

Planning Coordination Mechanism of Scenic Spots and City Area Contradiction——Case Study of Dengfeng, Henan, China

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1. Introduction

Dengfeng is located in the central of Henan province of China. World Cultural Heritage The Centre of Heaven and Earth, the Songshan Scenic Area and the world famous Shaolin Temple are located in Dengfeng. The rapid development of economy and city expansion brings to the contradiction of scenic spot and city area, culture tourism and Real estate development, high rise building and city style. Therefore, it is reference significant to explore the synergistic mechanisms of scenic spot and city area under the participation of local government, enterprise planners and citizen.

In order to exploring the reasons of contradictions between scenic spot and city area, cultural tourism and city development in the process of rapid urbanization of China, it is important to research the synergistic mechanisms of typical case in the micro and macro bilinear logic view in the interception of certain historical span. It is argues that keeping the flexible adaptability of micro system relative to macro system (the national or regional scale) is the key to stable local elements, guide the coordination of scenic spot and city area and inverse configuration. The synergistic mechanisms of scenic spot and city area, which consist by the transition space of basic control line, height zoning and cultural infiltration, could form a bidirectional djustment path and elements allocation pattern which aims to optimize small unit. city unit development mode leads to the reshape of scenic spot and city blending area, but it also brings with a certain degree of inner closed tend, which deeply influences the formation of new relationship of scenic spot and city area. At last, it reclaims that China should transfer from the macro guide system to micro innovation system when deal with the relationship of scenic spot and city area, to enhance the ability of independent regional development organization and effective allocation of elements.

2. Transformation of urban development mode in the rapid urbanization trend

Urbanization level is a significant symbol of a country s industrial modernization level. Seen from the world development history ever since the industrial revolution, if a country shall realize the modernization successfully, it shall not only promote the industrialization, but also enhance the urbanization synchronously. Ever since the reform and opening-up in China, the urbanization develops stably, and in 2014, the proportion of urban population in the total population reached 54.77%. However,

generally, the urbanization and industrialization level in China still lacks behind, and it is far behind that in developed countries and even lower than the average world level. According to the statistics, the urbanization rate of developed countries has already been close to or higher than 80%, and the urbanization rate of our surrounding countries like Malaysia, the Philippines, etc. which have similar per capita income, is also above 60%. The low urbanization rate prevents the domestic demand from expanding, and impacts the upgrading of industrial structure, which is also a significant reason for the inconsistent regional economic development. Consequently, the acceleration of urbanization process is an important part of the adjustment of economic structure.

In the grand urbanization development trend, the urban culture, ecology and landscape construction shall be fully learnt. It is proposed in New National Urbanization Planning (2014-2020) that it shall pay attention to human-oriented and quality-stressed urbanization path, and avoid the wrong mode of weighing amount and neglecting quality, and sacrificing environment for economic growth in the past rapid expansion period. Aiming at the problems of occupying scenic spots for the urban expansion and declining service ability, the National Tourism Administration proposed the cancelation of 44 A-level scenic spots in April 2015, and put forward the reorganization requirements for some 5A scenic spots. In this general background, many cities begin to transform the development thoughts and reformulate the urban planning and scenic spot planning, and study the coordinated scenic-city planning and management mechanism.

3 Changes in scenic-city relation in Dengfeng in the rapid urbanization period

Dengfeng, located in the middle of Henan Province, has center of the heaven world cultural heritage, Songshan Mountain and World-famous Shaolin Temple. In recent decade, the economy grows rapidly and urban scale expands constantly. Profit from the major projects, such as Music Shaolin Grand Ceremony and key projects of Shaolin Temple, the tertiary industry in Dengfeng enjoys great development, and especially, the tourism value and tourists are nearly doubled. According to the statistics, the annual tourists increased to 9.58 million in 2013 from the 6.7 million in 2009 in Dengfeng, and the total tourism income developed to 6.2 billion in 2013 from 3.6 billion in 2009. It could be said that in the past decade, the city and scenic spot developed rapidly, but there were distinctions in the development subjects. The emphasis of urban development shall be in the population, industry and land expansion, while the key of the development of the scenic spot shall be the promotion of service and supporting facilities, as well as the way of dealing with the huge passenger flow in peak time.

