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Reform of Japan's Land Planning and Implications to China

Meilin ZHONG*, Yiqiang ZHONG

Jiangxi Normal University, Nanchang 330022, China

Abstract This paper first briefly summarized the current state of exploration and construction of China's land space planning. Then, it analyzed Japan's land planning reform, studied its spatial planning process and explored relevant reform paths to obtain relevant experience. Through analyzing and summarizing the experience in the exploration of Japan's land space planning in combination with China's specific national conditions, it is intended to draw implications for China's land space planning in the new era, in order to provide references for the future operation of related actual projects of land planning and exploration of related strategic theories.

Key words Land planning, Strategic, Comprehensive, Japan's reform, Implications

1 Introduction

Land space planning has high-level, strategic, and comprehensive characteristics, which are mainly reflected that it is one of the important foundations and means for the state or region to conduct macro-control of land development and utilization, management, and protection. Through the proper use of resources, the remediation of major ecological and environmental issues, and the reasonable spatial allocation of population and economic activities, the land space planning can solve major problems and contradictions in land development and utilization, management, and protection, and socio-economic development for specific operations and implementation, thereby achieving effective promotion of the overall development of the country and coordinated development between regions. In the context of planning the institutional reform, restructuring China's land space planning system has become an urgent task to promote the planning reform. The studies on the land space planning system mainly focus on the general ideas and policy recommendations for the system construction, but the studies on the planning system reconstruction plan are relatively lacking. The implementation of a new round of China's land space planning pilot work, planning system, and methods are still under discussion. Many developed countries, such as Britain, Germany, France, and Japan, have accumulated rich experience in land planning. For example, Japan has the characteristics of a "government-led market economy," has similarities with China in terms of resource conditions and economic development. Thus, it is intended to provide a reference for China's land planning through a comparative analysis on exploration process of Japan's land planning^[1].

2 Exploration of Japan's land space planning

Japan has formulated seven national land plans. The first comprehensive national development plan was from 1961 to 1968, which aimed to promote coordinated and balanced regional development. The second land space planning occurred in 1969–1976 and laid a good institutional foundation for Japan to create an affluent environment. In order to improve the comprehensive living environ-

ment, the Japanese government launched the third national comprehensive development plan from 1977 to 1986, which has achieved certain results. Then, in order to form a multi-polar type with unique functions in Japan, eliminate the excessive concentration of functions such as population economic functions and administrative functions in a specific region, and promote mutual complementarity and exchange between regions and different countries, Japan conducted the fourth comprehensive land national planning in 1987–1997. In 1998–2007, Japan carried out the fifth national comprehensive land planning of "land development" and "land formation", laying a solid foundation for the formation of a multi-axis land structure. In 2008–2015, it was formally named *Japanese Land Formation Plan*. Based on the existing situation in which the land spatial structure has been formed, Japan formulated the sixth national land planning for promoting the independent and coordinated development of the wide area. In August 2015, the latest edition of "seven comprehensive plan" established the convection-promoted land development model. This model is based on the previous edition of *Japanese Land Formation Plan*^[2].

From resource development, economic development, the construction of national living infrastructure to the deep integration of economic and social development and multiculturalism, the goals of Japan's land planning have been continuously adjusted along with its economic and social development and changing background of the times. In summary, from the *First National Comprehensive Land Development Plan* (first comprehensive plan) to the second comprehensive plan, it is a gathering from points to lines; from the second comprehensive plan to the third comprehensive plan, it is the extension from lines to areas; from the third comprehensive plan to the fourth comprehensive plan, it is a development from plane to stereoscopic; from the fourth comprehensive plan to the fifth comprehensive plan, it is breakthrough from one pole one axis to one pole to four axes; from the fifth comprehensive plan to the sixth comprehensive plan, it is an exploration from multiple pole type to three-dimensional and semi-stereoscopic space; from the sixth comprehensive plan to the seventh comprehensive plan, it is a development from three-dimensional and semi-stereoscopic land space to four-dimensional land space

planning added with virtual space. All of these have gradually developed and improved the existing Japanese land space planning system.

