Planning and design of Rural Complex under the background of Rural Revitalization
——Taking the eastern mountainous area of Jilin province as an example

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Abstract. The ecological environment and natural resources in the eastern mountainous areas of Jilin Province have special and obvious advantages. From the "Rural Revitalization" strategy proposed by the 19th National Congress of the Communist Party of China to the "rural complex" proposed in the No.1 document, this paper analyses the development model and policy in domestic and international area, combined with the regional characteristics of the eastern mountainous areas in Jilin Province and the advantages of rural complex development. In order to provide reference for similar projects, the planning principles and main contents of rural complex construction in this area are discussed.

1. Introduction
In 2017, in the report of the 19th National Congress of CPC, in line with the transformation of the major social contradictions in China, aiming at the "two centenary" goals, a strategic plan for the full implementation of "Rural Revitalization" was put forward, which pointed out the direction for the work of agriculture, rural areas and farmers in the new era, and was also the main solution to the problems of agriculture, rural areas and farmers. In the report, it is proposed to improve the institutional mechanism and policy system of urban-rural integration development, accelerate the modernization of agriculture and rural areas, deepen the reform of rural land system, build a modern agricultural industrial system, production system and operation system, develop various forms of moderate scale operation, cultivate new agricultural operation subjects, and promote the integration of rural primary, secondary and tertiary industries. It has established the 20 words general requirements for the Rural Revitalization of "industrial prosperity, ecological livability, rural civilization, effective governance and affluent life". The Rural Revitalization Strategy has drawn a grand and beautiful blueprint for nearly 600 million Chinese rural population.

In the whole "Rural Revitalization Strategy", as an important part of "three areas, three parks and one complex" (functional area of food production, protection area of important agricultural products and advantage area of characteristic agricultural products; modern agricultural industrial park, science Park, entrepreneurship Park; rural complex), this concept was first formally proposed in the 2018 Central Document No.1. The rural construction based on the conditions is a rural complex with farmers' cooperative as the main carrier, allowing farmers to fully participate in and benefit from it, integrating circular agriculture, creative agriculture and agricultural experience, and carrying out pilot
demonstration through comprehensive agricultural development[1], comprehensive rural reform, transfer payment and other channels. We can see that in the new stage of deepening the structural reform of the agricultural supply side, the rural complex will play an important role in the construction of the fulcrum of the Rural Revitalization Strategy.

2. Development model of rural complex in domestic and international area

Rural complexes have also been successful in countries around the world. It integrates production, life and ecology, combines agricultural production and marketing with leisure services, and has functions of economy, society, education, environmental protection, recreation and cultural inheritance. Different countries, in light of their own circumstances, have also derived different characteristics and patterns to inject vitality into rural economic development.

Japan has actively extended the connotation of green sightseeing agriculture, and the innovative development of sightseeing agriculture garden and folk agriculture garden are typical rural complexes. Japan's Dawang sunflower farm is a typical case. It is the shooting place of the film dream directed by Kurosawa. It is the largest Sunflower Garden in Japan. It was founded in 1917, with a total area of 15 hectares. It is mainly planted with sunflower, and can harvest 150 tons of sunflower every year, so as to create special activities and delicious food to attract tourists. Later, this industry became the foundation of the farm. From the early mustard planting, the farm gradually developed into a leisure farm with mustard as the theme. At present, the basic facilities of the farm include: sunflower farm, waterwheel hydrophilic square, great shrine, bell tower, lucky bridge, buckwheat processing farm, plum garden, etc., and the media communication is used to develop the rural tourism.

The rural complex in the United States is generally called "citizen's farm". The citizen's farm uses the organization mode of mutual aid between the farm and the community, and urban residents and farmers bear the cost, risk and profit in a unified way. Among them, the guarantee of agricultural products provided by the agricultural park for the citizens is safe, fresh and obviously lower than the retail price of the market. The citizens provide stable sales channels to the agricultural park to achieve win-win results, effectively activating the production and consumption of agricultural products. For example, the Fresno agricultural tourism area in the United States includes the agricultural production area and leisure agriculture in the east of Fresno city. Among them, there are very important vineyards and industrial bases in the United States, as well as fruit fairs and lavender gardens that are very popular with urban families.

Rural complexes in France are generally called "rural resorts". Since the development of "agricultural tourism" in France, a large number of farms specialized in "rural resorts" have emerged. For example, Provence along the Mediterranean Sea is the most famous rural resort in France. The symbol of Provence is the cultivation of lavender, mainly because the sufficient light in this area provides a comfortable environment for the growth of lavender, which not only attracts the holidaymakers from all over the world to enjoy the sea of flowers, but also increases the sales of lavender products. In addition to related tourism activities, tourists can also taste local specialties, in addition, they can also participate in a series of tourism festivals to experience French festivals and arts.

