

Challenges and countermeasures for policy implementation of balance of cultivated land requisition and compensation in China

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Abstract

The balance of cultivated land occupation and supplement is one of the important links of China's cultivated land protection system, which alleviates the tension between cultivated land occupation and man-land conflict caused by China's continuous expansion in the process of urbanization and industrialization. At present, the balance of cultivated land occupation and replenishment is faced with some problems, such as the depletion of reserve resources of cultivated land, the mismatch between the construction area and the replenishment of cultivated land in time and space, "Superiority makes up inferiority" phenomenon and the decline of the quality of the replenishment of cultivated land. As a result, the dynamic balance of cultivated land quality and ecology can't be realized under the requirement of ecological civilization. Therefore, it is necessary to accelerate the formation of a new system of land occupation and supplement balance with the quality and productivity of cultivated land as the core, differentiate the regulation mechanism of land occupation and supplement balance, and strengthen the macro guidance mechanism in policy, so as to support the protection of cultivated land toward quantity, quality and ecology.

Keywords

Cultivated land protection, occupancy-compensation balance policy.

1. Introduction

In order to ensure food security for its 1.4 billion people, China has established the world's most stringent farmland protection system to safeguard the red line of cultivated land, a series of policies have been implemented, such as balance of cultivated land occupation and compensation, protection of permanent basic farmland, intensive and economical use of construction land, and construction of high-standard farmland. Through the implementation of a strict cultivated land protection system, China has not only hole out to the 1.8 billion mu of cultivated land red line, but also demarcated 1.55 billion mu of permanent basic farmland.

But the cultivated land protection situation is still severe in China. The frequent occurrence of global warming and extreme climate disasters also have adverse impact on China's agricultural production. For example, the historical extreme rainstorm weather happened in Henan Province in July this year, resulting 14.7 million mu of crops were damaged in the province, and

5.7 million mu of crops were never harvested. In addition, in the context of ecological civilization, a considerable part of the existing cultivated land will be withdrawn from ecologically sensitive areas in an orderly manner, and the original attributes of wetland, grassland, beach and woodland should be restored. Moreover, in the specific implementation of the arable land occupancy-compensation balance policy in the past few years, the phenomenon of "Superiority makes up inferiority" is widespread, and it is difficult to effectively restrain the occupation of high-quality arable land, resulting in a downward trend in the overall quality of arable land in my country. Therefore, this paper systematically analyzes the practical challenges in the implementation of the system of cultivated land occupation-compensation balance, and then puts forward corresponding countermeasures and suggestions to realize the "Trinity" development of cultivated land protection in quantity, quality and ecology, it is of positive significance to perfect the policy of cultivated land requisition-compensation balance and its realization path.

2. The stage and effect of cultivated land requisition-compensation balance policy

2.1. The background and development of the policy

The total amount of arable land resources in China ranks fourth in the world, but the abundance of the total amount can not make up for the difference and deficiency of per capita arable land. China still faces the dilemma of less high-quality arable land and less reserve resources [1-2]. As of 2015, China's per capita arable land area was only 0.09hm², which is lower than the world average. Since the reform and opening up, governments in economically underdeveloped areas, mainly in the central and western regions, have faced a tight fiscal revenue situation. These local governments have had to rely on "land finance" in order to balance their revenues and expenditures. Therefore, the area of cultivated land occupied by construction is also increasing, and the area of land suitable for farming is constantly being squeezed, which intensifies the contradiction of the lack of cultivated land in my country, especially the insufficient area of high-quality cultivated land. In this context, in 1997, China first proposed the concept of the balance of arable land occupation and compensation, and in 1998, "cultivated land requisition-compensation balance policy" was written into the "Land Management Law" to establish the legal status of the basic national policy of arable land protection. Since 2007, the No. 1 Central Document has emphasized strict adherence to the red line of cultivated land for 10 consecutive years. In 2017, the former Ministry of Land and Resources clarified a new "quantity-based, productivity-centric" new occupancy and compensation mechanism, which laid the foundation for the development of cultivated land protection towards the "trinity" of quantity, quality, and ecology.

2.2. Policy effects

From 1997 to 2003, according to the statistical data of the "China Land and Resources Bulletin", the total arable land in this period showed a continuous downward trend, and the grain output dropped sharply. From 2004 to 2010, the trend of decline of the total amount of cultivated land gradually slowed down, and China's grain output maintained a steady rate of increase. Since 2011, during the implementation of the arable land requisition and compensation policy, the economic, social and ecological benefits of land use have gradually increased. At this stage, the total quantity of arable land in China has stabilized, and grain production has continued to rise [3]. Since China's grain production reached the 600 billion kg level in 2012, it has maintained a "high and stable" level for five consecutive years. In 2017, the total national grain output was 661.6 billion kg[4], and the per capita grain occupancy has steadily exceeded the world average for the same period. So far, China's arable land requisition balance has been implemented for

more than 20 years. Most of the scholars believe that this policy has achieved remarkable results in adhering to the red line of arable land quantity and quality, ensuring national arable land resource security and national food security. However, some scholars have questioned the policy of cultivated land requisition-compensation balance[5], and this paper will have a discuss of it.

