Research on the Consolidation of Rural Construction Land under China's New Urbanization Plan A Case Study in Tongxiang City, Zhejiang Province, China

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Key Words: Consolidation of Rural Construction Land; Consolidation Pattern; Consolidation Guidance; Spatial Reconstitution.

SUMMARY

Consolidation of rural construction land is a product of the evolution of the rural regional system in the process of urban and rural transformation. The new urbanization plan, as being proposed, indicates a new direction and opens a new pattern for rural land consolidation. This article, taking the new urbanization plan as center, fully analyzed the development tendency of Tongxiang city in the next five years. Then, it put forward a consolidation guidance, with a people-oriented philosophy, to start with an overall planning, then provide a general approach to promote economic, political, cultural, social and ecological progress with an ultimate goal of promoting production and living conditions and also maintaining a sustainable ecological environment. With a construction mechanism provided, it first sorted out the consolidation contents, then further categorized the construction land into different types and at last offered each type a distinctive consolidation pattern respectively. Hence, the construction land consisted of the following four types, which are the empty-shell type, the scattered type, the industry-supporting type and the central type. Based on these classifications, this article brought out the following consolidation patterns as solution, which are a unification of urban and rural areas, a new community aggregation that integrated the urban and rural areas and an overall relocation of rural population. Tongxiang city, endowed with a typical plain terrain in China and designated as the permanent address of World Internet Conference, was no doubt a satisfying study area. This article broke the previous consolidation deadlocks, and got rid of the "one-fits-all pattern", a dilemma in which one same pattern was applied to tackle with different rural construction land types. Under the new urbanization plan, it explored new strategies on rural construction land consolidation, which fits the characteristics of Tongxiang city. And these strategies could provide references for the future consolidation of rural construction land either in other places of Zhejiang or on a national scale.

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1 Introduction

The farmers are the behavioral subjects in the process of rural economic development. Their ideology and activities are the basis of constructing the future pattern of the village ^[1]. Along with the increasingly close exchanges of the material and information between urban and rural areas, and farmers' qualitative changes in housing needs and perception as well as the influence of the traditional ideas such as getting married and returning to their roots ^[2], there are emerging the flowing phenomena in rural construction land of Tongxiang city: building new houses without demolishing the old ones, staggering the old and new houses, even using land illegally,etc. In order to solve this chaos which is caused by urban-rural integration and interaction, local participants must timely respond to these changes and adjust it ^[3,4]. Besides, the rural construction land rural transformation ^[5-7], and it becomes crucially important to solve the problem that the rural construction land is being disorderly expanded. And the consolidation plays an important role in reconstruction of rural space, allocation of land resources, and it has the important significance in rural construction and development of urban-rural integration.

In the processes of rural construction land consolidation of the past, they always ignore the farmers' dominant role and neglect village's particularity that different from urban^[8]. Just to pursuit economical and intensive land use, they use the standardized model of urban community in all villages. That will result in a single and homogenizing space patterns, and cause a serious barrier for interacting and communicating among farmers ^[6-7]. Therefore, it will make the utilization of space resource inefficient, and hinder the process of optimizing village's ecological layout and constructing beautiful village. Under the background of new urbanization, it is an important breakthrough for rural construction consolidation to use the land economically and intensively as a starting point and realize the urban-rural integration which involves harmonious development, ecological and industrial village.^[9,10] In recent years, with the Notice of the Ministry of Land and Resources for the 13th Five-Year Land Remediation Planning Work(Land Resources [2015] No.68). the Zhejiang Provincial Department of Land and Resources on the Issuance of Zhejiang Land Remediation Potential Technical Guide (Trial) and the Notice of Zhejiang County Land Reclamation Planning Preparation (Revision) Guide (Zhejiang 2016 soil resources No.9) and other land management regulations released, the rural construction land consolidation has been attached great importance. Besides, with the national planning of agricultural modernization in 13th Five-Year programme issued recently, it directly points out that the adjustment of agricultural structure

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FIG Working Week 2017 Surveying the world of tomorrow - From digitalisation to augmented reality Helsinki, Finland, May 29–June 2, 2017 and the development of regional agriculture are the major problems to be solved in the next five years. With a view to the trend of future rural development, it is imperative to do a good job of rural construction land consolidation. Therefore, the different regions are actively exploring the ideas and modes on consolidation suitable for the local situation. And they are eager to take a unique brand new road of rural construction consolidation.

2 Study Area

Tongxiang is located in the north of Hangjiahu Plain in Zhejiang province. It is located in the Golden-Triangle of Shanghai, Hangzhou and Suzhou. Tongxiang has a very advantageous location, and it is known as the hometown of silk. By the end of 2015 year, there are 689 thousands registered people, 420 thousands temporary resident people in Tongxiang. The regional GDP reaches 65,263 million, and the government revenue reaches 10,027 million. Tongxiang got many honors such as the national science and technology advanced city, the national model city of culture, the national education advanced city and more. And it has been ranked among the country's top 100 at the county level for many years.

