

THE CHARACTERISTICS ON THE GENERATION OF URBAN FORM OF HANGZHOU COMBINING WITH THE HIGH SPEED URBANIZATION

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ABSTRACT : The important adjustment of administrative divisions of Hangzhou in 2001 made its urban area reach 3068k m², leading to the beginning of its historic development. With the new round establishment of master urban planning, Hangzhou determined the future urban spatial form is group urban spatial form. This paper summarizes the development process of urban spatial form of Hangzhou in recent years and analyzes the features of several significant moves carried out for the new urban spatial form.

KEYWORDS: Hangzhou, urban spacial form, strategies, characteristics

1 BACKGROUND: ADJUSTMENT OF ADMINISTRATIVE DIVISIONS AND NEW URBAN SETUP

Hangzhou is located in Changjiang River Delta. For the sake of varied landform and dense river network, the urban form had developed from concentrated form to linear form, and then to planar form.

1.1 The limitation of land had placed urban development in a difficult position

The planar form had brought urban diseases: Since the adoption of reform and opening policies, Hangzhou maintains a rapid economic growth. Urban sprawl had led an uncontrolled expansion of urban form and brought lots of diseases such as overcrowding, traffic jams, environmental pollution, high land price.

Dismantling old constructions to build the new city. Different functions shared the same area.: For a long time, Hangzhou didn't have enough urban area to support its development, the only way to build the new city was dismantling the old constructions, so it had caused a spatial overlap of different functions such as living, working, travelling, reservation of historic sites.

The limitation of land had seriously handicapped economic development and the process of urbanization: For many years, Hangzhou had all along been in the front rank of China in terms of economic aggregate. But the limitation of land had seriously handicapped economic development and the process of urbanization. As a regional central city, Hangzhou didn't have strong radiant ability to promote the whole region's development.

1.2 Administrative divisions & City orientation & Development goals

Administrative divisions: The important adjustment of administrative divisions of Hangzhou in 2001 made its urban area reached 3068k m² including Xiaoshan and Yuhang districts. This action had completely resolved the problem of land limitation and created a new setup of urban development. For future requests, Hangzhou needed a brand new orientation and development goals adapted to the new setup.

City orientation: Hangzhou's city orientation can be summarized in 3 levels:

First, it's the capital city and economic, political and cultural center in Zhejiang province. Second, it's a famous historic city and core of southern Changjiang River Delta in China. Finally, it's an international scenic-tourist city.

Development goals: With this orientation, Hangzhou determined a series of development goals:

Promoting industrialization, informationization, marketization and internationalization through urbanization, encouraging urban organic renewal, realizing urbanization by scientific method and basically achieving modernization as soon as possible.

Establishing the city's brand image, emphasizing city characters, constructing Hangzhou as “The city of quality life”, “Leisure City”, “Silicon Valley with ideal environment” and enforcing competitive ability of industry and culture.

Collaborating with Shanghai to promote the integral development of Changjiang river delta. Enforcing its radiant ability as sub-center in this region.

Developing as historical city, cultural city and international scenic-tourist city.

2 CHALLENGE: DEVELOPMENT OF GROUP URBAN SPATIAL FORM

With the new urban orientation and development goals, how to inherit history and take advantage of Hangzhou's development foundation to achieve those goals? On the basis of drawing lessons from urban development in China, Hangzhou determined to realize historic transformation by promoting group urban spatial form.

2.1 Advantages

The foundation of development: Hangzhou had all along been in the front rank of China in terms of economic aggregate before the adjustment of administrative divisions and was political, economic and cultural center in Zhejiang province. Xiaoshan and Yuhang were also located in the top hundred districts which had powerful economy in China.

Rudiments of the new urban form: The original urban form of Hangzhou was a planar form with three cores including the old city zone, economic and technological open zone in Xiasha, high and new technology open zone in Binjiang. The original Hangzhou city and the two districts in Xiaoshan and Yuhang were separated in space. These three regions, especially Xiaoshan and Yuhang districts were composed of well hierarchical structures. The natural landform of these regions was hilly land which was typical in southern Changjiang delta. Although these cities and townships were scattered, they organized into an integral system with strong political and economic relations.