Table 1 Changes of major indicators in the past decade in Dengfeng

Classification of indicators		2001	2013	Growth rate
Economic indicators	Gross domestic product of the city (0.1 billion Yuan)	52.2	450.9	8.63
	Per Capita GDP (Yuan)	9818	65978	6.72
	Total value of agricultural output (0.1 billion Yuan)	7.7	21.8	2.83

	Total industrial output value (0.1 billion Yuan)	98	1019	10.4
	Local financial revenue (0.1 billion Yuan)	1.91	27.1	14.18
Urban scale	Urban population (10000 People)	10.7	19.3	1.8
	Urban size (square kilometers)	11.35	23.13	2.03

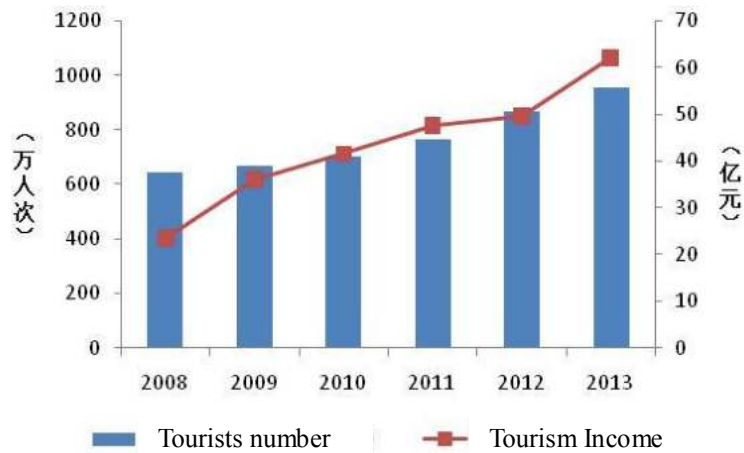


Fig. 1 Changes in tourists received and general tourist income in Dengfeng from 2008 to 2013

Dengfeng has eight scenic spots, including Shaoshishan Scenic Spot, Shaolin Temple Scenic Spot, Fawang Temple Scenic Spot, Songyang Academy Scenic Spot, Taishishan Scenic Spot, Luya Cliff Scenic Spot, Zhongyue Temple Scenic Spot and Guanxingtai Scenic Spot. Fengdeng is surrounded by the scenic spots, with close boundaries. At the early stage of the rapid urban expansion in Dengfeng, there was also the impact of cultural tourism project, industrial project and real estate development on the ecological environment and scenic spot, especially the constant emergences of high-rise buildings. In the old city transformation process, many traditional buildings were torn down, and the tourists and residents were doubted at the urban scape. Therefore, with the common participation of local government, planner, residents and enterprise, the achievement in the exploration of scenic-city planning coordinated mechanism based on the concept of scenic city will be of certain referential significance.

