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Present Status, Driving Forces and Pattern Optimization of Territory in Hubei Province, China

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***Abstract*—**"National Territorial Planning (2016-2030)" was issued by the State Council of China in 2017. As an important initiative of putting it into effect, territorial planning at provincial level makes overall arrangement of territorial development, resources and environment protection, comprehensive renovation and security system construction. Hubei province, as the pivot of the "Rise of Central China" national strategy, is now confronted with great opportunities and challenges in territorial development, protection, and renovation. Territorial spatial pattern experiences long time evolution, influenced by multiple internal and external driving forces. It is not clear what are the main causes of its formation and what are effective ways of optimizing it. By analyzing land use data in 2016, this paper reveals present status of territory in Hubei. Combined with economic and social data and construction information, driving forces of territorial spatial pattern are then analyzed. Research demonstrates that the three types of territorial space aggregate distinctively. The four aspects of driving forces include natural background which sets the stage for main functions, population and economic factors which generate agglomeration effect, transportation infrastructure construction which leads to axial expansion and significant provincial strategies which encourage the established path. On this basis, targeted strategies for optimizing territory spatial pattern are then put forward. Hierarchical protection pattern should be established based on development intensity control as respect for nature. By optimizing the layout of population and industry and improving the transportation network, polycentric network-based development pattern could be established. These findings provide basis for Hubei Territorial Planning, and reference for future territorial planning in other provinces.

***Keywords*—**Driving forces, Hubei, optimizing strategies, spatial pattern, territory.

I. Introduction

THE primary task of ecological civilization construction is to optimize territorial development pattern, as it is put forward by the 18th National Congress of the Communist Party of China. In January 2017, the State Council issued the "National Territorial Planning Outline (2016-2030)", a strategic, basic and comprehensive plan for territorial spatial development and protection in China [1]. From practical experiences of developed countries, territorial planning is the main way for government to scientifically manage land development and coordinate regional development [2], [3]. The purpose is to guide regional overall planning and promote sustainable development of economy and society, and to solve unbalance and disorderly territorial development caused by market failure [4]. In fact, spatial planning system of China is not perfect. It is a crucial problem that land resources have been unordered and decentralized developed and overexploited so that ecological space and agricultural space are seriously squeezed. In this regard, territorial planning makes crucial attempt to realize the "Multi-Plan Integration" mode and contributes to spatial planning system reform. It is also conducive to improving land use regulation and enhancing territorial spatial governance ability.

Territorial spatial pattern is the result of land use conversion for a long period. Land use change, as the significant manifestation of human activities' impact on natural ecosystems, has always been a specific field of global climate change and environmental change research [5], [6]. Land use change process and its driving mechanism have been widely concerned by scholars worldwide. Researches use remote sensing images to monitor and analyze land use and land cover change, then build corresponding database [5]-[9]. Researches with respect to factors and driving mechanism of land use change mainly focus on aspects of natural environment, economic development and related policies [6]-[11]. It has been argued that factors and their intensities are quite different under different scales [10]. There are few studies probing into territorial pattern and its formation mechanism at provincial level. This would be helpful to enrich our understanding of the law of territorial spatial pattern evolution, which is an important cornerstone for prediction of evolution trend and optimization of territorial pattern.

This paper takes Hubei Province as an example. By identifying the characteristics of territorial spatial pattern, background conditions are clarified. In consideration of the interaction between territorial spatial pattern and related economic and social factors, this paper probes into the formation mechanism of territorial spatial pattern. On this basis, optimization strategies are proposed. It provides guidance for Hubei Territorial Planning, and reference for future territorial planning in other provinces.

II. Background of Research Area and Source of Data

A. Background of Research Area

Hubei province is located in the central hinterland of China and the middle reaches of the Yangtze River, bordering Anhui in the east, Chongqing in the west, Jiangxi and Hunan in the south, Shanxi in the northwest and Henan in the north. There are 12 cities directly under the provincial government, 1 autonomous prefecture, 39 municipal districts, 24 county-level cities including 3 counties directly under the provincial government, 37 counties, 2 autonomous counties and 1 forest

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district.

Hubei has a total area of 185 thousand square kilometers, 70% of which is covered by mountains, one-tenth is covered by water and one-fifth is covered by cropland. Hubei is surrounded by mountains in the east, west and north. Forest resources are rich with the forest coverage of 38.4%. Hubei is also rich in water resources. It is the water conservation area for middle line of the South to North Water Diversion Project and for the upper and middle reaches of the Yangtze River, and is also an important hydropower and energy base. Therefore, Hubei has special ecological status in the whole country, and is responsible for regional and even national ecological security. At the same time, as an important commodity grain production base since ancient times, Hubei also takes charge of the important task of national grain production safety.

B. Source of Data

Spatial data used by this research are the Hubei Land Cover Data of 2016 with spatial resolution of 300 m. It is derived from the Land Cover Project of the Climate Change Initiative conducted by the European Space Agency. To clearly express national spatial pattern of Hubei province, 22 land use types of original data are integrated into urban space, agricultural space and ecological space by ArcGIS platform (Table I).

III. Present Status of Territory in Hubei Province

The total area of Hubei is 18.59 thousand km^2. At the end of 2016, urban space of Hubei is approximately 2.9 thousand km^2, accounting for 1.54% of the total area of provincial territory. Agriculture space is approximately 98 thousand km^2, accounting for 52.7% of the total area, which is the highest proportion of land use. Ecological space is approximately 85.1 thousand km^2, accounting for 45.76% of the total area of provincial territory (Fig. 1). Then, the proportion of urban space, agricultural space and ecological space in Hubei Province are calculated by counties or districts below in order to reflect the distribution of these three types of space.