In May 2017, the Ministry of Finance issued the notice on carrying out the pilot work of rural complex construction, proposing to focus on the construction of six supporting systems, including production system, industrial system, business system, ecological system, service system and operation system, in accordance with the three-year plan and annual implementation, focusing on the construction goal and functional orientation of rural complex, and determining 18 supporting systems in Hebei, Shanxi, etc. The province carried out the rural complex construction pilot. The No.1 document of the CPC Central Committee and the State Council on the implementation of the Rural Revitalization Strategy issued in January 2018 has attracted a new round of extensive attention. At present, the rural complex in China is experiencing rapid development, and new construction pilot projects are springing up, but the development of the rural complex in China is only in the primary stage, with all provinces, cities and autonomous regions It is still exploring its development mode and path, relevant research has not been carried out in-depth, and a few related papers only stay in the interpretation of concept and
connotation and case analysis. However, there is no lack of successful cases, such as zuiyu village in Jinshan District, Shanghai, Guanting town in Feixi County, Anhui, Yangshan, Wuxi, Jiangsu, Duoli farm in Hongguang Town, Pidu District, Chengdu, and many other typical rural complexes have been built successively, and achieved good results. The construction of the rural complex in Jilin Province started later than most domestic provinces. The first batch of national rural complex does not include Jilin. In 2018, construction of rural complex projects began in some places, but was only at the embryonic stage. Fragmented projects, such as Changchun Lianhuashan Rural Complex, Gongzhuling Xiangshui Rural Complex.

Table 1. Regional distribution of national rural complex in 2018

| Region            | Percentage |
|-------------------|------------|
| Southeast China   | 50%        |
| Southwest China   | 23%        |
| Central China     | 15%        |
| Northwest China   | 12%        |

Idyllic East is a relatively successful case of rural complex landing in China. Located in Yangshan Town, Wuxi, Jiangsu Province, idyllic East integrates modern agriculture, leisure tourism, rural community and other industries, advocates the harmonious integration and sustainable development of human and nature, through the organic combination and symbiosis of "three life" (production, life, ecology) and "three production" (agriculture, processing industry and service industry). To achieve ecological agriculture, leisure tourism, rural living and other composite functions. Another example is Chengdu Duoli farm project, where a high-end agricultural complex has been built. The project has built an organic agriculture development scale of 600 mu organic ecological agriculture demonstration area, 12000 M2 greenhouse and sorting and packaging center. At the same time, as an agricultural complex relying on the development of high-end organic agriculture, it is also one of the few agricultural "mass entrepreneurship and innovation" parks in Chengdu. At present, it has become a carrier platform for agricultural innovation and entrepreneurship. In the farm, the agricultural entrepreneurship and innovation carrier platform with 2000 square meters of cultural and creative space has successively introduced projects such as maker coffee bar, organic vegetable salad bar, farm private room vegetable, park cooperative and family farm into the farm by setting up urban agricultural entrepreneurship and innovation fund, providing full range of entrepreneurship and innovation incubation services including talent training, technological innovation, investment docking, market development, etc. The park carries out innovation and entrepreneurship in agricultural development.

3. Regional characteristics of the eastern mountainous area in Jilin Province

The eastern mountain area of Jilin Province is located in the eastern border of Jilin Province in the northeast of China, including Yanji City, Baishan City, and the south of Tonghua City, a total of 16 counties. The regional ecological environment and natural resources have special and obvious advantages. The topography and landforms are mainly high mountains, mountains and hills, and the mountain area accounts for 78.6% of the total area, and the area of cultivated land is relatively small. In the future, the region will focus on building an important ecological barrier for water conservation in the eastern part of the province, and implement the forest ecological restoration project in Changbai Mountain. Regional ginseng, traditional Chinese medicine, edible fungi, wild vegetables and other mountain characteristic industries have a good foundation for development. The eastern mountain area of Jilin Province has a long history, and it is a border area inhabited by 48 ethnic groups, such as Han, Korean and Manchu. In the long-term common life, the people of all ethnic groups unite and struggle and form a unique regional culture, which has become an important cultural support for the construction of rural complex.
Table 2. Basic situation of towns and villages in eastern mountain areas of Jilin province

|               | County | Town | Village | Unit  |
|---------------|--------|------|---------|-------|
| Yanji City    | 8      | 66   | 1069    | 2365  |
| Baishan City  | 6      | 47   | 496     | 940   |
| Tonghua City  | 2      | 26   | 319     | 801   |
| Total         | 16     | 139  | 1884    | 4106  |

In the planning and construction of rural complex in the eastern mountainous area of Jilin Province, how to comprehensively consider such factors as location advantage, resource type, land use conditions, infrastructure and market environment, agricultural industry development, etc. Scientific positioning of the theme type, leading industry and main functions of the rural complex, respect for the diversity and differences of natural resources, give full play to the advantages of featured agricultural products in mountain areas and internationally renowned tourism resources according to local conditions, especially in the integration of one, two and three industries to find a representative and leading way of innovative development and characteristic development, fully reflecting the regional characteristics, industrial characteristics and Product characteristics will become an important hand in implementing the strategy of Rural Revitalization in this region.

