

Feasibility Study on the Linking Project of Urban and Rural Construction Land Increase and Decrease

Haibo Fan

Shaanxi Dijian Guantian Investment Construction Co., Ltd., Baoji, Shaanxi 721000, China

Abstract

The implementation of increase-decrease linked projects has become an important way to alleviate and improve the development of urban-rural integration. Through the implementation of the project, farmers in the project area live in central villages, settlements or towns, which solves the problem of scattered settlements in the project area. At the same time, the rural infrastructure and farmers' production and living conditions in the project area have been improved, and the construction of beautiful villages has been promoted, and the great goal of rural revitalization in the new era has been achieved. This paper takes the increase and decrease of linked projects in the Guanzhong area as an example. Starting from the current conditions of the study area, the study area is analyzed separately for the reclamation potential, feasibility and benefits after the project is implemented. At the same time, it puts forward the necessary suggestions for the smooth development of the project. Provide the necessary reference.

Keywords

Increase Or Decrease Linked Projects; Construction of Beautiful Villages; Guanzhong Area; Quality of Cultivated Land.

1. Introduction

In order to alleviate the contradiction between supply and demand of construction land, promote the construction of new rural areas, promote economic and social harmony, sustainable development, and achieve the goal of rural revitalization, the Shaanxi Provincial Department of Land and Resources has issued relevant documents such as the "Notice on Further Utilizing the Increase and Decrease Linkage Policy to Support Poverty Alleviation and Relocation through Relocation" (Shaanxi Land and Resources Regulation [2017] No. 22), which require the implementation of increase and decrease linkage projects throughout the province. Combining the relevant requirements of Shaanxi Province for construction land reclamation, carrying out the urban-rural construction land increase/decrease linkage project has become an important way to alleviate land pressure, promote urban-rural coordinated development, and improve rural living environment. This article takes the increase and decrease linkage project in the Guanzhong region as an example, starting from the current conditions of the research area, analyzes the potential and feasibility of land reclamation in the research area, as well as the benefits generated after project implementation. At the same time, necessary suggestions are proposed to provide necessary reference for the smooth implementation of the project.

2. Basic Information of the Project Area

The study area is located in Qishan County in the west of Guanzhong, between $107^{\circ} 33' - 107^{\circ} 55'$ east longitude and $34^{\circ} 07' - 34^{\circ} 37'$ north latitude, with an altitude of 800-1660 m, large relative height difference, steep valley slopes, narrow mountain roads, uneven ground loess coverage, and soil layer thickness generally less than 30 cm. Qishan County belongs to the

continental monsoon type semi humid climate zone. The four seasons are cold, warm, dry and wet. The total annual solar radiation is 114.1 kcl/cm². The average annual sunshine is 2139.8 h, and the percentage of sunshine is 74%. The average annual temperature in the county is 120 °C, and the average frost-free period is 214 days. The average annual precipitation in the county is 633.8 mm, with an evaporation of 895.6 mm, which is 42.9% higher than the precipitation. The humidity index is 0.69. More than 80% of the county is made up of loamy soil, which has good soil quality and deep layers. It is well ventilated, permeable, and suitable for the growth of various plants, and has unique advantages in developing agricultural production. The water resources within the county are relatively abundant and the water quality is good, but the distribution is uneven, and the contradiction between supply and demand is prominent. In recent years, through large-scale farmland infrastructure construction and comprehensive management of small watersheds, the water conservancy and agricultural production conditions in Caijiapo have been greatly improved, forming a favorable environment for the development of agricultural production.

3. Analysis of the Current Situation of the Research Area

Most of the scattered natural villages in the study area are gradually formed in the process of the continuous development of the traditional Agrarian society according to the clan and blood relationship. For the convenience of farming, a large amount of arable land is scattered around rural residential areas. This scattered distribution of rural settlements and arable land is not conducive to improving rural infrastructure conditions, improving the level of rural public services, nor is it conducive to the need for large-scale mechanized agricultural production development. Due to historical reasons, the urban and rural construction planning management of Qishan County is not in place, and many towns and villages have not prepared village and town plans, so the land is used at will. Rural residential areas are mainly composed of bungalows, which are scattered and not concentrated. The homesteads in rural residential areas are mostly spontaneous construction without sufficient constraints and restrictions, resulting in a large amount of arable land being used for residential construction. This leads to low land use intensity and waste of land resources. In the demolished area, rural residential areas have different orientations, with uneven front and rear layout, inconsistent building levels and styles, and inconsistent architectural styles; The roads in rural residential areas are narrow, and the level of road hardening is low. In rainy and snowy days, some roads are severely muddy, affecting road traffic and adding many difficulties to the allocation of internal transportation facilities and infrastructure land in rural residential areas, hindering the optimization of the internal structure of residential areas.

Based on the above reasons, the planning, layout, and construction level of rural residential areas in the project area urgently need to be improved.