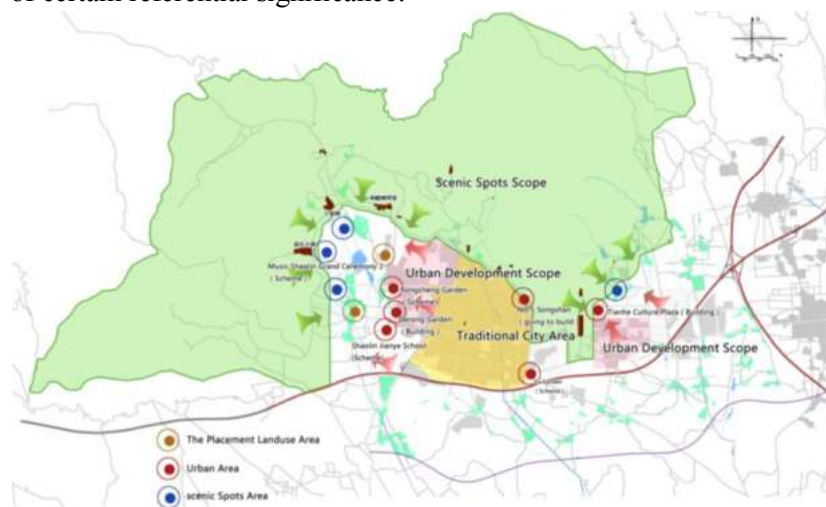


Fig. 2 space of scenic spots and Dengfeng city

4 Processing of scenic-city relation with the concept of scenic city

The scenic city theory has abundant details of traditional culture, and inheriting the traditional philosophic concept, as an eco-city theory with Chinese characteristics. According to the artistic conception of traditional Chinese landscape painting, artificial environment is one of the significant elements of the composition. Especially, the single architecture and architectural complex with historical or regional features usually become the theme and spirit of the painting. Therefore, respecting the urban context and continuing the historical features shall be the important links of the construction of scenic city.

In the Chinese history, attention shall be paid to the concept of geomancy, as well as the requirements on drinking water, disaster prevention and war prevention, etc. in the building of a city, and it had the tradition of building the city near the mountain and by the water, which created a batch of historic cities with remarkable landscape features.

Historic city, town and village shall stick to the principle of overall maintain the traditional street textures and spatial scale, instead of changing the natural landscape and environment relying on the traditional patterns and historical

^[1]The protection of historic culture shall also integrate the thinking of scenic city.

Currently, the scenic spot planning and overall urban planning compiled for most cities may be detached in the compilation time and coordination. And the planning of scenic spot is usually limited within the protection range, and there is a lack of effective control over the surrounding natural environment. Therefore, the specific measures and methods of implementing the landscape and historic culture from the coordination of scenic-city relationship, especially in the planning of some small towns, may be of great significance for the protection of scarce resource, shaping of urban features, as well as the coordination of development and construction.

5 Planning strategy based on the concept of scenic city

5.1 Investigating the landscape environment and historical culture, and clarifying the protection object

Before the compilation and implementation of the planning, it shall balance the urban development power and requirements on the landscape environmental protection. The legal, immovable, and non-renewable mountains, waters and historic sites with particular significance shall be protected strictly, and general resources shall also be applied in classification after full demonstration. In this period, it must pay attention to the connections between the objects, investigate and confirm the surrounding environment, important sights and overlook landscapes^[2].

5.2 Paying attention to the coordination between protection and development, and highlighting the thematic features

At present and in the future, the force of urban population and industrial concentration is still strong [3]. When creating the scenic city with historic features, it can dredge the population and industry by constructing new urban areas, thus to alleviate the historic protection pressure. Confirm the differential development mode of the new and old urban areas gradually, and encourage the functional updating and multi-element combined utilization in controllable condition.

5.3 Controlling the development capacity and construction intensity, and promoting the sustainable development of the city and environment

Scenic city shall conduct the practical control over the overall urban environment, and realize the sustainable use and constant optimization of landscape, as well as the organic integration of the economic benefit, social benefit and economic benefit [4]. It must carry out scientific measurement of the environmental carrying capacity and resource capacity, control the development capacity, construction intensity and architectural height reasonably, and guarantee the coordination between the urban development and landscape environment.

6 Collaborative mechanism of planning based on the scenic-city coordination

In the legal planning system, the control of the urban natural landscape and environment is realized with the overall planning which are the main documents for the planning management department to carry out the planning and construction management. Consequently, in order to implement the concept of scenic city and historic protection, it must propose the measures and methods from the perspective of the overall planning. Combining the above analysis, the author proposes the scenic-city planning mode from the perspective of the overall planning (Fig. 1). It mainly puts forward four aspects of contents,

