk legend

Bagua island has 400 years history, traced back to Song dynasty. The earliest mention of Bagua Zhou as an island on the Yangtze River can be found on a map from Ming Dynasty (1368-1644AD). In Yingtian Fu Jing Fangkuo Tu, the map of the Yingtian (Nanjing)'s area, Sha Zhou ("The Sandy Island") was located in the place in which the current Bagua Zhou lies. In 1684AD, the southwest part of Bagua island began to have its first group of inhabitant. In addition, three precious stone tablet were founded in Bagua island--Jinmu stele, Shijin stele and Zhushou stele. They respectively records the story of previous peasant uprisings, land finance reform in Qing dynasty, and birthday congratulations for Jiang.

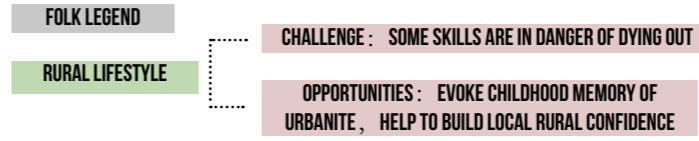
As to the name of Bagua, Bagua is literally '八卦' in Chinese, which means an octagonal trigram used in Daoist cosmology in order to represent the fundamental principles of reality (octagonal trigram means "eight symbols"). There are no official records about why that island was named Bagua. However, a legend spread among the Nanjing inhabitants tells that Queen Ma (1332-1382 AD), the wife of the first Emperor of the Ming Dynasty (1368-1644 AD), dropped a jade bagua in that location on the river, and the island grew on that. With



Figure 4-52. Empress of Ming Dynasty
Source: Sina.com



Figure 4-53. Bagua--the Eight Trigrams
Source: Baidu



4.5.2. Rural lifestyle/living habit

As one of the biggest rural settlement in Nanjing, Bagua island has many local traditional crafts, such as Nanjing brocade, embroidery, paper cuttings, porcelain etc.. These rural crafts are actually in danger of dying out because of failing to be handed down from past generations. Old rural craftsmen are mainly old residents in Bagua island, however they lack promotion skills, and don't know how to benefit from it. According to author's interview, local craftsman eager to impart knowledge of their trades to apprentices, however, it is hard in current capitalism society. Luckily, homestead-based rural leisure is a good opportunity for them. On one hand, traditional rural craft skill is a strong bonding among younger generation and old craftsmen, in that learning making traditional crafts is an educational experience for children, while teaching process is a dissemination of traditional culture, besides, craft itself can be used as decorative art for rural houses. On the other hand, relative cultural creative crafts can be promoted as local products in order to expand rural industries. Since homestead-based rural leisure is mainly a long-term rent life for different types of people. Traditional rural crafts can help to get more people involved in, and build a strong social interaction.



Figure 4-54. Rural traditional skills and handicrafts
Source: Sohu.com

归园田居·其一
魏晋：陶渊明
方宅十余亩，草屋八九间。
榆柳荫后檐，桃李罗堂前。
暧暧远人村，依依墟里烟。
狗吠深巷中，鸡鸣桑树颠。

There are many old Chinese poems that praise the Chinese rural lifestyle. One of the most famous poem shown above depicts a ideal rural image, which contains natural landscape, rural houses, rural poultry and daily activities. A kind of utopian world attracts everyone. According to author's observation, local farmers in Bagua island have various local big events, such as dragon boat festival, open market, 'big pot eating' etc..In daily life, farmers also preserve their own rural living habit. Rural women like to wash clothes by riverside together with neighbors, young kids like to play wildly in clusters, farmers is used to play chess and card after working in the field. These rural lifestyle/living habit is totally different from nowadays fast pace urban life. However, this rural lifestyle is actually the childhood memory of most old urbanite (especially middle aged and the senior group)--this generation was born in rural, grew up in rural, but work and live in urban during adulthood. They eager to come back to rural area to enjoy the rural leisure life again.



Figure 4-55. Chinese rural lifestyle illustration
Source: Pinterest

4.6 RURAL PRODUCTION

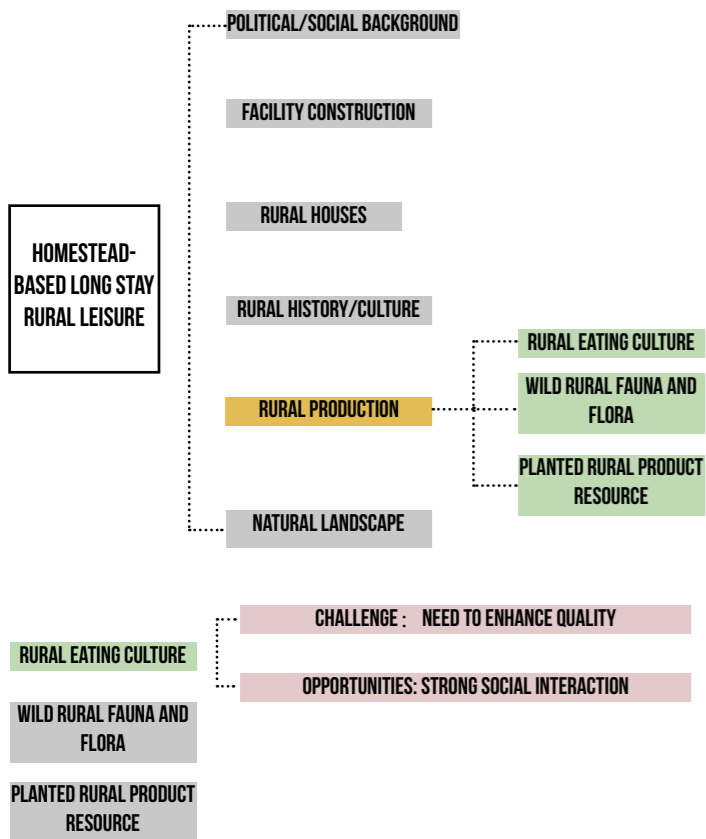


Figure 4-56. Delicious rural food
Source: SOHU.com



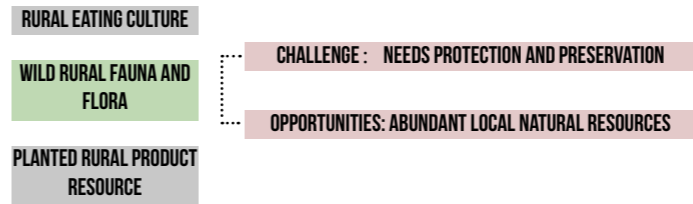
Figure 4-57. Neighborhood eating habit
Source: SOHU.com



Figure 4-58. Rural wedding dinner party
Source: SOHU.com

4.6.1 Rural eating culture

Rural food culture is one of a strong rural symbol in China. Since rural residents are familiar with each other, these rural people tend to eat in groups. We can say, it is a rural group party with Chinese characteristic. The eating scale would be much big especially in important festival or dates, such as residents' wedding('流水席' in Chinese), Chinese New year etc. The best cook in village will be invited to cook for the whole village, and the food quality is much better than urban food because it is more organic and fresh. However, since this Chinese party is a local traditional and spontaneous activity, people usually has low-ends impression, and eating environment, eating service is lacking. From the perspective of social interaction, this group eating culture is a chance to keep the neighborhoods friendship, strengthening social interactions in a way. For long stay rural leisure development, it is a necessary and promising mode among tenants, who seeks for rural group living lifestyle.



4.6.2 Wild rural fauna and flora

There is abundant wild fauna and flora in Bagua island, mainly includes river fish and wild potherb resource. The mudflats around Bagua island are native wetlands environment, with typical biodiversity characteristics. Egrets, wild ducks grow freely here, in addition, there are hare, pheasant, hedgehog appear. Wild birds are various: thrush, starling, red-billed finch, gray magpie, geese, etc.. Precious porpoises are also found in the Yangtze River section. However, these wild rural product is in danger because of soil/air/water etc. pollution problem.

According to surface soil safety evaluation in Bagua island, most of soil is suitable for rural potherb growing. However, there is 2.3% of land has high risk of pollution, which mainly located in the south and east part of island, influenced by Cd element from the surrounding industrial factories. It is necessary to conduct soil remediation and pollution source controlling.

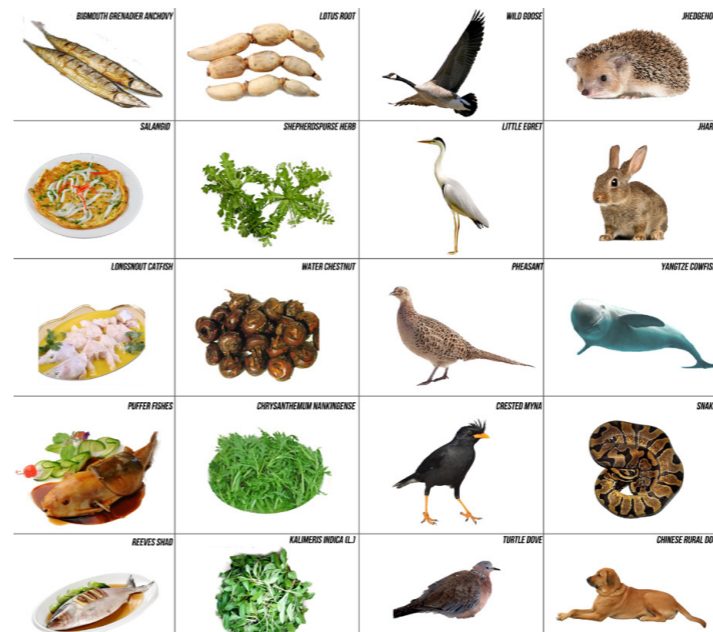


Figure 4-59. Typical animals, crops and cuisine in Bagua island
Source: author

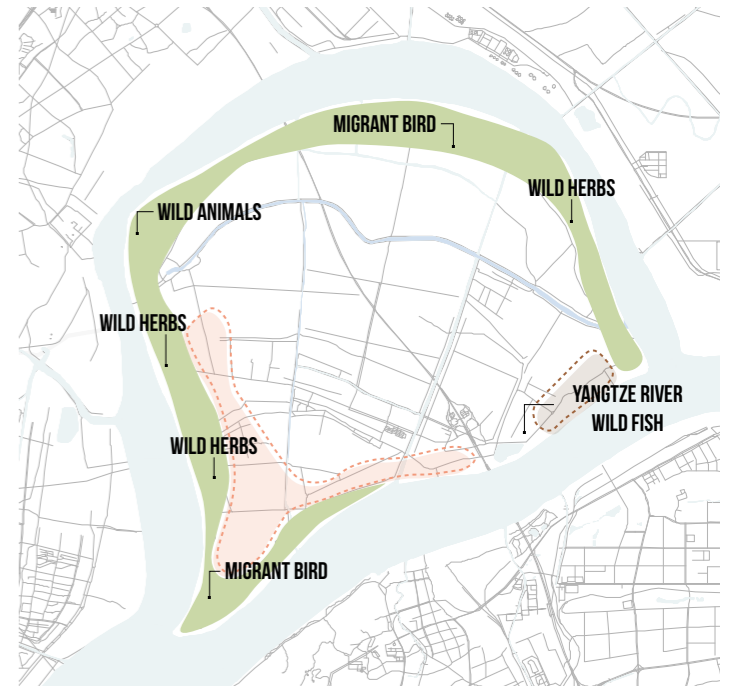


Figure 4-60. Wild rural products distribution
Source: author

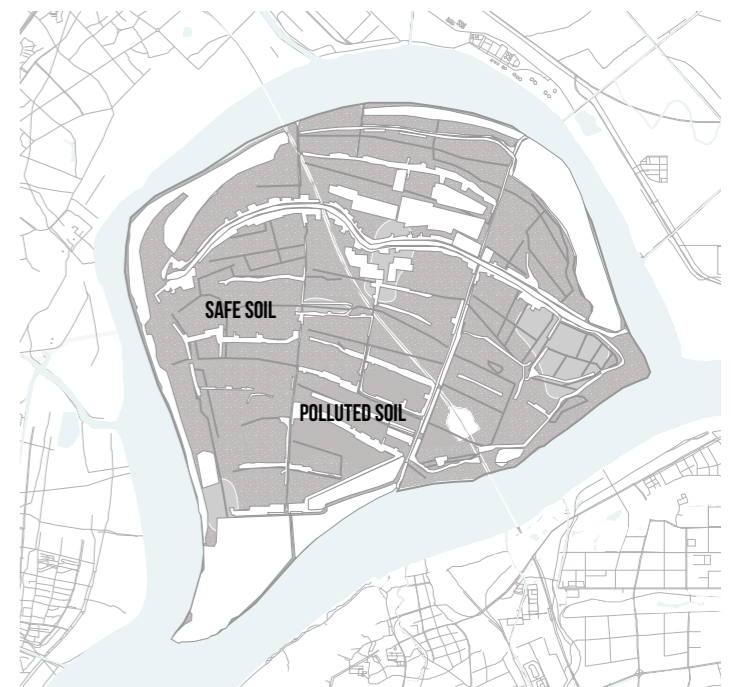


Figure 4-61. Soil safety evaluation map in Bagua island
Source: Jinqian Song,2017

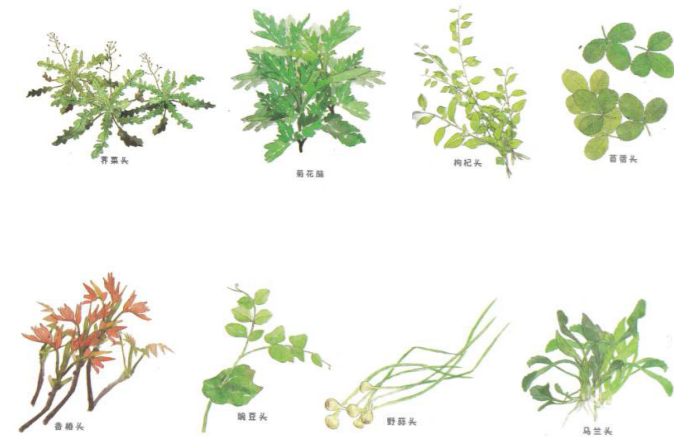


Figure 4-62. Typical edible potherb resources in Bagua island
Source: Baidu Baike

4.6.3 Planted rural product resource

Bagua island has rich natural resource and is famous for its characteristic local potherb, which includes: Chinese artemisia selengensis, lotus root, Chinese dendranthema indicum, Chinese water chesnut, Kalimeris indica etc.. Among all the agriculture product, Chinese artemisia selengensis is the most famous one, and wins the label for Bagua island as 'The No.1 village of Chinese artemisia selengensis', 'the hometown of Chinese artemisia selengensis'. Characteristic rural dish made from artemisia selengensis is a typical name card of Nanjing, and popular in Southeast part of China. After years of development, Baguazhou has become the largest production base. In 2003, the artemisia selengensis production has reached 50 million kg, with cultivated area up to 35 thousands Mu. The wok cuisine made by Chinese artemisia selengensis is a local specialty that attracts every tourist to taste, and carries the memory of each natives. There is Chinese old poetry as shown below that praises local artemisia selengensis in Nanjing during the harvest season (figure 4-64).

There is a rural wisdom: 'Artemisia selengensis grows well in April, but can be used like firewood in June'. It is usually sown in the field in autumn and winter season, and harvested at the end of spring. Inside each villages, many small plots of farm can be found along neighborhood streets or on vacant land. They are farmed by local residents as a complement to their daily food consumption. For future long term rural leisure industry, It is necessary to improve agricultural technology and time arrangement to enhance rural production efficiency, and make the use of both large-scale planted cropland and small homestead based vegetable plots.



Figure 4-63. Rural dish made by Chinese artemisia selengensis
Source: Xinshipu.com

蒿满地蘆芽短，
正是河豚欲上時

Figure 4-64. chinese poem to praise artemisia selengensis
Source: Shi Su (Chinese literator and poet, AD 1037 -1101)

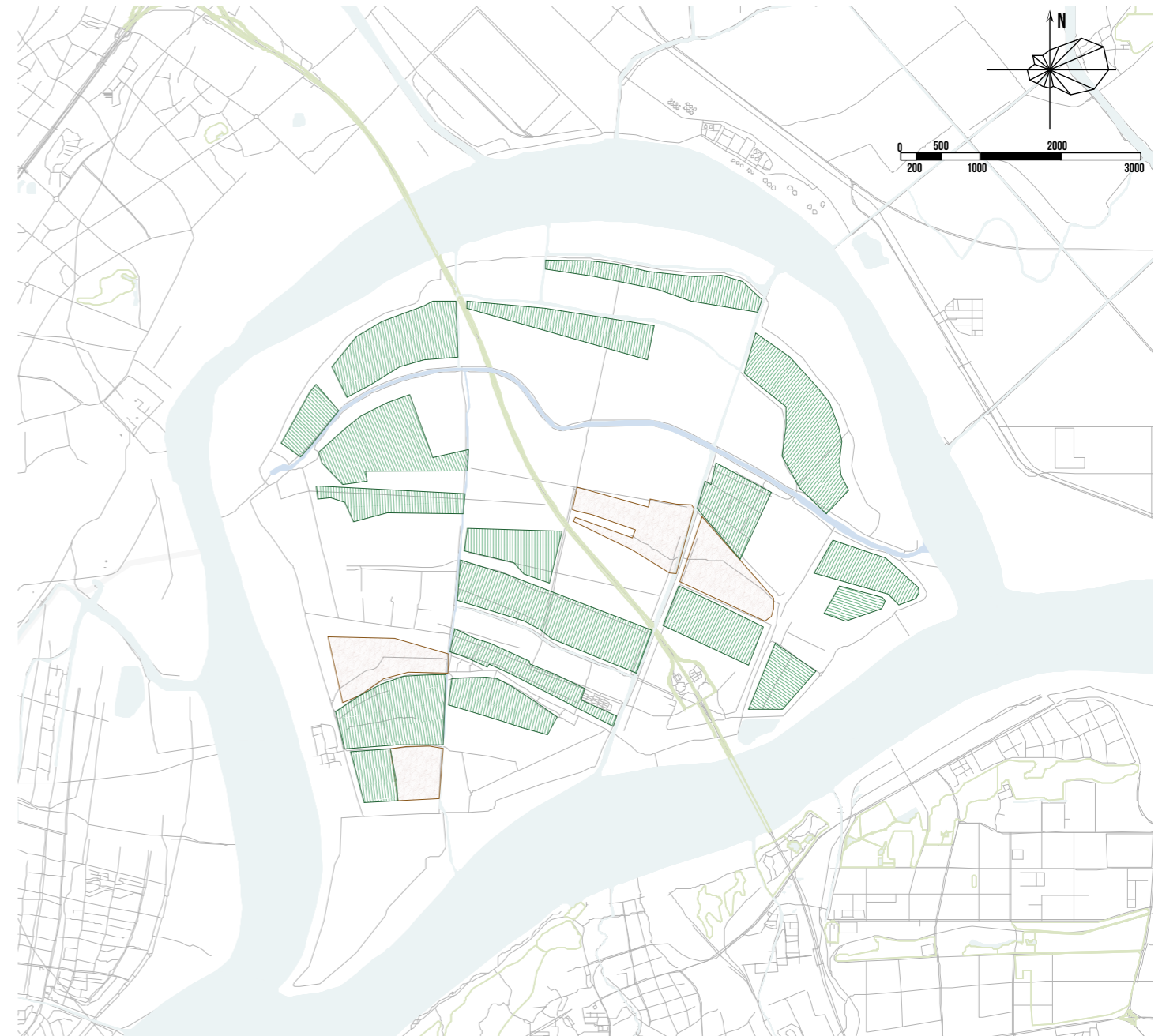


Figure 4-65. Chinese artemisia selengensis growing land
Source: author

4.7 NATURAL LANDSCAPE

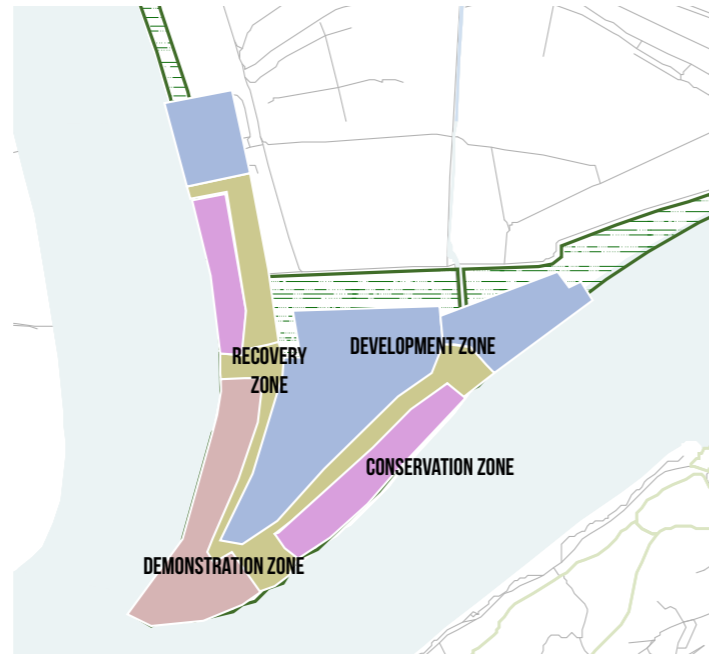
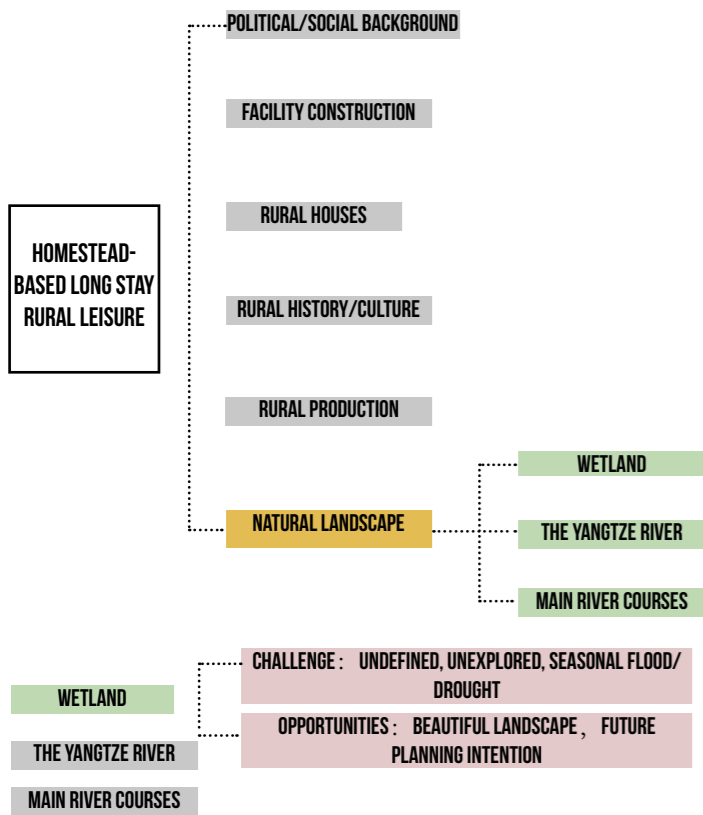


Figure 4-66. Wetland park function zoning plan
Source: author

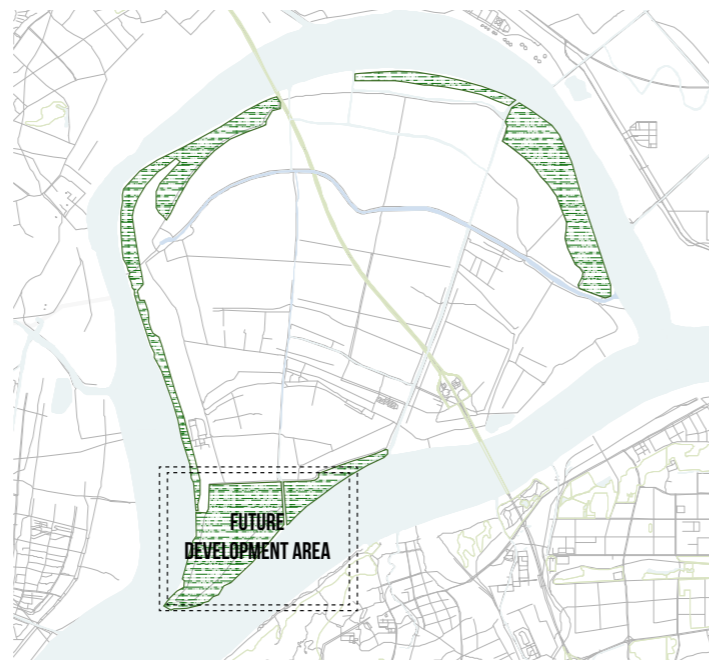


Figure 4-67. Wetland master plan
Source: author

4.7.1. Wetland

Bagua island is located in the middle latitude area, thus the ground layer is affected mostly by the monsoon and the climate characteristics of winter, summer, spring, autumn are obvious. Affected by monsoon, the shoal wetland park has typical biodiversity, forming a typical Jiangnan wetland landscape. Since Bagua island is an island embraced by riverside wild wetland. According to wetland master plan of Nanjing, Bagua island has a total area of 2,857 mu wetland, and plan to build 20 acres of aquatic plant seedlings, 50 acres of gossip paddy fields, and 50 acres of landscape hills. The future focused development area is located in the southwestern corner, named Bagua wetland park. It owns 690 hm², with water body 277 hm²(accounts for 40% of the whole wetland park). Based on the 'national wetland planning guideline'(2010), bagua island gives development zoning plan for the wetland park, and divides the whole park into 4 functional zone: conservation zone(163hm²),recovery zone(127hm²), demonstration zone(116hm²), and development zone(280hm²)(figure4-66).



Figure 4-68. Wetland scenery in spring
Source: baidu

In spring, moderate rainfall and flood make wetland a spectacular green place and the still lake looks like a large mirror. A large number of migratory bird breeding, migration and distribution here.



Figure 4-69. Wetland scenery in autumn
Source: Xinhuanet

In autumn, the vast reed marshes rustle in wind. Various natural trees make wetland have rich color layers. Both spring and autumn are good season for wetland scenery travelling.



Figure 4-70. Wetland scenery in summer
Source: Xinhuanet

In summer, wetland sometimes would be flooded by Yangtze river, hardly accessed. Yangtze river flows from the west to east, and enter Bagua island mainly from the southwestern part, wherer wetland can resist and purify part of polluted water in a way.



Figure 4-71. Wetland scenery in winter
Source: author

In winter, plants and trees are withered. We see nothing but barren fields, overrun with weeds and biers. Opposite to summer, winter is extremely cold and dry, thus both summer and winter are not suitable for travelling.



4.7.2. Yangtze river

Bagua is a sandbank plain formed by the alluvial action of the Yangtze river. The Yangtze river is divided into north and south branches in Bagua island, with south branch as the main stream and north branch as the tributary. The maximum water depth is about 10m, with a coastline of more than 30 km, is a relatively good preserved wetland environment in Nanjing. In addition, the government has set clear regulation and control over coastal development (figure 4-72): most shoreline can be used for living and leisure function, except for the part of west and south region, which is for protected drinking water resource. Actually there are two main problem of Yangtze river these years. One is the water quality degradation, and the other one is the seasonal flooding situation. A few years ago, there were baiji dolphins in the Yangtze river. But current water quality can not reach national standard because of the industrial park construction across the river. For the general tourist, they may see the Yangtze river as tourism scenery, however, for the long-stay residents, they would see the river as basic natural and life environment. It is urgent to solve the water pollution and flooding problem.

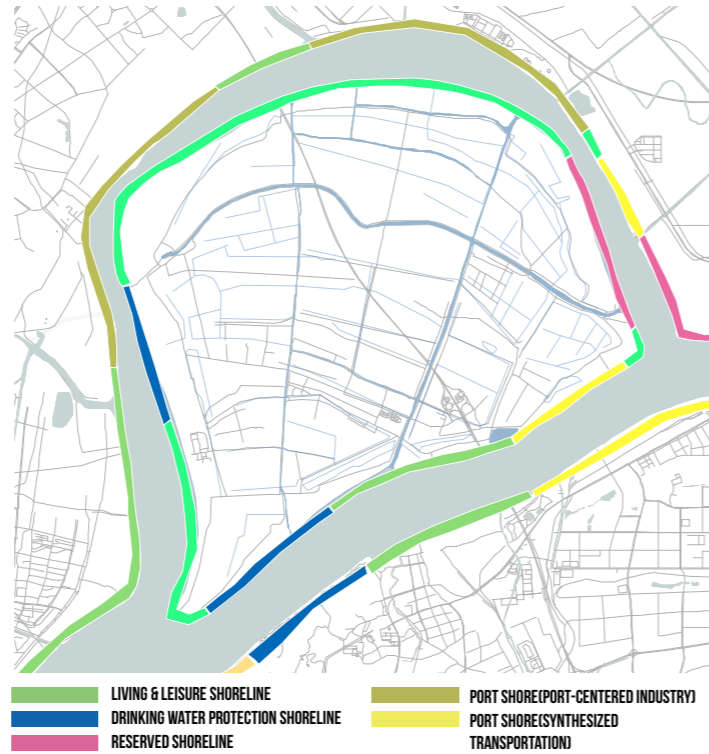


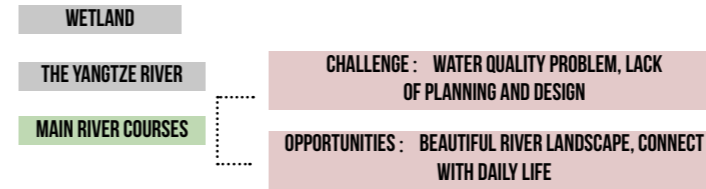
Figure 4-72. Yangtze river regulation map
Source: author



Figure 4-73. Bird view of Yangtze river
Source: nj.leju.com



Figure 4-74. Flooding problem in summer season
Source: js.people.com.cn



4.7.3. Main river course

Bagua island has rich water system, includes over 300 small ditches, various river courses and ponds up to 9.8km², which accounts for 17.5% of the total surface area of the whole island. In Bagua island, there are good water networks and relatively independent water system pattern. Among these river courses, there are three main river courses worth to mention—Shuangliu river, Yuejin river and Jianghe river (figure 4-75). The first two river course run through the whole island from north to south, while Jianghe river run through from east to west. Other river courses branch such as Wuyi river and Guanmin river also play important roles in the water system. Among these river courses, Jianghe river is the biggest one, about 9km long, 50-80 meters wide. In 2012, Nanjing dragon boat association awarded it one of the best dragon boat competition river course in Nanjing. These river courses and ponds are also useful for local raising livestock, irrigating crops, bathing, and supporting river fish breeding etc.. However, there are some development challenge as well: lack overall riverside planning and design; lack ecological protection. For instance, hard river slope surface not well connected with water landscape; serious seasonal duckweed pollution problem; lack of riverside leisure design (riverbank platform, path, corridor) etc..

For homestead-based rural leisure development, river courses is necessary and important because it is related with people's daily life. River courses in Bagua island distribute through the whole island, thus for long-stay residents, river is part of their general living environment. For example, after dinner, they may walk by the river for 1 hour; during festival, they may hold dragon boat match in the river. There is a Chinese saying that: river is the mother of rural settlement. If we can use the best of the river resource, we can influence rural life by the power of nature in a way.



Figure 4-75. Water system in bagua island
Source: author



Figure 4-76. Jianghe river course
Source: SOHU.com

4.8 CONCLUSION

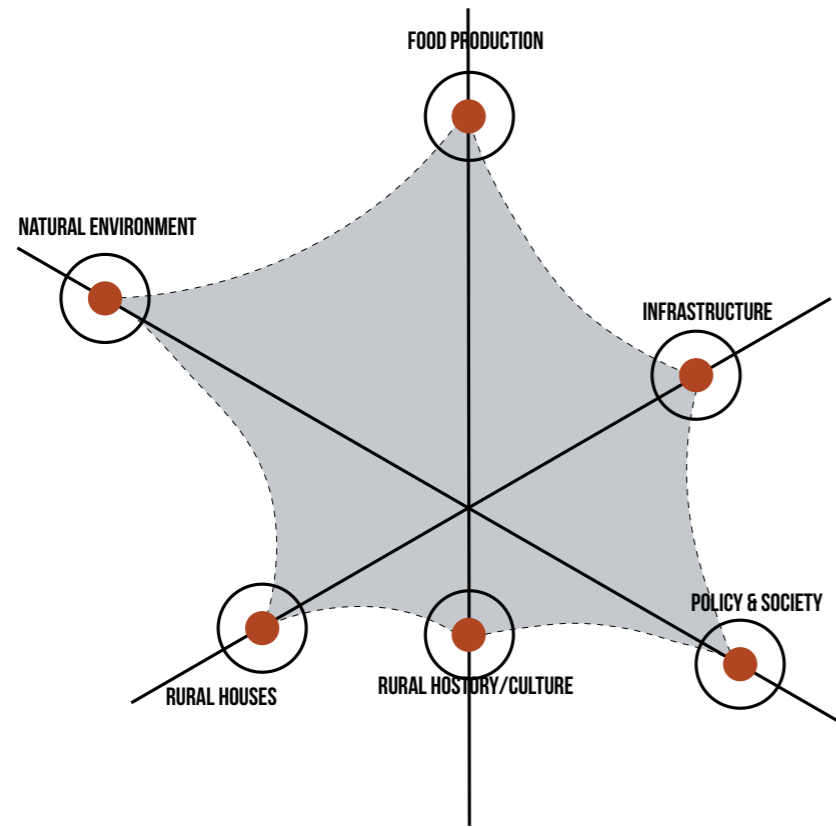


Figure 4-77. Six pillars' value evaluation rose diagram
Source: author

1. When we look at 6 pillars separately, we can conclude a scoring rose diagram (figure 4-77). According to above analysis, food production, natural environment, and rural houses relatively have good development potential. While current infrastructure foundation is insufficient, however, with the construction of heyang tunnel highway and qiyi highway, this pillar would be strengthened. Rural history/culture value in bagua island is weak now, however it is not the vital characteristic for long stay rural leisure development.