3 Exploration of Japan's land space planning reform

3.1 More perfect from contents to forms The sixth comprehensive land plan focused more on "qualitative" development on the basis of quantitative development, and made every effort to shape a mature social plan to ensure residents' comfort, safety, peace and stability. In the planning process, various methods were employed to encourage the participation of various stakeholders, respect the requirements of local autonomy, realize the partnership between the central government and local government, cultivate local self-development capabilities, and establish different regional plans through cooperation between the two parties; make clear the linear correlation between the national and local plans, to make it easier for the public to understand^[3]. It has effectively alleviated the situation of population decline and aging, regional competition across national borders, environmental issues, budget constraints, and dependence on the limitations of the central government.

On the basis of *Grand Design of National Land 2050* issued in July 2014, Japan has formulated a national long-term development macro plan. The latest round of Japan's national land plan covers a wide range of radiation content (14 fields), including industrial layout, cultural tourism, local construction, transportation and communications, land and resources, resources and energy, marine, environment, landscape, and social mutual assistance. As a national-level macro-land planning that supports the economic growth of the entire country and promotes the overall development of the country's economy and society, it is characterized by taking positive measures for the first time to deal with social problems of population decline. On the basis of the sixth comprehensive plan wide-area independent and coordinated development, it further emphasizes the integration of regional cultural characteristics, positioning the new economic engine of national economic and social development in the next ten to fifteen years to "promote convection between regions", advocate that the eight wide-area regions should "adjust to local conditions" and promote innovation, and use the flow of multiple factors such as population, resources, culture, knowledge, and skills among wide-area regions as the driving force for economic growth, and achieve a full range of independence, autonomy, mutual assistance and cooperation, exchange and innovation, and common development between regions^[4].

3.2 Development from three-dimensional and semi-stereoscopic space planning to four-dimensional land space planning

The new land formation plan is simplified from four levels (the original national, regional, Tokyo, Hokkaido, and Osaka and Kyoto, and municipalities) to two levels (the national plan and the wide-area local) plan. National plans for comprehensive and basic planning to improve land use, improvement, and protection mainly include the use and protection of land and other land resources, the use and protection of coastal areas, disaster prevention and mitigation, urban and rural layout, industrial layout, transportation and other public infrastructure construction, cultural

welfare, tourism development, environmental improvement, *etc.* The plan, including the Northeast Circle, the Capital Circle, the North Continental Circle, the Central Circle, the Osaka Circle, the China Circle, the Shikoku Circle, and the Kyushu Circle^[5], is a wide-area local planning area.

3.3 Implementation measures focusing on improving investment in land and infrastructure construction

The direction of land infrastructure investment, the perfect application of land and land information, planning supervision, and inspection of planning-related systems fall into the category of planning implementation measures. Land and infrastructure investment includes national strategy, cross-century technology inheritance and transformation, and the integration of land and infrastructure resources. The land and infrastructure construction of direct national investment is a strategic investment to promote the country's sustainable development. The wide-area sector strategy includes regional land infrastructure investment, regional cooperative infrastructure investment, and joint national and regional government investment in national infrastructure^[6].

4 Implications for China's land space planning

From the practice of Japan's seventh national land development plans, it can be seen that by implementing environmental protection requirements in the land plan, we can prevent major environmental problems from the source and strengthen the advancement of environmental management. Based on the formulation of the national land development plan, through mature experience in these areas, such as coordinating regional development and coordination, Japan solved environmental problems, and formed a new development pattern in which economic development and ecological environmental protection are coordinated, which is worthy of learning and has theoretical research significance and also has some practical significance^[7].