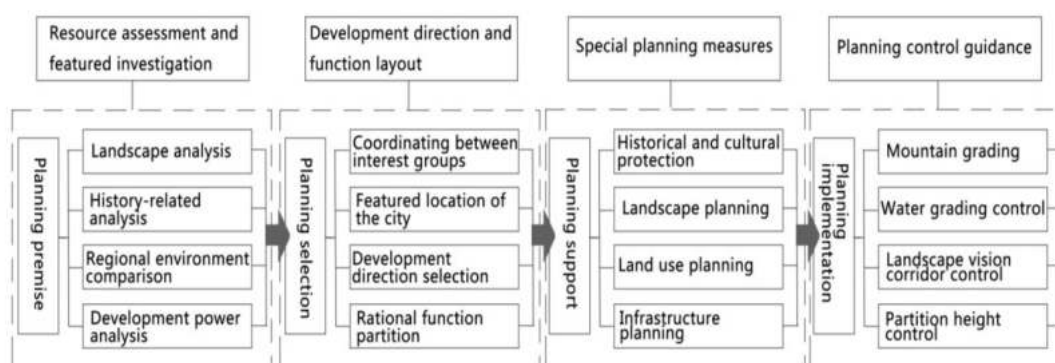
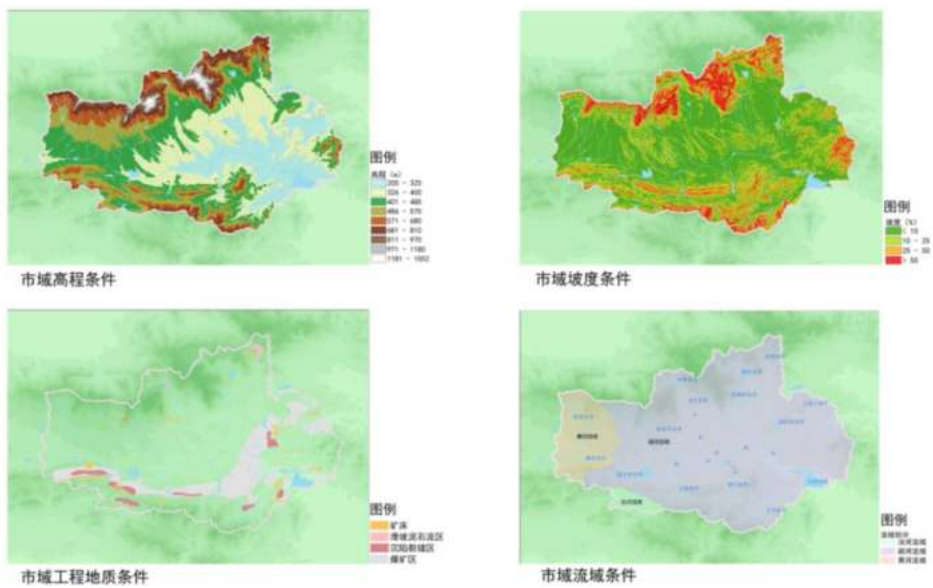
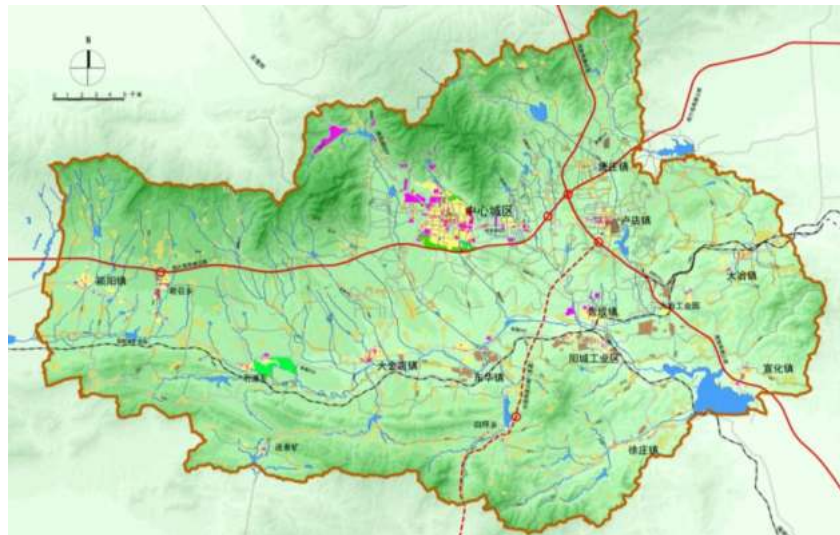
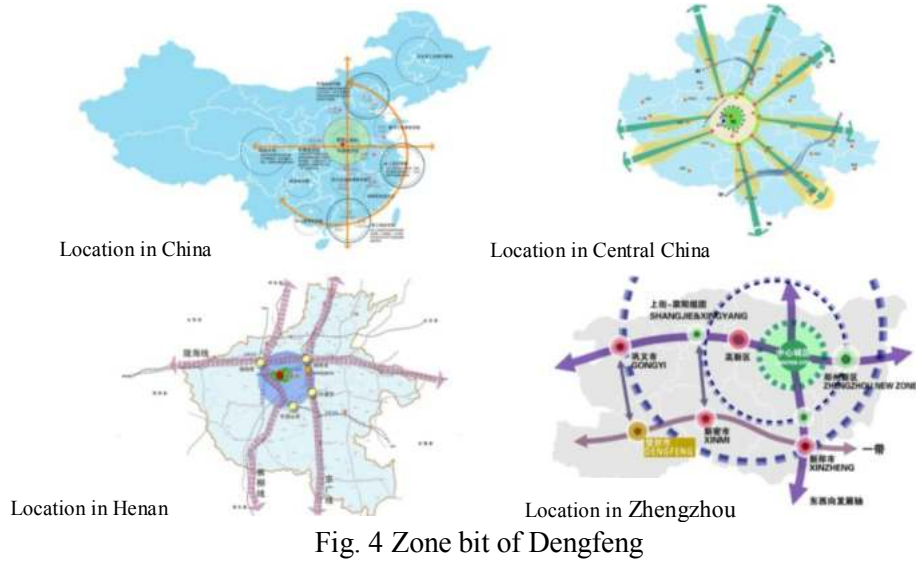