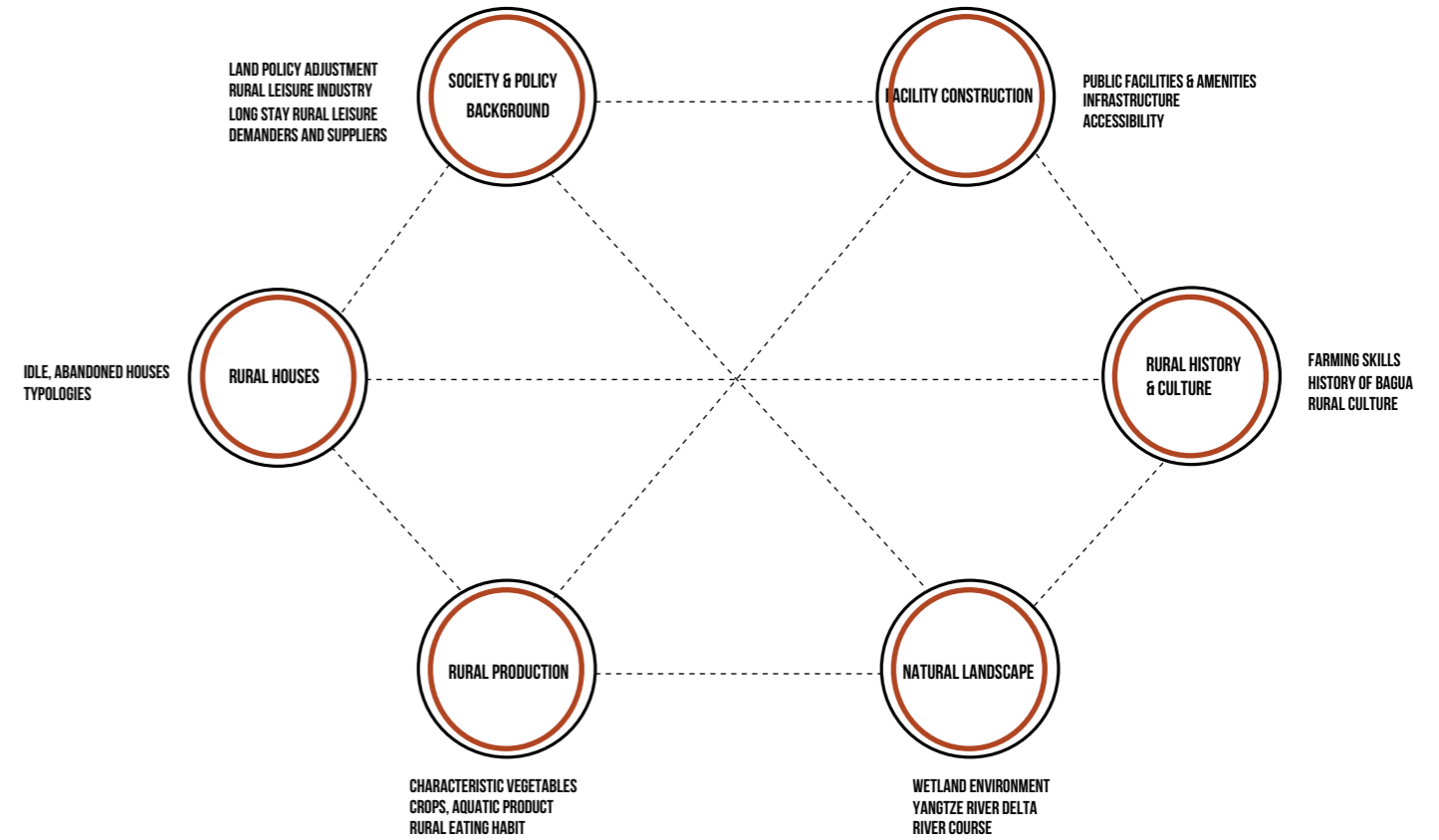
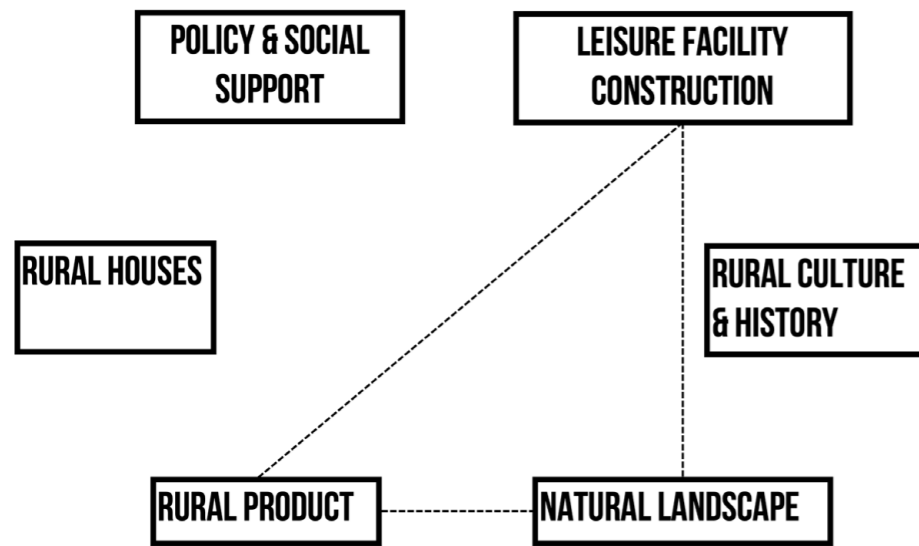
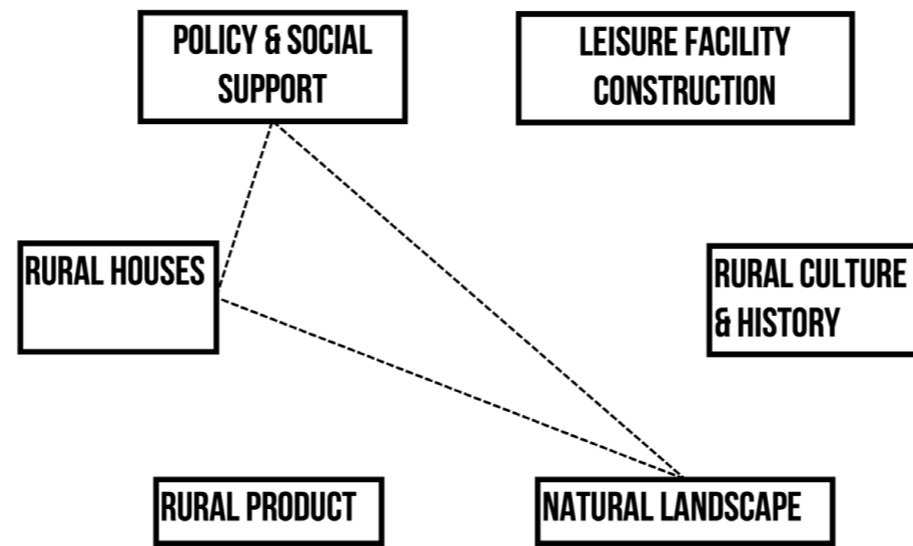


Figure 4-78. Six pillars are not connected to each other
Source: author

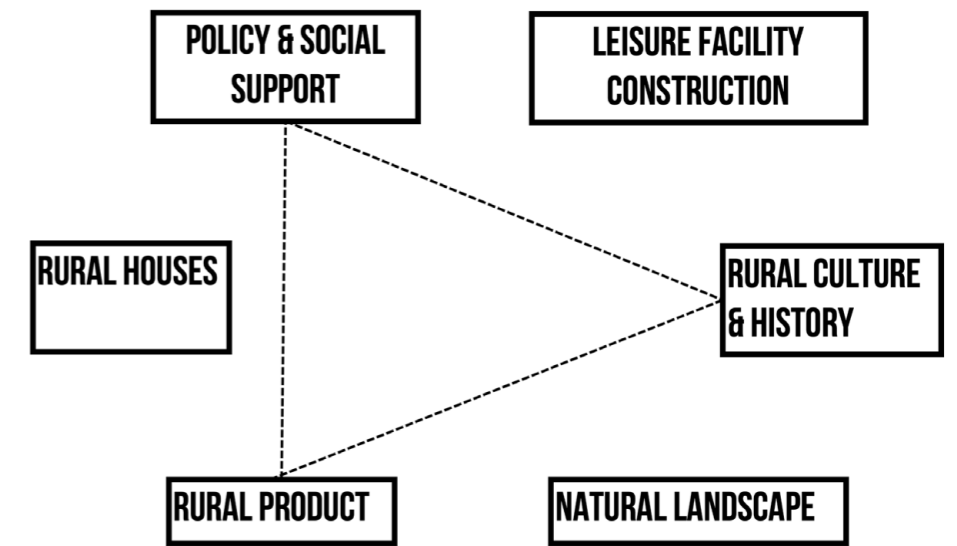
2. When we look at 6 pillars integrally, we can find out the inner relationships and potentials based on different pillars. Although the potential of each pillar is promising, the relationship building among these pillars is blurry and lacking. Each pillar develops isolatedly. For example, the rural production pillar is already with strong development foundation in bagua island, but it is mostly for rural agriculture industry, and not connected well with homestead and rural leisure industry, which means rural system is not linked with urban system. There is much wild potherb resource growing in natural wetland area, but the rural production development is only limited in cropland. Thus, the relationship among food production, natural landscape, and rural houses is weak.



The connection among pillar: rural leisure facility construction, rural product and natural landscape is missing. Current rural leisure facility construction in Bagua island is mostly profit oriented, without the local rural product and natural landscape concern, which lead to the phenomenon: the rural construction in Bagua island is similar to the general urban tourism project.



The connection among pillar: policy & social support, rural houses and natural landscape is missing. Rural houses in Bagua island is occupying nature space and grow wildly without spatial planning and design. Under policy adjustment background, it is necessary to connect these three pillars.



The connection among pillar: policy & social support, rural culture & history and rural product is missing. Local distinctive agricultural product and rural culture are potential, however are not developed and promoted based on the policy and social support.

Figure 4-79. Three missing connections out of 6 pillars
Source: author

5. STRATEGIES

5.1 PLANNING PRINCIPLES

As I explained in methodology chapter, for the future long stay rural leisure development, I select 2 relative elements(keywords) respectively from three layers(urban, rural, nature layer). For urban layer, I select social & policy support and rural leisure facility construction as keywords; for rural layer, I select rural house and rural history/culture as keywords; for natural landscape layer, I select rural production and natural landscape as keywords. The reasons to support my arguement can be seen in the methodology chapter. Here author will not repeat. Since my main goal is to connect three layers(systems) in order to achieve an integrated complex system. None of these keywords can exist independently in my project. Based on the analysis of Bagua island, naturally, I try to find the relationships among 6 pillars, and my three main principles are derived from these relationships. Actually, any combination can develop into a principle as long as it connect rural, urban and nature system. It can have several combination possibility, and these possibilities all help me to get my planning and design principles. Principles should cover all the pillars in the end, thus I choose the most relevant and direct combination and organize them into three principles as shown below(figure 5-1).

1. Progressive, moderate rural leisure construction

Offering a flexible, sustainable, moderate rural leisure environment, in the premise of nature respect and protection. To connect rural leisure construction, natural landscape and rural production pillars.

2. Homestead acupuncture vitalization

Making use of idle homestead land resource and affiliated cultivation land by progressive and small-scale homestead renewal and vitalization. To connect homestead and leisure and ecological environment elements.

3. Preserve and promote distinctive rural identity

Trying to reserve and promote local characteristic identity, which mainly includes distinctive agricultural product, cultivation culture, and rural landscape. To connect natural resource and agricultural production and leisure elements.

1. PROGRESSIVE, MODERATE LEISURE CONSTRUCTION

2. HOMESTEAD ACUPUNCTURE VITALISATION

3. PRESERVE AND PROMOTE DISTINCTIVE RURAL IDENTITY

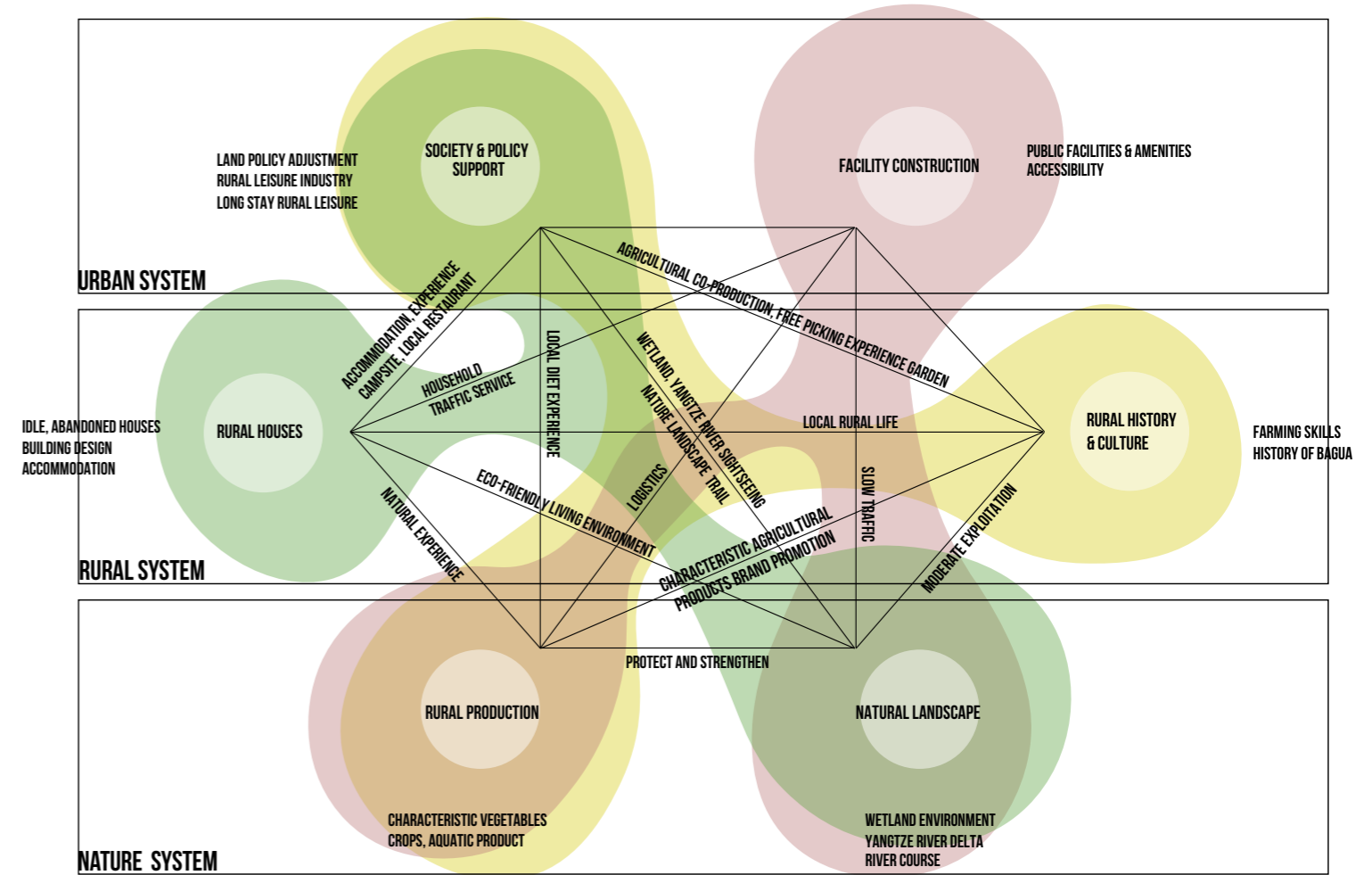


Figure 5-1. Design principles
Source: author

1. PROGRESSIVE,
MODERATE LEISURE
CONSTRUCTION



Figure 5-2. Progressive, moderate leisure construction principle
Source: author

2.HOMESTEAD ACUPUNCTURE
VITALISATION



Figure 5-3. Homestead acupuncture vitalisation principle
Source: author

3.PRESERVE AND PROMOTE
DISTINCTIVE RURAL IDENTITY



Figure 5-4. Preserve and promote distinctive rural identity principle
Source: author

5.2 DEVELOPMENT PERSPECTIVE

1. PROGRESSIVE,
MODERATE LEISURE
CONSTRUCTION

+

2. HOMESTEAD ACUPUNCTURE
VITALISATION

+

3. PRESERVE AND PROMOTE
DISTINCTIVE RURAL IDENTITY

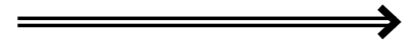
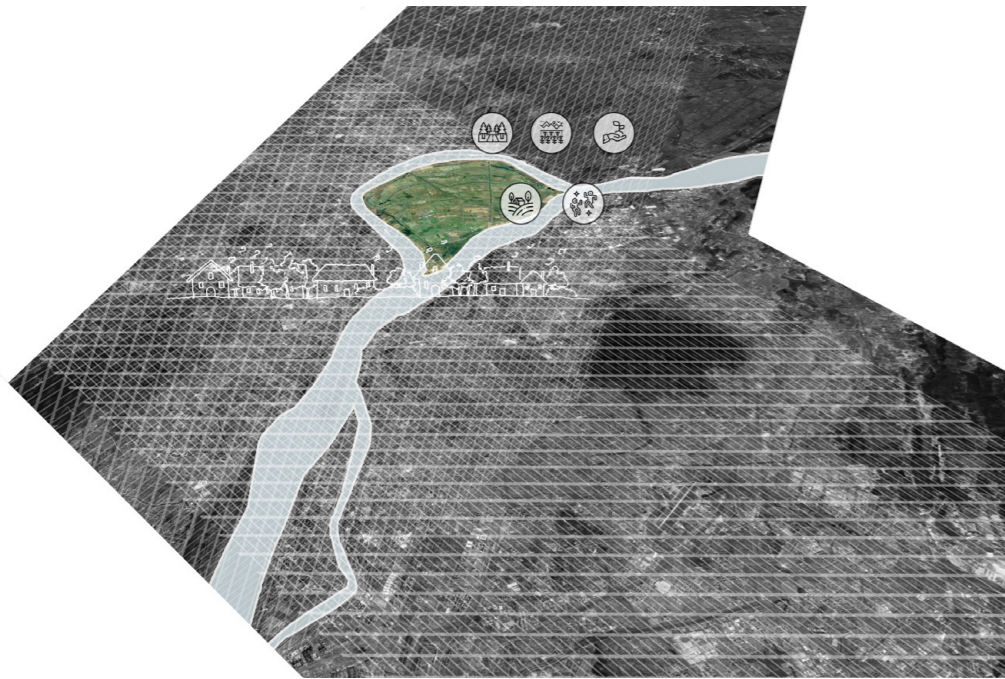


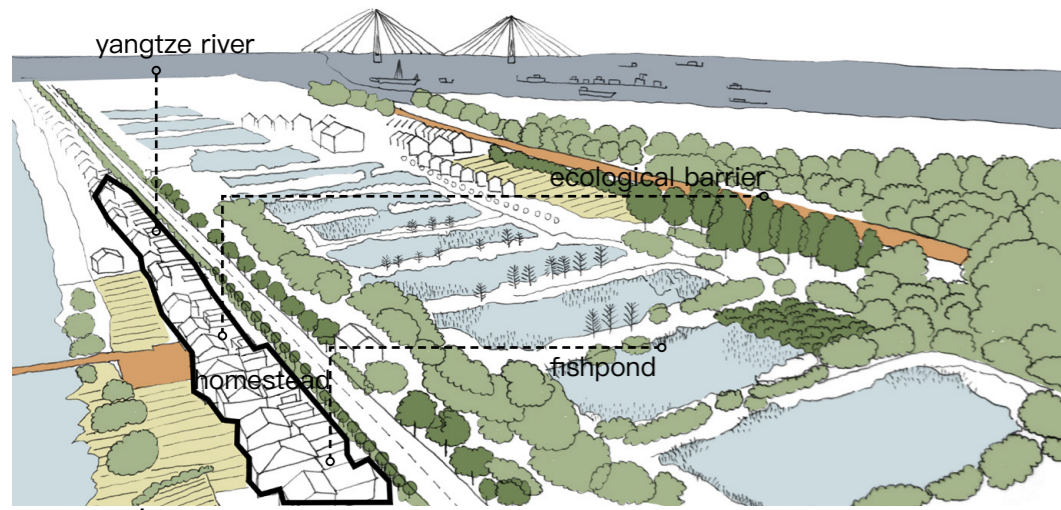
Figure 5-5. Overall vision of bagua island
Source: auhtor



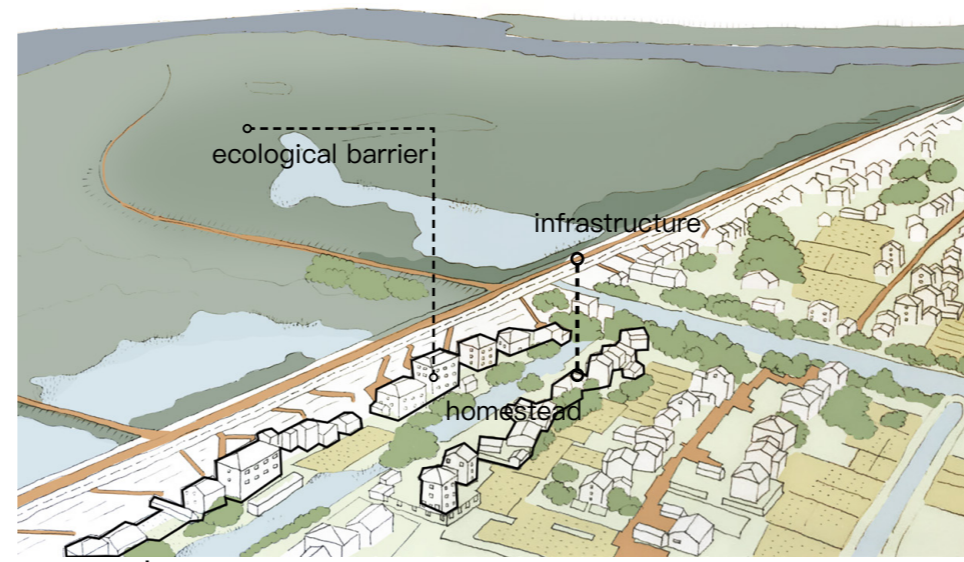
ISLAND SCALE

A green, native, leisure, inclusive, rural island, with various of rural leisure development modes for urbanite to escape from urban hustle and bustle.

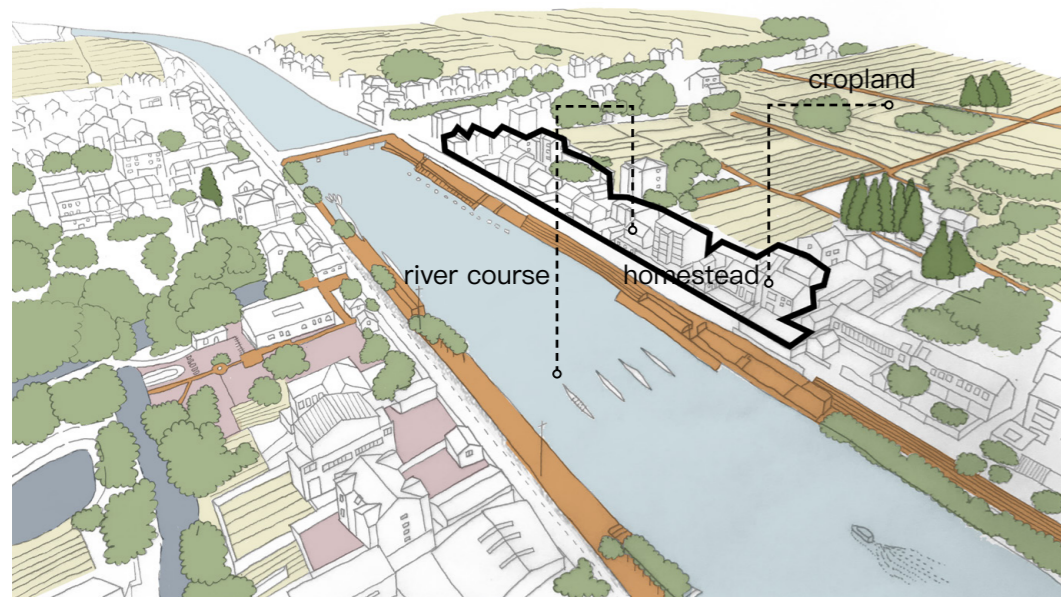
Figure 5-6. Vision of island scale
Source: author



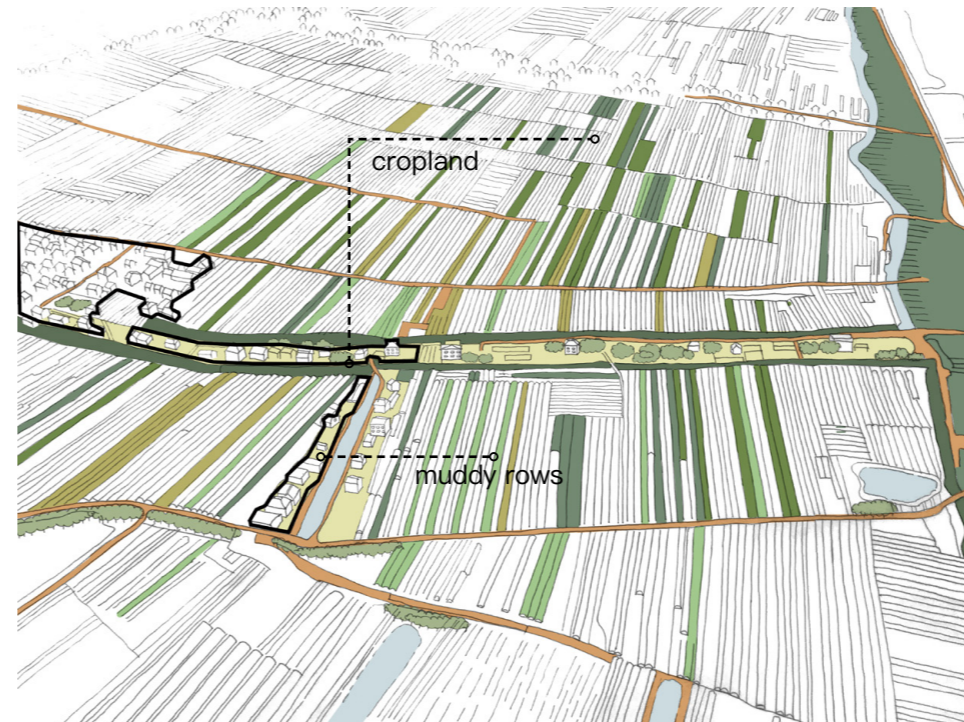
HOMESTEAD | POLDER



HOMESTEAD | WETLAND



HOMESTEAD | RIVER



HOMESTEAD | FARMLAND

MESO SCALE

long stay rural leisure is part of the overall rural leisure industry in bagua island, and connects tightly with natural, rural and urban system(such as natural wetland, yangtze river, rural culture and history, rural products, current profit-oriented leisure tourism construction ect.). A harmonious, symbiotic, systematic organization.

Figure 5-7. Vision of meso scale
Source: author



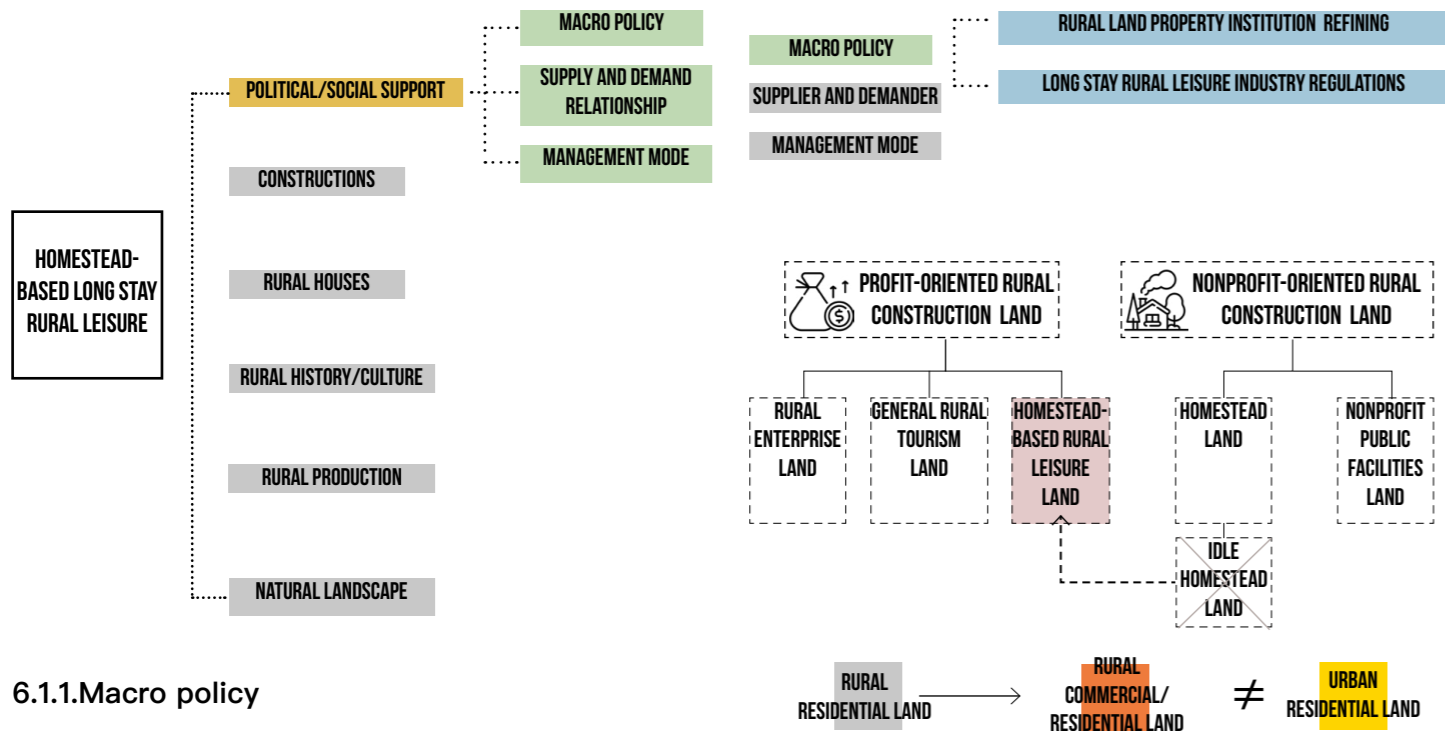
Figure 5-8. Vision of homestead scale
Source: author

HOMESTAD SCALE

Small and beautiful, authentic rural characteristic, mixed-use, affordable, strong social interaction, mainly long-term rent mode.

6. IMPLEMENTATIONS

6.1 POLITICAL/SOCIAL SUPPORT



6.1.1. Macro policy

The macro policy of long stay rural leisure development is based on the 'the separation of three rights' regulation. However, this programmatic regulation needs to be refined. First of all, the stakeholders main body should be the same, and their separate rights should be guaranteed and controlled. For farmers, their maximum rent/share term is up to 20 years in order to control the unintended rental and sale market. Their idle homestead can only be used for residential function, rather than business or industrial function. For the urban tenants, they are strictly forbidden from buying rural homestead or cropland. They can choose the tenancy term freely. For the operator and managers, common real estate companies are strictly restricted participating in the rural rental homestead market (otherwise, it will cause housing price turbulence). While social enterprises are the main operating and managing body, which can have more power to operate the whole process.

Secondly, the land property of homestead is slightly changed. In the past, it was non-profit oriented rural construction land. Now it could be gradually shifted to profit oriented rural construction land. However, we should still keep in mind that it is still completely different from the urban residential land. Author will elaborate the policy revision later in the pilot project chapter.

Figure 6-1. Land property adjustment
Source: author

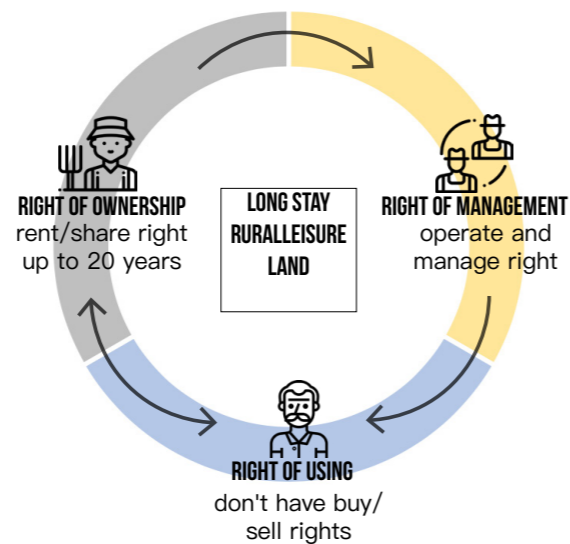
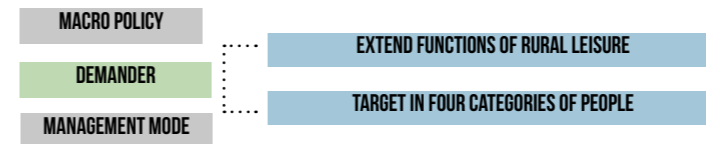


Figure 6-2. Clear land rights transfer regulation
Source: author



6.1.2. Supplier and demander--demanders

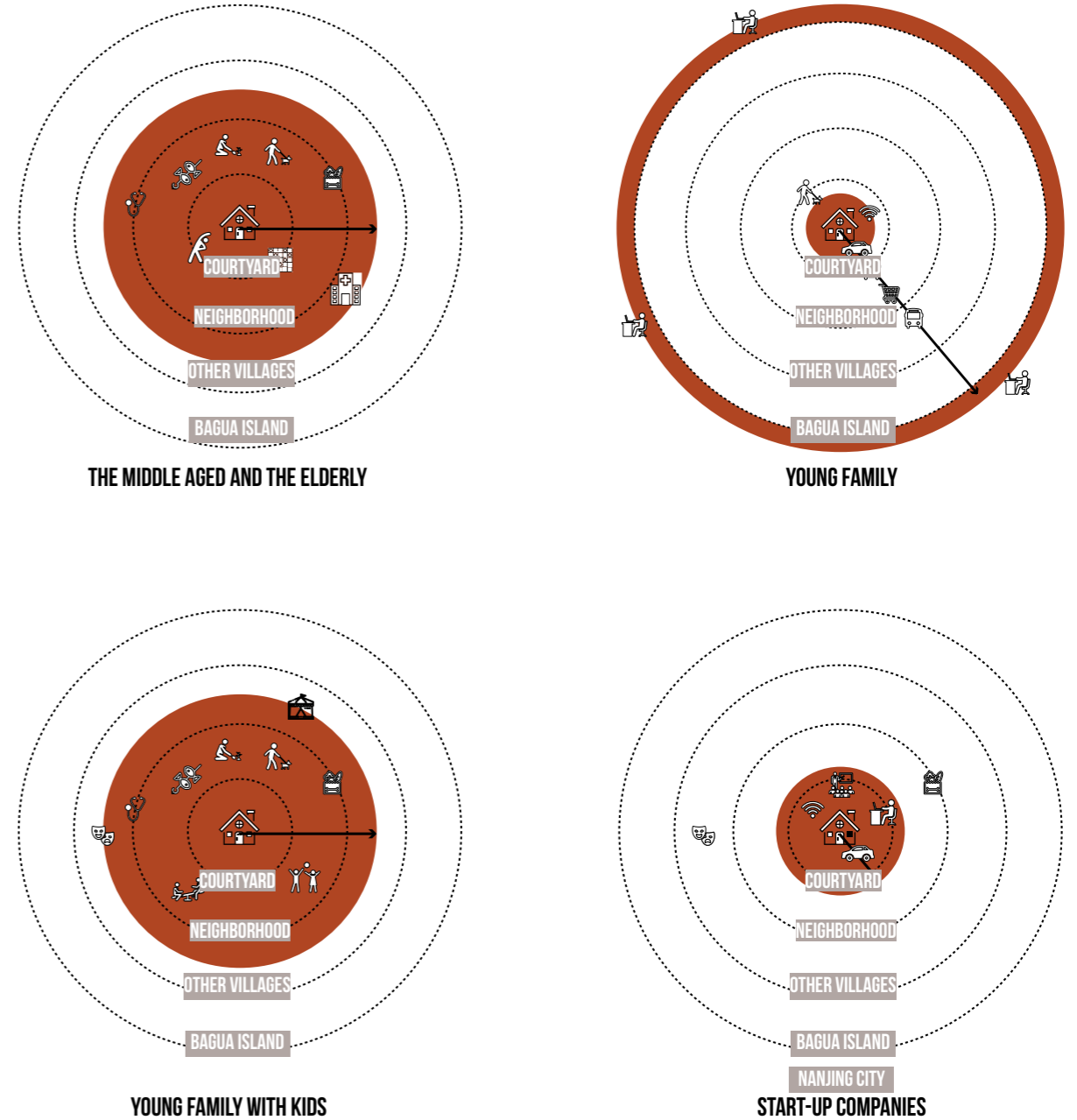


Figure 6-3. Scope of activity of different demanders
Source: author



Figure 6-4. Middle aged and the elderly
Source: author



For this kind of people, their appeal is social, nostalgic, organic food, air. The design strategy gives them more public space for communication and the opportunity to grow organic and healthy vegetables. The lease term is usually longer, 10-15 years.