TABLE I
Partition of Urban, Agricultural and Ecological Space

Type of space	Land use classification of data source
Urban space	Urban areas
Agricultural space	Cropland, rainfed
	Cropland, irrigated or post-flooding
	Mosaic cropland (> 50%) / Natural vegetation (tree, shrub, Herbaceous cover) (< 50%)
Ecological space	Mosaic natural vegetation (tree, shrub, herbaceous cover) (> 50%)/Cropland (< 50%)
	Tree cover, broadleaved, evergreen, closed to open (> 15%)
	Tree cover, broadleaved, deciduous, closed to open (> 15%)
	Tree cover, needleleaved, evergreen, closed to open (> 15%)
	Tree cover, needleleaved, deciduous, closed to open (> 15%)
	Tree cover, mixed leaf type (broadleaved and needleleaved)
	Mosaic tree and shrub (> 50%) /herbaceous cover (< 50%)
	Mosaic herbaceous cover (> 50%)/tree and shrub (< 50%)
	Shrubland
	Grassland
	Lichens and mosses
	Sparse vegetation (tree, shrub, herbaceous cover) (< 15%)
	Tree cover, flooded, fresh or brakish water
	Tree cover, flooded, saline water
	Shrub or herbaceous cover, flooded, fresh/saline/brakish water
	Bare areas
	Water bodies

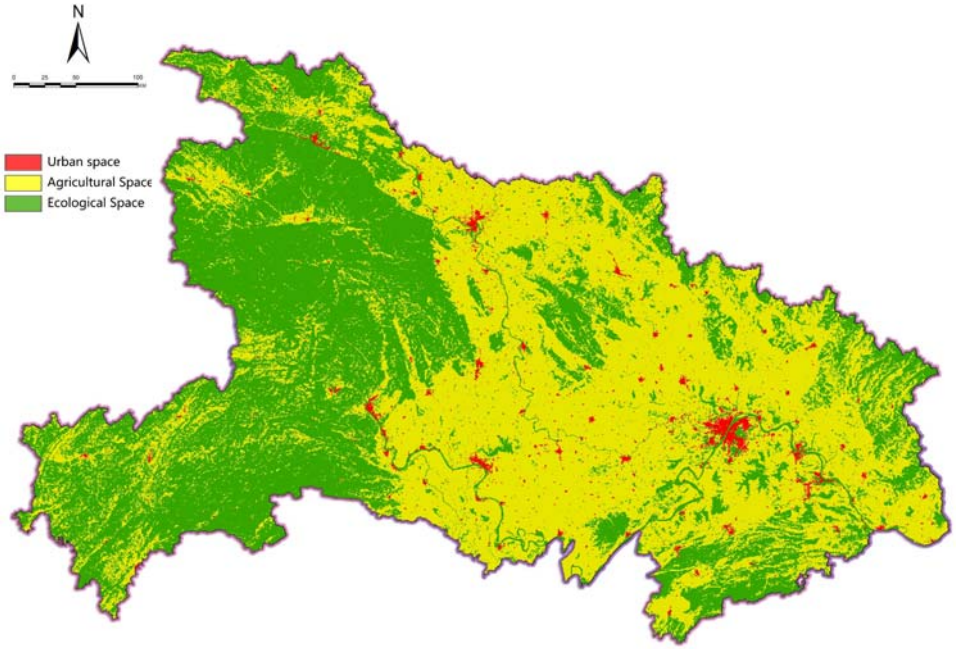


Fig. 1 Present distribution of urban, agricultural and ecological space in Hubei Province

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A. Urban Space

Urban space area accounts for 0.06% to 28% of total area in terms of each county or city. Areas with high densities of urban land use are Wuhan, downtown area of Jingzhou, Huangshi and Huanggang, next coming to part of Xiangyang, downtown of Yichang and Jingmen, Qianjiang, Xiantao, part of Xiaogan, downtown of Xian'an, Daye, Ezhou, Wuxue. In general, urban space mainly distributes in provincial central city, Wuhan and subcentral cities, Xiangyang and Yichang and their surrounding areas, as well as the Wuhan Metropolitan Circle, namely Wuhan and 8 large and medium-sized cities around Wuhan, including Huangshi, Ezhou, Huanggang, Xiaogan, Xianning, Xiantao, Qianjiang, Tianmen. On the contrary, urban land use level is obviously low in the northwest, southwest, northeast and southeast of Hubei (Fig. 2).