Fig. 3 Collaborative mechanism of planning based on scenic-city coordination including the resource evaluation and feature investigation, development direction and functional layout, special planning measures and planning control guidance, as well as the staged integration of overall planning.



7 Planning practice based on scenic-city coordination in Dengfeng

7.1 Analysis of the landscape environment and historic culture

The integrated mountain-city feature in Dengfeng is quite outstanding. The northern Songshan Mountain is not only one of the five mountains, a national-level scenic spot, but also a significant part of the historic city pattern. The historical architectural complex in center of the heaven and earth includes 11 outstanding historical buildings, including Shadows Measuring Platform, Star Observation Platform, Songyue Pagoda, three Watchtowers (Taishi Watchtower, Shaoshi Watchtower and Qimu Watchtower), Zhongyue Temple, Songyang Academy, Huishan Temple, Shaolin Temple Architectural Complex (including Changzhuyuan, Talin and Chuzuan), etc. It passed the del the 34th conference of the World Heritage Committee UNESCO, and being listed in the World Heritage List successfully, becoming the 39th world heritage.

There are numerous cultural relics and historic sites, which are especially concentrated in the south foot of Songshan Mountain, covering the dwellings, ancient streets, entrance building, temple, ancient pagoda, ancient tomb, ancient stele, ancient sites, etc. in which, multi-period features were quite significant. Before planning, it mainly started from the artistic carriers and historical remaining, including the contents, ancient poetries, books and paintings, and the landscape and historical sites that shall be protected with emphasis shall be confirmed for guiding the development direction, through the comprehensive analysis of the popularity, particularity, landscape value and preservation integrity.

7.2 Spatial structure planning of bottom line control

(1) Urban expansion power and development direction analysis

Seen from the zone location, Dengfeng is in the suburbs of Zhengzhou, Henan, Central China, as the core economic region of the Central Plains, as well as the key area of industrial development and population integration. Seen from the urban coordination, Zhengzhou will construct the metropolitan area pattern, and require Dengfeng to develop the urban world history cultural tourism city. Seen from the tourism development, Dengfeng is a significant part of the golden tourist route Kaifeng Z Dengfeng (Songshan) - Luoyang , and it shall still be improved and perfected i tourist reception facilities and scenic spot construction. Therefore, Dengfeng must coordinate the relation between protection and development, and expand the development thought based on the continuity of historical context, stick to the ecology red line and historic culture landscape protection line strictly, and shape the featured scenic-city space integrating the landscape and historical cultural protection.