4.1 Emphasizing the public participation in the process Japan's sixth national land plan of Japan began to break through the top-down planning method, and adopted the bottom-up approach to actively absorb the opinions of local governments and various sectors^[8]. Besides, it fully respects the consciousness of various civil society groups, makes various non-governmental entities undertake heavy responsibilities, participate in the management of land and infrastructure around them, and strengthen the construction of mechanisms to promote the continuous development of non-governmental entities. This strategic measure of relying on "new public domain expansion" to promote regional development is well worth studying.

4.2 Finding out the current business and informatization analysis

In the process of the recent several rounds of planning, Japan has paid considerable attention to the actual implementation of the analysis of the current situation of the basis of the top-level design of the informatization, the basic work of the organization's business and the investigation of the informatization status. At present, China remains in the "bottleneck" period of resource and environment development and utilization. Existing problems such as uneven regional disparities and uncoordinated economic and social development require early research

on land planning. We can use questionnaires, interviews and other special meetings in combination with specific Chinese conditions to make clear the current status of land planning operations and informatization, analyze current problems and optimize needs. Besides, it is recommended to carry out a sub-investigation on the standards, specifications, application systems, data resources, security requirements, and infrastructure on which the business is based, investigate the information management, operation and maintenance of the organization, and check the user business and information status at multiple levels and perspectives, to ultimately sort out research and analysis report on the status quo of business and informatization. For the use, improvement and protection of land and resources, it is recommended to establish a land space pattern, promote the coordinated development of economy, society and the environment, narrow the gap between regions and between urban and rural areas, improve national living conditions, and improve national competitiveness, and summarize some theoretical research and practical experience, to continuously promote the legislative work and organizational construction of land planning^[9].

4.3 Legislating to unify the land planning system and establish related planning coordination relationships In 2003, the Ministry of Land and Resources set out to carry out pilot projects for land planning at provincial level. In 2004, the National Development and Reform Commission launched regional planning pilots in the Beijing – Tianjin – Hebei metropolitan area and the Yangtze River Delta region, and in 2006 it launched the national main functional zone planning. At present, it is committed to the preparation and approval of national land overall planning and national urban system plan. The *Law of the People's Republic of China on Urban and Rural Planning* revised in 2015 emphasizes the functional development of urban and rural planning and emphasizes regional and urban and rural planning. Compared with the past plans, the *Thirteenth Five-Year Plan for National Economic and Social Development* gave more prominence to the concept of integrating urban and rural areas and balancing the spatial development. Therefore, it is very urgent to sort out the relationship between spatial planning, especially the relationship between land planning, land use planning, urban planning, and main functional zoning, coordinate the relationship between spatial planning and departmental planning, and strengthen the preparation of regional plans such as special areas^[10].

4.4 Implementing research and preparation work to ensure effective implementation of policies It is necessary to clearly define the functions and roles of land planning, and make clear that relevant content is the prerequisite basis for carrying out land planning work. Through interpreting *Land Planning Preparation Method* promulgated in 1987, we can understand that the principles, specific tasks and contents of land planning have the distinctive characteristics of planned economy era. The main task of the new round of land planning research and preparation is to start from regional space, integrate and coordinate resource space, production space, living space, and ecological space, coordinate population, resources, environment, and economic development,

coordinate domestic and international, and build national space pattern, lead relevant spatial planning, and promote sustainable development. In addition, starting from the overall national planning system, it is necessary to establish a national spatial planning pattern and a planning system with the support of national land planning and related spatial planning and departmental planning.

4.5 Reasonable and effective use of economic means The key to the implementation of land planning is the implementation of investment at the level of diversity and effectiveness. In order to promote the effective implementation of the plan, the government should implement different fiscal and financial and taxation measures in different regions. China stays in a period of continuous improvement of the socialist market economic system, it is recommended to explore methods of coordinating the relationship between the government and the market, the central and local governments, ensure the central government's investment capacity, give full play to local investment strength, and exploit the potential of private investment, and establish a joint investment system of central, local, and non-governmental organizations^[11].

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