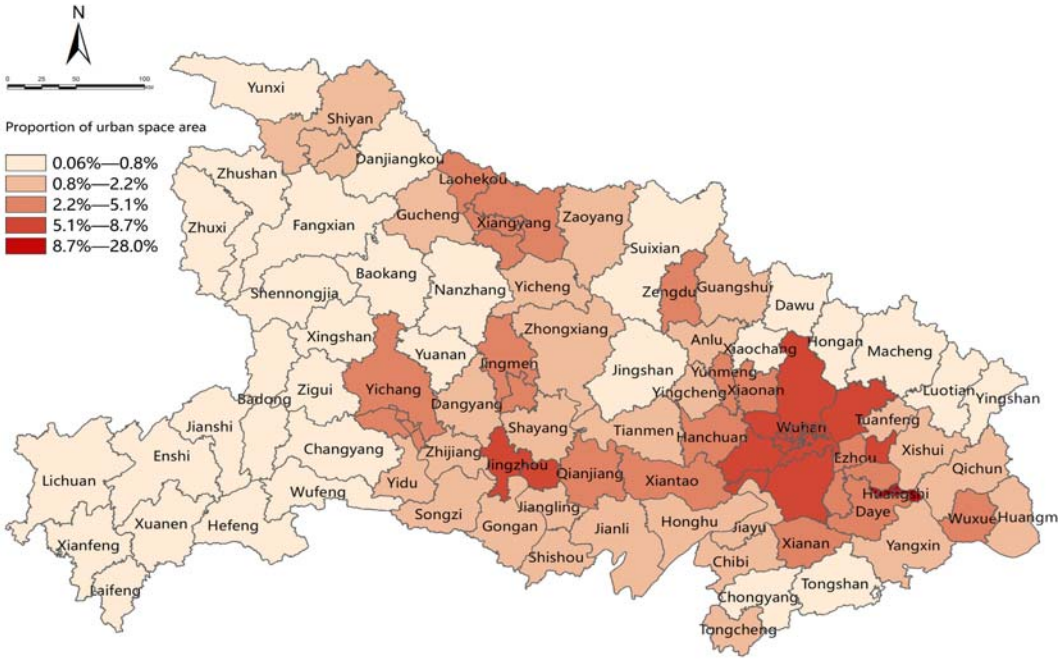


Fig. 2 Proportions of urban space area of cities (counties)

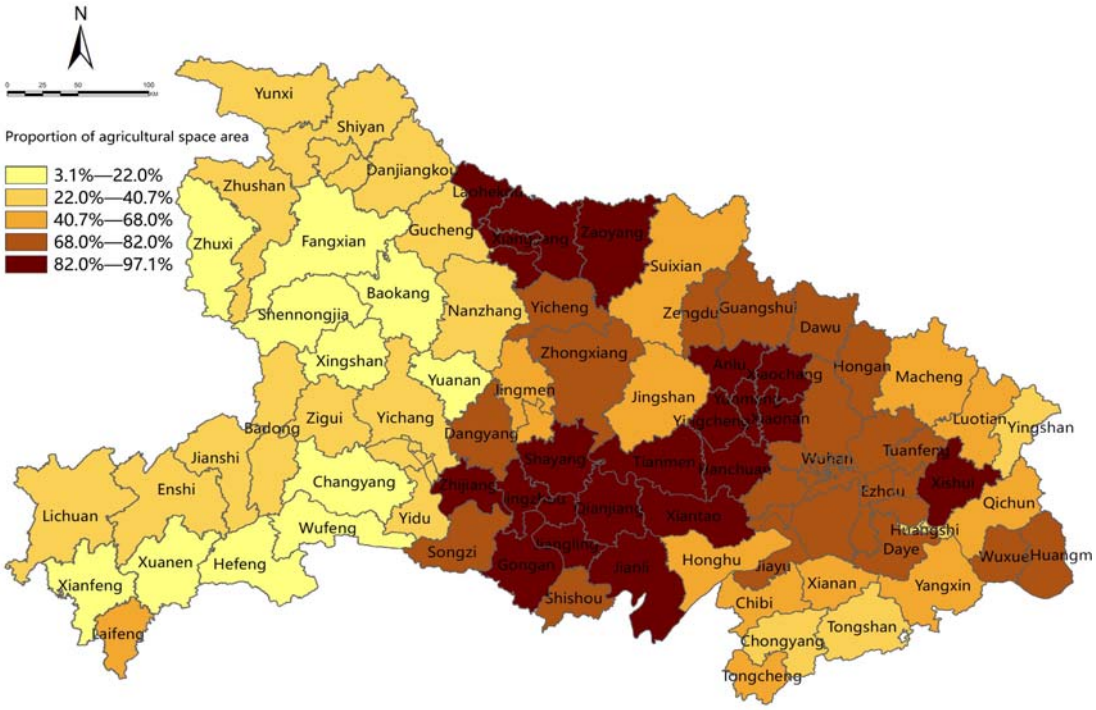


Fig. 3 Proportions of agricultural space area of cities (counties)

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B. Agricultural Space

Cities and counties differ greatly in agriculture land use level, which fluctuates between 3.1% and 97.1%. Jinzhou, Tianmen, Xiantao, Qianjiang, Xiaogan, Shayang county of Jinmen, Zhijiang of Yichang, Xishui county of Huanggang, Zaoyang, Laohekou and downtown area of Xiangyang are areas with high intensities of agricultural land use, which all exceed 82%. In general, agricultural space aggregates distinctly with density decreasing from central to west and east. Areas with high intensities of agricultural land use are the Jianghan plain which mainly consists of Jingmen, Tianmen, Xiantao, Qianjiang, Xiaogan and the East Plain along the Yangtze River which mainly consists of Daye, E'zhou, part of Huanggang, and the North Downland Area of Hubei which is composed by the east part of Xiangyang. Agricultural space of 3 cities and 15 counties covered by the Jianghan Plain, accounts for about 31.9% of the total agriculture space area of Hubei (Fig. 3).

C. Ecological Space

Ecological space of each county or city accounts for from 0.06% to 28% of the total area. Areas with high intensities of ecological space are Shiyan, Enshi, Shennongjia, Gucheng county, Nanzhang county and Baokang County in the west of Xiangyang, and most part of Yichang. The proportions of ecological space all exceed 50% in these areas. Areas with relatively low intensities of ecological space are Tianmen, Xiantao, Qianjiang, Jingzhou, Xiaogan and east of Xiangyang. In general, ecological space aggregates distinctly with density increasing from central to west and east. Ecological space mainly aggregates in the western mountainous area and the southeastern and northeastern hilly areas of Hubei, which consist of two thirds of ecological space of the whole province (Fig. 4).

