

# Retrospect And Prospect Of Master Land Use Plan In China

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**Key words:** master land use plan, development process, development direction, China

## SUMMARY

The purpose of this paper is to analyze the new situation and reform direction based on the systematic review of the progress and achievements of master land use plan. Under the current situation, it would be a major topic on how to handle correctly the relationship between the government and market, promote the construction of ecological civilization, improve the land utilization governance system, and insist on the strictest possible systems for protecting arable land and economizing land use. The future development of master land use plan may follow these trends: redefine its function in the spatial planning system, advance regulation of ecological red line, permanent basic cropland and urban development boundary, transform from two-dimension to four-dimension land use control, and enhance the compilation and implement of rural dominating land use detail planning.

## SUMMARY (in Chinese)

在系统评述中国土地利用总体规划发展历程和实施成效的基础上，探析土地利用规划面临的新形势与改革方向。现阶段土地利用总体规划面临着认识市场与政府的关系，推进生态文明建设与健全用途管制制度，坚持耕地保护和节约用地制度的新形势。提出通过把握土地利用总体规划在空间规划体系中的作用，推进生态保护红线、永久基本农田保护红线和城镇开发边界的管控，引导从“二维”管制迈向“四维”土地用途管制，强化对乡村地区控制性土地利用规划体系的探索，作为未来土地利用总体规划的发展方向。

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## 1. INTRODUCTION

China is in a critical period of rapid urbanization, the relationship between man and land, especially the conflicts among people, resource, environment and development is becoming increasingly tense. As an approach of spatial strategy and public policy, master land use plan is of great significance to alleviating "food crisis and ecological crisis", and realizing sustainable development. China has implemented two rounds of master land use plan and the third round is on-going. Accomplishments have been achieved, however, tough challenges exist. Most of existing studies focus on qualitative or semi-quantitative analysis of a certain angle or time point of the planning, lacking a systematic summary of the development of three rounds of land use plan. In order to explore the existing problems and the causes, it is necessary to review the initiating, implementation, management and development of the plans.

## 2. THE DEVELOPMENT AND PROBLEMS OF FIRST TWO ROUNDS OF MASTER LAND USE PLAN

### 2.1 The first round of master land use plan (1986-2000)

In 1986, in order to prevent continuous reduction and increasing occupation of cultivated land and inefficient land management, the State Land Administration established as an administrative unit. In the same year, the enactment of Land Management Law defined the legal responsibility of initiating and implementation of land use plan. In 1987, for the first time, China attempted to compile the outline of comprehensive land use planning and selected the pilot cities from the three levels of provinces, cities and counties to draw up the plans. The relevant planning standards were formulated. Since then, the writing and implementation of five-level master land use plan has been gradually carried out. The first round of plan is characterized by the planned economic background, combined with the preparation of agricultural zoning. It uses eight-category land classification system, highlighting the land suitability assessment, aiming to implement the special protection of cultivated land, decompose land use quota from central government to local. The initial establishment of the five-level planning system has played an important role in the protection of cultivated land, the strengthening of land management and the coordination of the land for various industries. However, due to the strong economic tone and the lack of relevant planning theory and technical support, the quality of plan in various localities differs. Relevant plans often break through the land use plan and there is no clear legal basis for handling "irregularities". Therefore, the plan is not scientific or practical.

## **2.2 The second round of master land use plan (1997-2010)**

Faced with the severe situation of plummeting arable land, extensive and illegal use of land, Central Government stressed that the master land use plan should focus on cultivated land protection, strictly control the occupation of cultivated land and make overall arrangements for various land use. Subsequently, the State Bureau of Land Management deployed and compiled all levels of plan and adjustment, and clearly proposed two goals: total cultivated land should not be reduced and supply and occupation of cultivated land should be balanced. In 1998, the revised Land Administration Law made it clear that initiating, approval, implementation, revision and related legal responsibilities of land use plan, and established the land use control system. The farmland protection system gradually formed. In 1999, the State Council approved the implementation of the Outline of the National Master Land Use Plan (1997-2010) and to 2001, most provinces and cities approved their master land use plans. The second round of planning is characterized by mandatory control quota and land-use control. Changing from merely controlling quota to limited goals, meeting the requirements of dynamic balance of the total cultivated land and the control of the total amount of construction land. The central government confirms amount of basic farmland protection, the amount of cultivated land for construction and the amount of supplementary cultivated land for development and arrangement of requisitioned cultivated land and other mandatory control quota. However, due to the special historical background and policy demands, the planned targets of this round of planning are very rigid and not flexible enough. The division of five-level plan system is not clear and their predictability for future development is not sufficient. The distributed plan management mode makes many plan indicators used in advance.