LEASE TERM : 10 YEARS



Figure 6-6. Young couples
Source: author



For this kind of people, their appeal is affordable house, thus the strategy is to give them convenient transportation, communication facilities. They don't care that much about public space. Leases are generally flexible and short, usually five years.

LEASE TERM : 5 YEARS



Figure 6-5. Young family with children
Source: author



For these people, their appeal is a natural and pollution-free, friendly growing environment. The lease period is generally flexible short, but considering the primary school and junior high school, most parents in Nanjing will choose the urban preschool district room, so consider the children are preschool children (under 6 years old), set for 5 years.

LEASE TERM : 5 YEARS

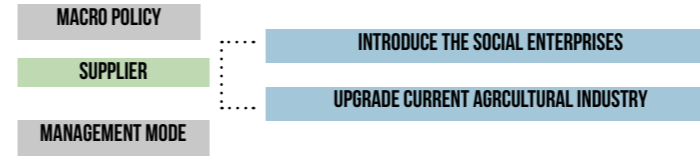


Figure 6-7. Start up companies
Source: author



This kind of people are looking for a cheap rent, free and innovative working environment. The case in the picture is the communication balcony of tian central architecture firm in Taiwan. Young people with dreams can face the countryside and brainstorm. The growth period of a startup is generally within 5 years(zhihu), so the lease term is set at 5 years.

LEASE TERM : 5 YEARS



6.1.2. Supplier and demander--suppliers

Social enterprises:

One important strategy is to introduce social enterprises into Chinese homestead-based long stay rural leisure development process. As analyzed before, urban real estate companies are strictly prohibited from homestead-based development because the land property policy. However, other local rural leisure enterprises are not powerful and experienced enough to handle the long-term operation at present. Obviously, Chinese government has more economic and political power to give out the investment impact and macro policy/guidance, while the invisible hand also can lead markets to allocate resources efficiently. However, Chinese rural homestead is scattered and mainly in small scale, thus the social power is also necessary and can help the government to get access to each projects. Author uses the 'social housing association' as Netherlands reference, and introduce social enterprises. The social enterprise is an up and coming phenomenon around the world. Social enterprises have both business goals and social goals. As a result, their social goals are embedded in their objective, which differentiates them from other organizations and corporations. A social enterprise's main purpose is to promote, encourage, and make social change. In Chinese case, social enterprise may have several subdepartments, which in charge of different mission, such as market, design, management, promotion etc. .

Farmers:

Another supplier is local farmer in Bagua island. They should be stimulated enthusiasm to participate in rural leisure tourism development. In the past, farmers' task is mainly limited in basic agricultural industry(the first industry), while in the future, it can upgrade to service industry(the third industry) such as housekeeping, catering and ordinary daily maintenance. All the supplying service including the homestead resource should be based on the farmers' willingness. Farmers can possibly collaborate with social enterprise and rural collective, and get individual rents and share out a year-end bonus as return.



Figure 6-8. What is social enterprise?
Source: The Community Council for Somerset

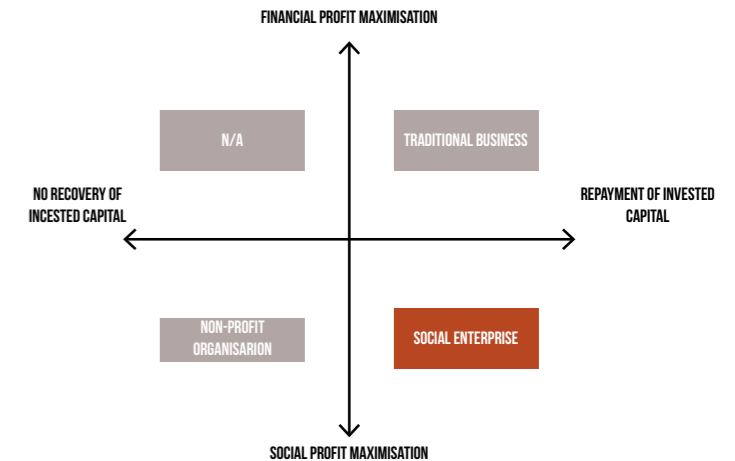


Figure 6-9. Characteristic of social enterprise
Source: Conscious Company Media





6.1.3. Management mode

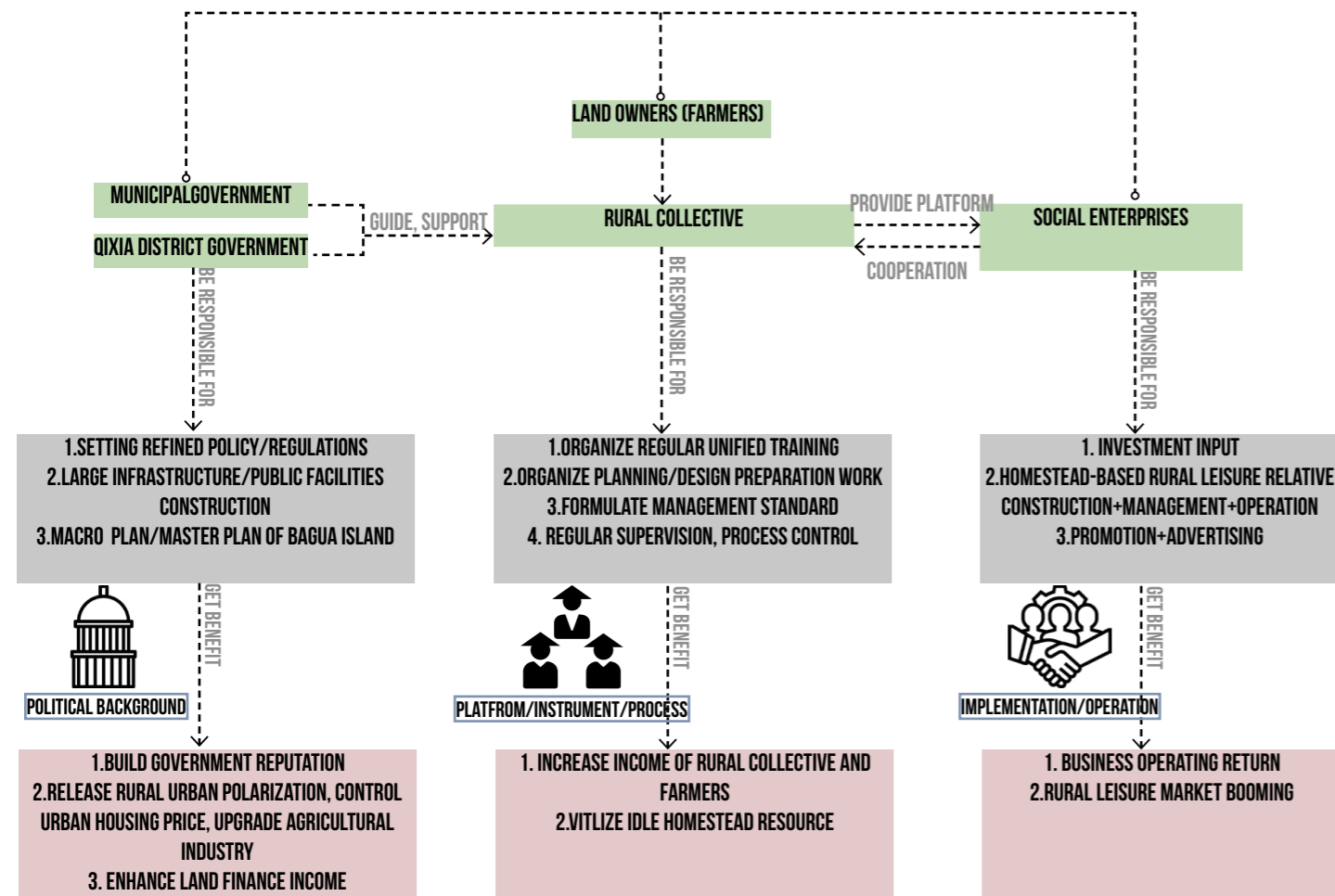
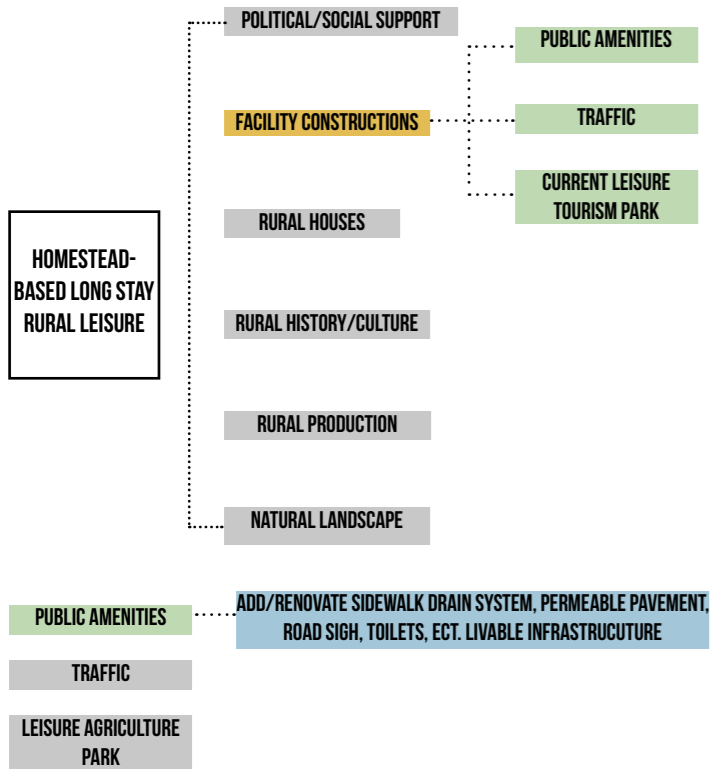


Figure 6-10. New management mode of suppliers
Source: author



Figure 6-11. The balance between supply and demand
Source: author

6.2 FACILITY & CONSTRUCTIONS



6.2.1. Public amenities

Based on the analysis above, public amenities are required to be improved urgently. However, we also should keep mind the principle --'small and beautiful'. Public amenities should be progressively, appropriately, reasonably developed based on the actual demands. From the island scale, public amenities include science, education, culture and health constructions, such as schools, hospitals, clinic, supermarket, tourism center, activity center etc.. Based on the existing construction, two tourism center are added at the entrance area of Bagua island. From the neighborhood scale, community hospital, neighborhood clinic are open fitness equipment are also necessary (figure).

The methods is improving the current existing rural amenities rather than introducing more massive public amenities. Thus, for instance, we should renovate the current rural road by applying permeable material, transform the current telegraph poles into rural leisure road sign, improve the current public toilets by ecological technology, redesign the abandoned flower box and roadblock as sidewalk oddments. These public amenities are not only for tourists, but more importantly, are for every resident. These amenities offer actual necessary convenience for people's life but not for attracting investment, nor government's reputation achievements.



Figure 6-12. Public convenience services and facilities construction
Source: author

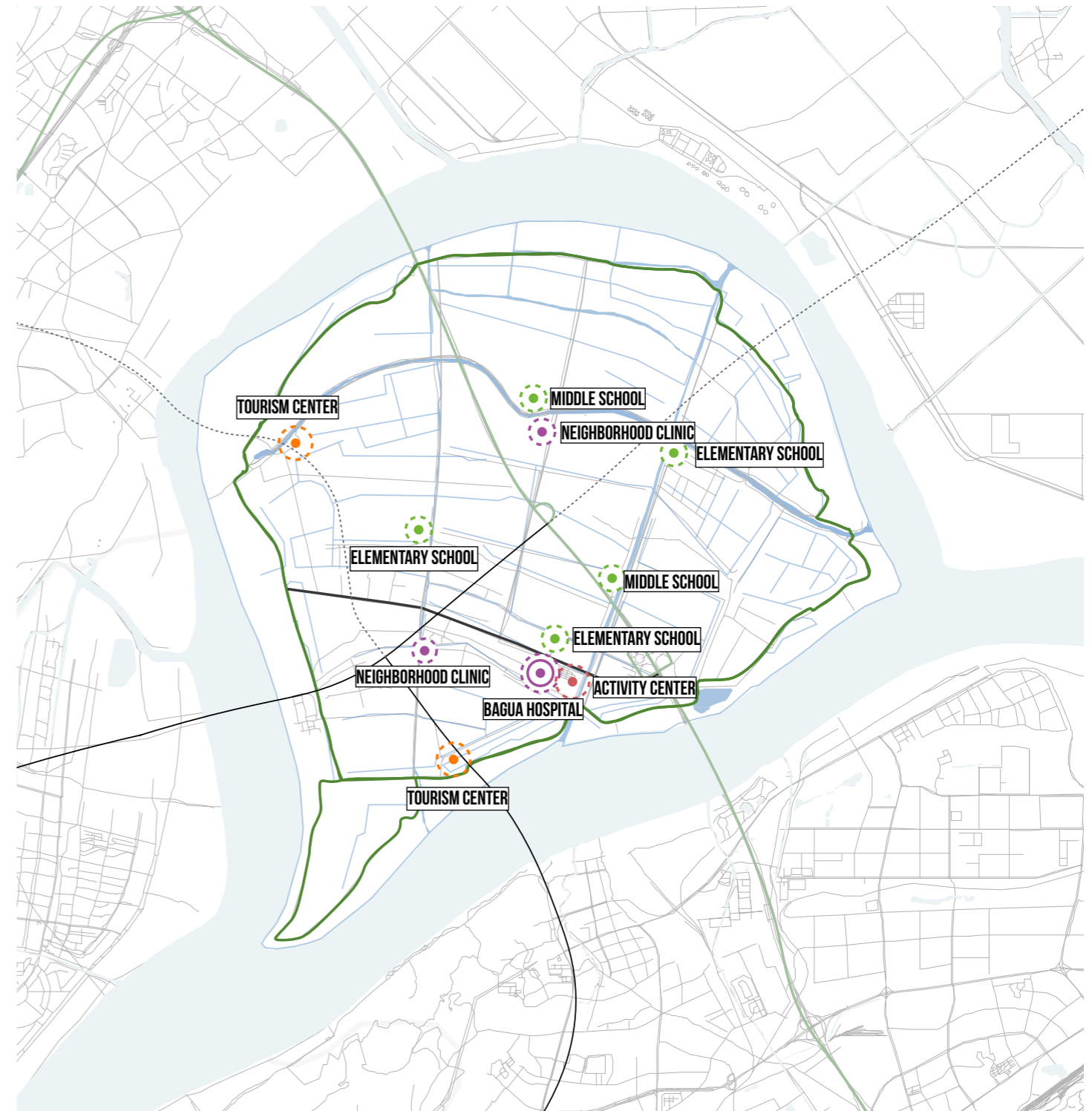


Figure 6-13. The distribution of public amenities
Source: author



6.2.2. Traffic

External traffic

According to the vision above, Bagua island is both a rural tourism island and long-stay leisure island. The former one requires a good accessibility towards island, and the latter one requires a relatively slow but comfortable internal traffic condition (Chinese meaning: "通而不畅").

On the one hand, as to external traffic plan, I suggest to follow the municipal traffic master plan. By 2020, free Heyan tunnel and Puyi highway can guarantee the accessibility towards Bagua island. The second bridge elevated highway doesn't charge the local residents, but charge the tourists for 20rmb. Longitudinal Heyan tunnel and the second bridge highway can bring traffic flow from Nanjing main city (from the south), Pukou residential area (from the north-west). Lateral Puyi highway can bring traffic flow from the Anhui province (from the west), and Yizheng city (from the east).

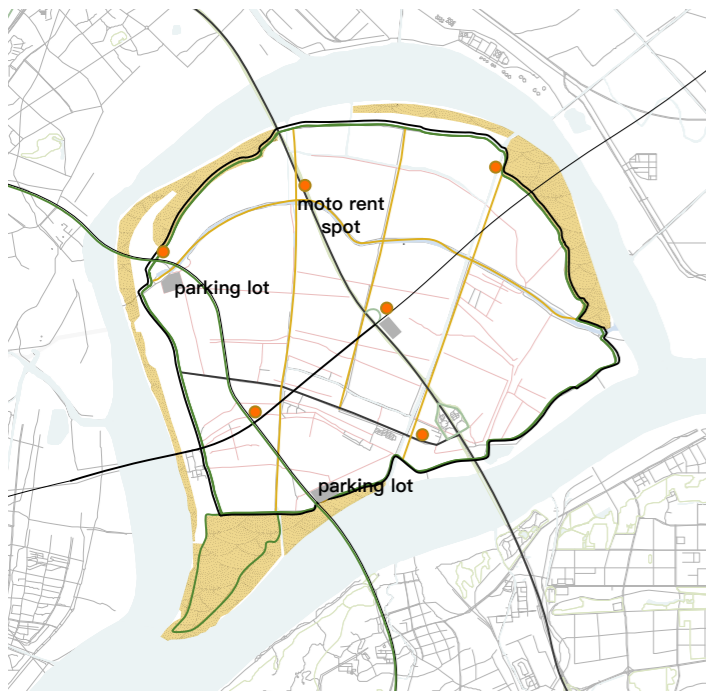


Figure 6-14. External traffic plan
Source: author

Internal traffic

On the other hand, for internal traffic, the principle is to decrease mobility influence. Quad bike and segway is seen as eco-friendly transportation. Under static traffic concern, moto rent spots and parking lots for tourists are mainly located in the road intersection area, which close to the entrance to the island, as orange spots shown below. For the long-stay residents, their cars can be parked in their own neighborhood/courtyards.

The principle 'wild delight' also give reason of introducing segway and quad bike. They are regarded as the mobility more close to natural system and rural system, with interesting driving experience meanwhile. According to the actual observation and interview, they are also suitable for leisure tourism experience. For example, south-west shore is the best viewpoint to enjoy the beautiful sunset in Bagua island. However, you need to pass through the large wetland area firstly, which doesn't have car lane, but only wooden footpath. In this condition, renting a quad bike would be a wise decision—to explore the wetland and reach the shore viewpoint.

As shown in the internal traffic map below, yellow routes are mainly for segway, while yellow area is mainly for quad bike tour. Green routes are recommended for bicycles and segways. Pink pathway are pedestrian (alley) which are completely preserved unchanged.



Figure 6-15. Introduce diverse rural leisure transportation means
Source: Baidu

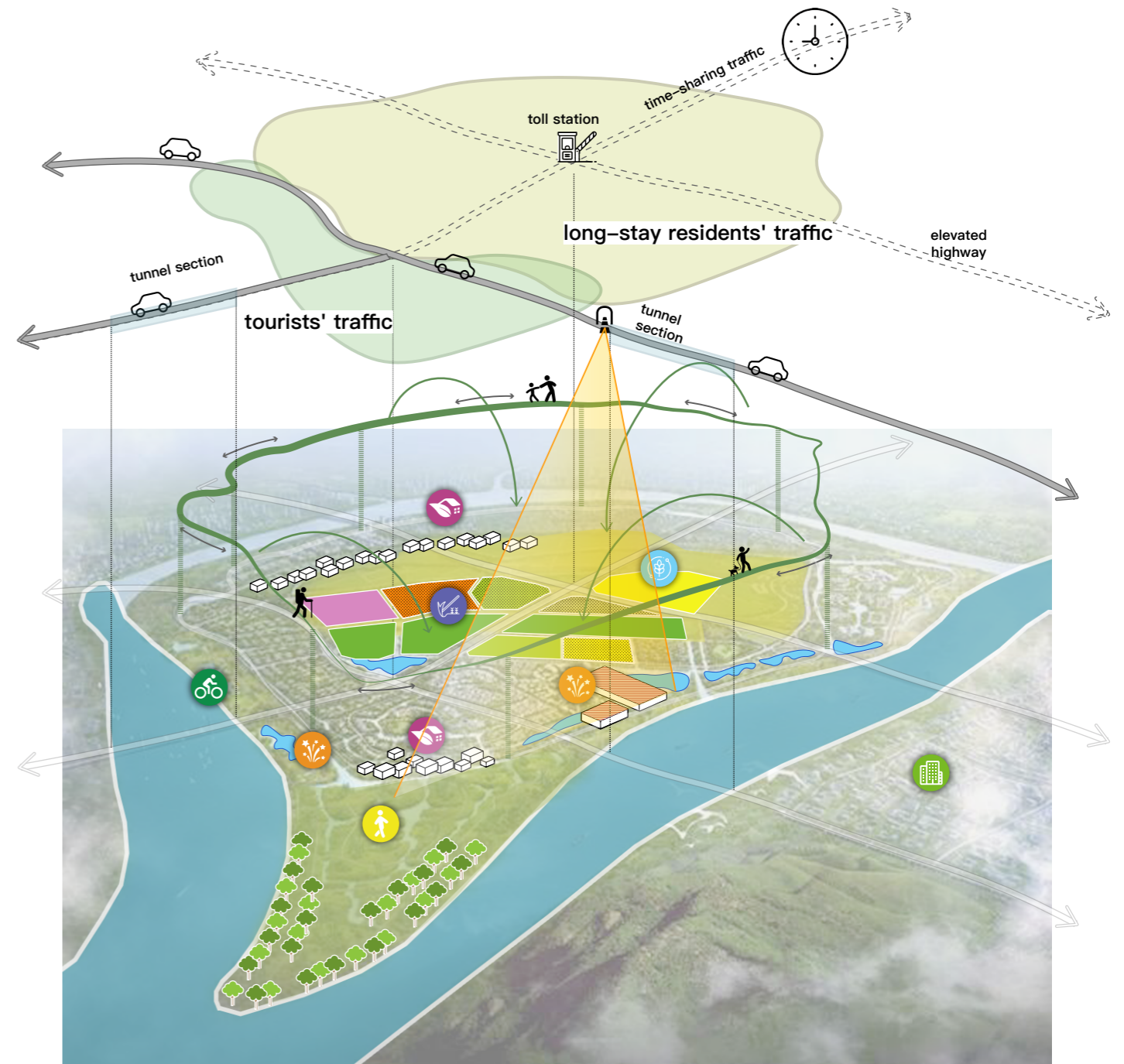
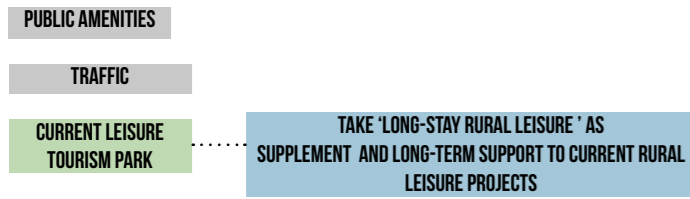


Figure 6-16. Traffic vision of Bagua island
Source: author



6.2.3. Leisure agriculture park

The case of homestead-based hot spring in Tangshan, Nanjing: the village is surrounded by developed tourism projects and rich landscape resources, with natural scenery in the north, tangshan hot spring tourism resort in the south and ziqing lake ecological scenic spot in the west. In this case, rural homestead-based small scale intercession is also an essential and important part of the overall master plan. Although its scale might be much smaller than rural resort, agricultural complex, rural tourism projects etc., it is equally important for the whole rural leisure system.

Actually, in current redevelopment projects, due to the lack of long term support, some beautiful Chinese villages construction lacks long-term management and maintenance in the overall stage, thus enter a new round of recession or functional alienation. In the face of all kinds of anomalies, the author would like to emphasize that "the beauty of the countryside" is not a temporary image whitewash, instead, we should give priority to the rural resilience and development ability, so the internal "hematopoiesis" is far more important than the external "blood transfusion", which means, homestead-based rural leisure is not only functional, but also the long-term rooted projects and helps to continuously active local sustainable development and growing.

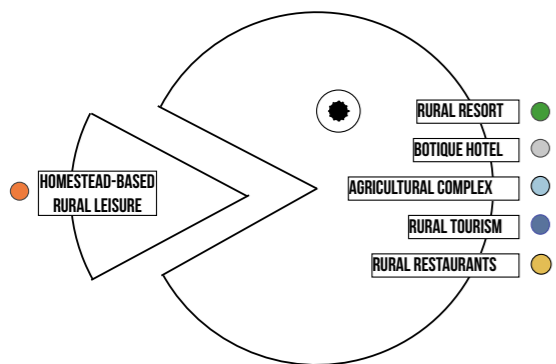


Figure 6-17. Take 'long-stay rural leisure' as supplement and long-term support to current rural leisure projects
Source: author

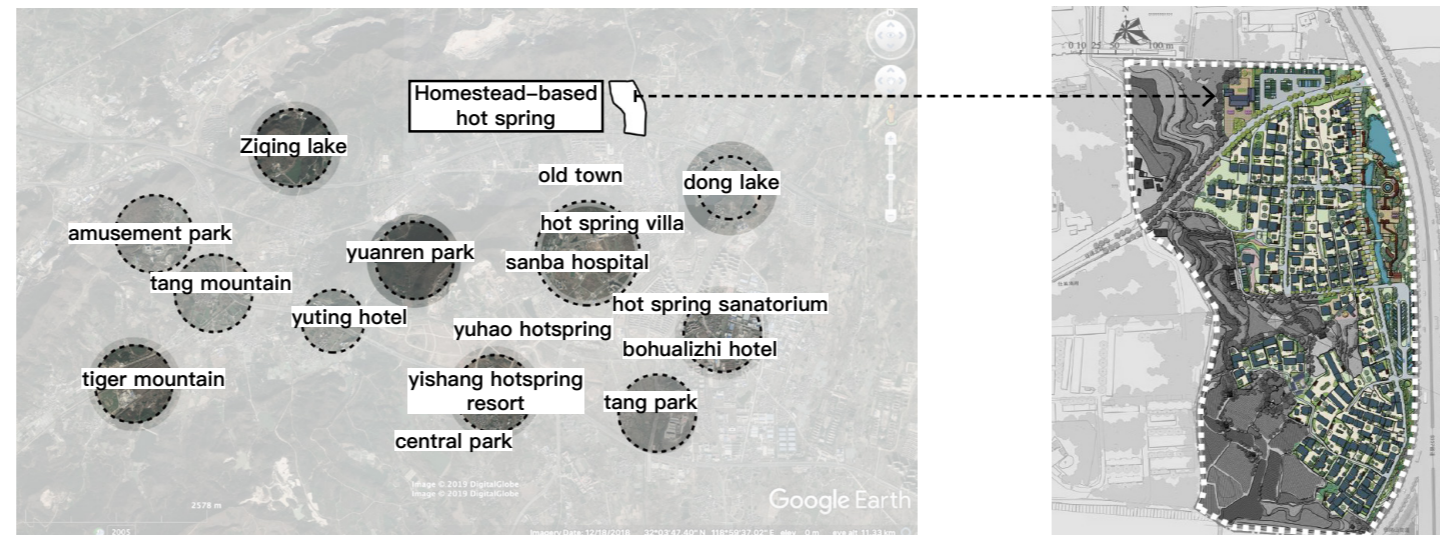


Figure 6-18. Case study: Tangshan homestead-based rural leisure development
Source: author

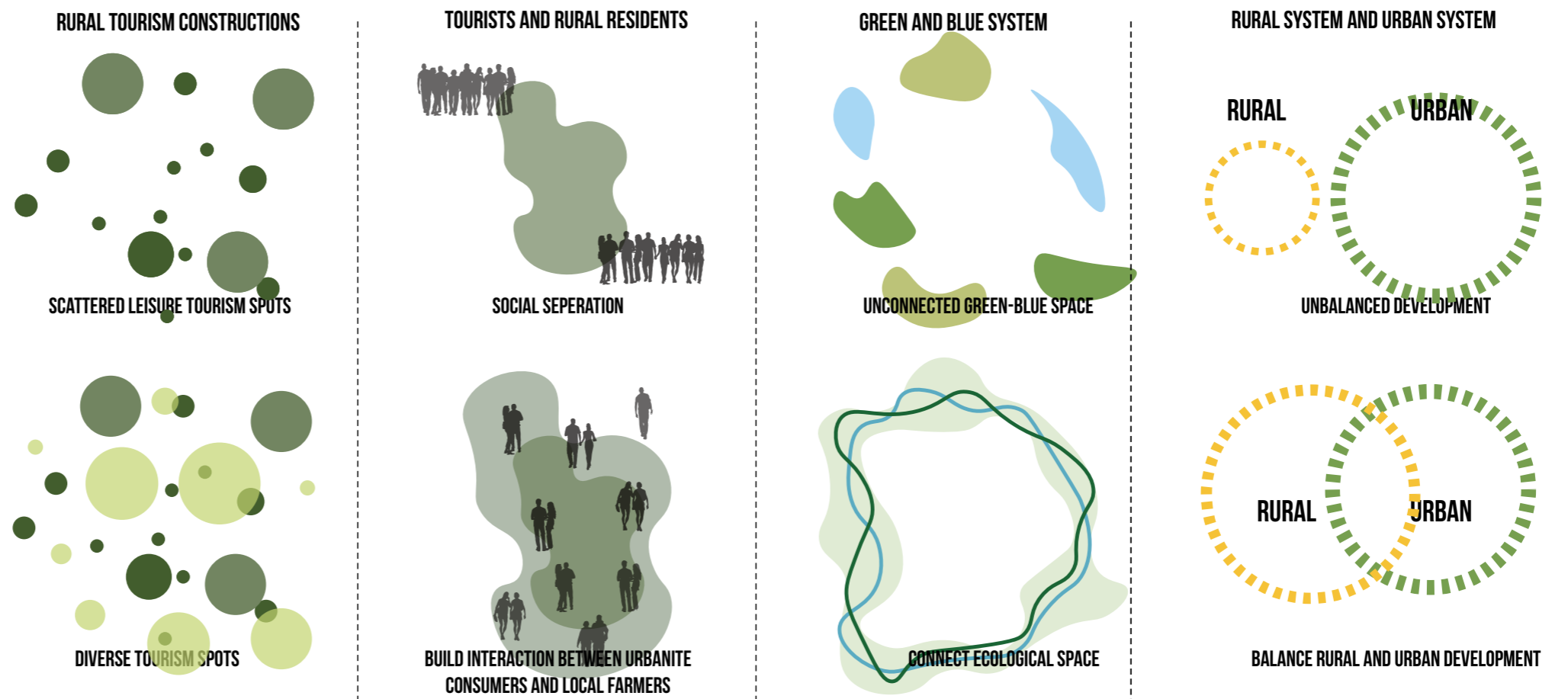


Figure 6-19. New relationship between 'long stay rural leisure' and current rural leisure tourism projects
Source: author

6.3 RURAL HOUSES

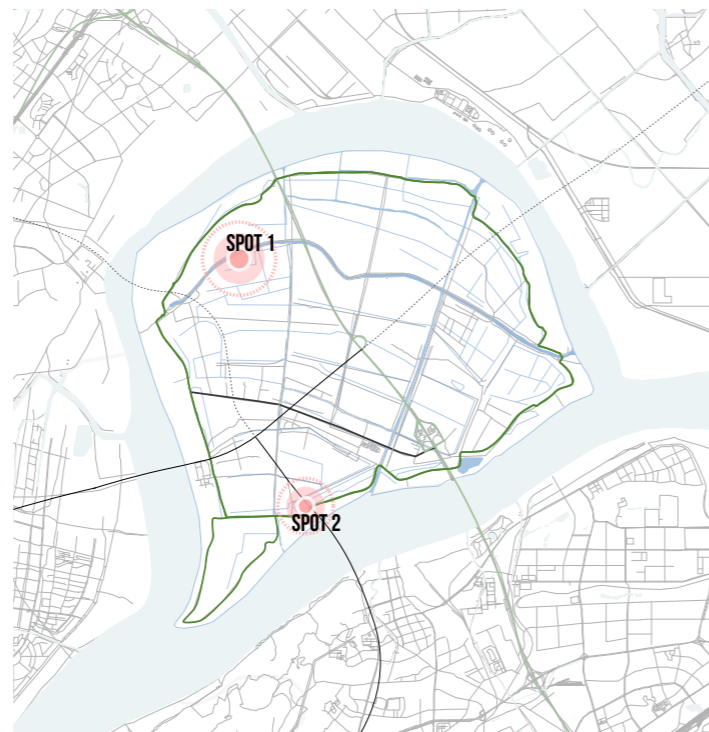
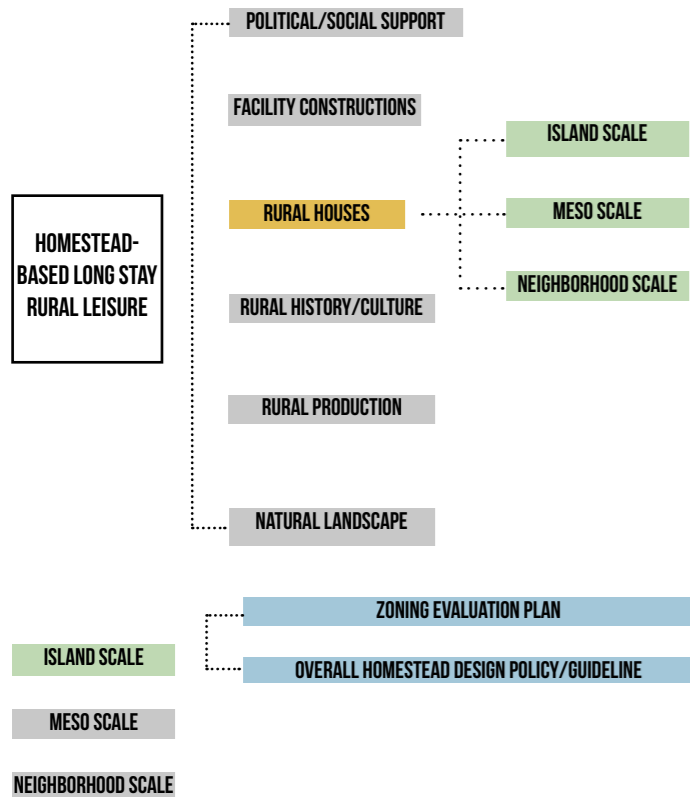


Figure 6-20. Potential development and construction spots
Source: author

6.3.1. Island scale--zoning plan

According to the analysis above, writer consider two potential spot for future homestead-based long stay rural leisure development (figure 6-20) .