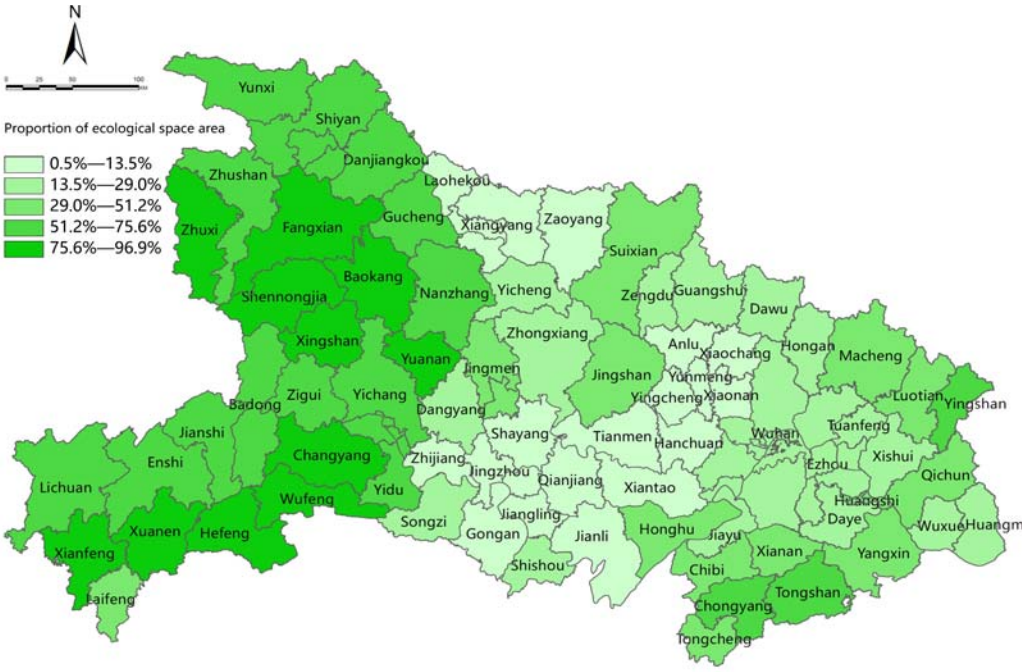


Fig. 4 Proportions of ecological space area of cities (counties)

IV. Driving Forces of Territorial Pattern in Hubei Province

A. Natural Background Constrains Territorial Spatial Pattern

Natural background has decisive influence on the formation of territorial spatial pattern in Hubei. Topography is featured by mountains in the East, West and North and basin with low attitude in the middle. Four mountainous and hilly regions include east extension of the Qinling Mountain and the Daba Mountain in the northwest, the Great Lou Mountain and the Wuling Mountain in the southwest, the Tongbai and the Dabie Mountains in the northeast, and the Mufu Mountain in the southeast. Two plains refer to the Jianghan Plain and the East Plain along the Yangtze River (Fig. 5).

The Jianghan Plain, the East Plain along the Yangtze River and the North Downland Area are relatively flat areas with fertile soil and sufficient light, having advantages in agricultural production. As important production bases of agricultural commodities in China, these regions are of high intensities of agricultural land use. Western Hubei is dominated by mountains while Southeastern Hubei and northeastern Hubei are dominated by low hills, which are important ecological protection barriers. In consideration of ecological sensitivity and carrying capacity, Western Hubei is positioned as mountainous ecological conservation area while Northeastern and Southeastern Hubei are known as mountainous water conservation areas. Constrained by terrain conditions, these areas are not only unsuitable for agricultural cultivation, but also unsuitable for high-intensity development and large-scale construction. Therefore, they are dominated by

ecological space. Moreover, spatial distribution of towns in Hubei is greatly constrained by the natural background conditions. Urban expansion has been limited by geographical features to a large extent. As a result, population and economic activities mainly concentrate on the Jianghan Plain and the East Plain along the Yangtze River in Hubei.

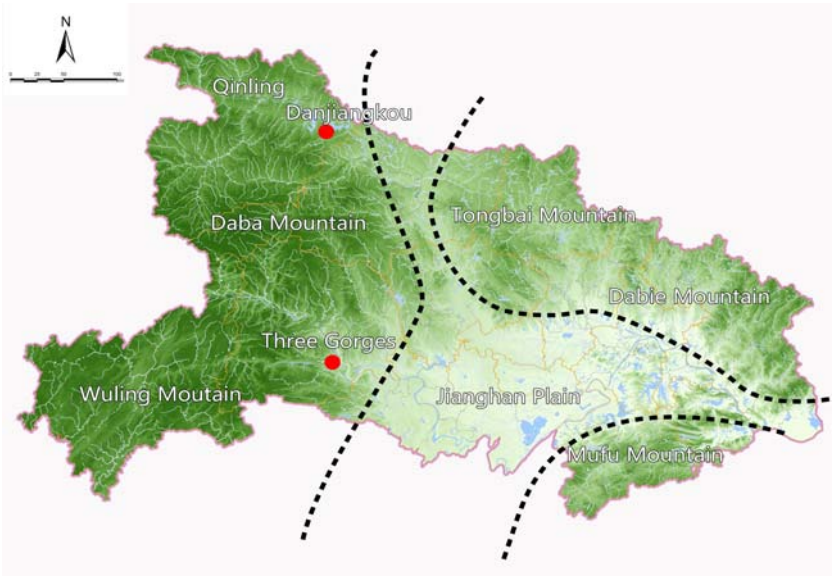


Fig. 5 Regional differentiation pattern of natural elements in Hubei

TABLE II
LIST OF MAJOR INDUSTRIAL PROJECTS IN HUBEI SINCE THE FOUNDING OF THE PEOPLE'S REPUBLIC OF CHINA [13]-[15]