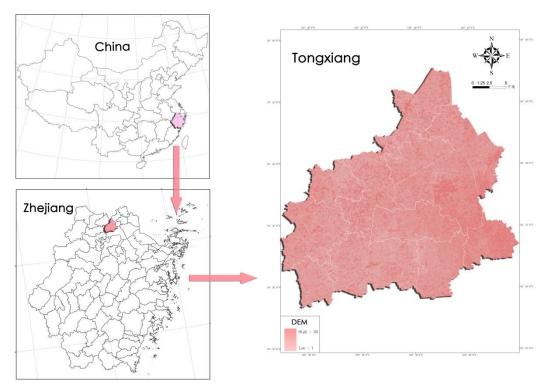


Fig.1 Location of Study Area

3 The Spatial Restructuring Strategy of Rural Construction Land

3.1 Classification of Rural Construction

According to the present characteristics of distribution and development mode about villages in

Tongxiang city, we can clearly divide villages into four types: hollow type, scattered type, industrysupporting type and center type.

1) Hollow Village

Hollow village refers to the villages which take the traditional agriculture as the major industry. However, because of the limitation of the natural and social conditions, the development potential in these villages aren't substantial. Villages like these are mainly distributed in Gaoqiao town, Dama town, Heshan town and Tudian town. The type is lack of the fundamental conditions of developing modern agriculture or other industries in these villages. Because young people are seeking for opportunities in big town, thus people live in the villages are most seniorities. They don't have the ability to learn more new agricultural technology, and they also are unwilling to move to big towns. It is worth mentioning that they cherish the relationship with family members or relatives, and they love to share the information, space and other resources with each other. So hollow villages have the actually potential productivity, but the shortage of production restrains the potential.

2) Scattered Village

Scattered type refers to the villages far away from the main city or these villages are located in protection zones like historical sites, ecological area and scenic spot. The location of these villages is remote. But part of the villages have cultural heritage. Villages like these are mainly distributed in Wuzhen town, Zhouquan town and Shimen town. The most important limitation to develop these villages is their location, which is scattered and random. Whereas, we can't just entirely remove the villages or relocate them, because the scattered type includes two categories: idle village and characteristic village ^[13]. They are similar to each other in aspect of location, but we should take absolutely different measures to do them. The idle villages are mainly demolished and reconstructed, which can enhance utilization efficiency of homestead, improve the rural environment and optimize allocation of resources. Compared to the idle villages, the characteristic villages have no need to be removed and just need to be modified by innovating, environment renovation and other measures.

3) Industry-supporting Village

Industry-supporting type refers to the villages have quite good basic conditions, which have highquality and contiguous farmland. These villages have big scale and ecological benefits. Villages like these are mainly distributed in Puyuan town, Chongfu town, Fengming Street and Longxiang Street. Industry-supporting villages have already developed the scale of agricultural production. And they have some distinct advantages in facilities, environment and resources, compared to other hollow or scattered villages. The villages should further improve the production capacity and strengthen industrial competitiveness and make the polymer effect stronger, which can attract other scattered villages to move here.

4) Center Village

Center type refers to the villages which have close connection with the main city. Usually these village have good conditions on facilities and public welfare, thus they have some influence on villages nearby. The villages like these are mainly distributed in Wutong Street. Due to the

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convenience of connecting with central city, the center villages have the certain advantages over other types of villages in the aspects of transportation, economy or industry, Therefore, the center villages also are considered to be the reserve regions for future expansion.



Fig.2 Village Appearance Before Consolidation

3.2 Promoting New Modes

Based on the types of villages sorted in last chapter, the government tries to explore more flexible and more suitable consolidation modes, which can be divided to three types: urban agglomerative consolidation mode, new community of urban-rural integration aggregation mode and overall relocation aggregation mode.

1) Urban Agglomerative Consolidation Mode

The urban agglomerative mode generates from the process of rural urbanization, and its function is to solve the problems caused by the inappropriateness of land-use, agricultural management and distribution of industries in urbanization. Among them, the most complicated problem is that the transformation from urban system to rural system and the alteration on land status. This mode is suitable for the center villages, which have close connection with the main city and also have some influence on other villages nearby, so the mode should take the urban land used to be more intensive as the primary task. Wutong Street is suitable for such consolidation mode. Nevertheless, in the process of consolidation, we should learn something from the experience of urban construction, and we can bring the rural consolidation into the urban planning and require farmers to build multistory buildings or even high-rise buildings together which are similar to the buildings in city. After consolidation, we expect to reduce the per capita land area, and the land area from the consolidation can be used for urban construction. The mode extremely eases urban land tension.