Reasons for Spot 1--Jianghe riverside area

- 1.Near Jianghe river course belt which has local characteristics and natural beautiful landscape.
- 2.High density of idle rural houses, and dense population.
- 3.Near the future Heyan highway entrance which will bring good accessibility.

Reasons for Spot --Qili village entrance area

- 1.Near the Heyan highway entrance and dikeroad, which has a good accessibility.
- 2.Qili village once spontaneously developed small scale homestead based rural leisure industry. We can still find development foundation here.
- 3.Qili village is close to the southwestern wetland park and Yangtze river upstream.



Figure 6-21. Using local rural materials: Taiwanese case study
Source: author

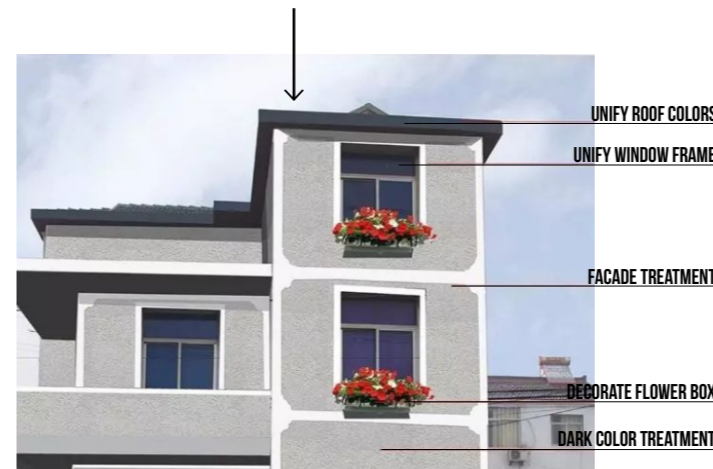


Figure 6-22. Building remould policy
Source: author

6.3.1. Island scale--design guideline

For the design and transformation of homestead, a organized and unified style is needed. For example, Santorini in Greece and Moganshan in Zhejiang, have both shaped local ICONS through architectural design and renovation. Once mentioned, everyone has a picture in the mid of the house style. Santorini in Greece is the white house, while Mogansha is the historical boutique homestay. Bagua doesn't need to completely imitate the mode of Santorini or Moganshan, since it does not have the ability to be a high-end destination, but the overall house image still needs to be unified, memorable and in orderliness.

1. Roughening of the wall: use anti-cracking metope paint for the treatment of wall drawing. If the amount of engineering work is large, use ordinary metope treatment

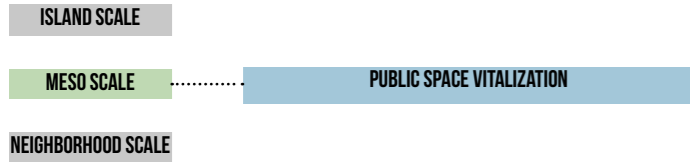
2. Color changes: all colors are unified in light gray tone, the purchase of wall paint to be processed according to the color card

3. Unification of window frames: unify and refresh the outer frames of all Windows. Conditionally change the inner window frames into wood-like aluminum alloys

4. Windowsills shall be beautified: customize diversified windowsills flower hanging boxes, configure plastic flowers or rent real flowers for planting, and encourage residents to grow flowers and plants by themselves.

5.The materials should be adopted from local island. For example, most rural house should be made in brick-concrete structure (figure 6-21) .

6.The number of guest rooms in a single home stay facility shall be no more than 2, the number of beds in a single home stay facility shall be no more than 8, the net area of guest rooms shall not be less than 8 square meters in principle (excluding toilets), the main building shall meet the requirements of local planning and style control, and the area of a single building shall not exceed 800 square meters.



6.3.2. Meso scale homestead

Mesoscale implementation is important, because it not only carries on the overall housing plan from the larger scale, but also derivate the detailed and concrete building design from the smaller scale. When we look at the rural house from a mesoscale, we would notice the surrounding cropland, infrastructure, landscape etc. Rural house is just a part of the rural settlement system. However, it is shped by all the surrounding elements. Based on this consideration, we should respect the current situation, and try best to activate it, rather than demolish and rebuild it. The existing housing typology is that rural house distribute along the road, across the crop land. In each courtyard, rural hosue can have free location according to landowners preference. However, the FSI and building height is similar.

The strategy is to keep the overall spatial relation and layout. However, some straight fluid road can add more small street corner, in order to add more semi-public and public space along the road. There is an idea called 'unobstructed but not fluid' in Chinese planning context. What we pursue is to mould soft interesting space, such as 'one step makes a difference', 'enclosure to create rich layers and scenes' etc.. For the cropland, it is divided into some plots with different functions, access to rural house at the same time. In addition, rural house cluster can be seen as a integrated system. House is not a isolated building any more. For example, some homestead land border is flexible, which can be shifted to other place, and more public courtyard is shaped by several homestead householders.

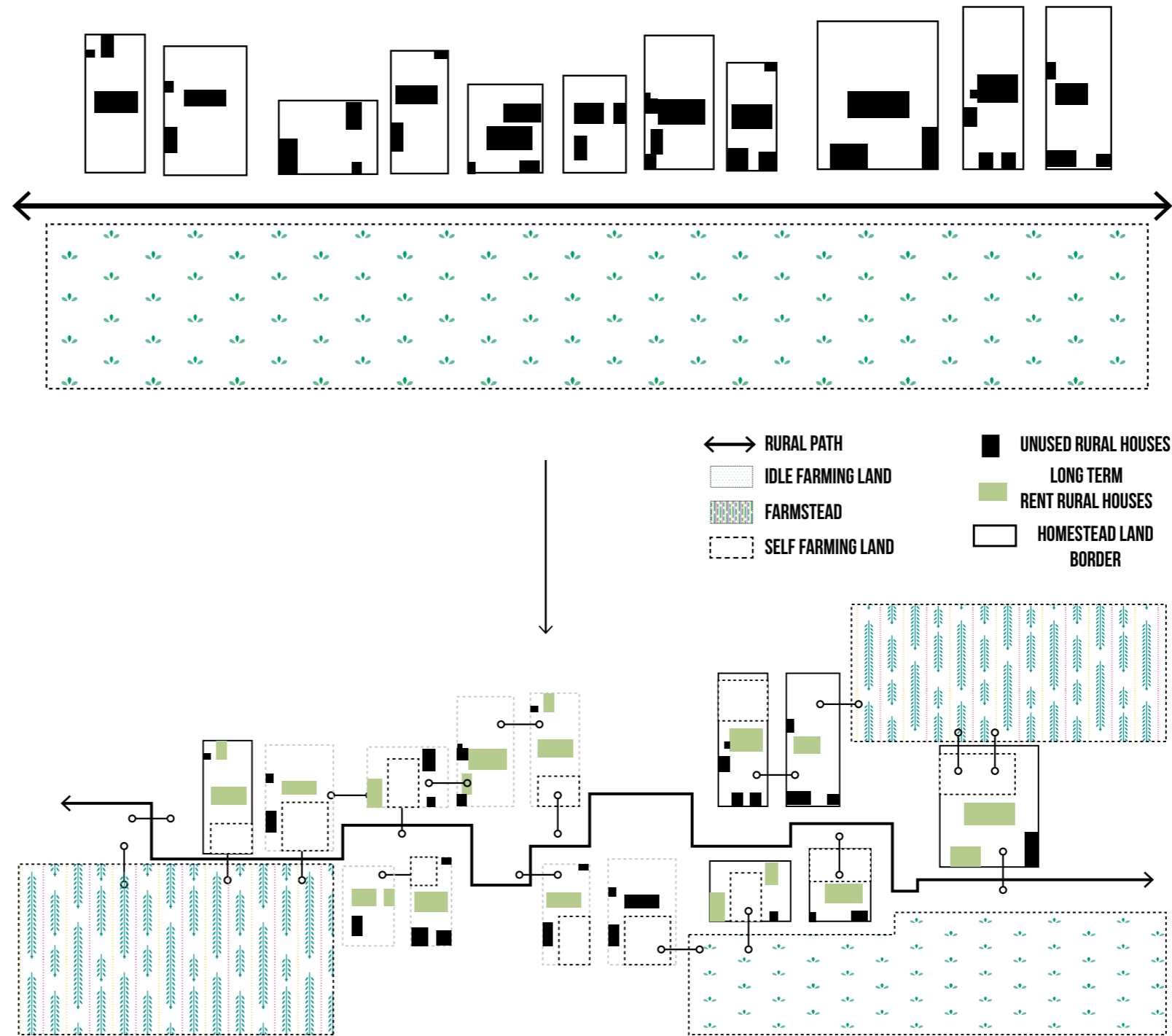
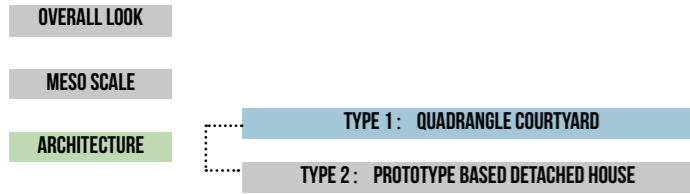


Figure 6-23. Rural house strategy illustration in meso scale
Source: author



6.3.3. Neighborhood scale–type 1

According to author's interview, there are two types of farmers related, that may influence the spatial intervention of rural houses. Type 1 is that the house owner has moved to live in urban area, barely use his rural house anymore. They tend to give more freedom to social enterprise to redesign and re-manage their house, with longer rent term. On the contrary, Type 2 is that the house owner are still living here, only with some room unused. These group of people are mainly the elderly, who do not have ability to live in urban area. They live on their meager old-age pension, and hope to increase daily income as well.

For the type 1, obviously, the long stay tenants are urbanite. The design goal is to create a rural group living and diverse atmosphere. Since the house owners give much flexible condition to the designers, buiding typology can be changed according to tenants' requirement. As analysed above, author suggest to apply quadrangles housing typology, to introduce the collective space, conformed by around 10 rural house. The strategic tip and illustration are shown below, and relating development main bodies are shown on the right (figure 6–26).



Figure 6–24. Type1: rural farmers have moved to urban area
Source: Asia Dialogue

TYPE 1

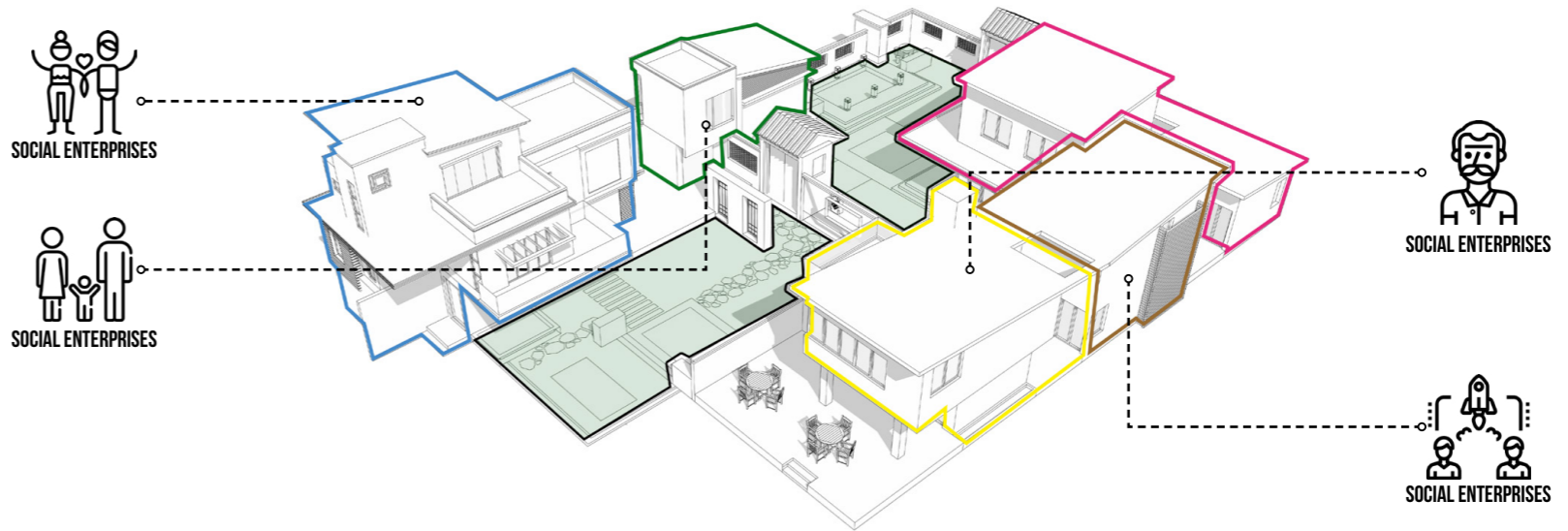


Figure 6–25. Who are the tenants?
Source: author

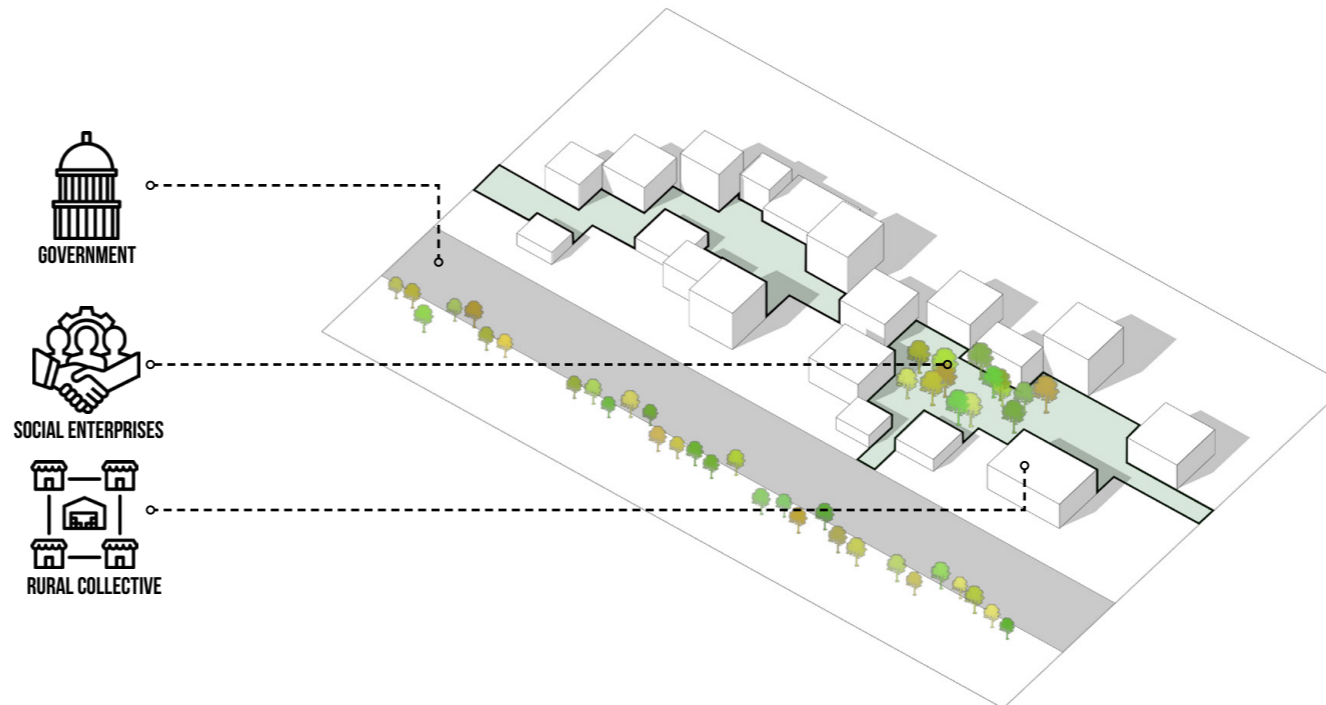


Figure 6–26. Who are the suppliers?
Source: author

模糊边界多交流	Break the fence barrier;
增补空间玩设计	Play with flexible space;
私人院落变合院	Enlarge shared inner courtyard;
邻里共融念不忘	Keep a good neighborhood relations.

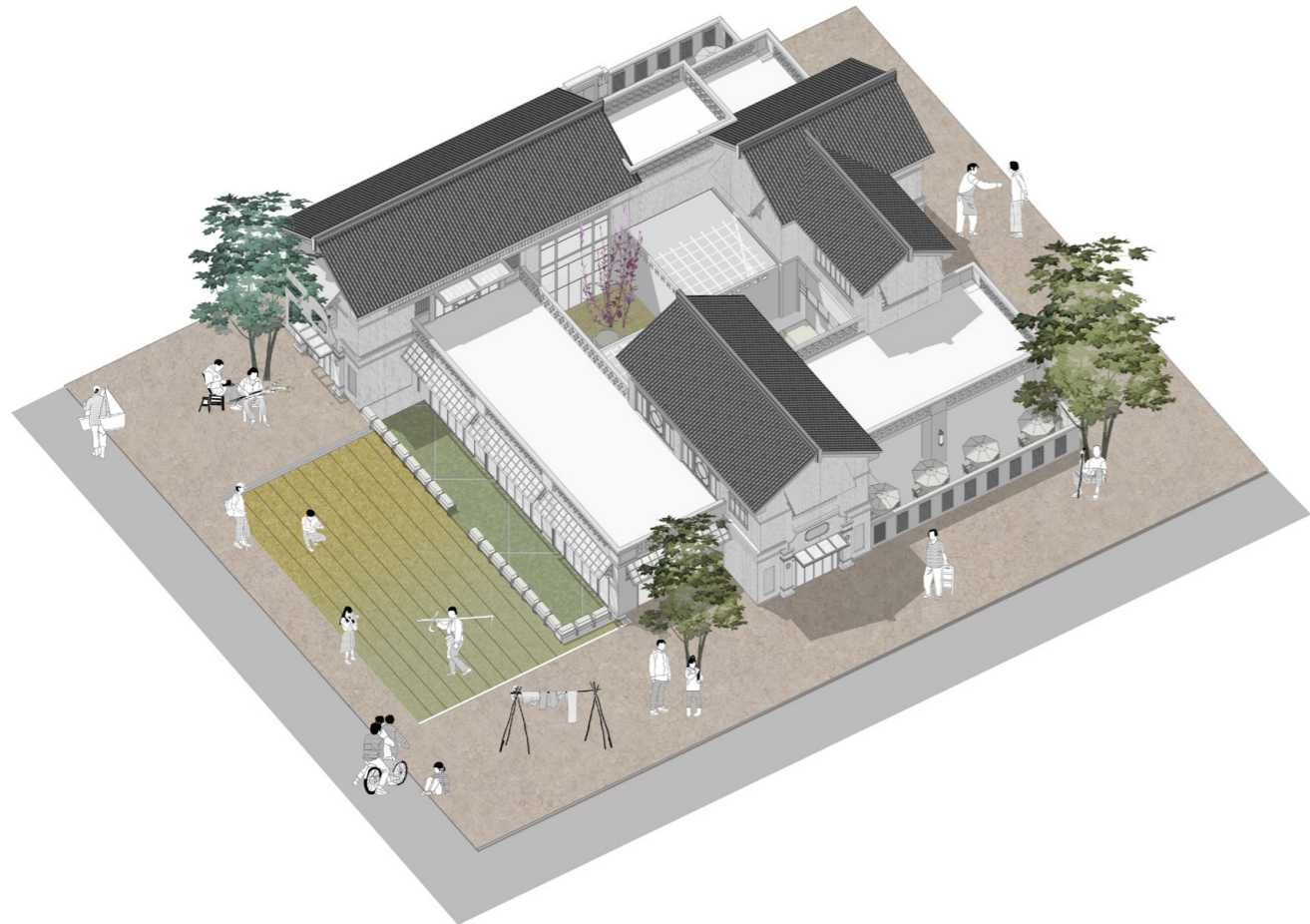


Figure 6-27. Image of rural house group with shared courtyard (type 1)
Source: author

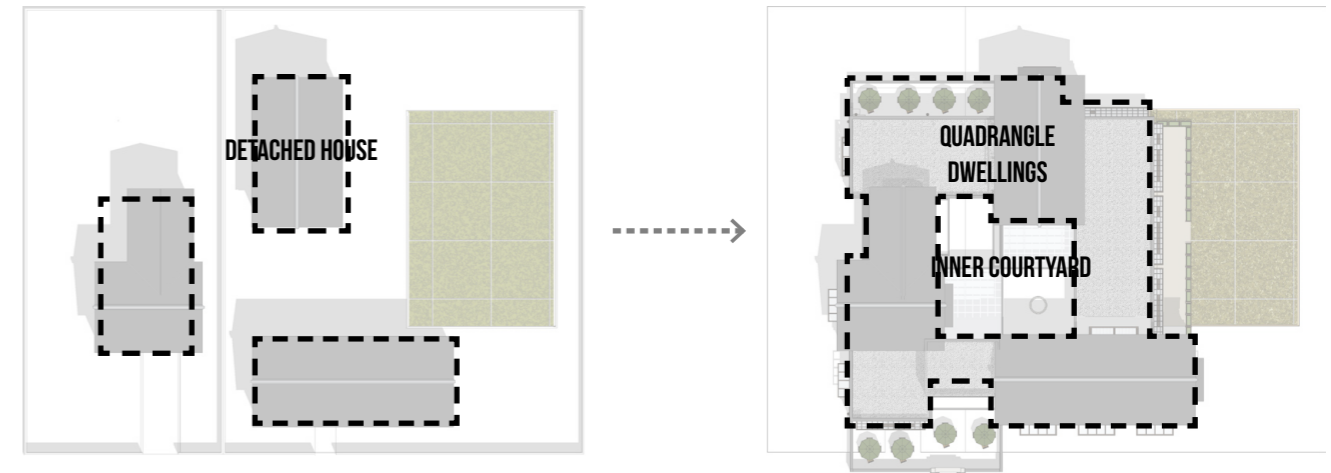


Figure 6-28. From detached house to quadrangle dwellings
Source: author

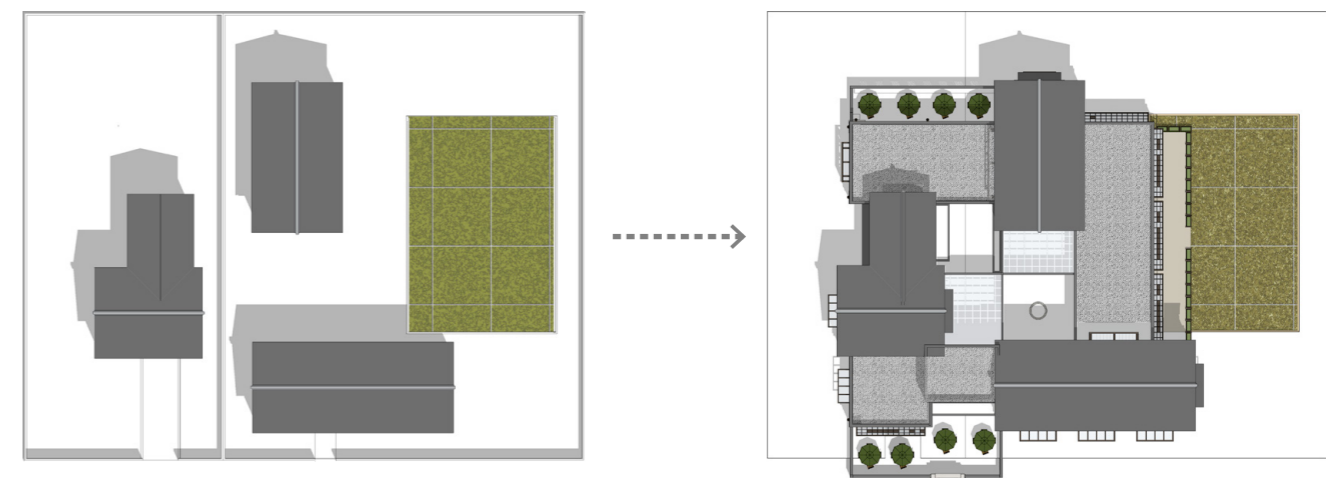


Figure 6-29. Figure-ground relation and floor plan
Source: author

OVERALL VISION

HOMESTEAD CLUSTER

ARCHITECTURE

TYPE 1: QUADRANGLE COURTYARD

TYPE 2: PROTOTYPE BASED DETACHED HOUSE

6.3.3. Neighborhood scale-type 2

For the type 2, the long stay tenants are not only urbanite, but also local farmers (mainly the elderly people). Since the design freedom is limited, the original building typology should be kept, only the prototype-based moderate design is allowed. In this case, each detached rural house still owns private inner courtyard. In order to improve the neighborhood interaction, a public community space is needed, which can be developed based on undefined land nearby. For type 2, half-live, half-rent is the common scene. It is important to create more co-existence space to gather different residents, especially rural and urban residents. The strategic tip and illustration are shown below, and relating development main bodies are shown on the right (figure 6-32).

The intervention freedom is relatively smaller than type 1, because it is only concentrated in public space outside homestead. As for the interior of homestead, since the land owner still lives here, it is more of a collaborative co-design strategy. The client behind the homestead based rural leisure association is the village collective and the farmers, so they provide more opinions on the interior space design of the homestead.



Figure 6-30. Type2: farmers still live in rural area
Source: bldaily.com

TYPE 2

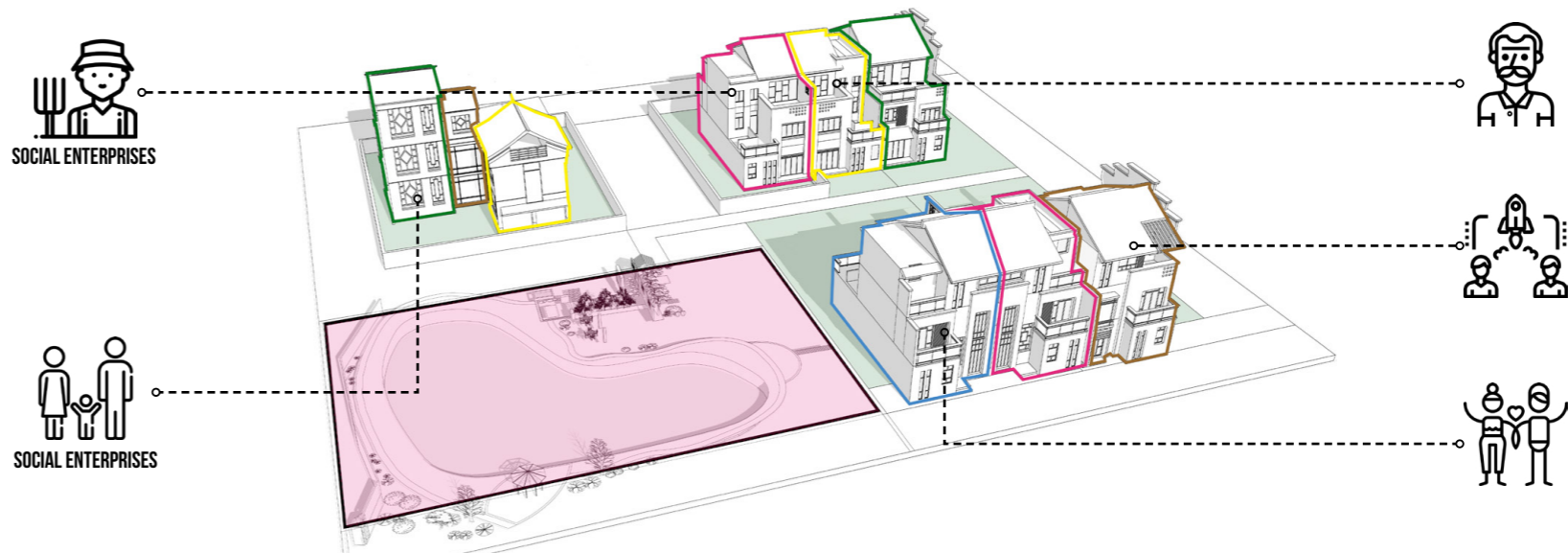


Figure 6-31. Who are the tenants?
Source: author

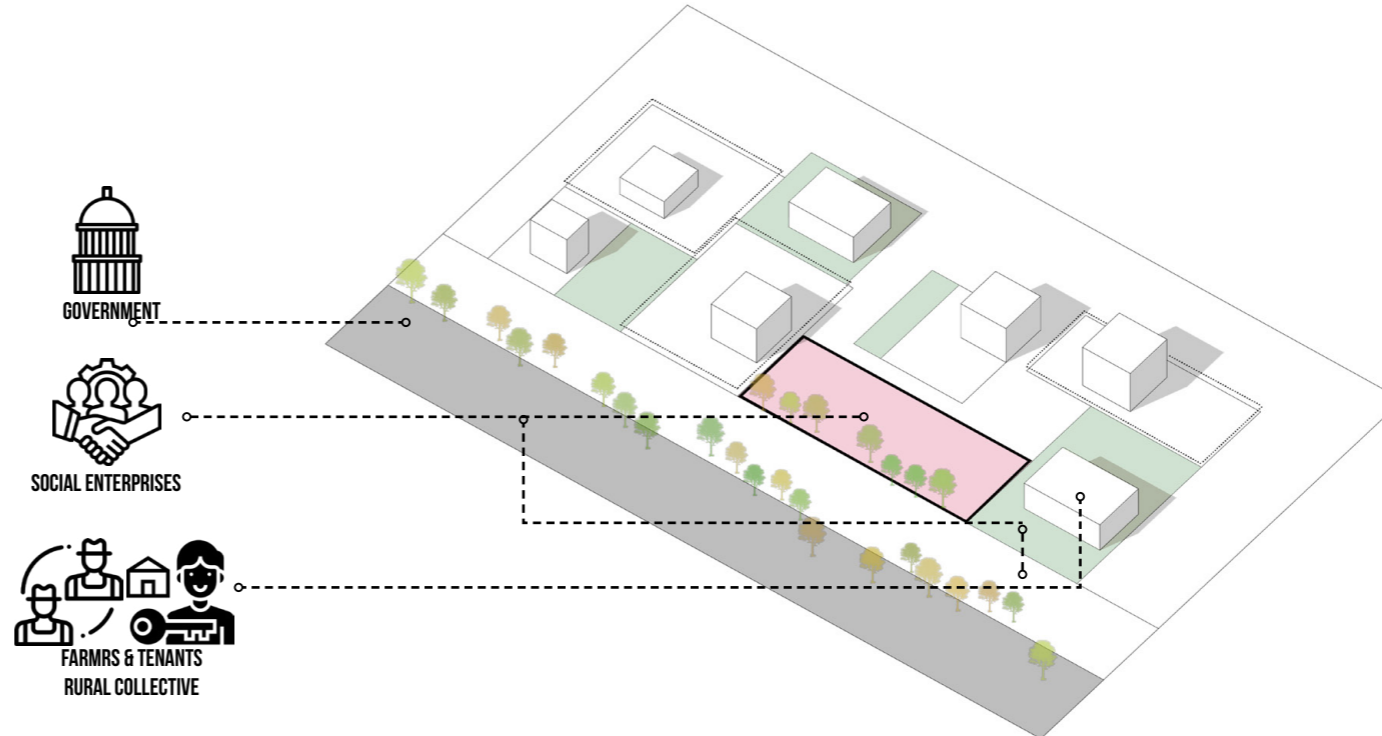


Figure 6-32. Who are the suppliers?
Source: author

原型主导辅设计	Prototype based progressive design;
各家各户有所长	Combining private and shared yard;
公共空间齐整治	Co-building neighborhood public space;
半租半住乐融融	Enjoy half-rent, half-live coexistence.