4. Planning principles of rural complex in the eastern mountainous area of Jilin Province

4.1 Ecological priority and sustainable development
Put the protection of ecological environment in a prominent position, comprehensively consider the carrying capacity of resources and environment, scientifically determine the development goals, vigorously promote the construction of resource conservation and environment-friendly rural complex.

The core zone of rural complex is controlled about 3 square kilometers, the Planning area of rural complex is controlled about 6 square kilometers, over 70 percent of land is used for agriculture and forestry. We should predict the possible environmental pollution in the development process in advance, reduce the impact of human activities on the mountain environment in the planning, and emphasize the sustainability of regional green development and landscape[2].

4.2 Mountain features, integration of agriculture and Tourism
Based on the local reality, supported by the characteristic agriculture of mountain area, relying on the characteristic green food and characteristic breeding base of mountain area, food production and processing are carried out, relying on the integration of agriculture and tourism, the unique geographical advantages and international high-quality tourism resources of Changbai Mountain are fully exploited to attract tourists from all over the country. To promote the healthy development of tourism, agriculture and real estate, fully reflect the regional characteristics, industrial characteristics and product characteristics, and enhance the regional connotation within the scope of environmental carrying capacity.

4.3 Government guidance and multi participation
The development of regional rural complex is in its infancy, so we must give full play to the guiding and supporting role of the government’s "visible hand", and mobilize all social forces to participate in the formation of joint forces. The government should strengthen the planning guidance, strengthen the standardized management of the market, strengthen the infrastructure construction, guide all kinds of business subjects, especially the farmers to improve the competitiveness of the rural complex in accordance with the market-oriented, large-scale and standardized operation. In the construction of rural complex, we should prevent the use of "capital enclosure movement" to encroach on rural resources, avoid the "control" of rural collective assets and the "deprivation" of villagers' due interests after the introduction of strong capital, uphold the core of "for agriculture" rural complex construction[3], and
fully establish the benefit sharing mechanism of enterprises, cooperatives and farmers.

5. Main contents of rural complex planning in the eastern mountainous area of Jilin Province

5.1 Construction of planning system of rural complex
Rural complex construction must adhere to the planning first and build a planning system of multi-planning integration, including the overall planning, industrial development planning, tourism planning, beautiful rural construction planning, industrial park construction planning, ecological protection planning, and related thematic research. According to the characteristics of this region, we should focus on the study of industrial development planning and tourism planning on the basis of agriculture, integrate tourism culture, ecological health and other industries, and realize the synchronization, integration and trinity of the three industries.

5.2 Planning and layout of rural complex
To fully meet the requirements of the three construction elements of rural complex agriculture, culture, tourism and real estate[4], create a space carrier and rural image of resource integration, so that residents can see mountains, water and nostalgia.

Agricultural industry area: rural landscape background area is also the bearing area for agricultural cultivation and agricultural leisure. The planning and layout should be combined with the regional layout of mountain featured agricultural products to select breeding varieties and reserve space for leisure agriculture, modern agricultural industrial park and community to support agriculture;

Cultural and tourism industry area: it is necessary to consider the function, scale and space matching, form a tourist resort destination with a variety of business types planning, load rich cultural life content, create a combination of tourism products highlighting natural ecology and leisure creative agriculture, as well as forest health and other holiday products, so that urban and rural residents can return to nature and return to the countryside[5];

Real estate and Cottage Area: while respecting the original village style and creating the village texture, it is necessary to build a relatively concentrated living area that can meet the living needs of different groups such as aborigines, new immigrants and sojourners, and to lay out management and service areas and create a new community.

5.3 The innovation of operation mode of rural complex
We should adhere to the joint construction and sharing of farmers, and enhance the endogenous power of sustainable and healthy development of rural complex. Taking "farmers + enterprises / third parties + cooperatives / village collectives + government" as the main mode, and actively exploring how to add makers, family farms, supply and marketing cooperatives and other stakeholders in the rural complex, activate the stock resources, mobilize the enthusiasm of all parties, and increase the economic sustainability. We need to further refine the policy and mechanism for the implementation of financial and social capital investment, and ensure that the capital investment is in place and the specific implementation of the project.

6. Conclusions
At present, the country has given great support to the rural complex and its development mode is unprecedented. The construction of the rural complex will be widely carried out in the whole country. As a new thing, there is no unified mode of development and construction, nor should there be a unified planning and design. The rural comprehensive planning and construction in the eastern mountainous areas of Jilin Province should adhere to the principle of adjusting measures to local conditions and highlighting characteristics, and pay attention to the protection of ecology and the development of Local culture, rather than simply transplanting and duplicating the southern projects, The local government should fully exploit the unique geographical advantages of Changbai Mountain and international high-quality tourism resources, and plan to build a number of pilots and highlights that can play a leading
role in the foundation and prototype of the rural complex to help implement the rural revitalization strategy.

Acknowledgements
This work was supported by the 2019 Social Science Fund Project of The Education Department of Jilin Province. “Planning Researches of Rural Complex in The Eastern Mountainous Area of Jilin Under The Background of Rural Revitalization”. (Grant No. JJKH20190433SK).

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