3. Challenges and Predicaments of Implementing the Policy

3.1. Time and space mismatch between construction occupation and replenishment of cultivated land

Due to the spatial overlap between the distribution of China's cultivated land resources and economic development advantages, China's high-quality cultivated land resource areas are also areas with rapid urbanization and industrialization, and high-quality cultivated land has a face-to-face conflict with urban development. Although China has established a policy of balancing occupancy and compensation, the phenomenon of "Superiority makes up inferiority" still happens, and occupying near and far away has not been fundamentally changed [6].

In addition, in terms of time, large-scale infrastructure construction projects such as energy, transportation, and water conservancy often need to implement the task of supplementing arable land in a relatively short period of time. Most counties have insufficient reserves of arable land reserve; in terms of space, there is more demand and supplement for arable land. The areas with weak arable land capacity are concentrated in the areas with rapid economic development in the southeast, while the areas with stronger arable land capacity are concentrated in the northeast and northwest regions. The construction occupation and the space of arable land do not match, and gradually show an increasing trend [7].

At the same time, after years of vigorously implementing arable land supplementation, governments at all levels have taken land as the main way to supplement arable land to alleviate the contradiction between people and land in densely populated areas, leading to the problem of increasing depletion of arable land resources in the region. The remaining arable land reserve resources are mostly in remote areas with poor farming conditions, and they are scattered sporadically. In order to pursue a balance in the amount of cultivated land, some places have ignored the impact of land development on the ecological environment, severely damaged the ecological environment, caused natural disasters such as soil erosion, and threatened the safety of the local ecological environment. Blindly pursuing the balance of account and supplement in quantity is no longer suitable for current and future development needs [8].

3.2. The phenomenon of "Superiority makes up inferiority" is quite common

The original intention of China to achieve the balance of arable land occupation and compensation is to prevent the total output capacity of the stock arable land from decreasing, which is reflected in the various characteristics of arable land, such as quantity, quality, and ecology. However, my country's local finance is still relatively dependent on "land finance", so "self-interest" has become a common feature of governments at all levels. Many towns and industrial parks choose high-quality arable land with flat terrain, convenient transportation, high soil quality, and relatively complete farmland infrastructure. However, most of the arable land that is supplemented by the same amount is remote, difficult to cultivate, and low yield rate[9]. This has led to the overall low quality of cultivated land across the country, with medium and low-yield fields accounting for more than 60%. At the same time, high-quality fields are mostly close to the edge of cities and towns, and they are unable to resist the process of urban expansion and sprawl. This has made it difficult to implement the "superior and supplement" policy of construction land over agricultural land. And this has formed a deviation

from the original intention of the country to formulate the policy, and this deviation is very obvious in the balance policy of cultivated land occupation and compensation [10].

In order to solve the problem of "emphasis on quantity but less quality", in 2004 the State Council's "Decision on Deepening Reform and Strict Land Management" clearly stated that the quantity and quality of supplementary cultivated land should be converted according to grades. But the core requirements of this decision have not been implemented. The reason is that the quality of new cultivated land not only depends on the soil, topography, hydrology, climate, irrigation and drainage and other conditions that constitute the cultivated land, but also needs to consider the distance to residential areas, the convenience of cultivated land, and the potential, measures and effects of fertility cultivation. Complementing the quality of cultivated land cannot be completed in the first time, and there is a certain lag in rectification [9].

3.3. Unbalanced quality and ecology endanger the safe production capacity of cultivated land

Survey and research [11] show that the suitability of cultivated land has continued to decline in the process of changes in the spatial pattern of cultivated land in China in the past 20 years. Among them, the climate suitability of cultivated land has declined the most, and the arid and semi-arid regions in the north have the significant decline. Highly suitable arable land is rapidly decreasing in southern agricultural areas such as southern China and the plains of the middle and lower reaches of the Yangtze River, while low-level suitable arable land is rapidly increasing in northern agricultural areas such as arid and semi-arid areas in the north and northeast plains. The area of saline-alkali cultivated land in the five northwestern provinces exceeds 2.667 million hm², and more than half are moderate to severe. The problem of soil pollution in some areas is serious, with 19.4% of arable land soil points exceeding the standard, and the problem of heavy metal pollution in arable land has intensified. In 2017, the country opened the cross-provincial occupation-compensation balance of cultivated land, but due to the differences in economic development between the east and the west, the north and the south, the cross-provincial occupation-compensation balance accelerated the spatial transfer of cultivated land, reduced the suitability of cultivated land, and increased the ecological risk of cultivated land.