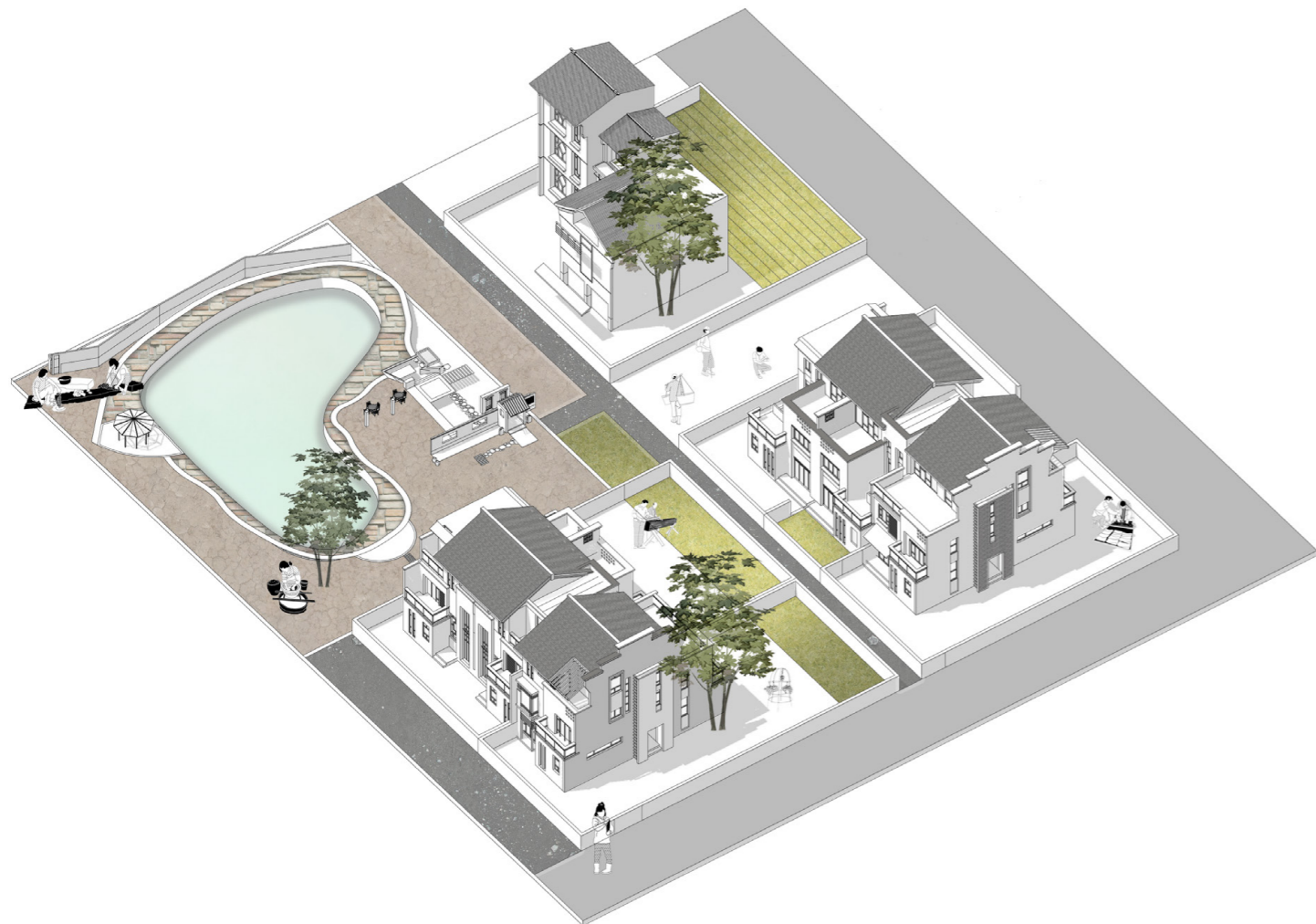


Figure 6-33. Image of rural house group with private courtyard (type 2)
Source: author

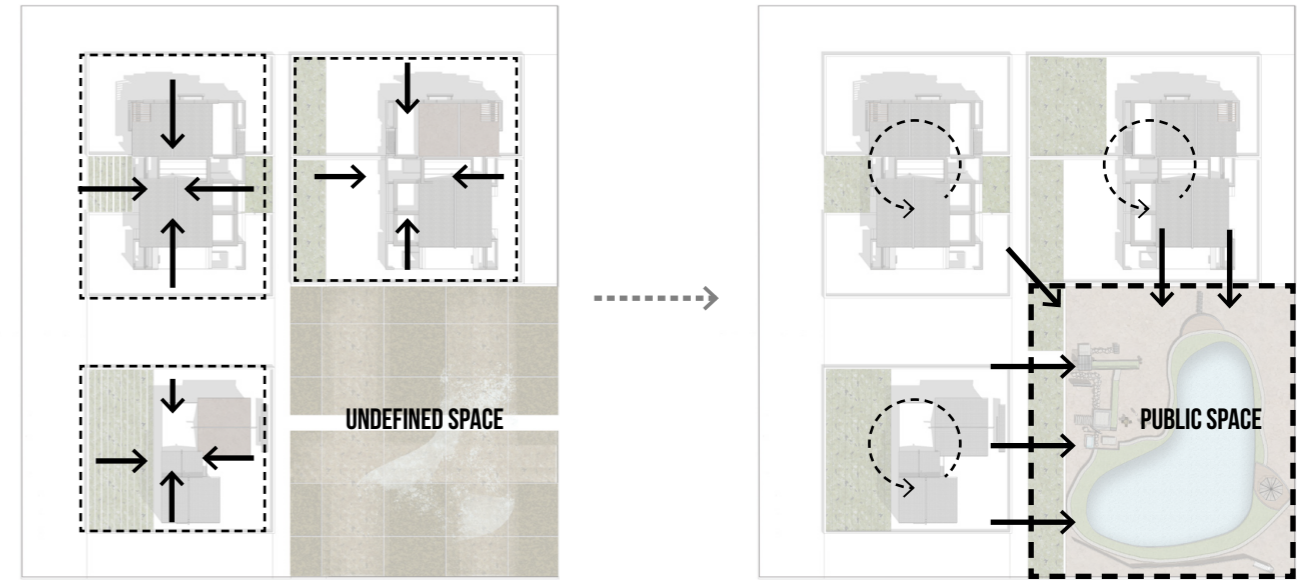


Figure 6-34. From undefined space to public space
Source: author

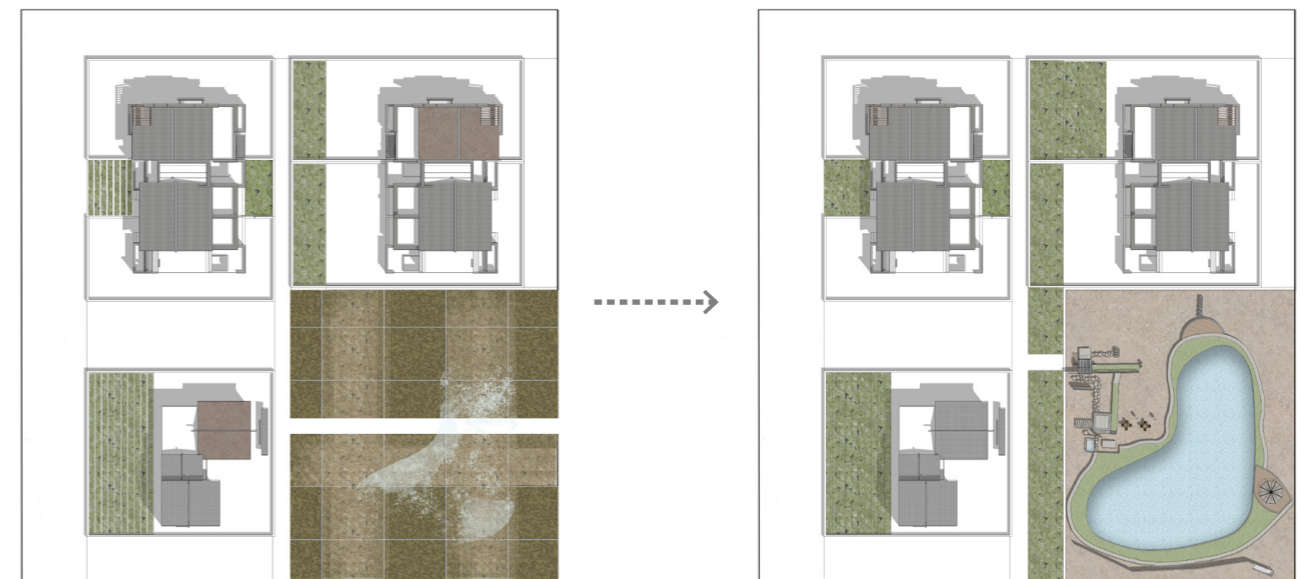


Figure 6-35. Figure-ground relation and floor plan
Source: author

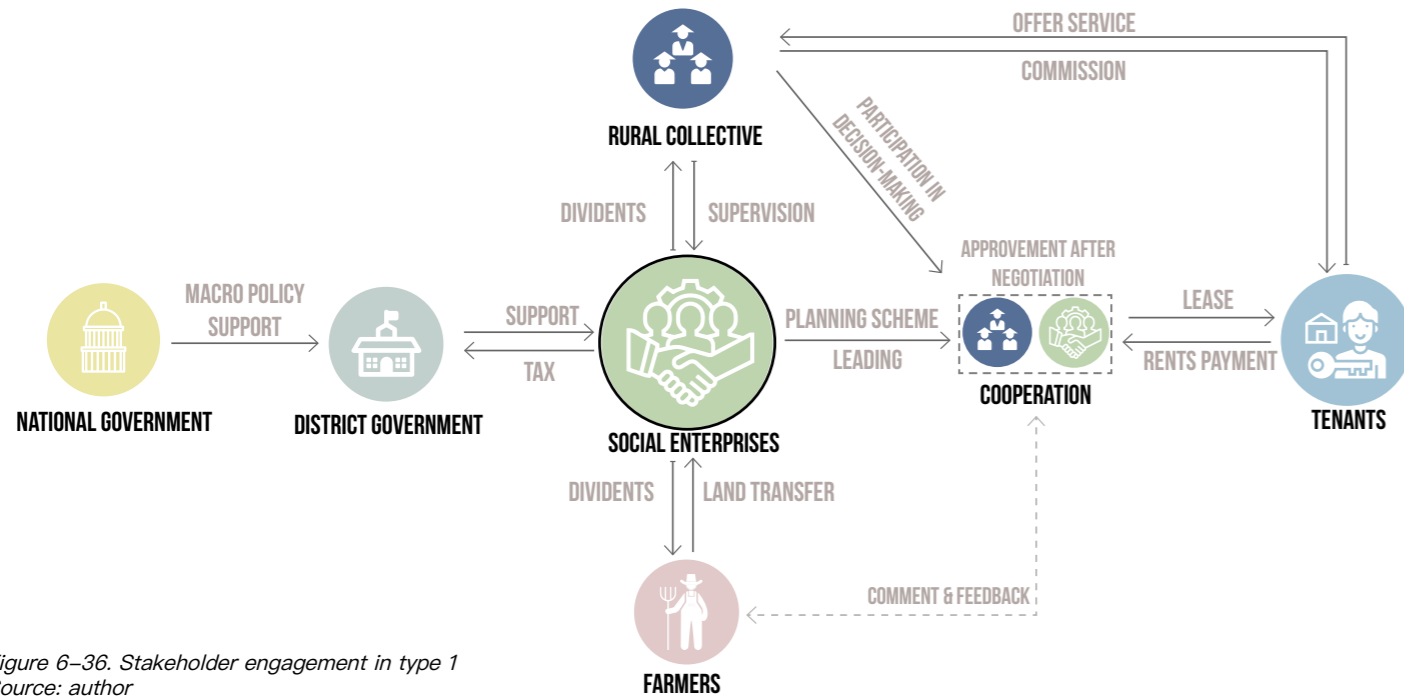


Figure 6-36. Stakeholder engagement in type 1
Source: author

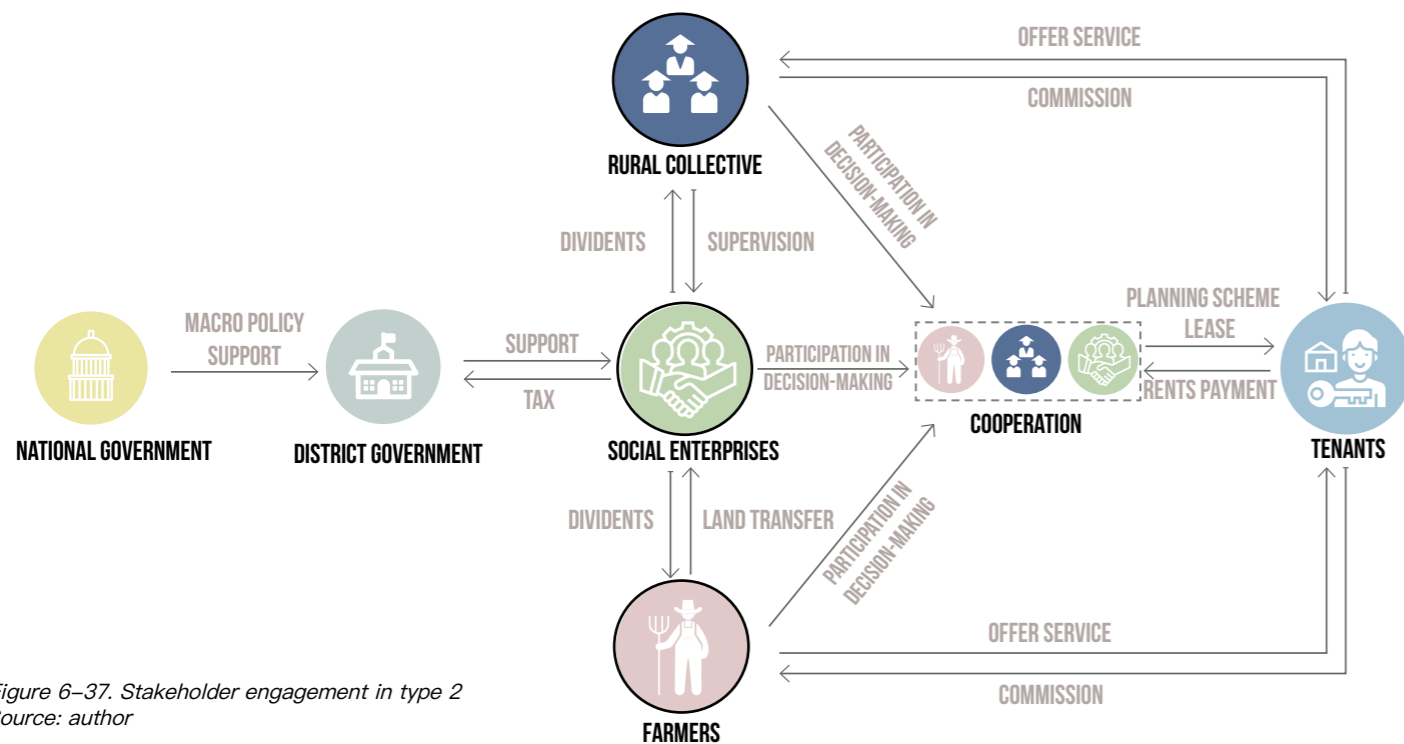


Figure 6-37. Stakeholder engagement in type 2
Source: author

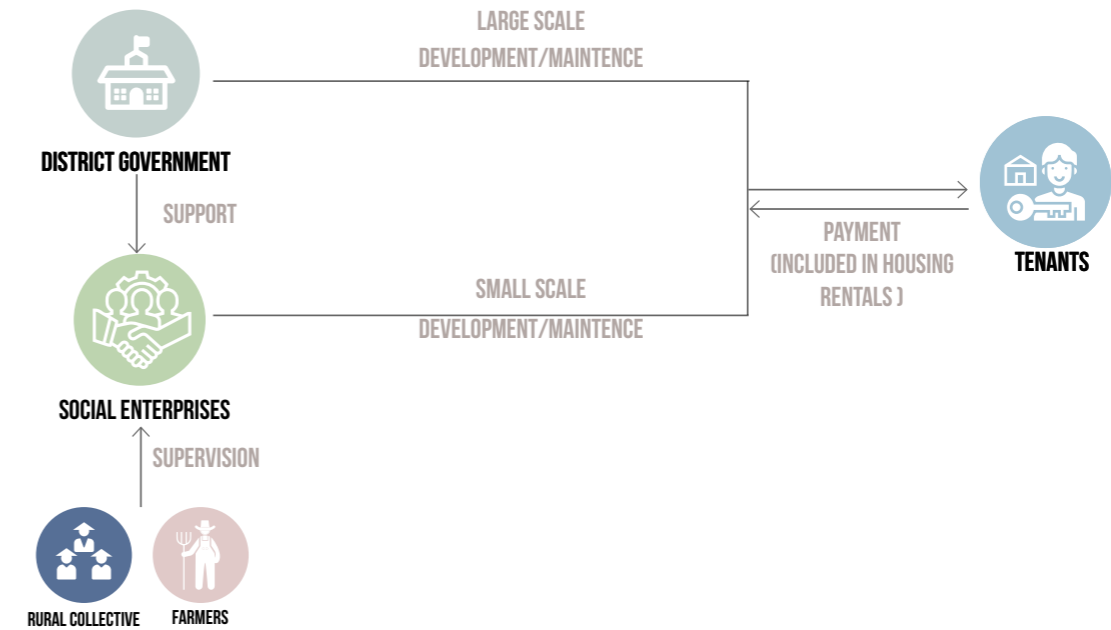


Figure 6-38. Stakeholder engagement in rural unconstruction land
Source: author

TYPE 1:

The farmers have left Bagua island, thus they relatively give more flexibility to land spatial adjustment. In this case, social enterprise is the leader, but the village collective will also participate in the development work because they have better knowledge of local conditions and geology.

TYPE 2:

In the second case, the voice of social enterprises will be smaller, village collective, farmers, social enterprises cooperate and share the separation of powers. Farmers would join the participation in decision-making because they are both land owner and user. Besides, they can offer rural service and get commission from tenants.

NONCONSTRUCTION LAND :

Government helps to do big scale renovation, while social enterprises in charge with neighborhood and meso scale renovation. Farmers and village collective would responsible for supervising. Tenants can enjoy the convenience, but the cost is included in the rents.

6.4 RURAL HISTORY/CULTURE

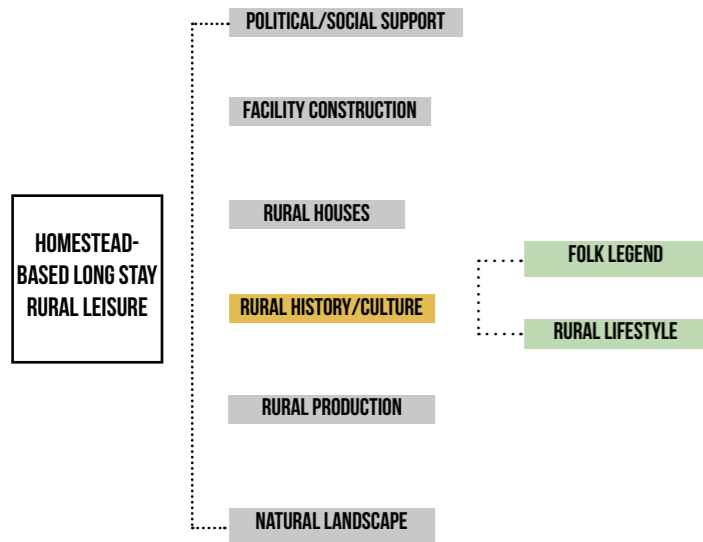


Figure 6-39. Historical landmark
Source: author



6.4.1. Folk legend

Culture and rural identity should be the basic intension of long-stay rural leisure construction, otherwise, it will be shallow and not sustainable. It is important to value local cultural inheritance and rebuild rural social confidence in Bagua island. As analysed above, Bagua island has long history and interesting folk legend, which can be combined with modern leisure industry in a way. For example, the cultural promotion of bagua jade, the rural wall painting, and historical monument construction can help people to understand the rural history, restore the rural cultural memory and also enrich their rural life.

On the other hand, as the symbol of Tai Chi, Bagua(the Eight Trigrams) remind people of t'ai chi ch'uan. Nowadays, some folk t'ai chi ch'uan groups in Nanjing urban area would orgainze people to have exercise and match here. It is a meaningful way to guide people to rethink the relationship between time and space, past and present, nature and society, industrial life and rural life, self-discipline and heteronomy etc. These educational and cultural activities should beencouraged and promoted.



Figure 6-40. Historical cultural promotion
Source: amazon



Figure 6-41. Tai chi culture promotion
Source: SOHU.com



6.4.2. Rural lifestyle

Rural culture is not only reflected in long history, but also in daily rural life. What urban people pursue is a lifestyle that so called 'Returning to the true nature' and 'recovering the original simplicity'. In Chinese, it is called " 回归自然, 返朴归真 ". In current China, rural life pace and urban life pace is completely different. For long stay rural leisure developemnt, it is more important to focus on the self-actualization layers, which means that long stay tenants can feel real rural lifestyle from daily details, rather than short term behaviors.

There is a saying: Taking culture as the soul. For example, preserving the old furniture is a cultural elements accumulation. These furnitures are not displayed in museum any more, but used by modern people. In addition, rural labour activities can be combined with rural culture as well. Airbnb experience tours can be applied. Long stay tenants can learn rural skills from experienced loacla farmers and villagers. It is a good opportunity to promote rural culture in Bagua island.

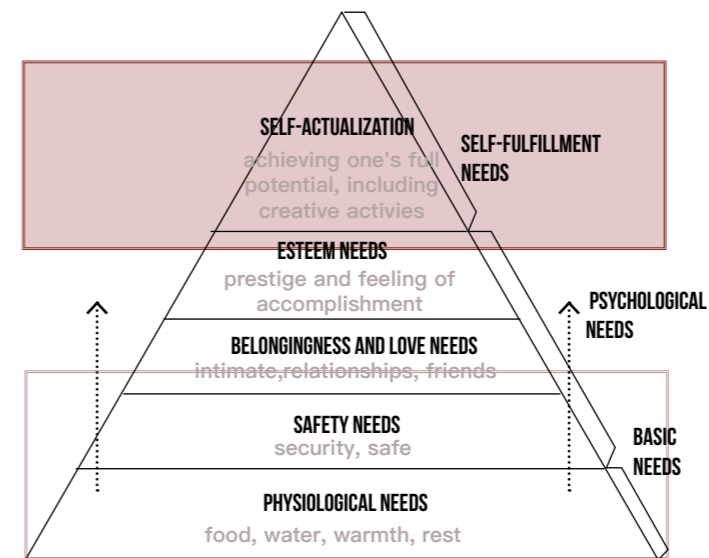


Figure 6-42. Maslow's hierarchy of needs: from basic needs to self-fulfillment needs
Source: Dan Martell



airbnb EXPERIENCES
WHAT THE NEW CHANGES
MEAN FOR TOUR & ACTIVITY COMPANIES



Figure 6-43. Rural lifestyle experience
Source: Airbnb.com

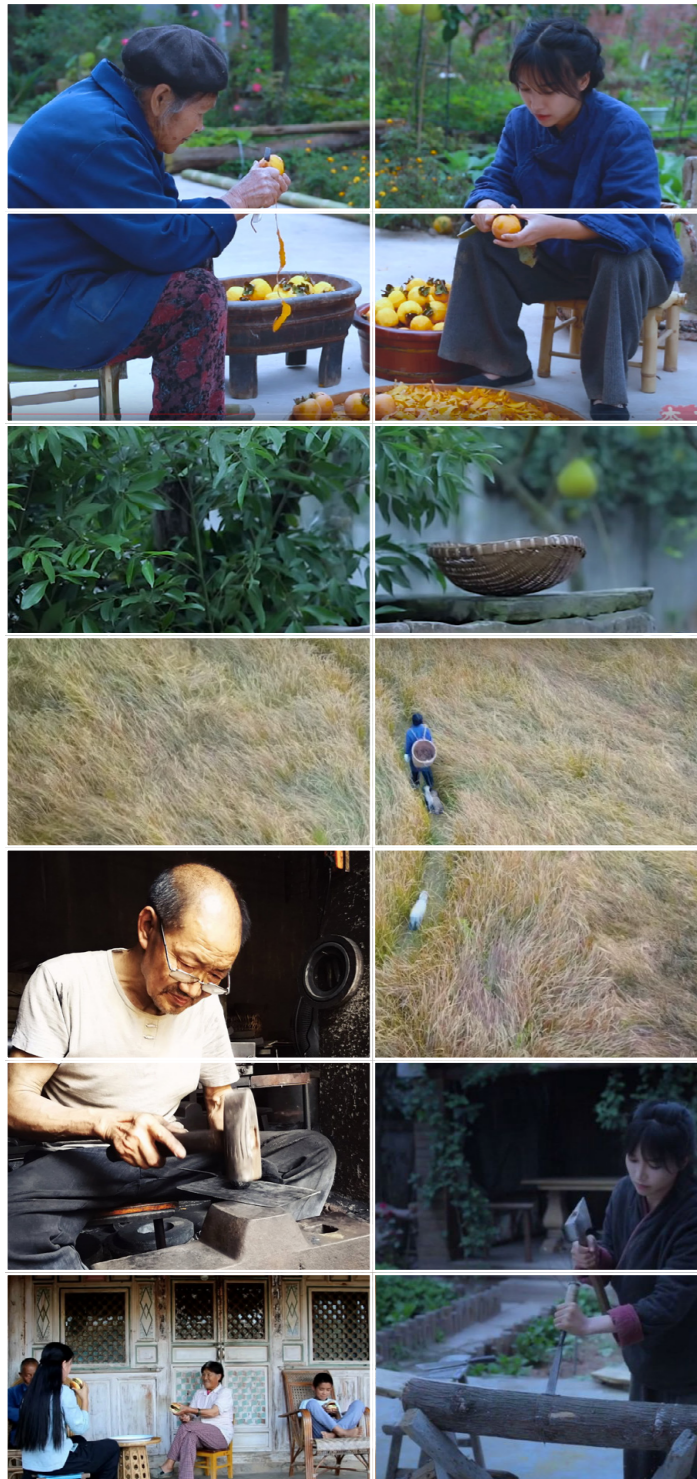


Figure 6-44. Rural lifestyle scene
Source: Li Ziqi

As to the spatial planning and design, rural culture can be connected with local landscape and homestead. On this basis, rural history, rural culture and rural life map are connected with each other. For example, Chinese dragon boat match has a long developing history, and it has become rural traditional, authentic event in specific Chinese festivals. Thus It is not only a cultural and historical symbol, but also a rural life memory for Chinese farmers. It happens in the river courses in Bagua island, and connected tightly with people's waterfront life. Besides, Chinese New year rural market is another example because it always happen in the busiest village and street. Thus, author try to combine rural life, rural culture and rural history into one strategic map. Through this map, author hope to illustrate how rural culture and history combine with rural spatial planning and design. Rebuilding rural life improves the social benefits, which enhance social interaction, and local confidence.

As shown on the right, the strategic map show the agricultural skill training school, neighborhood educational area and leisure experience area. The agricultural skill training school is based on the existing primary and middle school in bagua island, which can be used as rural agricultural experience and training base for the students in urban area. Neighborhood education area is mainly for the future tenants, which is built based existing public space and activity center. Leisure experience area is mainly leisure function, combined with rural products market and handicrafts, creative cultural products, is mainly aimed to external tourists. These rural cultural spots are coordinated with others and co-build a cultural environment for rural historical and cultural promotion. To a lager scale, the daily life belt is grown along Jianghe river course, which is the biggest rural settlement area. Together with the Qili rural life belt, these two belts act as a window to reflect the soft power of Bagua island, not only for the short term tourists, but also the long stay residents.

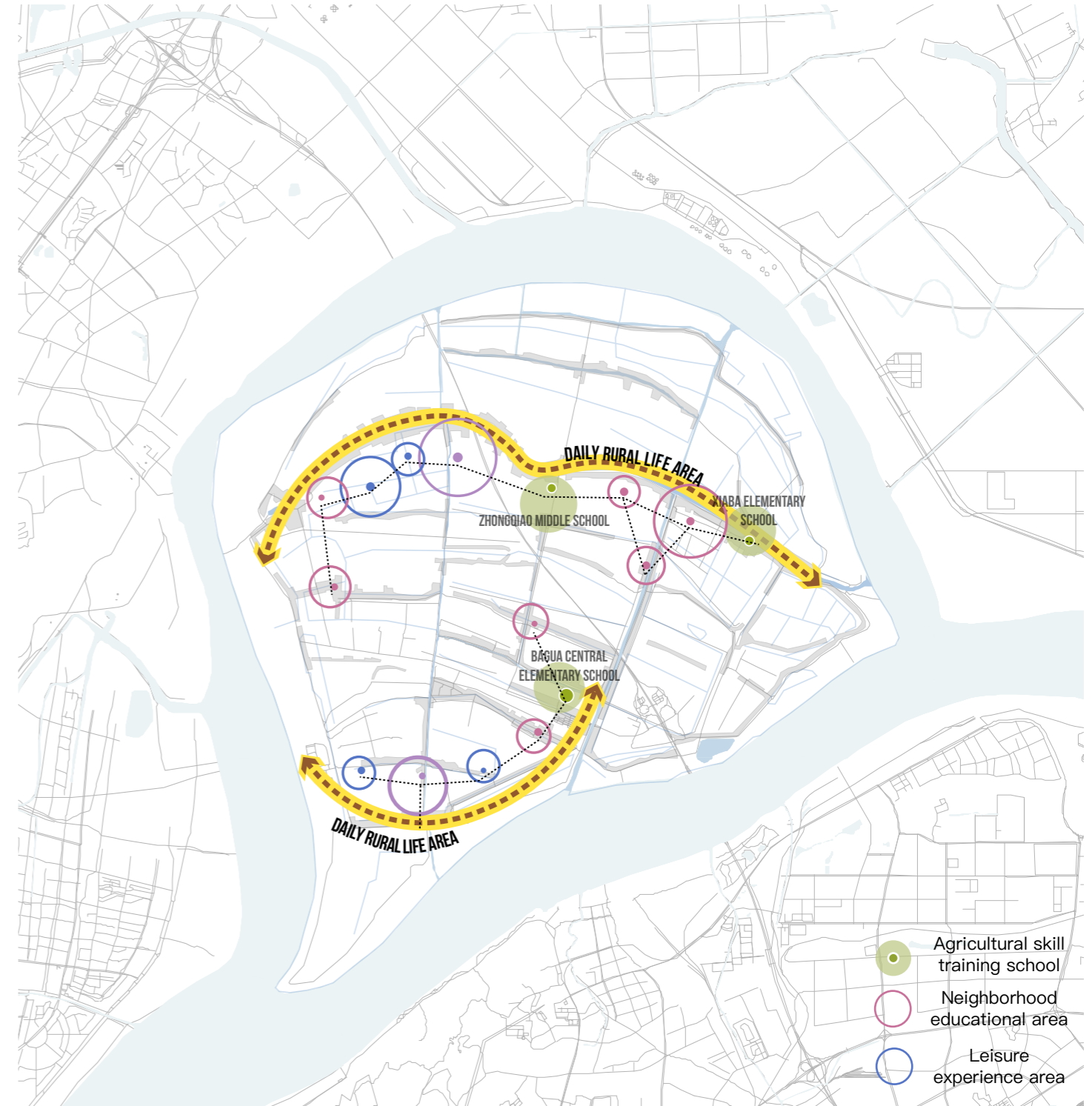
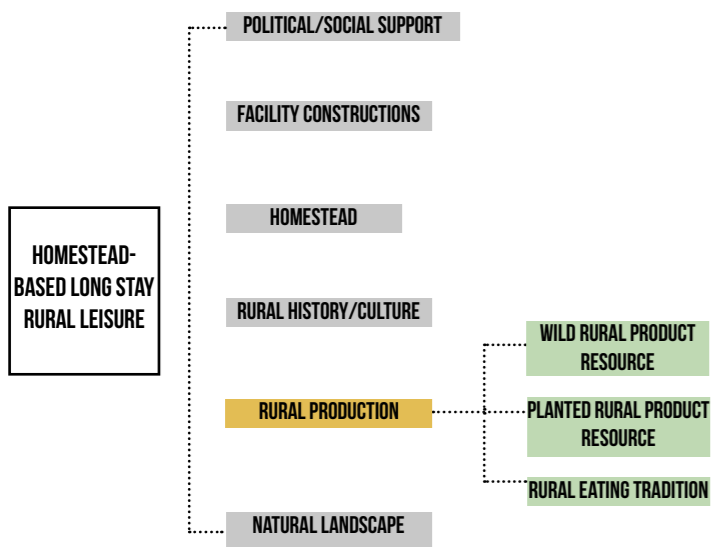


Figure 6-45. Rural history/culture strategy map
Source: author

6.5 RURAL PRODUCTION



6.5.1 Wild rural production

Wild rural product experience is an important and interesting section under 'rural production' pillar. In the current urban farming and rural leisure construction mode, people can only experience planting and picking activity in a man-made environment, such as vegetable plots and glasshouse etc. which is still different from wild self-picking exploration activity. The wild picking experience is a joyful experience, and the wild potherb tastes better than planted one. Thus, for the wild rural production growing area, exploration routes and spatial distribution should be published. For example, Chinese Artemisia Selengensis is grown around the wild wetland in early spring, mainly in the southern part of Bagua island. With this practical information, people can pick wild potherb under scientific control.



Figure 6-46. Wild potherb picking map
Source: author



Figure 6-47. Managed potherb picking map
Source: author



6.5.2. Planted rural production

Long stay rural leisure can be seen as a supplement to the rural efficient production. Without the planted rural product as economic support, long stay rural leisure would be a normal residential settlement copy of urban commercial house. Different rural product relating design can help to enhance rural social interaction, offer green organic rural product, upgrade rural industries, and extend rural product chain to get benefit. Belowing toolbox can offer some new ideas.