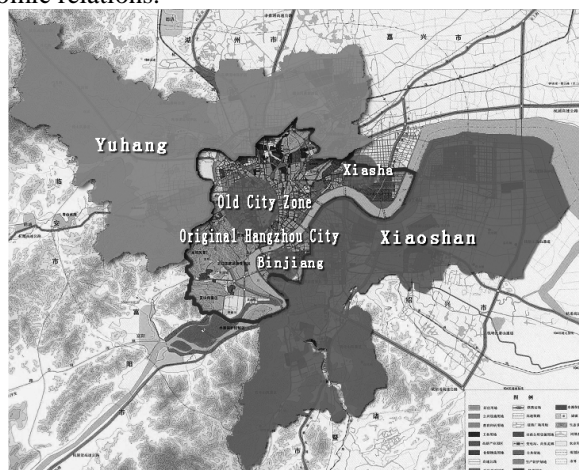


Figure 1 Rudiments of the new urban form

2.2 The theoretical foundation

Definition of group urban spatial form: Group urban spatial form is an urban system composed of different cities and townships. As the size of each zone is limited, it cannot include all functions of modern cities. Although focusing on different functions, they collaborate together as an integral system which has well hierarchical structure. On the other hand, the urban system also promotes political and economic development of each zone. This urban spatial form can strengthen the relationship between urban and rural areas. It is a superior urban spatial form which is widely accepted as ideal metropolis form. Basing on the

current situation of Chinese cities' development, it is necessary to develop group urban spatial form through adjustment of administrative divisions.

Requirements for integral development of group urban system:

First, every part of the group urban system should have solid foundation.

The group urban system composed of different zones with different functions needs integral development. The key for it is that every part in the system should have solid foundation. That is to say every zone should amass enough economic and political foundation since the adoption of reform and opening policies.

Second, Group urban system should have strong radiant ability.

One major purpose for developing group urban spatial form is radiating cities nearby in politics and economy to promote the integral development of the whole area. That requires the foundation of each city especially the center city strong enough to create new advantages for urban growth and competition. This radiant ability influences not only levels above the group urban system but also levels below it.

Finally, the separation of different zones in group urban system.

Zones of different functions in the group urban system are separated with each other in space and develop independently. So the resource utilization transforms from land resource utilization to land capital utilization.

2.3 New urban form

With the new round establishment of master urban planning, Hangzhou determined the future direction of urban development called "downtown area expands to east, new towns are exploited along Qiantang River and tourism focuses on west."

Urban spatial form transforms from planar form which centers on the old city zone to group net form which covers across Qiantang River. The group urban spatial form with two development axes is composed of one center, three sub-centers and six groups with six greenbelts among them.

One center: The central city zone serves as center of politics, economy, scientific education, information, culture, tourism. It includes living, administration, business and finance, tourism and service, technology and education functions.

Three sub-centers: Three new towns including Jiangnan, Linping and Xiasha serve as sub-centers of high and new technology industries, business and finance, comprehensive industry, technology and education. Among them, Jiangnan is an expected business center and modern industrial district, which mainly depends on high-tech industrial parks. Linping is a comprehensive industrial district of modern processing and manufacturing. Xiasha is a comprehensive district which mainly depends on economic and technological development zones and University Districts.

One center and three sub-centers make up the main image of Hangzhou.

Six groups: Transferring superfluous population and industries from central city zone. It is divided into two parts. Northern part is a comprehensive district of culture, recreation, tourism, economy, higher education. Southern part depends on comprehensive industries, local logistics, high and new technology industries.

Six greenbelts: Open spaces among groups are reserved for green belts to avoid destruction of urban environment.

Geographic center and two development axes: The geographic center of the new urban form includes north Qianjiang new town and south Qianjiang century town. The east-west axis along Qianjiang river guides development of urban ecological environment. The north-south axis composed of the center city zone and Jiangnan new town guides development of urban space.

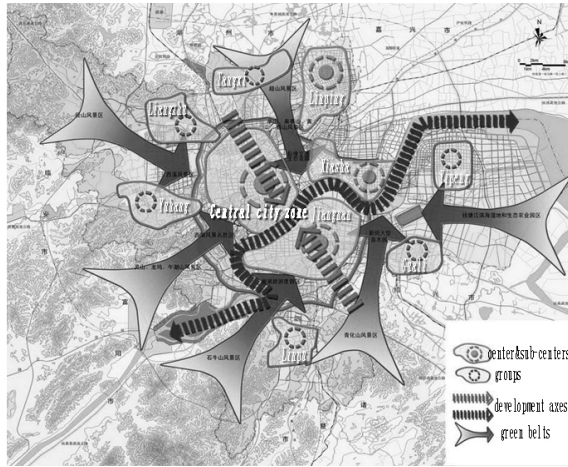


Figure 2 Group urban spatial form

2.4 Directions of urban development

According to group urban spatial form, the directions of urban spatial development can be summarized in 5 different aspects:

Eastern area of new urban functions serves as a linker of Shanghai and Hangzhou.