4. Countermeasures for Improving the Implementation of the Balance of Cultivated Land Occupation and Compensation

4.1. Regional development of differentiated arable land "red lines"

Cherishing and rationally using every inch of land and protecting cultivated land is a basic state policy that our country must adhere to for a long time. In the context of ecological civilization, the delineation of the "red line" should be based on factors such as cultivated land resources and economic and social relations, and differentiated establishment of national and provincial levels of cultivated land protection "red lines".

In economically developed areas, first of all, we should stabilize the amount of cultivated land, maintain the balance of cultivated land quality and the arrangement of cultivated areas that are easy to cultivate, increase the productivity of cultivated land, and take the lead in realizing the balance of ecological occupation and compensation of permanent basic farmland, thus pushing up the utilization efficiency of resources. In ecologically fragile regions such as the arid regions of the northwest and the hilly and mountainous regions of the south, priority has been given to improving the quality of cultivated land and ecological rehabilitation of permanent basic farmland, a part of marginal arable land in ecologically sensitive areas such as wetlands, woodlands and grasslands will be properly withdrawn and the proportion of marginal arable land will be reduced.

4.2. Increase the production capacity of arable land

Years of land improvement practices have fully proved that land improvement projects can improve production and living conditions, improve the ecological environment, and alleviate problems such as soil erosion. At the same time, land preparation can fully tap the huge farming potential of unused land, increase the quantity of cultivated land and improve the quality of cultivated land, which has become the most important way to realize the balance of cultivated land occupation and compensation. In 2016, the "Plan for Recuperation and Restoration of Farmland, Grassland, River and Lake (2016-2030)" was issued to implement the concept of ecological civilization into farmland protection, while ensuring farmland production capacity, it also paid attention to repairing and improving the ecological status of farmland. At the same time, it should be combined with the reform of the rural collective construction land system to improve farmland production conditions and improve the quality of farmland. At the same time, it should include the marginal farmland reserve by remediating idle or inefficient construction land such as "hollow villages" and "disused homesteads". Realize the "win-win" of increasing the production capacity of arable land and the economical and intensive use of rural construction land.

4.3. Strengthen the macroscopic guidance and control of national policies

In 2017, China began to implement the policy of inter-provincial occupation-compensation balance of cultivated land. However, due to the differences in the economic development of various regions in the country, the inter-provincial occupation-compensation balance is likely to further accelerate the geographical transfer of cultivated land, destroy the dynamic balance of cultivated land, and gradually reduce the suitability of cultivated land and increase the ecological risk of cultivated land. Therefore, the state should strengthen the macro-control and overall planning of the implementation of the "occupation-compensation balance" policy, optimize the spatial pattern of cultivated land through national spatial planning, and based on the suitability of cultivated land, reduce the loss of high-suitability cultivated land and limit the loss of low-suitability cultivated land. Expansion and withdrawal of unsuitable arable land in an orderly manner, optimize the overall pattern of arable land space, and improve the overall suitability of arable land. At the same time, strengthen the construction, management and protection of cultivated land reserve areas, concentrate and unified use for cultivated land supplementation, improve the quality and ecological conditions of supplemented cultivated land, and realize the "quantity-quality-ecological" balance of cultivated land occupation and supplement.

5. Discussion and outlook

Cultivated land protection is related to the survival and development of the Chinese nation. Over the years, a series of cultivated land protection systems have played an important role in ensuring national food security. However, there are still depletion of cultivated land reserve resources, temporal and spatial mismatch of cultivated land replenishment, and widespread "occupation", as well as the widespread "Superiority makes up inferiority" and so on question. In the context of ecological civilization, the balance of arable land occupation and compensation can no longer be satisfied with the "occupancy one for one" on the book, but to achieve the dual needs of coordinated regional development and high-quality arable land construction. First of all, the regions shall formulate differentiated arable land "red lines". The delineation should be based on factors such as arable land resources and economic and social relations, and differentiated arable land protection scopes should be established. Secondly, the balance of arable land occupation and compensation must adhere to the core of production capacity, with land consolidation as the carrier, and achieve the balance of arable land occupation and

compensation through the increase of arable land production capacity. At the same time, state should intensify the comprehensive improvement of rural areas to achieve a "win-win" relationship between the supplement of cultivated land and the economical and intensive use of rural construction land. Finally, when formulating policies, the state should strengthen the macro-control and overall planning of the implementation of the "requisition-compensation balance" policy, and systematically improve the "requisition-compensation balance" system of cultivated land, improve the high-standard farmland construction system, and support the deep development of cultivated land protection to the trinity of quantity, quality and ecology, realizing the sustainable security of cultivated land resources under the age of ecological civilization.

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