Time	Location	Amount	Name
Early days of new China in the 1950s	Wuhan	7	Wuhan Iron and Steel Company (first phase), Wuhan Heavy Machine Tool Plant (first phase), Qinshan Thermal Power Plant (first phase), Wuhan Meat Joint Processing Plant, Wuchang Shipyard, Wuhan Boiler Factory and so on
	Huangshi	1	Daye Smelter
	Ezhou	1	Echeng Steel Plant
Third-Line Construction Period from 1960s to 1970s	Wuhan	5	Wuhan Iron and Steel Company (continually construction), Wuhan Heavy Machine tool Plant(extension), Qinshan Thermal Power Plant(extension), Wuhan Steam Turbine Generator Factory, Wuhan Petrochemical Plant
	Huangshi	2	Daye Nonferrous Metal Company, Daye Smelter(extension)
	Ezhou	1	Echeng Steel Plant(extension)
	Shiyan	2	The Second Car Factory, Dongfeng Tire Factory
	Jingmen	2	Jinxiang Phosphate Refinery, Jingmen Refinery
	Xiangyang	3	Western Hubei Chemical Plant, Hubei Chemical Fibre Plant, Xiangyang Bearing Plant
	Yichang	6	Yichang Zhongnan Rubber Factory, Red Flag Cable Factory, Yangtze River Machine Tool Olant, Zhicheng Oil Dpot, Hubei Chemical Fertilizer Plant (Yichang branch), Gezhouba Hydropower Station
	Xiaogan	1	Yingcheng Gypsum Expansion Project
	Qianjiang	1	Jianghan Oilfield
From 1990s to now	Wuhan	3	Wuhan East Lake Hi-tech Development Zone, Wuhan Economic and Technological Development Zone, Wuhan Airport Economic and Technological Development Zone
	Xiangyang	2	Xiangyang Hi-tech Development Zone, Xiangyang Economic and Technological Development Zone
	Yichang	1	Yichang Hi-tech Development Zone,
	Huangshi	1	Huangshi Economic and Technological Development Zone
	Xiaogan	1	Xiaogan Hi-tech Development Zone
	Jingzhou	1	Jingzhou Economic and Technological Development Zone
	Ezhou	1	Gedian Economic and Technological Development Zone
	Shiyan	1	Shiyan Economic and Technological Development Zone

B. Major Industrial Layout Encourages Land Agglomeration Development

Industrial development is an important driving force for territorial development [12]. Since the founding of the People's Republic of China, territorial development of Hubei has been significantly affected by the state's major investment projects. Major industries can form scales rapidly, greatly promoting local economy, considerably contributing to population mechanical growth, and effectively encouraging land agglomeration development.

It was in the early days of new China in the 1950s that China laid the foundation of economy. Three of the 156 major projects aided by the former Soviet Union were all distributed in Wuhan. At the same time, there were other national and provincial projects. Seven of them were distributed in Wuhan,

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laying an indispensable position of Wuhan in Hubei Province [13]. Another industrial construction climax came to the 1960s to 1970s, which was called the Third-Line Construction Period. During this period, the focus of industrial layout advanced from Wuhan to cities in central and western part of Hubei, including Jingmen, Xiangyang, Yichang, Shiyan and so on [13]. Investment of national projects in this period had greatly promoted the development of cities and towns in Hubei. Distribution of these projects had changed the territorial development pattern when Wuhan was the center of gravity, playing an important role in promoting social and economic development of Western Hubei area [14]. After the Cultural Revolution, economic development came to the period of readjustment and rectification. By the 1990s, with the rise of open industrial parks, such as Shenzhen Special Economic Zone and Shanghai Pudong New District, Hubei also entered the era of development zones. At present, there are 11 national development zones and 120 provincial development zones in Hubei [15], [16]. These zones become new vitality of regional economic development through attracting investment, opening up and carrying out preferential policies (Table II).

In general, major industrial projects since the founding of the People's Republic of China are mainly distributed in Wuhan, Ezhou, Huangshi, Yichang, Xiangyang, Shiyan. Early major industrial projects formed several growth poles of regional development, and played an important role in promoting urban development. Since the reform and opening up, booming market economy had brought new vitality to local economic development. However, it has not changed the regional economic pattern formed by early industrial layout. Since the 1990s, with gradual improvement of market economy, multiple driving forces of urban spatial growth have emerged, and the spillover effect of major industrial projects is not as significant as before. Even so, all kinds of development zones are still an important driving force for land agglomeration development.

C. Transportation Infrastructure Construction Promotes Land Axial Development

Transportation infrastructure construction is an important issue of territorial development, and also a main factor for formation of spatial pattern and spatial structure [17]. All kinds of resources and elements scattered in geographic space are connected by transportation infrastructure. Therefore, economic activities are orderly organized. Development axes based on a variety of transport facilities could be gathered by regional economic facilities and social facilities, promoting organic integration of economic activities and regional infrastructure. On this basis, considerable spatial agglomeration effects would come into being [18].

During the "12th Five-Year" period of China, Hubei formed a railway network featured by four vertical and three horizontal corridors and a highway skeleton network featured by seven vertical, five horizontal and three circular corridors [18]. The railway network has improved accessibility of Hubei to other provinces. Railways from Yichang to Wanzhou and from Wuhan to Yichang reached Enshi, Jingzhou and such districts having no railway before, filling the gap of railway passenger transport in Western Hubei, and realized full coverage of railways to all cities in the whole province. Moreover, with the improvement of highway skeleton network, all counties in Hubei are being covered by expressway network.