(2) Delimiting the basic control line

The overall planning of Dengfeng mainly alleviate the pressure of old city protection with the urban cluster in the east and south of the city, strengthen the population and industrial

concentration in the new city, and intensify the historical protection and tourism development in the old city. The urban clusters are mainly separated by the water system and greenbelt. In the cluster, it mainly plans the garden and greenbelt by relying on the landscape, thus to form the overall spatial structure of surrounding by water, as well as gardens. Industrial parks shall be constructed at a certain distance from the old city, for avoiding the damages to the historic culture and landscape environment. (Fig. 5 and Fig. 6)

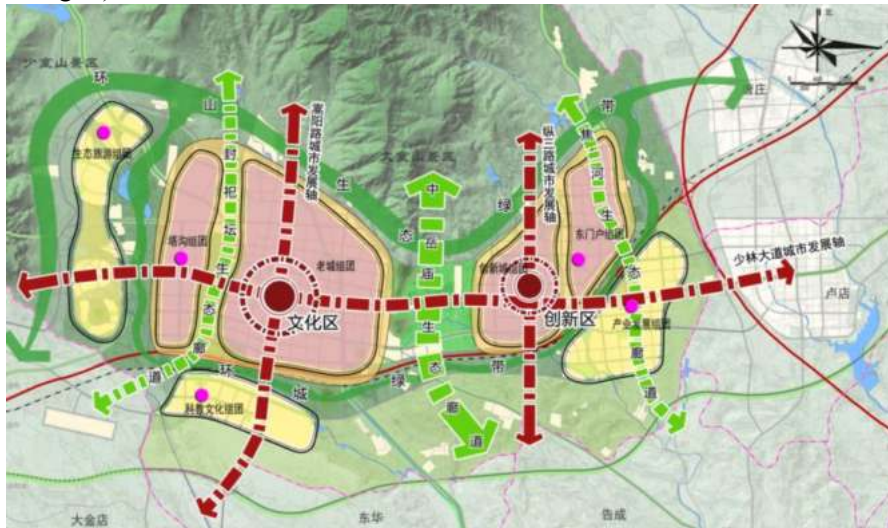


Fig. 7 Planning structure

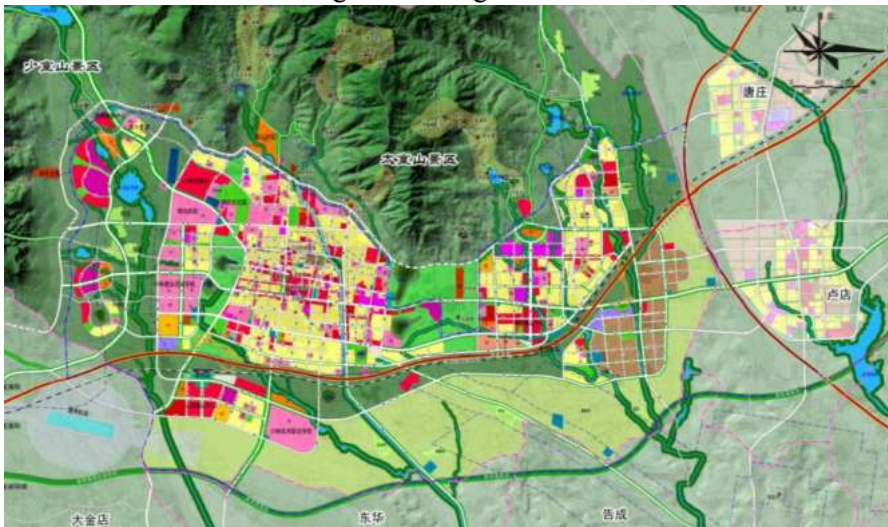


Fig. 8 Landuse

Designate the boundary of construction land and non-construction land in the urban planning area, control the urban growth range, and protect the landscape and rural ecological environment (Fig. 7 and Fig. 8)