## **3. INNOVATION AND PROBLEMS OF CURRENT MASTER LAND USE PLAN**

### **3.1 Current practice: The third round of master land use plan (2006-2020)**

Influenced by the central government development strategy and local needs, the first two rounds of land use plan centering on quota control have gradually exposed a series of problems such as not efficient in controlling space. In 2002 and 2003, the Ministry of Land and Resources carried out pilot projects on land use plans at the county and municipal levels, and the third round of land use plan was officially launched. In 2004, in accordance to the requirements of the Central Government's strict management on the direction, scale and major layout of land use and planning, the Ministry of Land and Resources demanded that all localities conduct a systematic review of the implementation of the previous round of land use plans. Afterwards, various localities successively carried out preliminary work such as data collection and research, planning and implementation evaluation, major issues and policy suggestions. In 2005, in order to explore ways and mechanisms for protecting cultivated land and saving land for intensive use, "four investigations and four controls" were carried out for the inventory of cultivated land, construction land, illegal land use, initiating and implementation of the plan. In 2008, The Outline of the National Overall Land Use Plan (2006-2020) approved by the State Council and promulgated by the State Council covered such issues as the protection of cultivated land and basic farmland, the conservation and intensive use of construction land,

structural optimization, ecological construction, land use control and the implementation of planning and other issues, clearly proposed "space control for construction land". Land use plan evolved from the traditional "control based on the use of cultivated land for special purposes" to "space control" for building space and non-building space, forming a management and control system for "three areas and four districts" for construction land. The third round of plan emphasized the protection of cultivated land, strictly controlled the construction land, conserved land for intensive use and strengthened space control, taking into account economic sustainability, ecological rationality and social affordability. Under the basic premise of strictly protecting the quantity of arable land, by means of index control, usage control and space control measures, emphasis is placed on both rigid and flexible planning, prohibition and guidance are combined, and the plan and implementation are guaranteed by annual plans, the system of agricultural transfer, project pre-trial and inspector enforcement.

Table 1 The comparative analysis of three rounds of land use plan

Category	1st round	2nd round	3rd round
Situation	Decreasing cultivated land, exploit of cultivated land by construction, and inefficient land management	Subsided arable land, extensive land use, illegal land repeatedly prohibited	Effective management of land quantity, not space
Focus	Concerned about the special protection of arable land	Highlight the dynamic balance of total cultivated land, the total amount of construction land regulation	Relationship between crop supply, construction and environmental protection
Target	A single target of quantity control	Quota control with limited targets	The goal of diversification
Feature	Take eight-category land classification system	Take control measures for land use control	Control construction land space through three lines and four zones
Innovation	Highlight land suitability assessment and utilization	Assign mandatory control quota, rigid regulation	Saving intensive land, both rigidity and flexibility
safeguard	Use top-down quota regulation and management, step-by-step decomposition	Land Management Law clearly defined the preparation, implementation and related legal responsibilities	Take the annual plan, agricultural transfer system, pre-project review, inspector enforcement and other means

### **3.2 The main issues facing the current plan**

The deficiencies of current master land use plan show in the following area: First, uncoordinated between departments. Due to legal support, system basis and different department heads, there are differences in planning objectives and disaggregation of classification standards, which is not conducive to the effective implementation of unified management and planning. Second, there is no top-down convergence, due to the longtime of planning, the inconsistencies between the provincial-level plan and the basic maps and the base of the county-level plan lead to the lack of convergence between the scale of the land for the county and towns and the planned targets set by the provincial and municipal plans. Third, the mechanism is not well-designed, overlooking the issue of meticulous management and land property rights, and research on rural area development needs to be strengthened. Fourth, the importance of plan is underestimated, plan adjustments are too frequent, and there is no effective restraint regulation, the overall management and control role of land use plan has not yet been fully reflected.