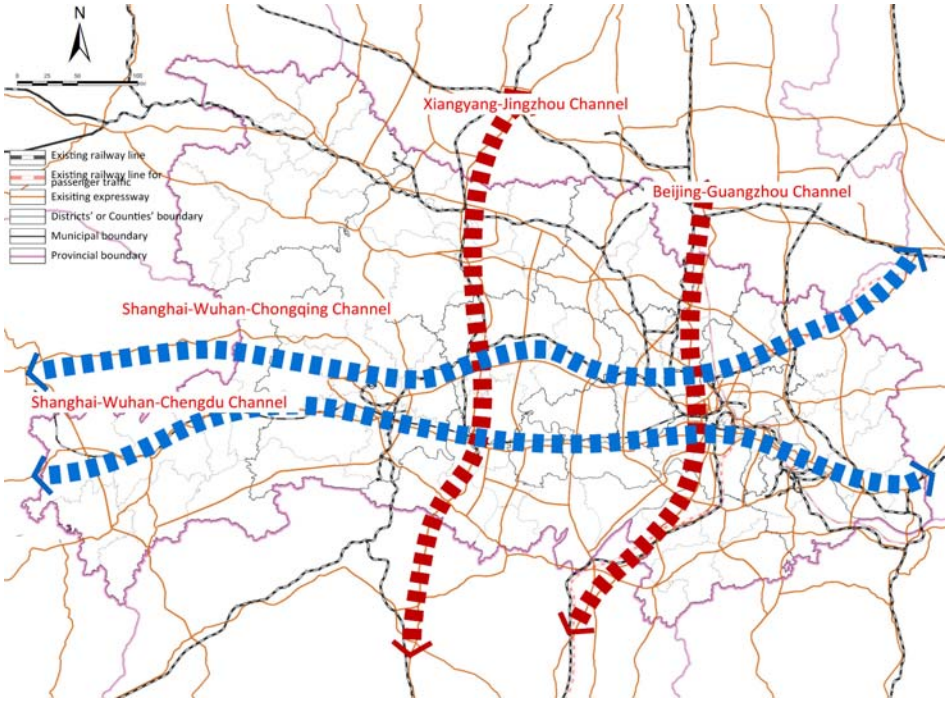


Fig. 6 Existing traffic pattern and its axial band aggregation effect of Hubei

Generally speaking, the majority of urban space in Hubei is axially distributed along the east-west Shanghai-Wuhan-

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Chengdu channel, the east-west Shanghai-Wuhan-Chongqing channel and the north-South Beijing-Guangzhou channel and the north-south Xiangyang-Jingzhou channel (Fig. 6). The Shanghai-Wuhan-Chengdu channel and the Shanghai-Wuhan-Chongqing channel are important parts of national transport corridors along the Yangtze River. Major cities, such as Wuhan, Xiantao, Qianjiang, Tianmen, Jingmen, Jingzhou, Yichang, Enshi, Huanggang, Ezhou and Huangshi are distributed along it. The Beijing-Guangzhou channel is also part of the transportation corridor from Beijing to Hongkong, Macao and Taiwan. Major cities such as Xiaogan, Wuhan and Xianning are distributed along it. Along the Xiangyang-Jingzhou channel are Xiangyang, Jingmen and Jingzhou.

D.Significant Provincial Strategies Deepen the Framework of Territorial Spatial Pattern

Regional development strategies are greatly influenced by government will, most of which are spatial approaches to solve existing economic and social problems under specific historical conditions. It is particularly evident in countries with strong government regulation. Hubei provincial committee and provincial government put forward the "One Nucleus and Multi-level" development strategy system. Building the stronghold of the “Rise of Central China” strategy, as the nucleus, commands various strategies and work platforms at provincial level. Among them, strategies that has great influence on territorial spatial pattern includes "One Central City and Two Subcentral Cities", "Two Circles and One Belt", "Red and Green Development" and so on.

The “One Central City and Two Subcentral Cities" strategy is always put at the core position. It takes Wuhan as the central city and Xiangyang, Yichang as the two subcentral cities. After years of development, centralized and balanced territorial spatial pattern characterized by a situation of tripartite confrontation has been initially formed.

Under the guidance of the "Two Circles and One Belt" strategy, each district was endowed with specific strategic positioning. The Wuhan Metropolitan Circle, as one of the greatest urban groups in central region and also the traditional industrial base in China, has been entrusted with tasks of transforming economic development mode and upgrading industrial structure. Meanwhile, western Hubei area is regarded as the green ecological barrier in Central China and water conservation area for the middle line project of the South to North Water Diversion Project. So the Eco-cultural Tourism Circle in Western Hubei is assigned to develop tourism industry, and to combine economic development with ecological protection. In terms of the Yangtze River Economic Belt, its task is to give full play to the superiority of the Yangtze River water resources and promote the development of characteristic industries, so as to speed up new round of opening up. This strategy has deeply affected major industrial distribution, main infrastructure arrangement and key watershed ecological protection in Hubei, and realizing differential exploitation and protection targets of territorial space.

The "Red and Green Development" strategy refers to two pilot areas of economic and social development, respectively the Dabie Old Revolutionary Mountainous Region and the Wuling Ethnic Minorities Mountainous Region. The principle task of these areas is to actively explore green development model, in order to protect ecological environment and to improve people's living standard. Under the guidance of this strategy, areas with backward economic level have achieved green development. Therefore, ecological space agglomerates in these areas.

V. Optimizing Strategies of Territory in Hubei Province

A. Establishing Hierarchical Territorial Protection Pattern as Respect for Natural Background

On the basis of land development intensity control of different regions, hierarchical territorial protection pattern of the whole region should be established to maintain the security of ecology and soil and water resources, and to promote ecological civilization construction. According to the requirements of the "Outline", there are 3 kinds of resources protection theme, including human settlement ecology, cultivated land resources and natural ecology. Meanwhile, level of protection includes protection and maintenance (Table III).