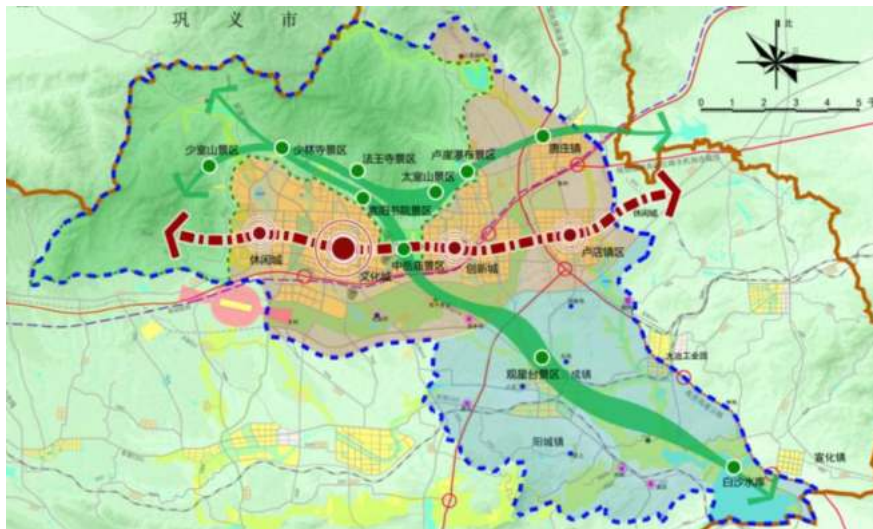


Fig. 9 Eco-space structure in urban planning area

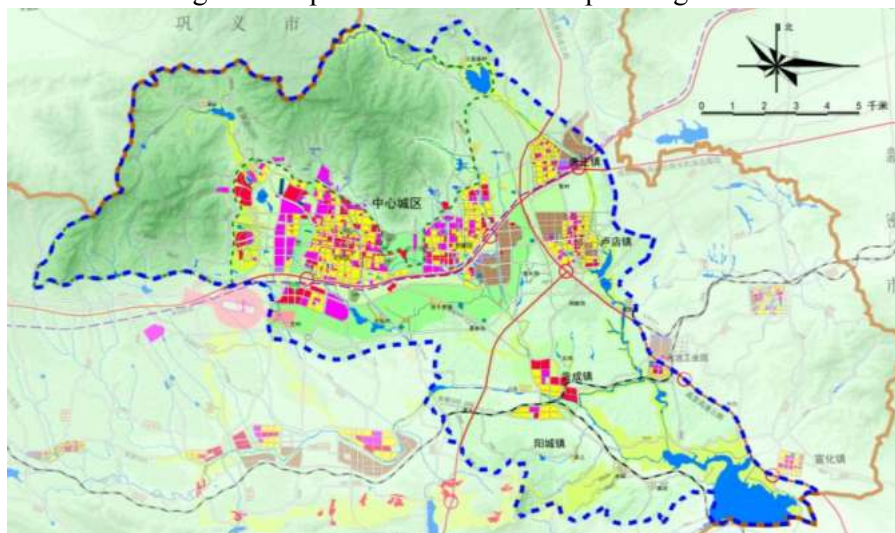


Fig. 10 Landuse of urban planning area

7.3 Coordinating transition space

Form the recreational transition zone between the city and Songshan Mountain with the current round-the-mountain roads, and expand several places of public space for forming the leisure nodes of tourism.

Form several places of the slow public place by making use of the features of distributed tourist sites. Highlight the recreational traveling atmosphere of the entire Dengfeng through the urban travel and leisure zone. Distribute several important tourist facilities cluster, and perfect the supporting service system in Dengfeng.

Control the surrounding areas of Mazhuang Reservoir between the urban area and landscape, the west and north side takes the boundary of landscape as the boundary, to Epo- Fengjitan Suogudui Urban ecological greenbelt in the east, and Zhengshao Highway in the south. Plan and develop the functional cluster dominated by the ecological travel and leisure functions. It shall strictly control that the construction land shall not

exceed 1/3 of the total, and reserve large stretches of forest and farmland. The unit development gives rise to the re-shaping of local element and environment in the scenic-city integration region, with certain inside closure inclination, which has great impact on the formation of new scenic-city relation.