2) New Community of Urban-rural Integration Aggregation Mode

New community aggregation mode is suitable for industry-supporting villages. This mode focuses on improving the environment, adjusting the layout of living and reactivating the idle land in the original rural address without demolishing villages. So we can say that the mode can make land use more efficient through changing the rural internal structure. And this mode can be fitted in Puyuan town, Chongfu town, Fengming Street and Longxiang Street. Through adjusting internal structure, improving the old residential layout and living conditions, it can firmly improve the land-use efficiency and promote the healthy level of these villages. Meanwhile, it can slow down the trend of blind urban expansion. The specific work includes demolishing old facilities, gradually loosing structural houses and constructing new buildings and centralizing settlement. The most important thing about the internal transformation of the village is to strictly implement the principle "one person, one house", which is the most difficult task. Therefore, in order to smooth the difficulty of the implementation of residential consolidation, the relevant departments should strengthen to manage homestead, gradually demolish or reclaim the unlawful buildings, or even withdraw the farmers' homestead whose owner have already went into town. It is so necessary to reinforce the land law enforcement.

3) Overall Relocation Aggregation Mode

This consolidation mode mainly includes two major parts: village merger and village migration. The small and scattered villages are united into center village through the two forms. And this mode is suitable for empty village and scattered village. The villages merged with other villages are originally far away from center villages. On the one hand, the merge can expand the scale of center villages, on the other hand. it can gather more funds to firmly construct the center villages, which can improve the attractiveness to other villages, release the agglomeration effect and enhance the core competitiveness of the villages. Besides, through the merger, we can modify the layout of the village, delineate the different functional zones and reasonably distribute the residential land, corporate land and public infrastructure land. This mode is suitable for Wuzhen town, Zhouquan town, Shimen town, Gaoqiao town, Dama town, Heshan town and Tudian town. In the migration, the government is the main important part. And in the process of selecting new sites, it should have a long-term vision and choose the sites with good economy, adequate space and near the central villages. The whole village relocated into the surrounding central villages is beneficial to public infrastructure configuration, which can form the scale benefits.



Fig.3 Village appearance Before Consolidation

4 ENLIGHTENMENT

(1) Differentiated consolidation modes need to be adopted in the light of local conditions. While choosing the consolidation modes in the rural area, we should take many factors into consideration such as the distribution, the location, the level of the economy and the population. Different consolidation modes have different organization and implementation patterns, meanwhile subjects and structures are quite different as well. So we should follow the construction plans to improve the public facilities and centralized residence of farmers by unifying the plans and the public facilities, guiding farmers in each village and permitting self-built houses. In space, it means nearby adjustment and internal consol. Different modes need different guiding strategies, meanwhile we should make good use of those lands which are used inefficiently, and reuse the lands which are covered with old houses or unused. We can promote the efficiency of land use and the level of intensive land use by the way of vitalizing the stock land and optimizing the structure of land use. Government should take full advantage of infrastructures and guide farmers to migrate step by step.

(2) We should establish the rural residential consolidation system, "sorting different levels, classifying different types and promoting new modes". We know that the optimization of the rural residential distribution is a multilevel system, including macro consolidation level, meso classification and microscopic pattern configuration. The three levels ought to have their own focus, performing respectively their roles. Especially, we should pay more attention to the meso level and microscopic level, because the classification of different village and selecting suitable modes can maximally realize the potential of rural residential land.

(3) The optimization of rural residential land should be distinctively managed and implemented, never be'one size fits all". Firstly, different types villages ought to choose the appropriate consolidation modes that match them. We should choose the consolidation modes of rural residential land on the basis of the analysis of whether the original village should be demolished or developed, and considering factors like the distribution, the location, the level of economy and the population. The discussion of these theories and methods of innovation provide guidance and technical support for the rural residential consolidation, which will promote the work of classification management and implementation.

(4) We should carry out the diversification of subjects in rural residential consolidation and value public participation. Generally speaking, the rural residential consolidation is mainly characterized by collective organizing, government's guiding and farmers' willingness. Although different consolidation modes are aimed at different subjects, we must value public participation, take the public requests into account in the whole process, and finally increase the efficiency of rural residential consolidation and space optimization.

5 CONCLUSION

Under the general tone of urbanization driving the economic development in China, the rural constructive land consolidation will become an important part in the course of the new urbanization. According to the changes of the times and the shift of the focus of social and economic development, the national relevant government departments should constantly adjust the requirements of the rural constructive land consolidation, keep pace with the times and comply with the requirements in thinking, orientation and strategy. Secondly, it is an important guarantee for the successful consolidation of the rural construction land by emphasizing the participation of farmers. The rural consolidation is closely related to the interests of farmers, and the farmers are more concerned about it. It is helpful for a better combination of the government's envisage and the willing of farmers through letting farmers exert their autonomy to participate in the entire consolidation activities, so that farmers can accept the rural consolidation from the heart. Meanwhile, we can supervise the consolidation work more meticulously and avoid to carrying on a new adjustment again soon after the finish of consolidation in such a mechanism. And all these precious experience are worth learning.

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