TABLE III
Hierarchical Territorial Protection

Scope		Theme of protection	Level of protection
Wuhan Metropolitan Circle		Human settlement ecology	Human settlement ecology and high quality arable land protection
Jianghan Plain		Cultivated land resources	High quality arable land protection
Dabie Mountainous Area		Natural ecology	Soil and water protection
Wuling Mountainous Area		Natural ecology	Biodiversity protection
Qinling-Daba Mountainous Area		Natural ecology	Biodiversity protection
Mufu Mountainous Area		Natural ecology	Biodiversity protection
Yangtze River Basin	Wuhan-Ezhou-Huangshi-Huanggang segment	Natural ecology	Natural ecology maintenance
	Jing River segment		Natural ecology maintenance
	Three Gorges Reservoir Region segment		Soil and water protection
Han River Basin	Danjiangkou Reservoir Area segment	Natural ecology	Water source protection
	Jianghan Plain segment		Natural ecology maintenance
Qing River Basin		Natural ecology	Natural ecology maintenance

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B. Establishing Polycentric Network-Based Development Pattern by Promoting Resource Allocation Efficiency

"Pole-axis system" reflects the objective process and laws of social economic spatial organization. It is considered to be the most effective regional spatial development mode [18]. The "outline" also points out that "polycentric network-based development pattern" should be established, in order to enhance the efficiency and competitiveness of land development. On one hand, in urbanized areas with strong environmental carrying capacity and with high level or great potential of agglomeration development, relative centralized distribution of population and industries should be encouraged to develop agglomeration areas. On the other hand, key developing axes should be actively cultivated relying on major rivers and important traffic lines, so as to promote orderly flow and efficient agglomeration of essential production factors.

1) Developing Agglomeration Areas by Encouraging Centralized Distribution of Population and Industries

By optimizing population and industrial layout, agglomeration development of key development areas should be enhanced in order to increase the efficiency of territorial development. Firstly, Wuhan, Xiangyang and Yichang could be regarded as the first level of development areas taking consideration of their strong agglomeration effect, so as to promote the development of surrounding areas. Secondly, medium-sized cities should be regarded as the second level of development areas to cultivate regional growth poles. Prefecture-level cities and cities governed by the province with population less 500 thousand should be developed into metropolises to adopt population and industries transferring from coastal developed areas and metropolitan areas within the province. Thirdly, counties could be developed into the third level of development areas that can preferentially carry on population transferring from rural areas. By promoting specialty industries and dominant events, human settlement quality of counties could be improved (Fig. 7).

2) Cultivating Developing Axes by Improving Comprehensive Transportation Network

Comprehensive transportation network should be improved. According to the "Hubei Comprehensive Transportation Plan Outline during the 13th Five-Year Period", nine integrated transport channels should be established, including the Shanghai-Wuhan-Chongqing channel that implements the Yangtze River Economic Belt Development Strategy and that supports east-west bidirectional opening up, the Beijing-Guangzhou, Fuzhou-Yinchuan, Xiangyang-Jingzhou Channels that connects the "One Belt and One Road" and that links up Wuhan national traffic hinge, Yichang-Jingzhou and Xiangyang regional traffic hub, the Shanghai-Wuhan-Chongqing, Beijing-Jiulong, Suizhou-Yueyang, Shiyan-Yichang-Enshi, Hangzhou-Ruili Channels that promotes regional economic development (Fig. 8) [19].