## **4. THE NEW ENVIRONMENT OF CURRENT LAND USE PLAN**

### **4.1 Decisive Role of Market and Better Role of Government**

With the Third Plenary Session of the 18th CPC Central Committee on "letting the market play a greater role in the allocation of land for state-owned construction and further expanding the land's power" and other reform issues, the transformation from "planned administration" to "market-oriented economy" has become one of the inevitable ways of reform. As the main carrier of land resource allocation, the market determines that market participants will be market-oriented to determine land use. One of the reasons for the current planning failure is that the government's regulation of resource allocation can determine the behavior of market participants and cannot substitute for market participants to make decision choices. Therefore, we should turn our planning ideas into "can we build" and "should we cultivate" if we cannot determine what kind of thing we are or what we want to build? The emphasis is on whether we can build or not. Considering the characteristics of land use uncertainty in a market economy, emphasizing the market's guiding role in resource allocation, After confirming the direction of market economy and public interest, the government functions should be changed through innovation in administration, with a focus on restraining or regulating the part of market allocation failure, and making full use of the means of administrative control, market guidance and economic incentives to strengthen planning and implementation. Planning, as a government act, is a correction of market failure and as such plays an important role in the process of social development (Wang, 2003). Therefore, grasping the decisive role of the market and giving full play to the role of the government will have a profound impact on promoting the transformation of the mode of development, correctly fulfilling the functions of the government and adapting to the ever-changing market requirements.

### **4.2 Accelerated the construction of ecological civilization and improve use control system**

Accelerate the construction of ecological civilization, promote intensive and efficient production space, suitable living space, beautiful ecological space, Use the system to protect the ecological environment, strengthen the awareness of ecological protection in the preparation and implementation of the overall land use planning, and clarify the ecological protection bottom line in land use, explore compatible "Sansheng space" planning system, construct rational structure of production, living and ecological space, develop strength and regulatory boundaries, strengthen economic compensation for regional ecological protection and achieve the coordination of efficiency and fairness. Improve the use of the control system, strictly limit the conversion of agricultural land to construction land, the implementation of special protection of arable land, a clear land use control rules and legal responsibilities, the implementation of the overall land use planning and management responsibilities. Fully delineate red lines for ecological protection, permanent red lines for basic farmland protection and urban development boundaries.

#### **4.3 The most stringent arable land protection system, land-saving system and ecological environment protection system**

Protection of arable land is one of the main lines in the development process of land use planning. It is a long-standing fundamental national policy of our country to unswervingly adhere to the most stringent arable land protection system. The farmland protection system based on the principle of "strict control, strict compliance with the bottom line, and dynamic balance" not only shows economic benefits, but also has the significance of extensive social security and ecological construction. As the root cause of the difficulty in implementing the protection of cultivated land, it is necessary to use the system to regulate the rights and obligations of the actors and to strictly observe the red line and the bottom line of food security in cultivated land so as to ensure that the actual amount of cultivated land is basically stable as a precondition for handling the relationship between food security and construction and development (Meng&Zhao,2007). At the same time, we must unswervingly promote the system of land conservation, strictly control the increment, revitalize the stock, optimize the structure of land use, and enhance the efficiency of land use and the degree of urban construction land intensive. Adhering to the system of protecting cultivated land and the system of saving land plays an important role in alleviating the contradiction between supply and demand for land and in solving the problems concerning agriculture, rural areas and farms and in ensuring the sustained and steady economic and social development in the new era.