7.4 Strict height partition

The following elements shall be considered for determining the architecture height: guaranteeing the overall style and feature of the city, especially the smoothness of the visual corridor. Combining the building function layout of blocks, the architecture height shall be adjusted according to the natures of the function. Considering the operability of the planning management, the same plot employs unified architecture height for control.

Designate the architectural height control line in Dengfeng. It is in the buffer control region of Songshan Mountain in the north. The limit height of the building in core tourism service region is 12 meter, while the architectural height in the north of Shaolin Avenue shall be less than 18 meters, and that in the south of Shaolin Avenue shall be less than 3 meters. The urban construction shall be controlled according to such height, and those memorial and landmark architectures exceeding the height shall receive special procedures or examination and approval.

7.5 Landscape features with cultural penetration

Guarantee the integrality and uniqueness of the urban spatial form, and keep the coordination between the natural landscape and human landscape.

The planning shall follow the goal of ecological tourist city and national-level historic city, highlight and strengthen the mountain, river and city urban landscape organize the roads, architectures, architectures and greening space rationally, integrate the urban environment, natural environment and humanity history environment, and form the harmonious and unique featured tourist city and landscape.

Starting from the landscape components, including nature, humanity and city, carry out the contrast analysis by combining relevant cases. The overall positioning of the future urban landscape in Dengfeng is determined as Mountain-foot city cultural city famous tourist city . Focusing on such a positioning, the future urban landscape shall follow the following nine strategies: highlighting the mountain, water loving, integrating green, inheriting history, carrying forward Zen culture, displaying the spirit of the time, protecting the traditional feature block, constructing ecological livable city, and improving the traveling experience and service.

8 Conclusion

At present, the urbanization accelerates in China, but hind the economic globalization and planning standardization, the appealing for counter-urbanization, ecologicalization and

humanistic transformation keeps raising [6]. The overall planning of Dengfeng carries out the thinking of landscape city and protection of history and culture. In the small urban planning, it shall continue the traditional art and culture of China, respect the urban context and landscape, establish the planning system, guide the featured development of the city, and provide good references for shaping the featured and attractive small towns. The disposal of scenic-city relation shall transform from the macroscopic system supply to the scenic-city coordinated microcosmic system, and enhance the autonomous organization of development and effective allocation of element. However, there are still many problems requiring more studies and exploration, for instance, the problem between history protection and urban construction, problem between traditional landscape and modern landscape, problem between waterfront development and disaster prevention, which are also the problems that would certainly be confronted in the rapid urbanization process.



Fig. 11 Dengfeng region realizing the overall landscape control



Fig. 12 Scenic spot

Fig. 13 Transition region

9. References

- Conservation Regulation of Historic City, Town and Village [Z]. No 524 Decree of the State Council of the People's Republic of China.
- Shi Feng, Pen Gen, Qu Wenjing, 2011, Exploration and Practice of Urban Design based on the Overlook Landscape [J]. *Planners*, (8): 41-45.
- Yang Baojun, Chen Peng, 2011, How to Take the Road of Urbanization in China [J]. *Urban Planning Forum*, (1): 1-7.
- Feng Yimin, 2010, A Study on Urban Landscape Fringe Areas of Ecological Landscape Planning and Design: A Case Study of Xinyu Southern Yangtiangang [J]. *Planners*, (4): 36-41
- Tai Xuedong, 2010, Urban Planning and Design for Waterfront Area of Beijing-Hangzhou Grand Canal in Suqian [J]. *Urban Planning*, (2): 93-96
- Qiu Baoxing, 2010, The Complex Science and Ecology-and Human-Centered Urban Reconstruction [J]. *Urban Planning Forum*, (1): 5-13

Institute of Shanghai Tongji Urban Planning & Design Institute, Overall Urban Planning of Dengfeng (2014-2030) first draft [Z]. 2015