Improving the quality of comprehensive service, tourism and ecological environment in western area.

Urban space expands to southern area. Creating new geographic center of new urban form of 3068 k m²

Protecting scenic-tourist resources in northern area and creating new towns on this basis.

Reviving the old city zone by renovation and reconstruction.

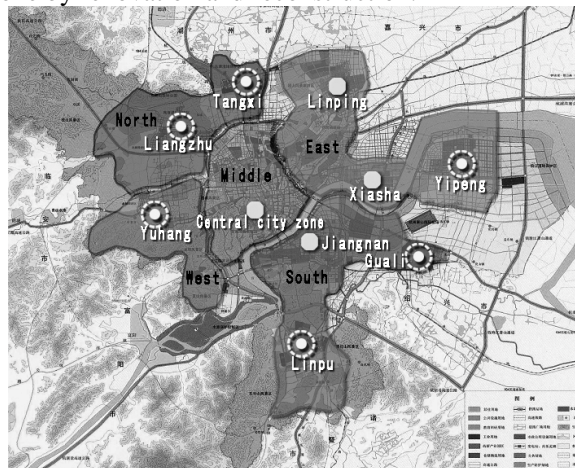


Figure 3 Directions of urban development

3 CREATING NEW TOWNS: PUTTING GROUP URBAN SPATIAL FORM INTO EFFECT

3.1 Four Levels of urban form of Hangzhou

The urban form of Hangzhou can be summarized into 4 levels. From top to bottom they are:

The city group in Changjiang River Delta, which crosses the administrative divisions.

The Hangzhou city with area of 166,000 k m², which is based on its administrative divisions.

Municipal district with area of 3068 k m²

Satellite towns or the districts of the same functions as satellite towns are called “new towns”. These new towns’ development depends on urban complex. New town construction is the key of putting group urban spacial form into effect.

3.2 Integral development & New town construction

The main part of group urban spacial form is “one center, three sub-centers and six groups”. The central city zone, new towns and groups are separated with greenbelts wedge into the open spaces among them.

The three layers are widely different in modernization level. The central city zone has the highest modernization level for historic reason. The new towns also have high modernization level. The six groups which transformed from the original townships have low modernization level though the economic foundation is solid. So it's crucial to promote the integral development of Hangzhou city. And the most important one is how to transform district building into town construction.

3.3 Focus of urban spacial development: construction of 20 new towns

Following the conception of top-down urban planning and down-top urban construction, Hangzhou focuses urban spacial development on construction of new towns and urban complexes. In July 2008, on the basis of group urban spatial form, Hangzhou put forward a strategy of creating 10 new towns along Qiantang river to make the most of the city's 90 km shoreline. Among these new towns, Qianjiang is located in the central city zone, as the geographic and functional center of the new urban form and intersection point of two development axes.

Meanwhile, creating another 10 new towns along major rivers and roads. The new urban spacial form can be putted into effect by the construction of 20 new towns. Finally, Hangzhou will build 100 city complexes of area of 62,000,000 m². These city complexes occupying 140,000mu will cover the whole city and drive the construction of new towns.

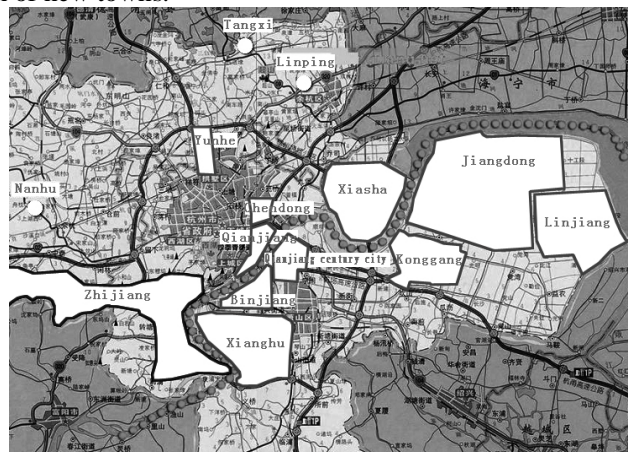


Figure 4 Construction of 20 new towns

4 CONCLUSIONS

Under the process of urban modernization with special national conditions in China, the development of Hangzhou's urban form is a representative one. Facing the new challenges of realizing a new urban form, Hangzhou makes corresponding strategies, which is valuable for the other Chinese cities similar to Hangzhou.

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