### **5. FUTURE DIRECTIONS OF MASTER LAND USE PLAN**

#### **5.1 Emphasize the importance of master land use plan in spatial planning system**

As urban and rural planning, master land use plan, main functional area planning and ecological function zoning are responsible by different departments, there are differences in compiling main body, planning scope and time limit, index system, etc. There is a lack of a unified measurement standard and coordination mechanism among them. Characterized by "five plans, three levels, one book and three certificates", urban and rural planning delineates "three districts

and four lines" as an important means of space control (Li&Zhang,2012). Through the "one book and three certificates" to strengthen the control of the project. The overall plan of land utilization features "five-level planning, plan regulation and control, three lines and two borders to ensure resources", emphasis is placed on the control of the "three lines" of cultivated land, basic farmland, and scale of construction land, as well as the control of basic farmland boundaries and the "two borders" of urban and rural construction land boundaries. The main functional area planning is characterized by "two-level planning, four types of division and coordination of policy division and control", and through the division of four main functional areas of "optimized development, key development, limited development and no-exploitation", the intensity of land development is controlled and matched related policies to control. Ecological function zoning features "two-level planning, three-level zoning and functional zoning preservation" as the characteristics, and proposes three types of first-level zoning and other two-level zoning for ecological regulation, product provision and residential security. The spatial planning mentioned above have their own characteristics, but its essence is the space control based on the land development rights (Lin&Xu,2014). To clarify the dominant functions of different plans and to grasp the functional role of the overall plan of land use in the spatial planning system and to ensure that the "red line" of ecological security and food security and the "bottom line" of steady growth, employment protection, livelihood guarantee and stability assurance, and to emphasize the cooperation and coordination under the joint responsibility and make overall planning from the aspects of the division of powers and responsibilities, the construction of the legal system, the violation of laws and regulations and the market mechanism, so as to realize the comprehensive optimization of industrial layout, land use structure and ecological environment.

## **5.2 Change land use control from two-dimensional to four-dimensional**

Land use control is an internationally accepted land management system and is also the core of China's land use control system. It is the direction of future development by expanding the field of land use control, coordinating the management of spatial planning and improving the legal guarantee so as to satisfy the public interest to the greatest extent. On the basis of respecting the formed land rights system, public interests and legal private property rights, we should improve the management of land rights and interests, expand the functions of land use control, and strengthen the process of compiling, approving and implementing the rules and contents for public participation in land use control, accelerate the use of laws and regulations related to the legislative protection. Land use control needs to move towards "four-dimensional" space control including land use, layout, utilization and rights and interests protection.

### **5.3 Explore the restrictive land use planning system in rural areas**

Unlike cities, rural land consists mainly of agricultural land, with a focus on production and ecological functions, and its utilization is subject to land suitability (Ou, 2003). Actively explore the control of rural land use planning system should focus on the core of construction land reduction, combined with the land remediation planning, urban and rural construction land use change linked to the planning, focusing on resolving urban and rural land use, land remediation project decomposition and other issues, to make it consistent in terms of the scale and layout, the implementation of indicators and the co-ordination of funds, and to establish a fine management system of land in rural areas outside the centralized construction area within the limits of urban areas, it is of practical significance to saving intensive land, coordinating the development of urban and rural areas and solving the "three rural issues."

## **6. CONCLUSIONS AND DISCUSSIONS**

The general trend of development of master land use plan is implementable, manageable and judgeable, and master land use plan should focus on two bottom lines of food security and ecological security, adhere to the protection of cultivated land and land-saving system, understand the relationship between the market and the government, improve the regulatory system for various uses, work with all kinds of relevant plans, explore regulatory systems in rural areas, and satisfy the implementations of three modernizations strategy of industrialization, urbanization and agricultural modernization.

## **REFERENCES**

- WANG, W, 2003, Market Economy and Land Use Plan, China Land Sciences, 1,9-15, Beijing, Board of China Land Sciences.
- MENG, X & ZHAO, X, 2007, Analysis of Problems and Causes in the Implementation of Comprehensive Land Use Planning in China, China Land Sciences, 6,19-26, Beijing, Board of China Land Sciences.
- LI, F & ZHANG, Q, 2012, "Three Zones, Four Lines" Functioning Analysis: Based On Complete Urban Planning System And Clear Govern Responsibilities, Planners, 28, 29-31, Naning.
- LIN, J & XU C, 2014, Land Development Rights, Space Control, and Synergetic Planning, City Planning Review, Beijing
- OU, M, 2003, Study on the System of Land Use Planning, China Land Sciences, 1,41-44, Beijing, Board of China Land Sciences.



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