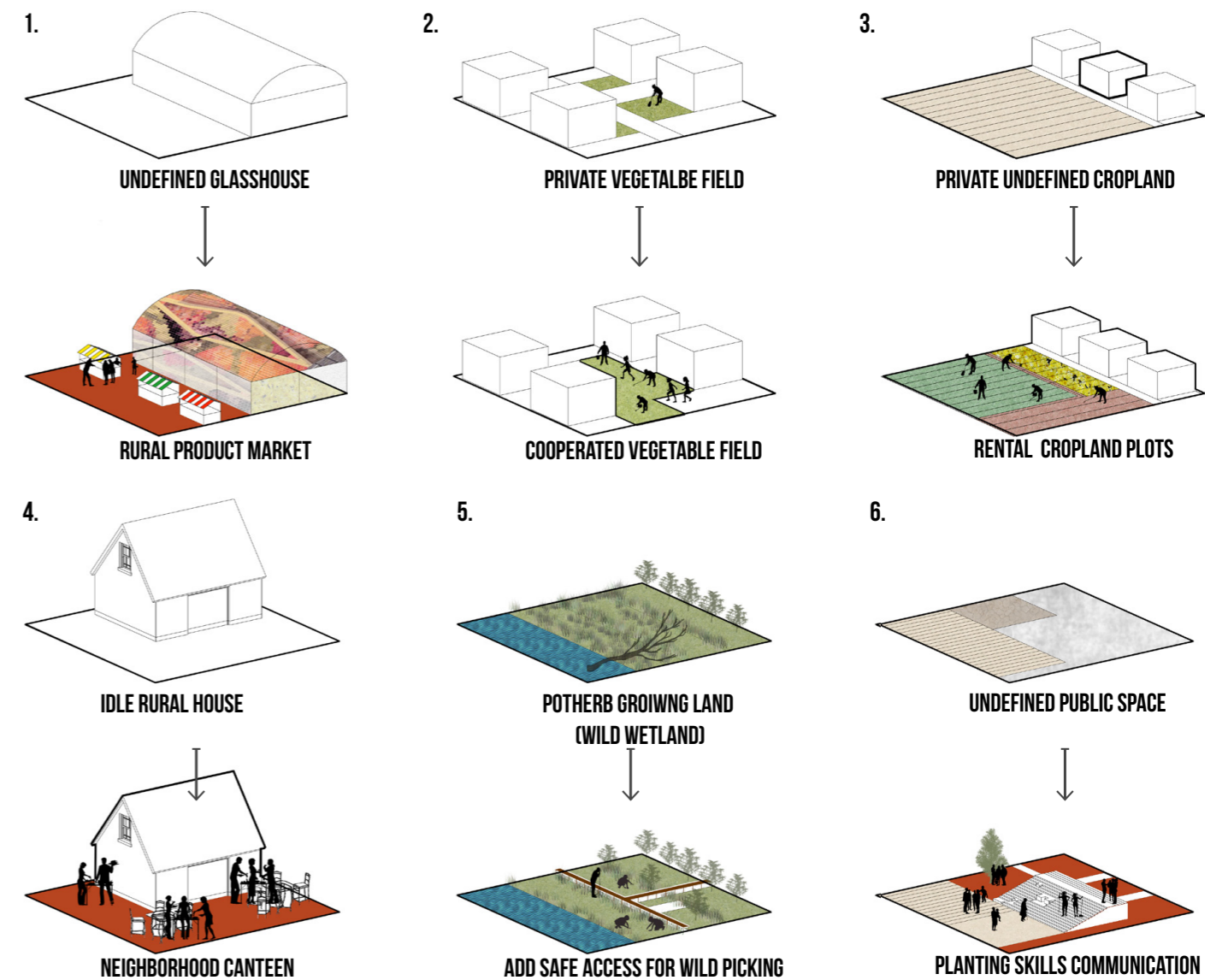


Figure 6-48. Rural production strategy toolbox
Source: author

6.5.3. Rural group eating tradition

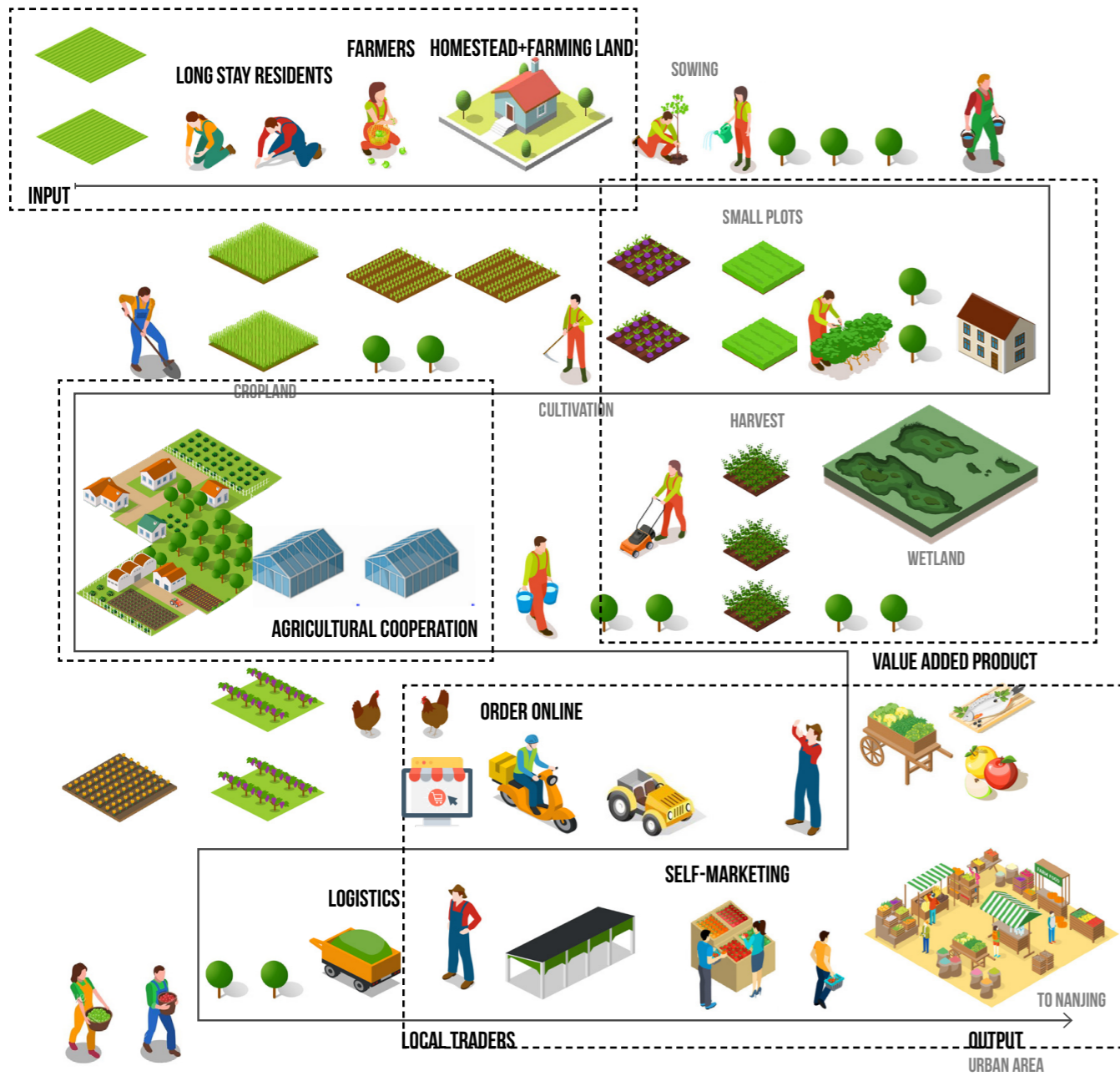


Figure 6-49. Rural production chain
Source: author



Figure 6-50. Current neighborhood layout
Source: author



Figure 6-51. Future neighborhood layout
Source: author



RURAL PLANT AND EXPERIENCE



SHARING AGRICULTURAL SKILL



NEIGHBORHOOD RURAL GROUP DINNER



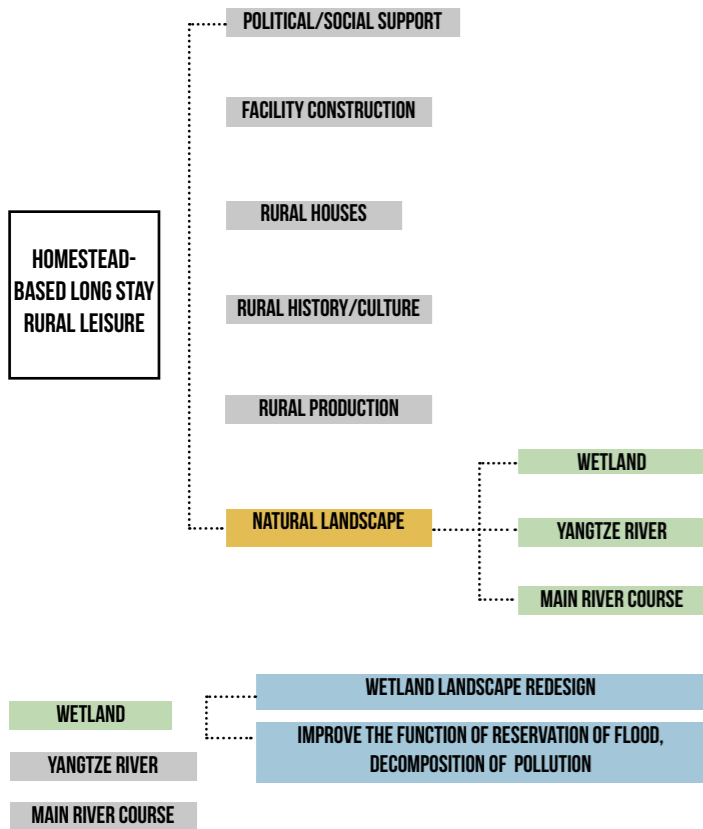
RURAL PRODUCT MARKET



RURAL PRODUCT BRAND PROMOTION

Figure 6-52. Agricultural activities
Source: Baidu.com

6.6 NATURAL LANDSCAPE



6.6.1. Wetland

For wetlands, the strategy is to retain their original characteristics as far as possible and delimit the leisure agriculture development area on a large scale. For the natural protection of wetlands, waterfront promenade is necessary. Through water treatment, the main problem is the seasonal flooding and water quality restoring. Emerged, floating leaf and submerged plants are suggested to be grown in different sections in order to block the Yangtze river sediment, and to prevent eutrophication.

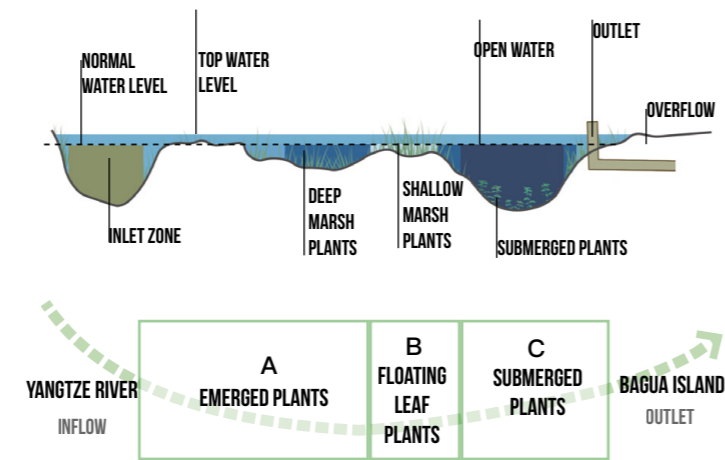


Figure 6-54. Wetland ecology suggestion
Source: author

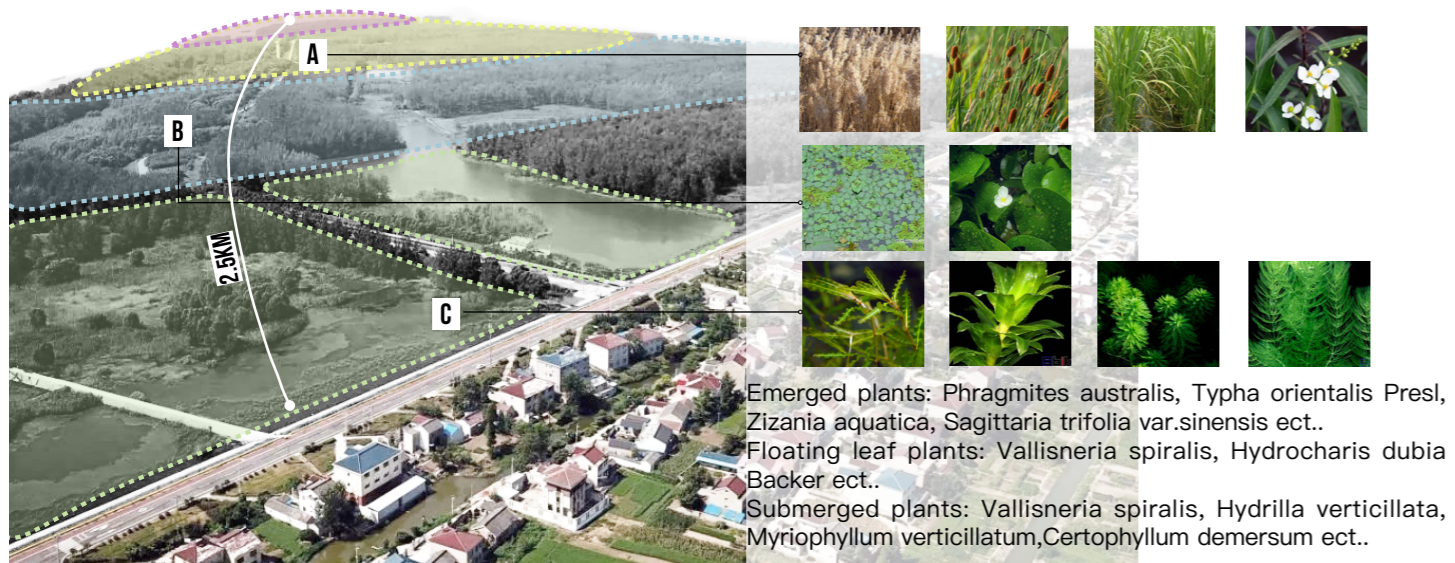
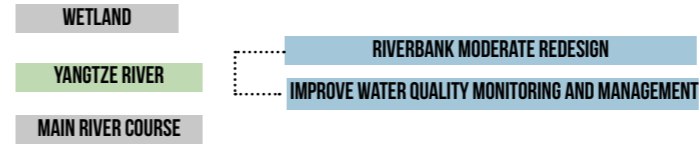


Figure 6-53. Wetland environmental management
Source: author



6.6.2. Yangtze river

The development vision of Yangtze river is to meet the rural leisure requirement and basic living requirement at the same time. According to current master plan, the only riverside area suitable for leisure development is the southwest shore area. For future long stay rural leisure construction, the water standard should be enhanced not only in the southwest part, but also northwest part, where Shangba village is located. Both areas are in the upstream region, which is feasible to set the water protection zone and guarantee the water quality. In addition, since the Nanjing industrial area is located on the northeast side across the river, multiple monitoring sections of surface water are needed as well.

Besides the basic living requirement, the Yangtze river also needs to meet leisure requirements. In the southwest shore, towards different directions, three sight viewing corridors are designed—sunset sight viewing corridor, Yangtze river sight viewing corridor, and Mufu mountain sight viewing corridor. Looking along the Mufu mountain sight viewing direction, the second bridge of the Yangtze river is magnificent and spectacular. You can also enjoy the beautiful Yangtze river scenery, even see the cowfish if lucky enough.

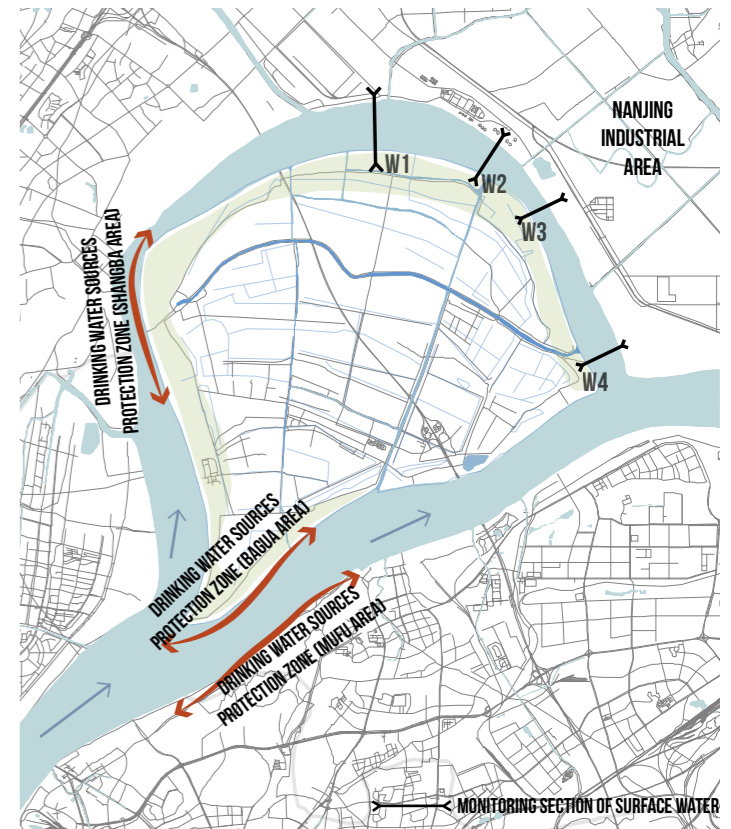


Figure 6-55. Water controlling plan
Source: author

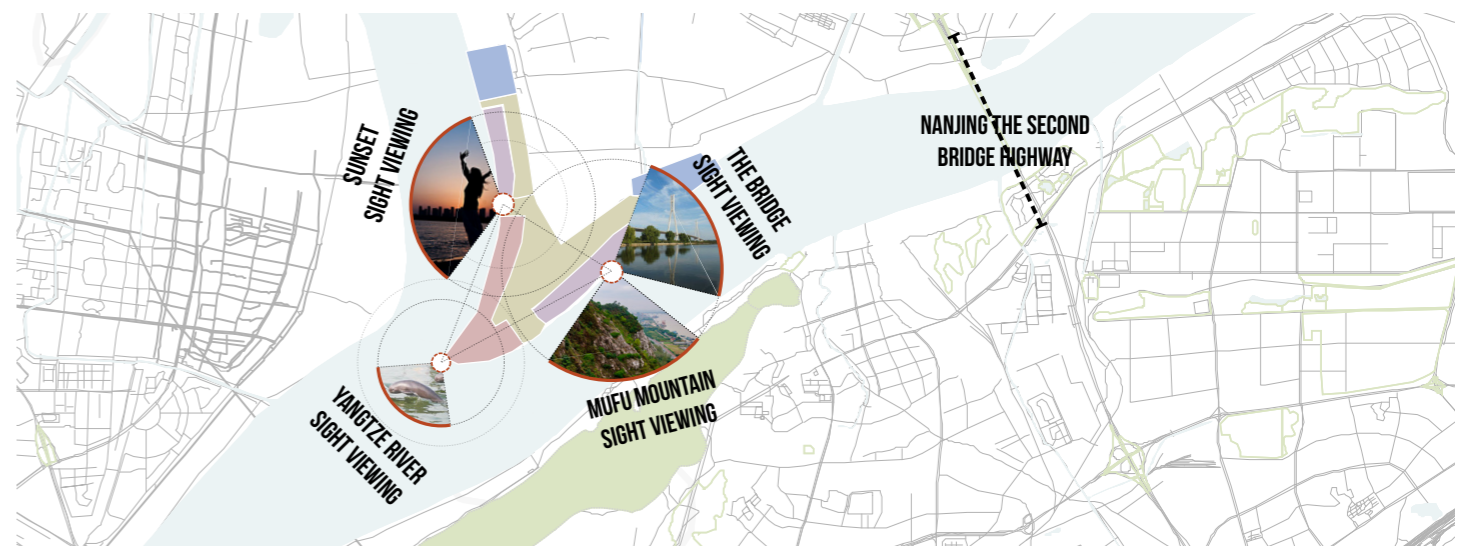
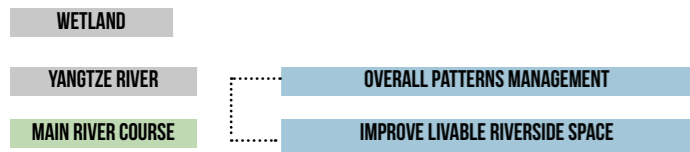


Figure 6-56. Sight view directions at inshore region
Source: author



6.6.3. Main river course

Overall patterns vision

As analyzed above, River course is one important element of the natural system in Bagua island, it needs to be connected with other elements from urban and rural system, and the planning and design need to be suited to local conditions as well. The overall river course pattern can be summarized to 'one belt, two corridors, linked network'.

One belt means the Jianghe river course lively belt, which is a lively belt mainly for riverside long stay local residents. Since Jianghe river is the widest and the main river course, and the most future homestead redevelopment is located on the both side of Jianghe river course, this belt needs more daily life oriented practice.

Two corridors are Shuangliu river and Yuejin river landscape corridors. These two river courses are the transitional connection among different rural leisure spots. Linked water courses network can guarantee the freshwater quality, and can naturally connect leisure and natural function. Shuangliu river and Yuejin river flow past the main rural leisure tourism projects in Bagua island, and they are the main water routes for long stay residents to access to large scale rural leisure projects. As analyzed before, Shuangliu river (west side) is wider and has better water quality. The riverside landscape leisure construction has been built. As to Yuejin river course (east side), it is divided into ecological protection zone, limited viewing zone, and leisure tourism zone according to water quality, water basin and riverside landscape condition. Taking Yuejin river course as example, the Northern part is close to the wetland area and unconstructed rural area, and the middle and southern part gradually develops to leisure and even industrial area. This functional layout pattern decides the corresponding river course pattern.

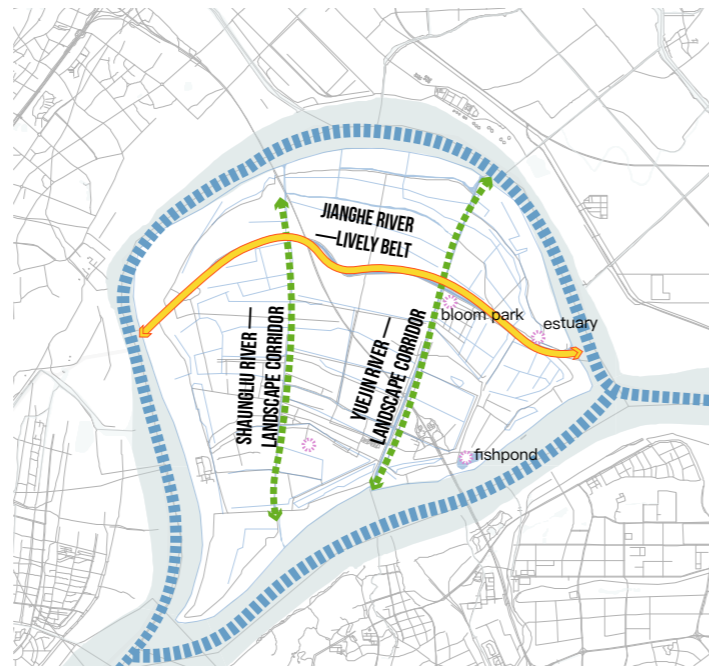


Figure 6-57. Overall river course patterns vision
Source: author



Figure 6-58. Yuejin river landscape corridor
Source: author

Jianghe riverside design

Jianghe rivercourse is the widest river in the island which is more lifelike, and serve for most future long stay residents. Learning from the Dutch experience, riverside space is not only served as natural landscape environment, but also is connected tightly with people's daily life and even leisure tourism. For example, boat trip, swimming wildlife, water-enjoyable environment etc. are connected tightly with daily life, and spatial design follows this principle. Since the design principle in Bagua island is 'small and beautiful', we hope to make the best use of existing river resource, rather than widen it, thus water environment remediation and public water-friendly space regeneration is necessary. Toolkits are shown below to inspire waterside design possibilities.



Figure 6-59. Dutch experience
Source: author

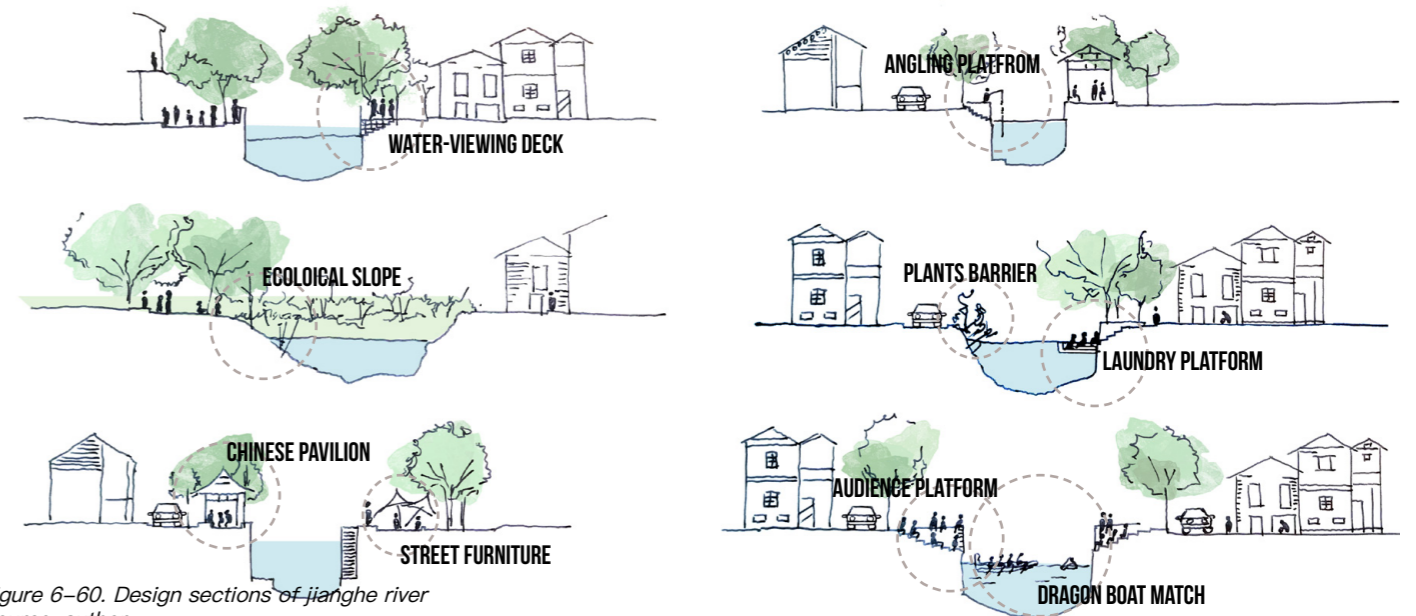


Figure 6-60. Design sections of jianghe river
Source: author

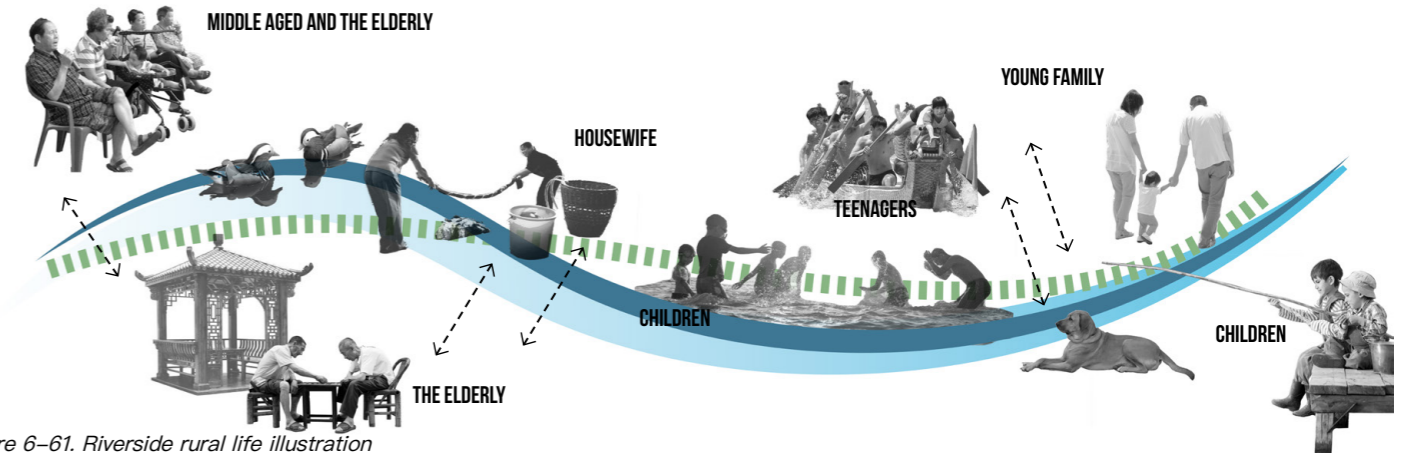


Figure 6-61. Riverside rural life illustration
Source: author

6.7 STAKEHOLDER ON THE MAP

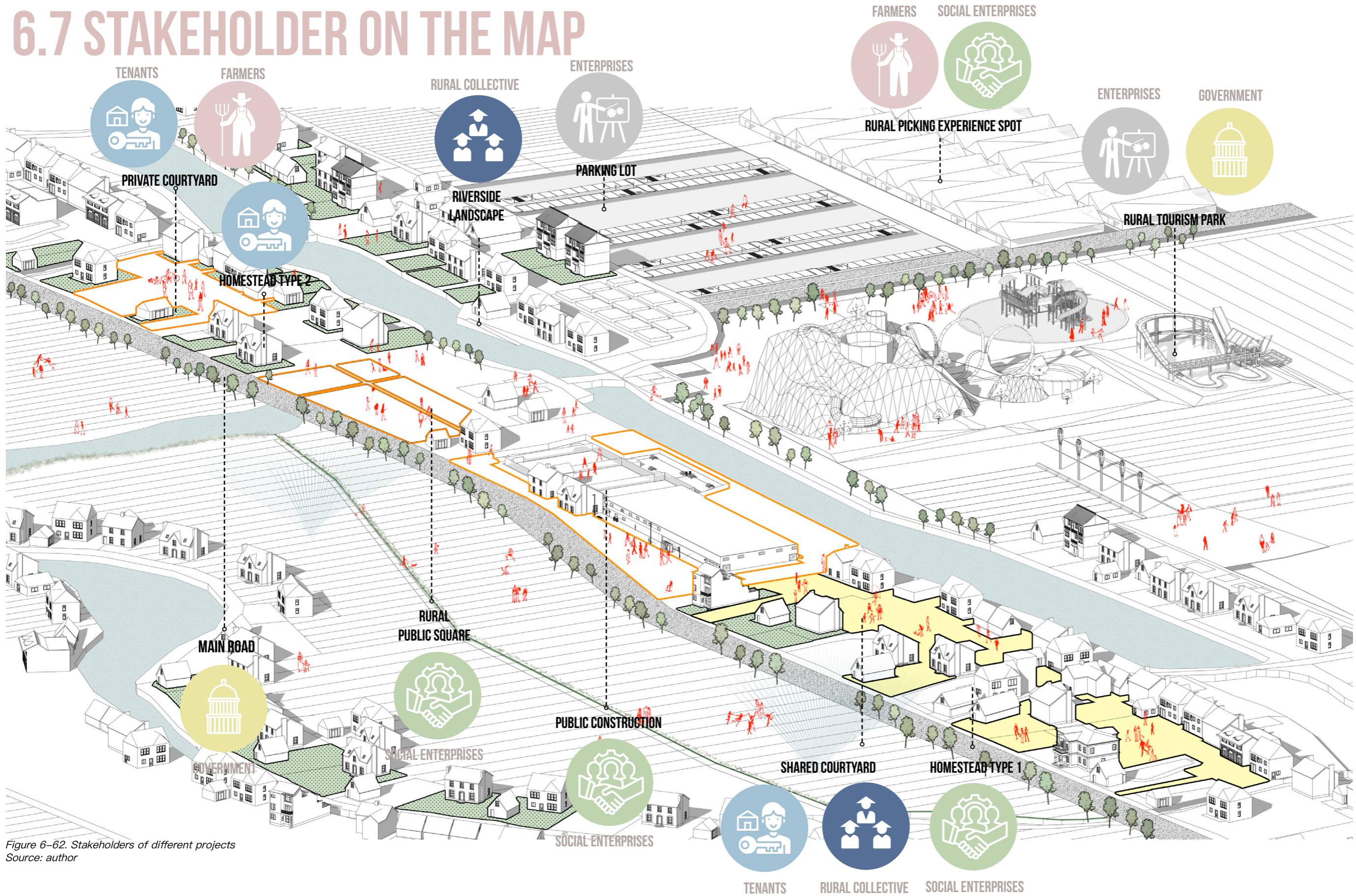
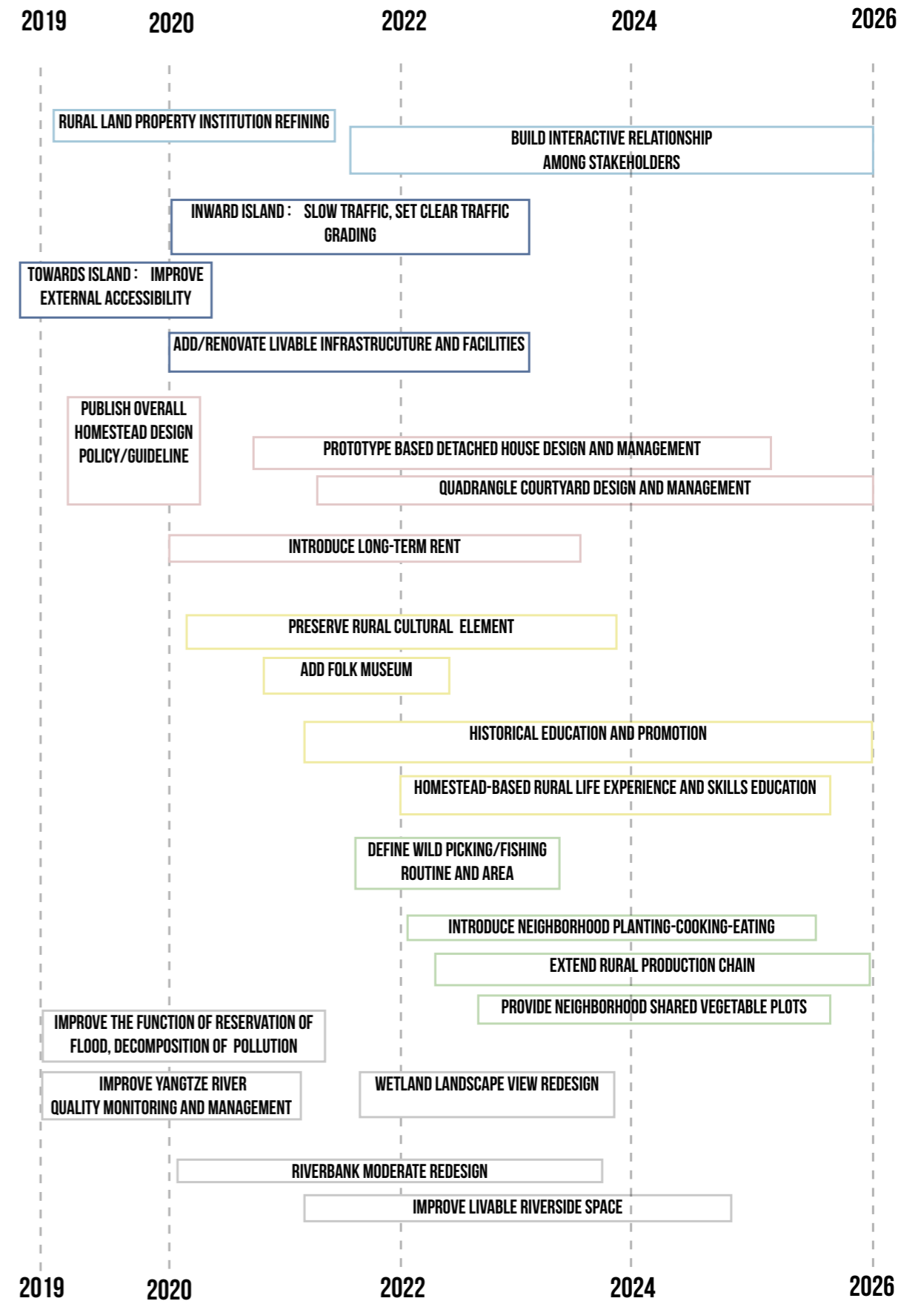
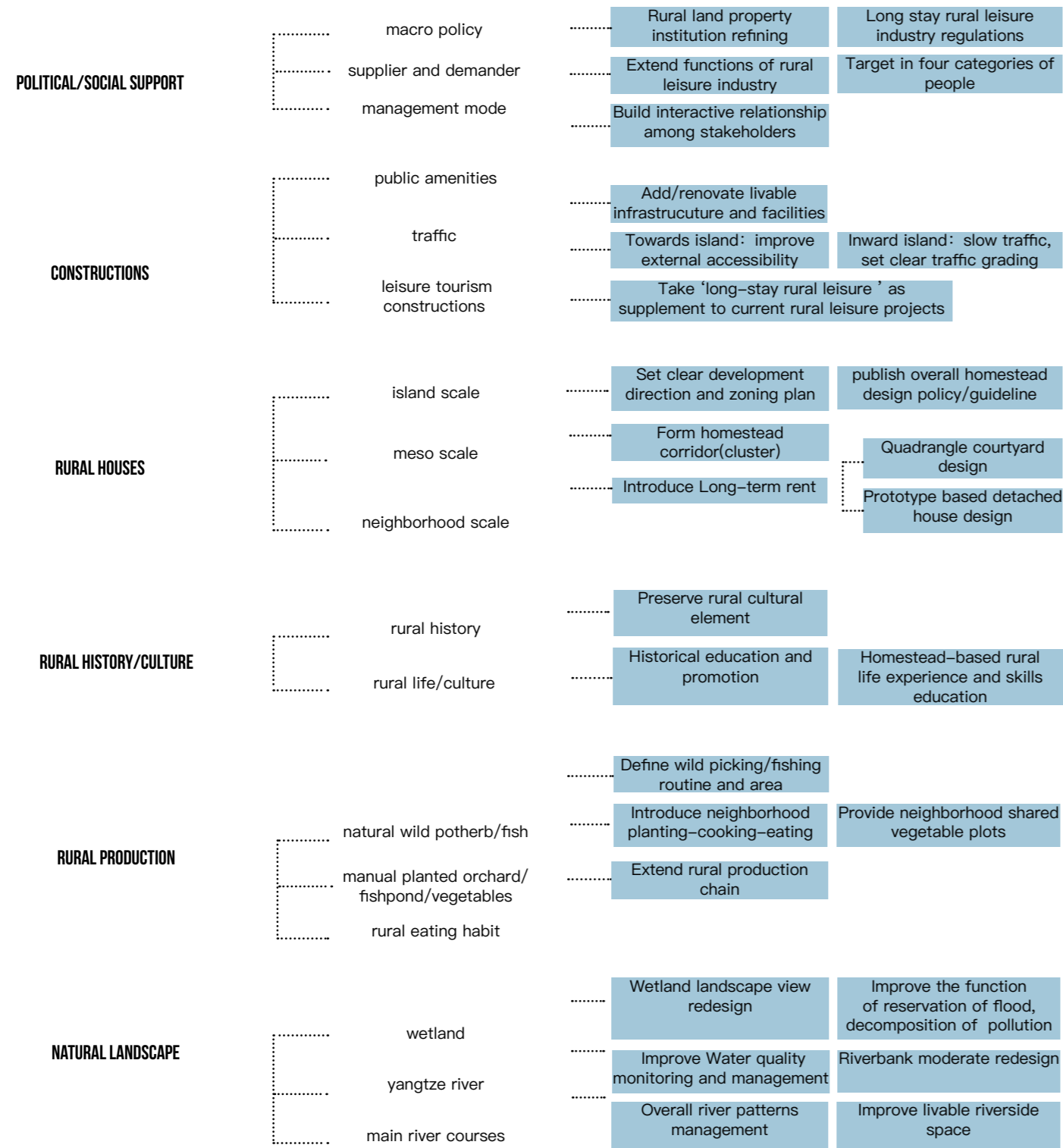