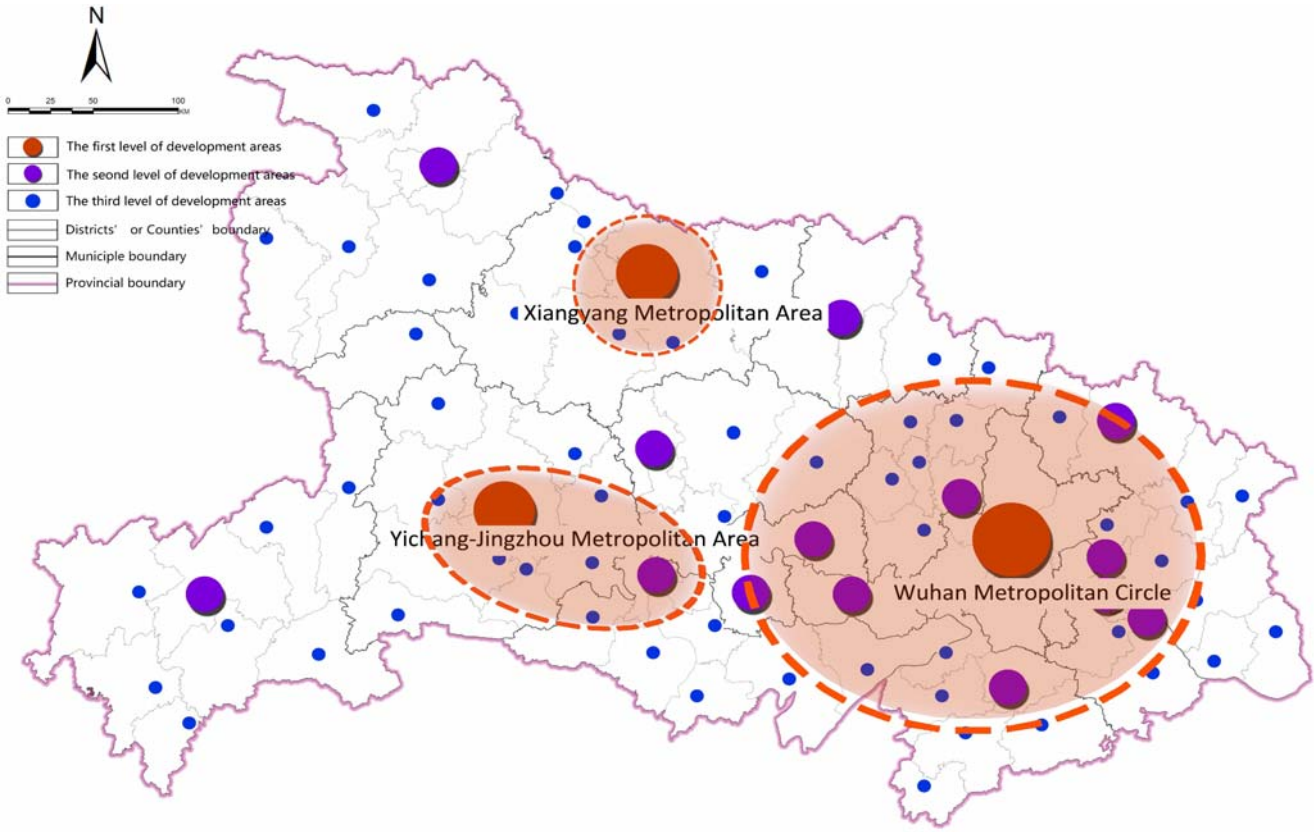


Fig. 7 Agglomeration areas construction

Relying on these five horizontal and four vertical integrated transportation channels that internally connect major cities and externally communicate with surrounding urban agglomerations, territorial developing axes should be actively cultivated, in order to guide orderly flow and efficient agglomeration of production factors, and to promote efficient allocation of resources. According to the basic conditions of different development axes and the economic and social development level of connected regions, strategic orientation and development focus should be clarified, so as to strengthen the economic relation, labor division and cooperation between agglomeration areas on the axes, and to promote their agglomeration effect.

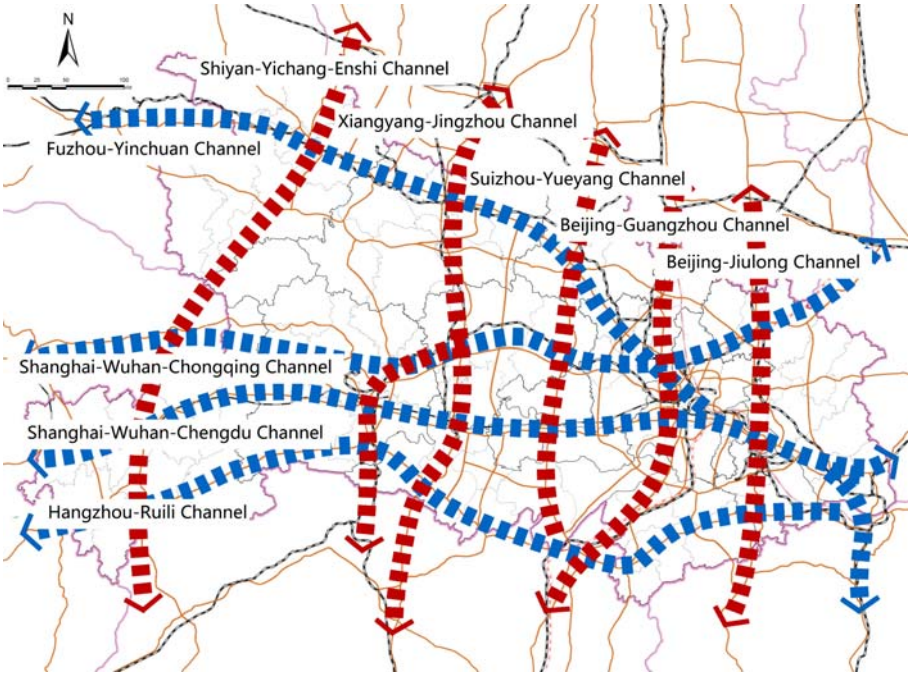


Fig. 8 Five horizontal and four vertical integrated transportation channels

3) Coordinate Regional Development Strategies to Optimize the Allocation of Territorial Spatial Resources

In consideration of regional differences in land quality, land use mode, land use potential, present features and future directions, coordinated development of key agglomeration areas and cooperative protection of agriculture and ecological space should be promoted. Moreover, it is of great importance to facilitate development of key aggregation areas, support characteristic development of ethnic minority areas, propel transition of resource based areas, encourage innovative development of experimental area, and promote regional coordinated development. By leading the transformation of regional development mode, a new spatial pattern with distinctive features, complementary functions and prominent advantages could be formed.

VI. Summary

In recent years, with the focus of national spatial strategy advancing from coastal region to inland region, the middle reach areas of the Yangtze River has been paid much attention to. As the stronghold of the "Rise of Central China" strategy, Hubei is now confronted with great opportunities and challenges in territorial development, protection and renovation. Territorial spatial pattern of Hubei demonstrates prominent spatial differentiation. Urban Space mainly distributes in central and subcentral cities of Hubei and the Wuhan Metropolitan Circle. Agricultural Space mainly distributes in the Jianghan Plain and the East Plain along the Yangtze River and the North Downland Area of Hubei. Ecological space mainly distributes in the west mountainous areas and the southeast and northeast hilly areas of Hubei. Driving forces of territorial spatial pattern are then analyzed. Natural background, major industries layout, transportation infrastructure construction and significant provincial strategies have great influence on territorial spatial pattern of Hubei. Finaly, this paper rasied three targeted strategies for optimizing territory spatial pattern. In view of development intensity control, hierarchical protection pattern should be established as respect for nature. Future more, by developing agglomeration areas and improving transportation network, polycentric network-based development pattern could be established. Last but not least, regional development strategies should be coordinated to optimize the allocation of land resources, so as to guide orderly development of land resources of Hubei.

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