Figure 6-62. Stakeholders of different projects
Source: author

6.8 PHASE



BY 2020

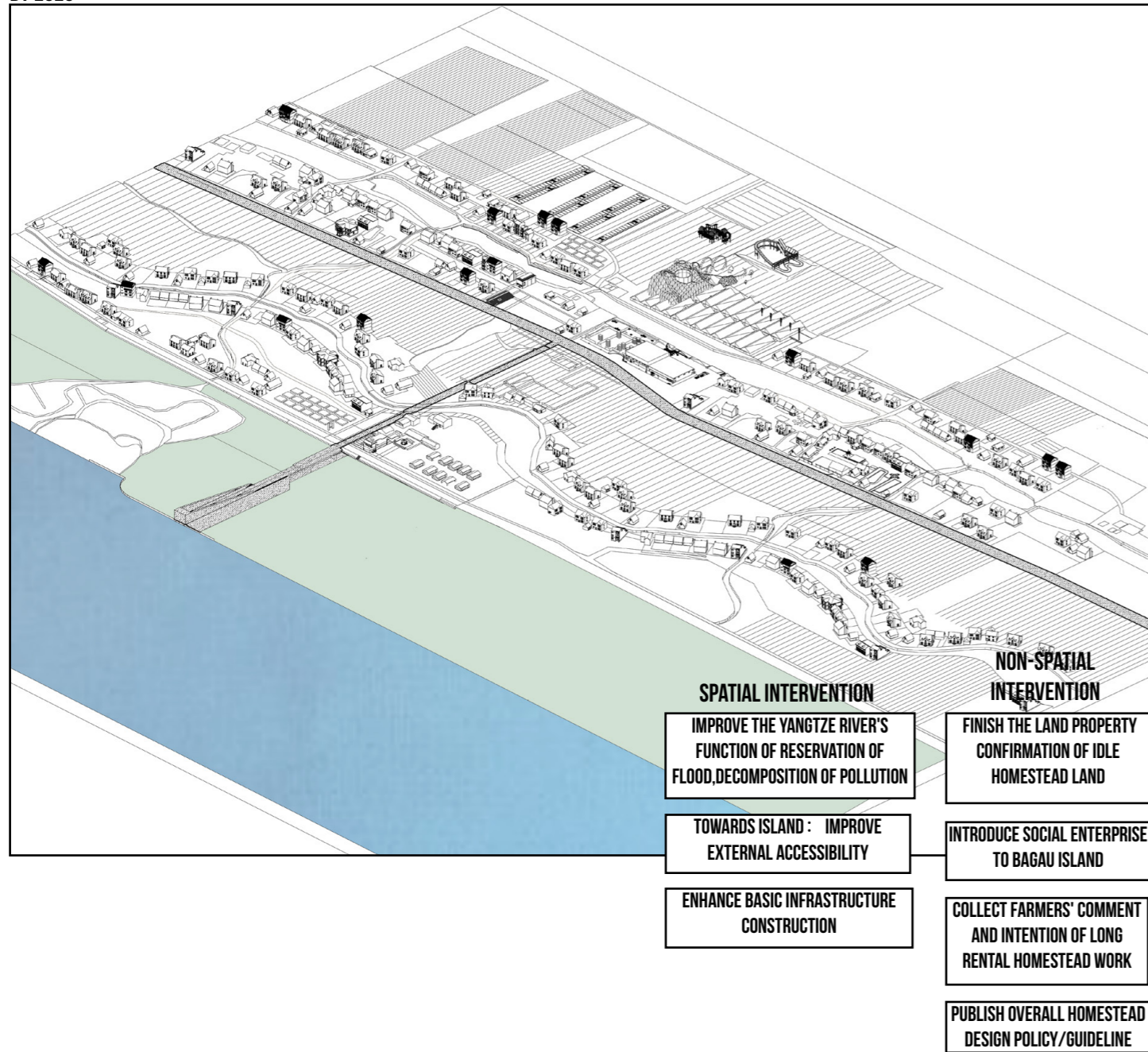


Figure 6-63. Map of phase 1
Source: author

FROM 2020 TO 2022

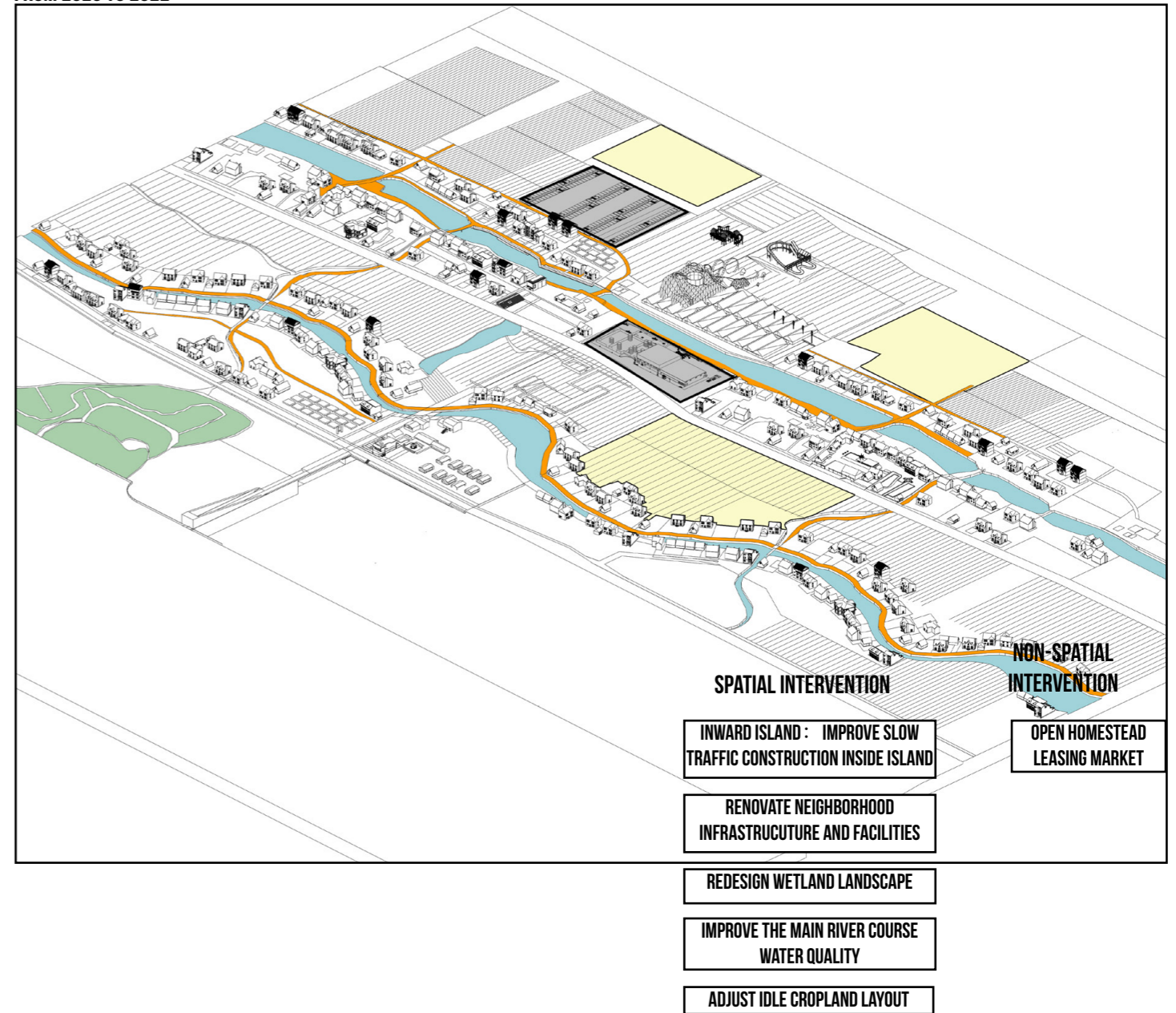


Figure 6-64. Map of phase 2
Source: author

FROM 2022 TO 2024

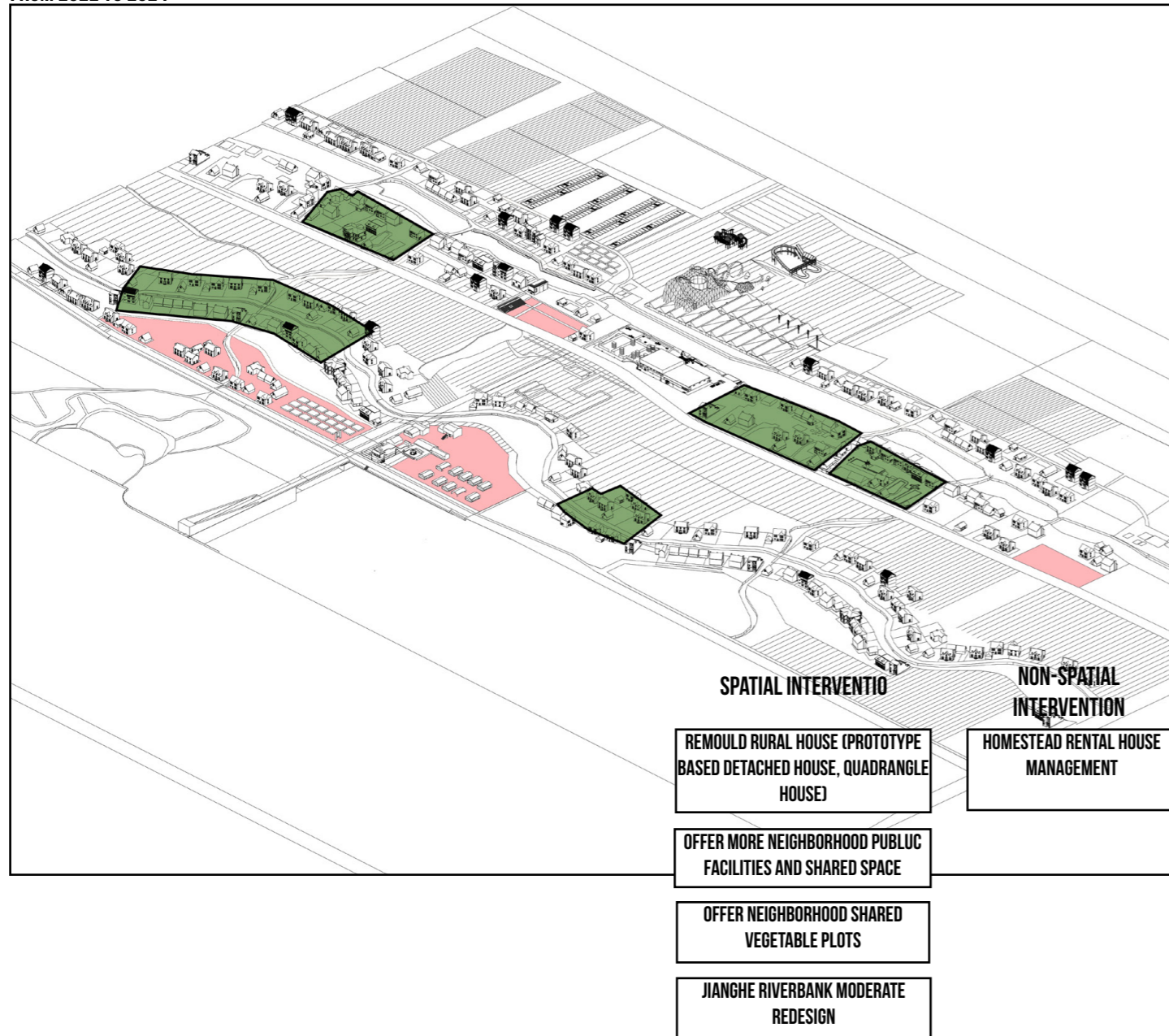


Figure 6-65. Map of phase 3
Source: author

FROM 2024 TO 2026

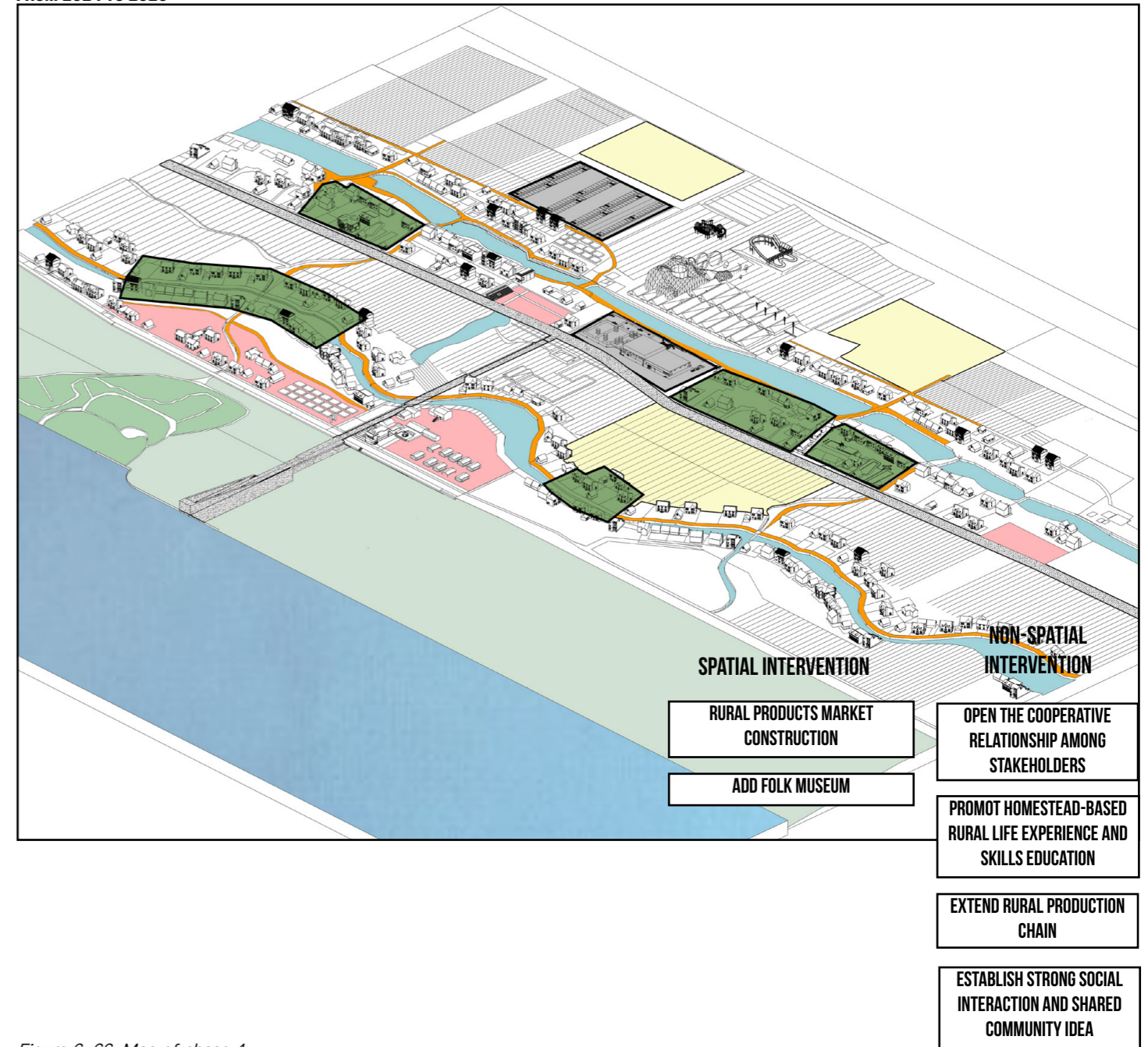


Figure 6-66. Map of phase 4
Source: author

7.PILOT PROJECT

7.1 PILOT PROJECT 1

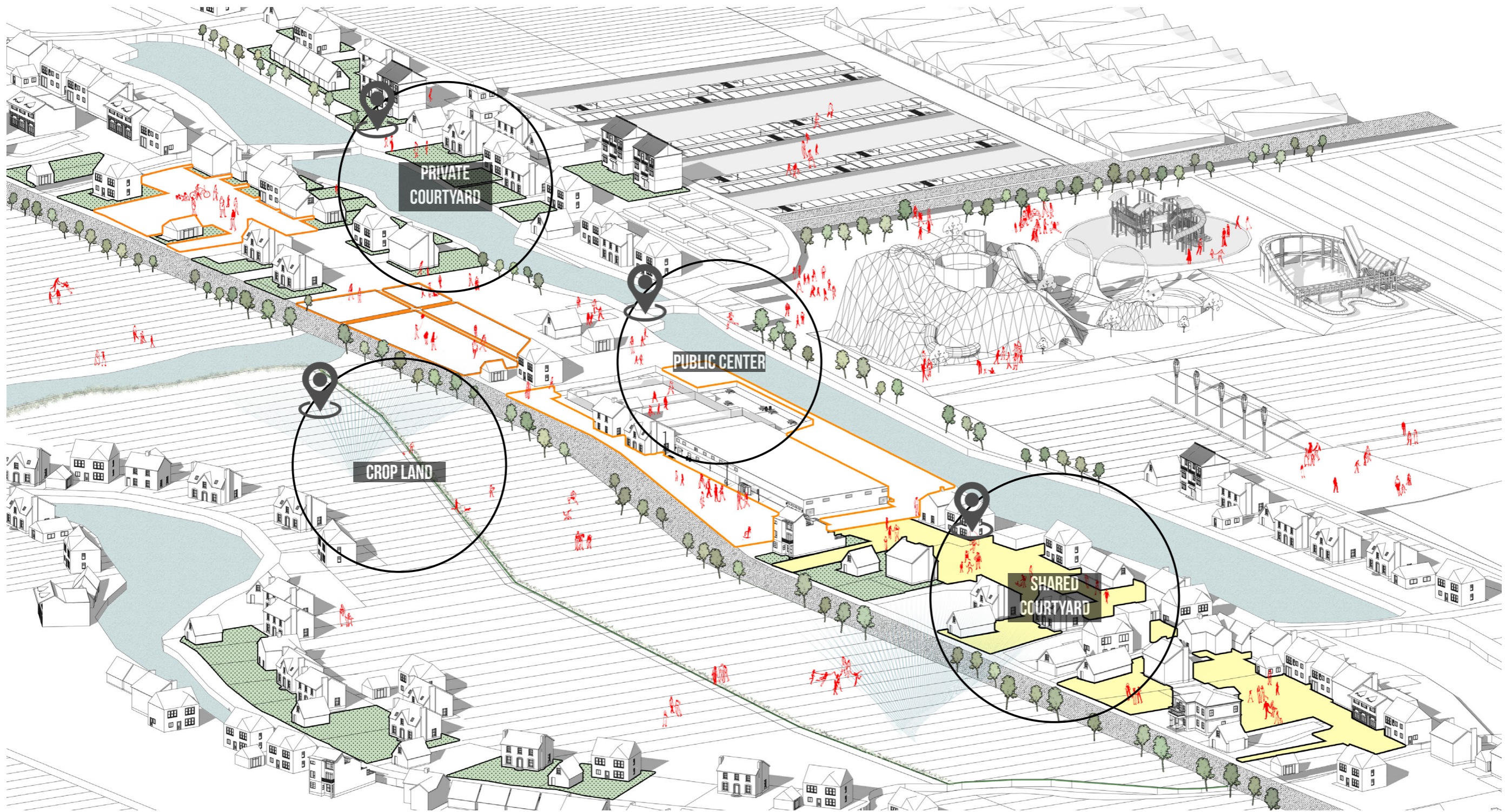


Figure 7-1. Pilot project 1—jianghe riverbank area
Source: author



SHARED COURTYARD

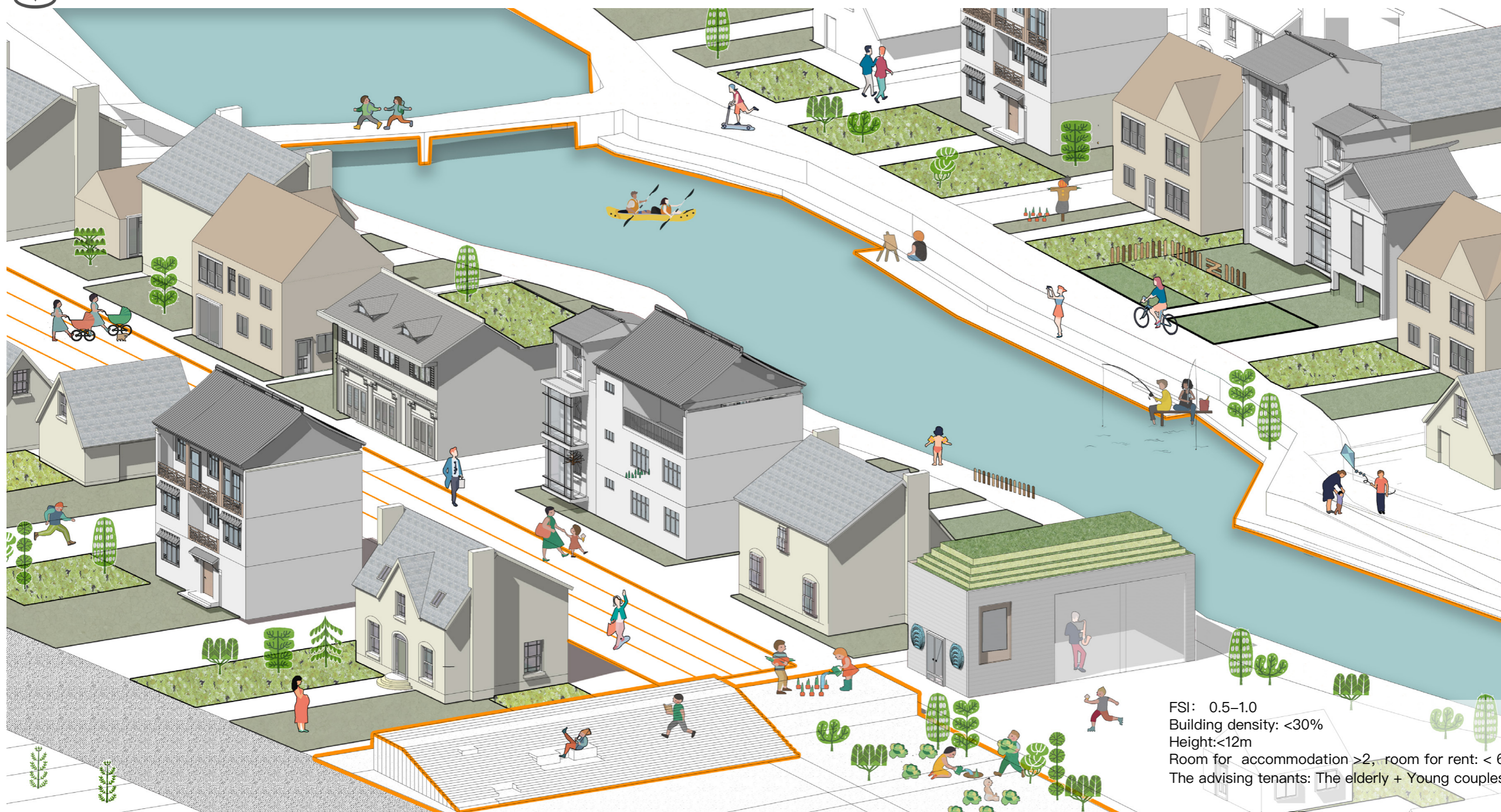


FSI: 0.6-1.3
Building density: <30%
Height: <12m
Room for rent: < 8
The advising tenants: The elderly + Young family with children + Start up companies

Figure 7-3. Shared courtyard illustration
Source: author



PRIVATE COURTYARD

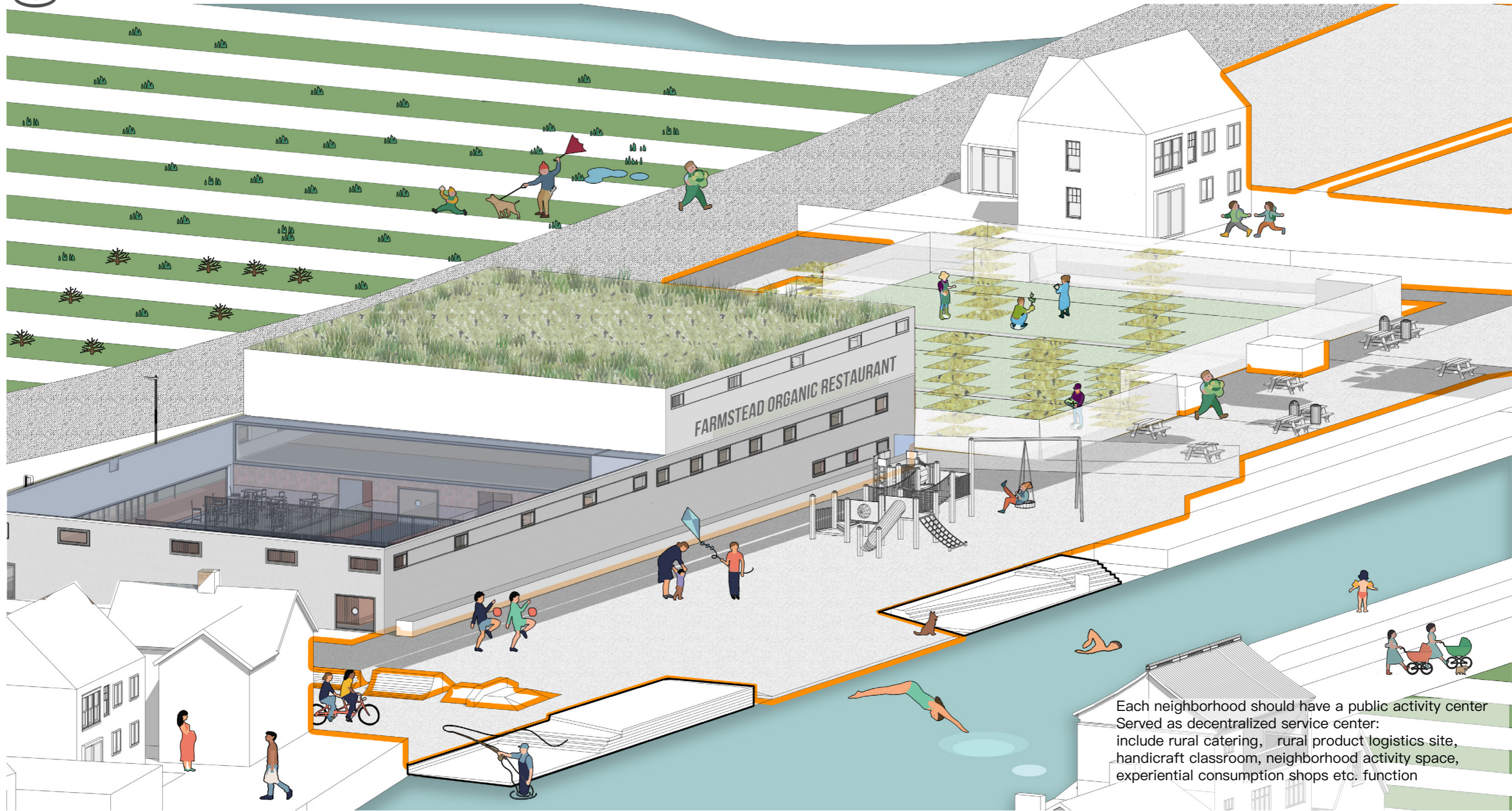


FSI: 0.5–1.0
Building density: <30%
Height: <12m
Room for accommodation >2, room for rent: < 6
The advising tenants: The elderly + Young couples

Figure 7-4. Private courtyard illustration
Source: author



PUBLIC CENTER

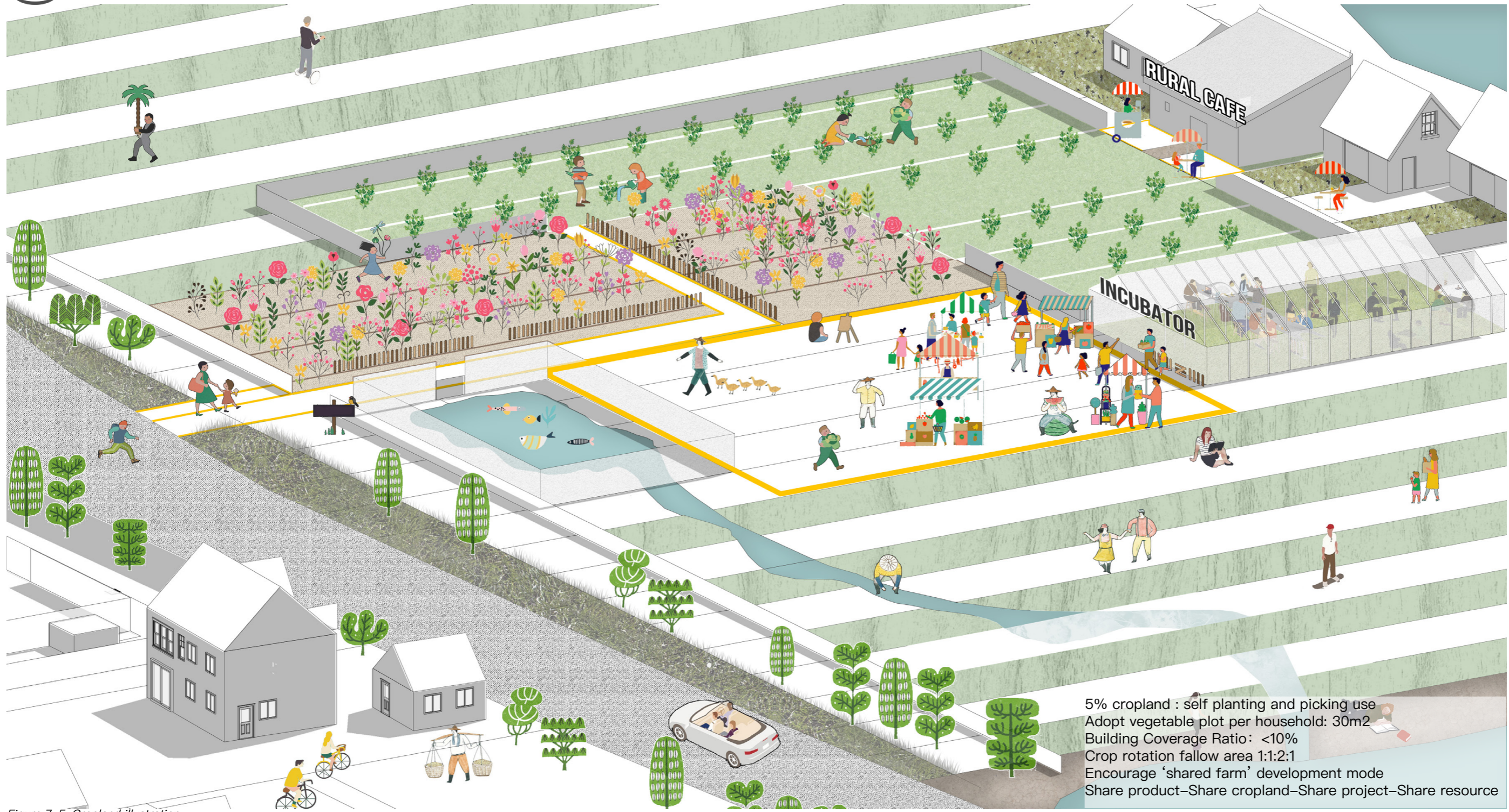


Each neighborhood should have a public activity center
Served as decentralized service center:
include rural catering, rural product logistics site,
handicraft classroom, neighborhood activity space,
experiential consumption shops etc. function

Figure 7-2. Public center illustration
Source: author



CROP LAND



5% cropland : self planting and picking use
Adopt vegetable plot per household: 30m²
Building Coverage Ratio: <10%
Crop rotation fallow area 1:1:2:1
Encourage 'shared farm' development mode
Share product–Share cropland–Share project–Share resource

Figure 7-5. Cropland illustration
Source: author

7.2 PILOT PROJECT 2

PILOT PROJECT 1--QILI VILLAGE(WETLAND AREA)

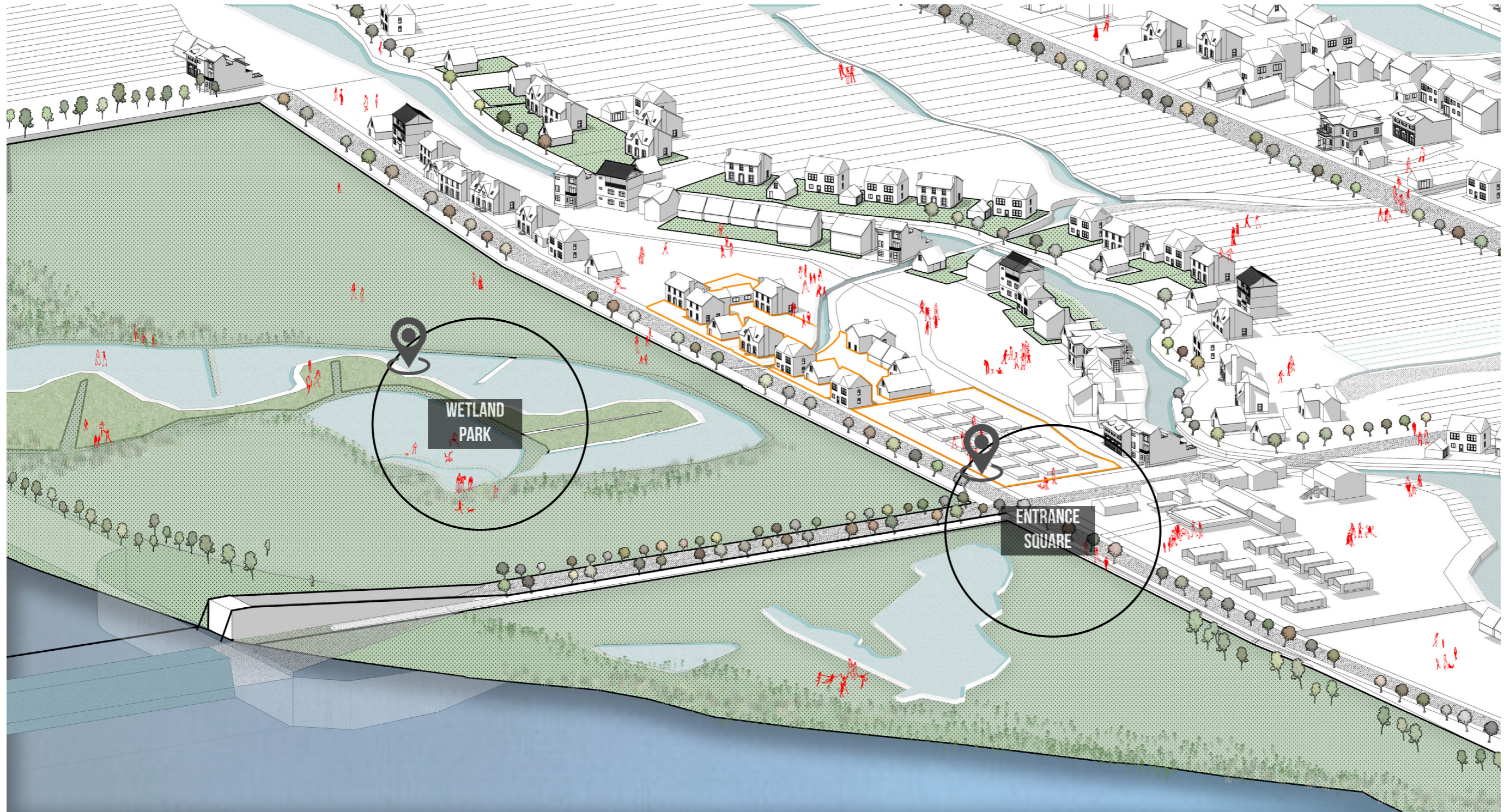


Figure 7-6. Pilot project 1--qili village(wetland area)
Source: author



WETLAND PARK



Figure 7-7. Wetland park illustration
Source: author



ENTRANCE SQUARE

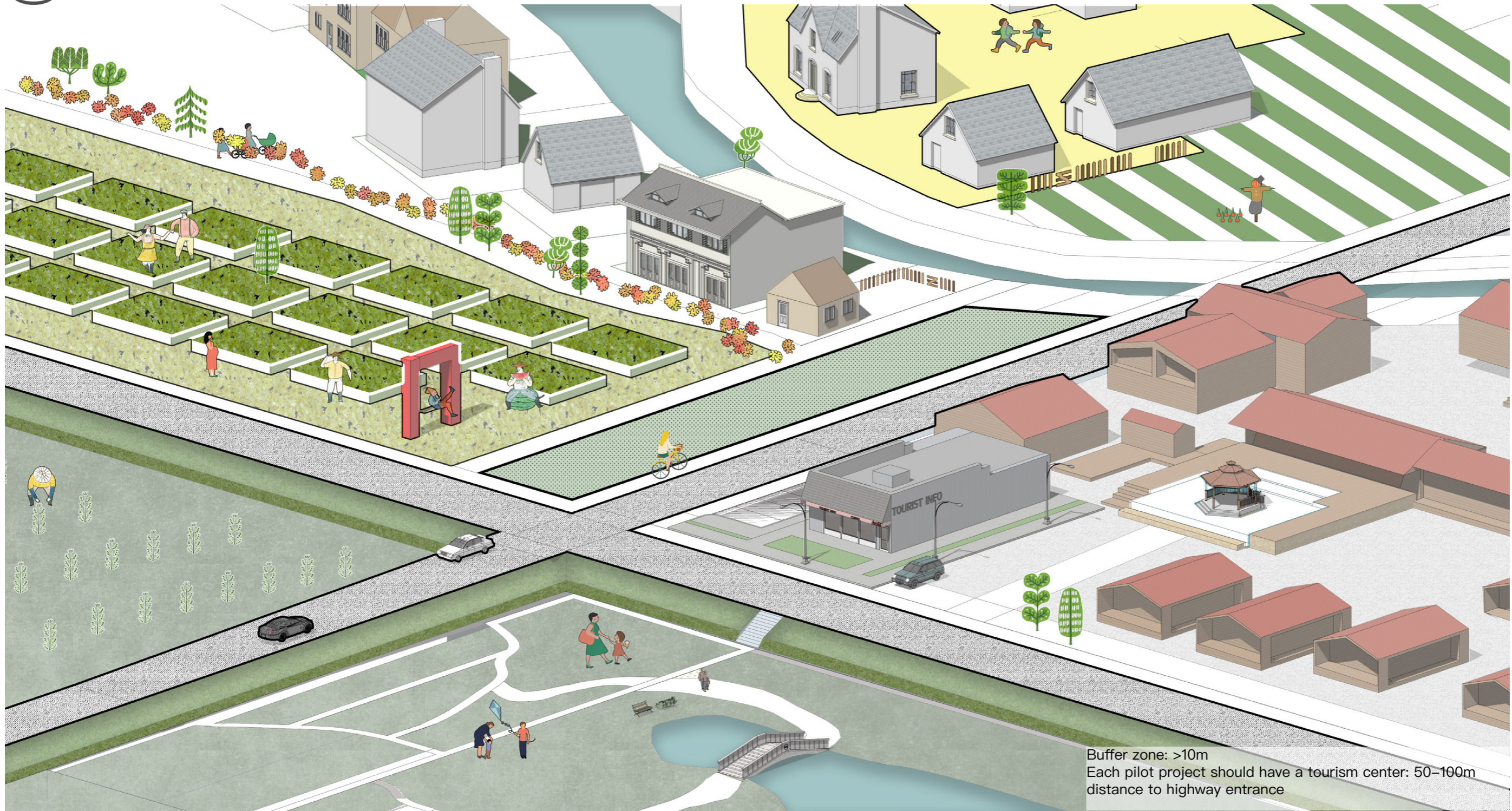


Figure 7-8. Entrance square illustration
Source: author

7.3 POLICY REVISION

A policy is a deliberate system of principles to guide decisions and achieve rational outcomes. A policy is a statement of intent, and is implemented as a procedure or protocol. From the perspective of different stakeholders, policy revision is shown below, which could be encouraged or promoted in other part of Chinese rural area. However, policies frequently have side effects or unintended consequences. Because the environments that policies seek to influence or manipulate are typically complex adaptive systems (e.g. governments, societies, large companies), making a policy change can have counterintuitive results. Thus these policy needs to be examined through more practice.

The land property of homestead is slightly changed. In the past, it was non-profit oriented rural construction land. Now it could be gradually shift to profit oriented rural construction land. However, we should still keep in mind that, it is still completely different from the urban residential land (figure 7-9).

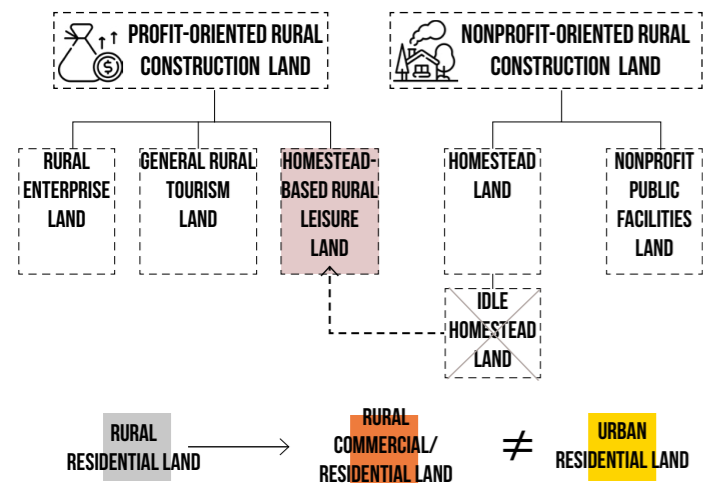


Figure 7-9. Land property adjustment
Source: author

Development people

For local farmers: the maximum lease term is up to 20 years. Farmers need to participate in the rural leisure knowledge train course regularly.

For operator: Social enterprise is suggested to engage in the co-developing process. However, Real estate bid, auction and listing market is forbidden, which means the working institution is different from nowadays real estate companies. Social enterprises need to give 10% of the operating profit to the rural collective every year as the villagers' year-end dividend, and this income is distributed by rural collective independently.

The possible functional leisure development direction are: Rural life experience, the elderly healthcare, cultural and creative industries etc.

Social enterprise which in charge of a overall long stay rural leisure project should consist of The Investment management department, Design department, Engineering department, Financial department, Promotion department etc.

For tenants: consumers can choose short-term, long-term and experiential stay. The rent price is between 1-2 million rmb. they are strictly forbidden from buying rural homestead or cropland. They can choose the tennacy term freely.

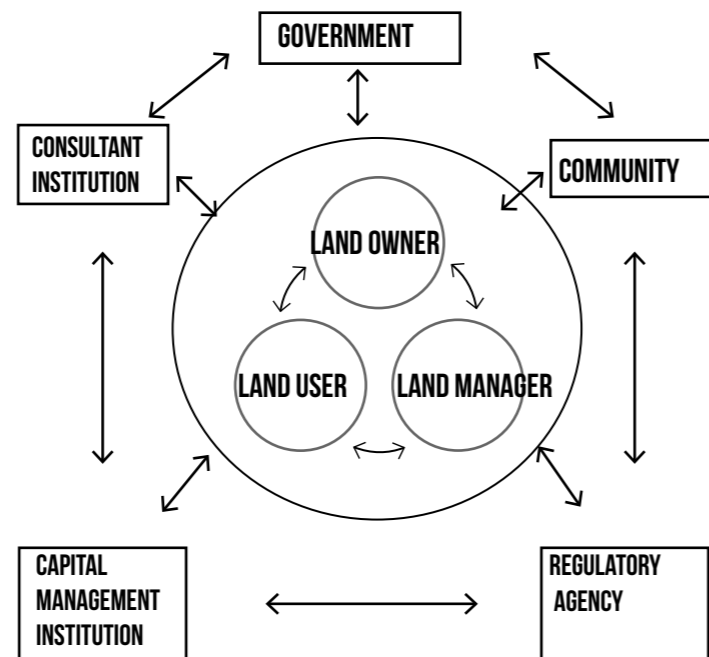


Figure 7-10. System structure of stakeholders
Source: author

Development process

cooperation: In the first phase, it is important to promote the idea of 'long stay rural leisure industry' to the actors, especially land owners. The awareness of cooperation should be built among government, rural collective, farmers and social enterprises.

combination/negotiation: In the second phase, as the landowners are actively participate in cooperation. It is important for planners to deeply investigate their actual interests and demands. Some small pilot project could be tested, to get feedback and comment from public.

planning/design: For design transformation, the main concept is "light intervention". The transformation of the old house is the same. The house in the back is mainly organized, so a public corridor will be built in the front, so as to introduce farmhouse and other business forms in the future. On this basis, each yard will have its own characteristics under the overall control. This phase is led by rural collective, land owners and social enterprises at the same time.

management/maintenance: This phase is mainly about the maintenance of long stay rural leisure construction. Governemnt should in charge of the large scale construction management and renewal, while for the developed homestead, it relies on social enterprise to manage. Rural collective has more experienced of local living conditions, thus they are in charge of the property management of residential community.

benefit/upgrade: Profit, benefit, industrial upgrading, market feedback and adjustment, and shape the co-production model, drive the development of the farmhouse catering, handicraft workshop, orchard home stay and other industries through the "integration of production and marketing", and establish a new economic development model of "returning to farmland and sharing agriculture". And the model that local villager autonomy system dominates, walk the vision of whole Renaissance.

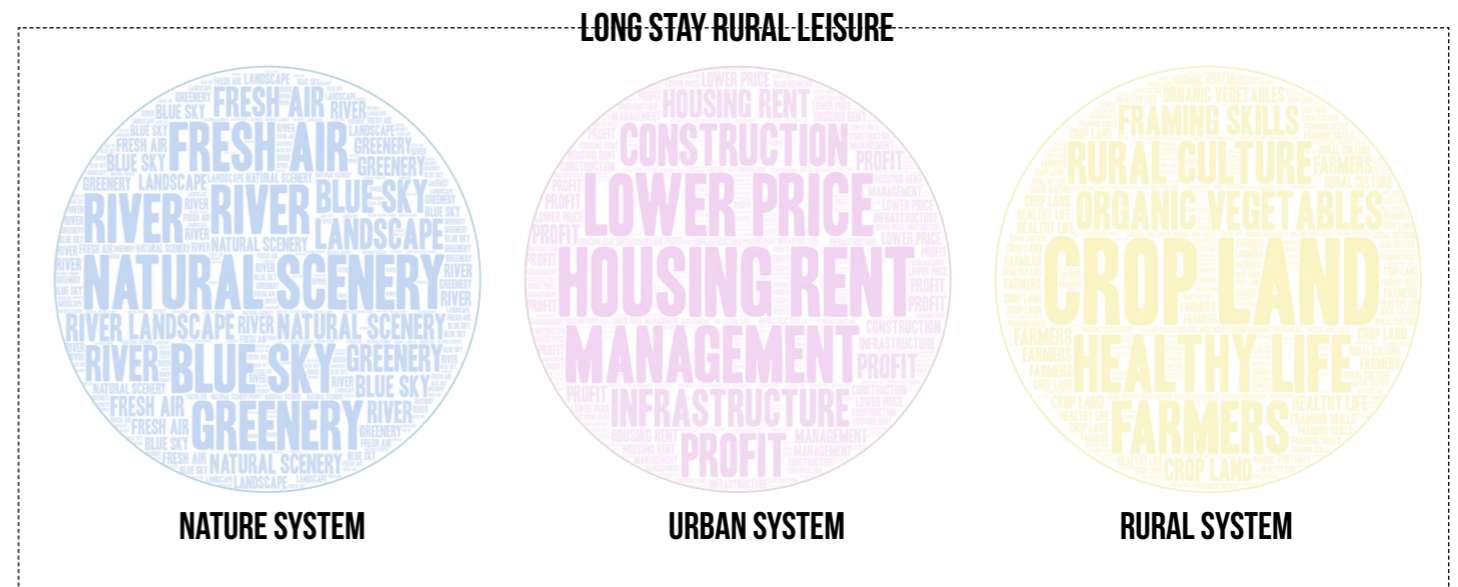
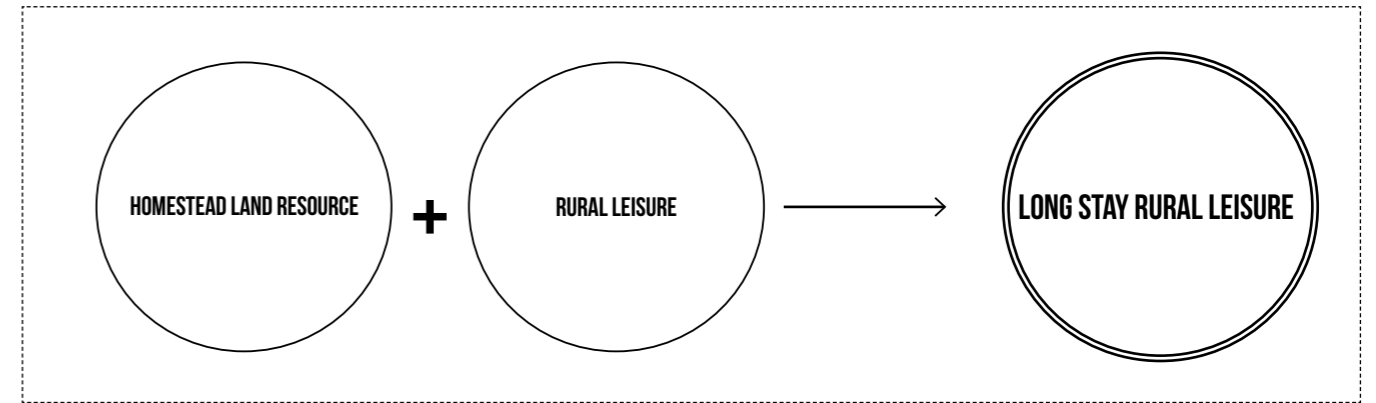
8. SYNTHESIS

8.1 Conclusion

Integration is the key word in dealing with the relationship between urban development and rural agriculture in this project. However, the integration of city and agriculture is not a purpose itself, but a tool for integration in broader contexts. In the project, long stay rural leisure development is actually utilized to examine the complex relationship between urban and rural sectors, between human settlements and its surrounding landscape, between largescale development and local communities, between short-term development pressure and long-term resilience. The core value behind this integrations is the sustainable development, to be more specific, wellbeing of people and environmental, which, in the fact, often compromise with economic growth and administrative convenience in the process of China's rural development.

With these hypotheses, the research and design of the project are based on the understanding of the conditions and dynamics of nature-rural-urban system and interactions among them. By identifying the current roles and potential performance of long stay rural leisure, the importance of nature-rural-urban integrating system is examined while at the same time a new framework and approach is proposed to facilitate sustainable rural practices. In addition, It is a systematic and complex project involving many stakeholders such as the government, enterprises, villagers and tenants. It is necessary to build a rational driving mechanism to ensure its healthy development.

With the case study of Bagua island, Nanjing, this thesis analyzes the stakeholders in the construction of shared farms and proposes to build a "driver mechanism based on government and enterprise alliance of shared farm", which has important research significance for exploring the construction path of homestead development in other place in China.



8.2 Reflection

1. Research scope and future research

This graduation project is aimed at discussing the future development direction and strategy of Chinese idle rural land, especially idle homestead land, under the new political and social background. In the introduction section, writer introduces the definition and problems of current Chinese rural land, the rural leisure industry application in China, and proposes to combine this two scopes together, which means to address: What is the 'long stay rural leisure industry'. In the next, Based on stakeholder theory, writer tries to prove that 'long stay rural leisure industry' is a rational and feasible development mode, to answer the question: From the perspective of governance, why we should apply it. Follow on that, the methodology chapter discuss the methodology to implement and operate it, which based on the 6 pillars and their relationships building. Then, in the strategy section, 'How to deal with it' question is answered. The pilot project chapter is the design visualization outcome of the whole project. The future research should base on the central theme of 'long stay rural leisure' development mode, discuss its values, operation, application, management, and promotion, not only from the spatial planning scope, but also from social, political, natural, and economic points of view, to reflect it in other area with similar backgrounds.

2. Relevance

Scientific relevance

When the Chinese rural land adjustment policy was published in 2018, both rural and urban people were under big influence, and they eager to know the corresponding strategy. This policy change also overturned the perceptive that rural homestead land cannot be operated by enterprise, nor used by urbanites. However, the development direction and management mode is a big question, and research on this topic is lagging and lacking. Besides, current scholar debates on the rural leisure topic is limited in profit oriented construction land, which is not suitable for homestead and relating rural collective land. Although some basic ideas are transferrable, the methodology needs to be redefined. Derive from the Dutch layers approach, this project offers a nature-rural-urban integration scope, hope to enrich the catalogue of future rural leisure industry, and Dutch layers approach in Chinese rural new era context.

Societal relevance

This research is not only focused on the market economic profit by Chinese rural land reform, but also focus on the harmony and integration of rural and urban development, and more importantly, focus on the current farmers without money or knowledge but only land resources, hoping to give

them equal rights with urbanites. The rural problem in china is a wicked problem, the chain reaction can be unpredictable, thus paying more attention to the social effect is essential. In addition, 'long stay rural leisure' development mode is different from normal rural leisure development, it relies on the effort of multi factors. It is not only the duty of enterprises and government, but also the participance of farmers, rural collective and tenants. This project tries to build an inclusive, affordable, social friendly long stay rural leisure environment for people involved, to avoid the emergence of 'tragedy of ant common'.

3. Research group & project

This graduation project is carried out in 'Transforming Chinese cities', complex cities studio. The 'Transforming Chinese cities' group considers that 'Chinese cities are experiencing a paradigm shift on urban development, focusing more and more on regeneration of existing built-up areas than construction of new towns/districts... It brings opportunities to improve livability and urban vitality, making better places for people living and working inside cities'. This sentence seems to focus on the Chinese cities value, actually, it also refers to rural area under urbanization process. Peri-urban area was so called rural area in the past, but currently, it is strongly influenced by urban construction building and policy control. Urban and rural area is a system, which cannot be treated separately. The motivation of my project is that, migrant farmers leave their rural house and rural land, to seek for working and living opportunities in urban area, which lead to much idle rural houses and land. The regeneration of this abandoned, undefined, idle rural resource is quite urgent and important. We can also call it 'existing built-up areas', but in rural context. How to vitalize this land? How to improve farmers and urbanites life quality at the same time? These questions fit and even extend the idea of 'improving livability and urban vitality'. The central theme of my graduation project is 'long stay rural leisure' construction, which is actually the hybridization of urban, rural and natural system. By research on this topic, I can be able to 1. 'clearly explain the transformation processes of the chosen city-region from a self-defined perspective, address both social and physical dimensions of these processes, and relate them to issues of livability'; 2.'map the social and spatial transformation processes in cities with effective analytical tools and correlated narratives'; 3.'Envision desirable and possible futures for the transforming Chinese cities';4.'Reflect on the on-going urban planning and design practices in China from the self-defined perspective', which are the main learning goals of 'Transforming Chinese cities' research group.

4. Perspective of Research

Chinese rural area is a multi-level, multi-factor, comprehensive system. The development of idle homestead land and 'long stay rural leisure' construction involves various stakeholders' perspectives, which can be structured from the external driving force(including government policy, enterprises, consumers etc.) and the endogenous power(including rural collective, farmers). Their demands and power-interests are analyzed in detailed in theory paper. Simply saying, rural farmers and rural collectives stand for the land ownership perspective; government and enterprise stand for the land management perspective; urban consumers stand for the land using right perspective. These three perspectives are correspond to the 'separation rights of rural collective land' policy regulation.

5. Limitation

There are some limitations that need to be mentioned. These limitations not only lie in the project implementations, but also could be the methodology and political context. This thesis is a starting attempt to encourage and suggest people to be aware of the 'long stay rural leisure construction' as a trigger to vitalize Chinese rural area.

Firstly, the whole project is based on the current policy backgrounds. However the Chinese rural land policy keeps changing, which may leads to completely different development mode in reality. Policy revision is different in different province, thus needs adjustment to local conditions. Secondly, the long stay rural leisure development mode is not a popular widespread development mode for Chinese rural land at present. It is just a personal hypothesis by writer herself. The emerge of 'shared farm' and relative literature have not been fully developed, and still need time to test its rationality. In addition, Chinese rural problems are wicked problem, it is impossible to completely solve the rural urban problems only by development mode building. The long stay rural leisure development is only a small part of general rural leisure development, its influence and transferability is limited. Thirdly, this project introduced the Dutch layers approach, and modify it from 'substratum-networks-occupation' model to 'nature-rural-urban' model. However, the Dutch layers approach is probably not necessary or feasible to promote in Chinese rural context, because of the different social, political and economic backgrounds. Last but not least, from the perspective of spatial planning and design, this project only selects 6 pillars from urban, rural and nature system subjectively.

6. Process & Progress

During this one year graduation project, I really learn a lot from my mentors: Lei and Steffen. Lei is experienced in strategic oriented planning, integral thinking and Steffen is good at logistic integral thinking. I really appreciate their help and encouragement. Here, I want to tease out the working process.

In P1, I originally hoped to use ArcGIS model to conduct the rural land construction suitability evaluation. Since I was always interested in Chinese homestead topic and ArcGIS methods. Naturally, I wanted to apply ArcGIS to solve homestead development problem. However, during P2, we found that the strategy should not only stay in the evaluation phase, most importantly, the evaluation should guide the following practice, and the pure quantities analysis is lacking argument. Besides, according to the field trip in Bagua island, the statistic information is not strong enough for the overall evaluation from nature, urban and rural aspects. Thus, I gradually abandoned the ArcGIS evaluation methods, instead, switched to the strategic oriented 'analysis-principle-vision-strategy-design' path. However, some other problems appeared. After P3, I was confused and feel anxious about the actual main line of my project. Looking beyond the commercial development mode is difficult for me, which reflected on that I only focused on the homestead itself all the time, because it is the core construction land. Lei kept reminding me that, for long stay rural leisure development, other aspects(natural, cultural, social, urban aspects etc.) are equally important, and have strong relations with homestead, and Steffen inspired me to use pillars to enrich my argument and proposal. Luckily, I think i finally found a clear methodology to guide my whole story, and steered to the right direction.

I am happy and proud to say that now I can understand the Chinese rural land adjustment clearly, and contribute to dealing with idle homestead land by rural leisure industry. This one-year graduation project experience really inspires me and not only gives me relative planning and design knowledge, but more importantly, gives me learning method and improve my self-learning ability that I will benefit forever.

9. BIBLIOGRAPHY

白廷斌, & 骆静珊. (2001). 城郊观光农业发展研究—以昆明市呈贡县为例. 云南地理环境研究, 13(2), 47–53.

陈百明, & 周小萍. (2007). 《土地利用现状分类》国家标准的解读. 自然资源学报, 22(6), 994–1003.

崔宝敏. (2010). 天津市“以宅基地换房”的农村集体建设用地流转新模式. 中国土地科学, (5), 37–40.

范艺馨. (2010). 我国农村宅基地使用权法律问题研究 (Doctoral dissertation, 重庆: 西南大学).

高飞. (2016). 农村土地“三权分置”的法理阐释与制度意蕴. 法学研究, 38(3), 3–19.

郭焕成. (2009). 休闲农业前景广阔. 农村工作通讯, 7(11).

郭焕成. (2010). 我国休闲农业发展的意义, 态势与前景. 中国农业资源与区划, 31(1), 39–42.

韩李荃, 胡海波, 鲁小珍, & 蔡祺. (2013). 基于“三元论”的湿地公园规划——以南京八卦洲湿地公园总体规划为例. 林业科技开发, 27(4), 125–129.

黄映晖, 唐衡, & 史亚军. (2009). 休闲农业的相关经济学理论探析. 中国农学通报, 25(17), 316–319.

田代洋一, 日本的形象与农业 [M]. 北京: 中国农业出版社. 2010.

王金龙, 罗继春, & 撒德山. (2006). 休闲农业在新农村建设中的作用. 农村经济与科技, 17(8), 65–66.

王英文. (2017). 村民主体认知视角下的山东省乡村闲置宅基地更新设计研究 (Master's thesis, 山东建筑大学).

吴邦国. (2004). 全国人民代表大会常务委员会工作报告——2004年3月10日在第十届全国人民代表大会第二次会议上. 中国人大, (6), 7–13.

肖碧林等. 我国农村宅基地置换模式、问题与对策建议 [J]. 中国农业资源与区划, 2011(3), 37–41.

谢美婧. (2009). 野菜种植业的产业化经营特点研究——以南京芦蒿业为例. 长江蔬菜, (10X), 69–72.

杨大柱. (2008). 城乡统筹发展背景下的村庄整治——五河县空心村整治的调查与思考. 经济研究导刊, (19), 64–65.

杨静, 李满春, 丁贤荣, & 刘永学. (2012). 长江南京段岸线资源 GIS 评价与分析. 地球信息科学学报, 10(2), 200–205.

杨亚楠. (2008). 农村宅基地闲置状况研究综述. 现代农业科技, (14), 281–282.

曾芳芳. (2013). 休闲农业视野下闲置宅基地开发模式研究 (Doctoral

dissertation, 福建农林大学).

曾芳芳, & 朱朝枝. (2013). 休闲农业视野下闲置宅基地开发合理意蕴探析. 东南学术, (3), 116–123.

曾芳芳, & 朱朝枝. (2012). 休闲农业视野下马克思休闲意蕴之当代价值解构. 长春理工大学学报: 社会科学版, 25(11), 60–61.

张子龙, & 臧英平. (2003). 南京八卦洲汉道河道整治工程措施分析. 人民长江, 34(7), 30–32.

周婧, & 杨庆媛. (2012). 农户层面农村宅基地流转研究进展与述评. 地理科学进展, 31(2), 139–148.

Antrop, M. (2000). Background concepts for integrated landscape analysis. Agriculture, ecosystems & environment, 77(1–2), 17–28.

Batty, M. 2005. Cities and Complexity. Understanding Cities with Cellular Automata, Agent Based Models and Fractals. Cambridge (Mass): MIT Press.

Bernice B. Brown (1968). "Delphi Process: A Methodology Used for the Elicitation of Opinions of Experts.": An earlier paper published by RAND (Document No: P–3925, 1968, 15 pages)

Dalkey, Norman; Helmer, Olaf (1963). "An Experimental Application of the Delphi Method to the use of experts". Management Science. 9 (3): 458–467. doi:10.1287/mnsc.9.3.458.

Daniels, T. (1999). When city and country collide: managing growth in the metropolitan fringe. Island Press.

20. Gude, P. H., Hansen, A. J., Rasker, R., & Maxwell, B. (2006). Rates and drivers of rural residential development in the Greater Yellowstone. Landscape and Urban Planning, 77(1–2), 131–151.

De Bruin, D., D. Hamhuis, L. Van Nieuwenhuijze, and D. Sijmons. 1987. Ooievaar. De toekomst van het Rivierengebied. Arnhem: Stichting Gelderse Milieufederatie.

Harold A. Linstone, Murray Turoff (1975), The Delphi Method: Techniques and Applications, Reading, Mass.: Addison-Wesley, ISBN 978-0-201-04294-8, archived from the original on 2008-05-20

Heurkens, E. (2018). Private sector-led urban development: Characteristics, typologies and practices. In: Squires, G., Heurkens, E. & Peiser, R. (eds.) Routledge Companion to Real Estate Development. London, Routledge, pp. 107–122.

Heurkens, E.W.T.M. (2012). Private Sector-led Urban Development Projects: Management, Partnerships & Effects in the Netherlands and the UK. Delft University of Technology, Delft.

Kerkstra, K., and P. Vrijlandt. 1988. Het landschap van de zandgebieden. Probleemverkenning en Oplossingsrichting. Utrecht: Staatsbosbeheer.

Martin; Miles, Ian; Othmer, Julia (2009). "Foresight tools for participative policy-making in inter-governmental processes in developing countries: Lessons learned from the eLAC Policy Priorities Delphi" (PDF). Technological Forecasting and Social Change. 15 (2): 880–896. doi:10.1016/j.techfore.2009.01.001.

McLoughlin, B. 1969. Urban and Regional Planning, a Systems Approach. London: Faber & Faber.

Meyer, H., & Nijhuis, S. (2013). Delta urbanism: planning and design in urbanized deltas—comparing the Dutch delta with the Mississippi River delta. Journal of Urbanism: International Research on Placemaking and Urban Sustainability, 6(2), 160–191.

Meyer H., I. Bobbink, and S. Nijhuis, eds. 2010. Delta Urbanism. The Netherlands. Chicago & Washington: American Planning Association.

Portugali, J. (2012). Self-organization and the city. Springer Science & Business Media.

RPD. 2001. Ruimtelijke Verkenningen 2000, het Belang van een Goede Ondergrond. Den Haag: VROM.

Saaty, Thomas L. (June 2008). "Relative Measurement and its Generalization in Decision Making: Why Pairwise Comparisons are Central in Mathematics for the Measurement of Intangible Factors – The Analytic Hierarchy/Network Process" (PDF). Review of the Royal Academy of Exact, Physical and Natural Sciences, Series A: Mathematics (RACSAM). 102 (2): 251–318. doi:10.1007/bf03191825. Retrieved 2008-12-22.

Sackman, H. (1974), "Delphi Assessment: Expert Opinion, Forecasting and Group Process", R-1283-PR, April 1974. Brown, Thomas, "An Experiment in Probabilistic Forecasting", R-944-ARPA, 1972.

Scheffer, M. 2009. Critical Transitions in Nature and Society. New Jersey: Princeton University Press.

Sijmons, D., 1991. Het Casco-Concept. Een Benaderingswijze voor de Landschapsplanning. Utrecht: Ministry of LNV.

Van Buuren, M. 2003. "Ruimtelijke Concepten op Waterbasis." In Ruimte en Water. Planningsopgaven voor een Rode Delta, eds. M. Hidding and M. Van der Vlist, 117–138. Den Haag (Reeks Planologie 5): Sdu uitgevers.

Xu, D. (2016). Islands' Metamorphoses: Two River Islands in Nanjing, China, as a Case Study in Historical Toponymy and Cartography.