4. Analysis of Reclamation Potential in the Research Area

In the rural areas of the project area, there are many phenomena of abandoning the old and building new houses, with one household having two houses, resulting in the emergence of abandoned homesteads in "hollow villages". Most of the scattered natural villages in Qishan County were gradually formed in the process of the continuous development of the traditional Agrarian society according to the clan and blood relationship. Abandoned homesteads have different orientations and are unevenly arranged before and after. Due to historical reasons, homesteads are mostly spontaneous construction without sufficient constraints and restrictions, resulting in a large amount of arable land being used for residential construction. As a result, the phenomenon of waste of land resources has been caused. Therefore, the government has used abandoned homesteads, abandoned industrial and mining areas, and old

villages for consolidation and reclamation into arable land, greatly improving the efficiency and efficiency of land use in the entire project area.

In the field investigation and exploration work of the project, through household by household investigation, the reclamation scale of the demolished area is 68.6 hm², with an increase of 67.2 hm² in arable land, and the arable land coefficient can reach 98%. The reclamation scale of the hollow village is 44.6 hm², accounting for 65% of the total area. It can add 43.7 hm² of arable land, 23.9 hm² of abandoned industrial and mining land, accounting for 35% of the total area, and 23.5 hm² of arable land. From the above data analysis, it can be seen that there is great potential for reclaiming arable land through the consolidation and reclamation of old areas. The Elo rating system of land in Qishan County is divided into natural quality, utilization, economy, etc. The abandoned residential land and abandoned industrial and mining areas in the demolished hollow village are fertile and have a deep soil layer. By reclaiming the natural quality of the land, it can reach a level of 13-14.

5. Feasibility Analysis of Reclamation in the Study Area

After implementing the linkage between urban and rural construction land increase and decrease in the research area, and through the consolidation and reclamation of original rural residential areas, unreasonable roads, and other scattered plots in the demolished area, soil fertility can be improved and land quality can be improved; At the same time, the farmland will become more regular after being reorganized and redesigned, which is suitable for farmland management and Mechanised agriculture operation. In addition, the supporting water transmission and distribution pipe network and field irrigation technology can make the water-saving effect more significant, achieve "two high and one excellent" (that is, high yield, high efficiency, good quality), and fundamentally improve agricultural productivity. From the perspective of intensive and economical use of land, through this increase/decrease linked project, the demolition of villages in the old area has changed the phenomenon of widespread and scattered construction land distribution, excessive per capita construction land area, and low land intensive utilization. The implementation of this linked project has a positive impact on the residents in and around the project area. It not only improves the living conditions and environment of the villagers in the demolished area, but also allows the villagers around the reserved land to enjoy the huge benefits brought by the development and construction of the reserved land. Therefore, it has received enthusiastic support from the residents in the project area.

In summary, this implementation plan is practical and feasible.

6. Benefit Analysis

After the demolition of the old area and the implementation of farmland reclamation in this project, the originally segmented farmland is integrated into concentrated and contiguous land, providing conditions for large-scale mechanized production. At the same time, the construction of farmland water conservancy facilities is in good condition. By implementing large-scale management, costs such as water, electricity, agricultural materials, and labor can be saved. After consolidation, the output value per mu of arable land will be significantly improved. Through the consolidation of rural construction land, the phenomenon of disorderly and extensive utilization in demolished areas has been improved. Through the reclamation of rural construction land consolidation areas, supporting engineering and technical measures, the quality of newly added farmland has been guaranteed. At the same time, the turnover index has been linked for the use of urban construction new areas, improving the utilization rate, output rate, and level of conservation and intensive utilization of land. Improve the production

conditions and living environment of farmers, vigorously adjust the agricultural industrial structure, and cultivate industries that generate wealth and increase income.

Through the centralized use of rural construction land, on the one hand, it can further clarify the zoning of land use, and on the other hand, it can consolidate the achievements of land use zoning. Organize according to the basic farmland protection zone plan, and construct other zones in accordance with the overall land use planning zoning requirements. This not only makes the land use zoning clearly separate on the overall land use planning map, but also on the actual land plot, thus laying a solid foundation for implementing land use management. Through the implementation of the project, not only the quality of rural cultivated land can be improved, but also new indicators of urban construction land can be added, the development of urban and rural integration in Qishan County has been strengthened, the rational allocation of land and other resources between urban and rural areas has been achieved, and the operation mechanism of the common development of urban and rural social undertakings and infrastructure has been established.

After the implementation of the project, by organizing rural residential areas, the villages will be relatively concentrated, which is conducive to improving the natural ecological environment and cultural landscape in rural areas. Through the construction of new houses for farmers, while improving the intensification of rural residential land use, it will also greatly improve the quality of the ecological environment. Through the reclamation of rural residential areas, while increasing the area of arable land, strengthening the greening and soil and water protection of newly added arable land, improving the ecological environment of the reclaimed land, and creating a good regional environment, good ecological benefits can be achieved.

The implementation process of linking the increase and decrease of urban and rural construction land to the project area, which is the process of demolishing old areas for farmers, organizing and reclaiming their homesteads, and constructing farmer resettlement areas. During the construction process of houses in concentrated residential areas, newly built houses occupy farmland and have a certain impact on the ecological environment; During the construction of houses, noise pollution, dust pollution, and solid waste pollution can be generated, which has a certain impact on the surrounding environment. If farmers in the demolished area do not organize their homesteads in a timely manner after demolition, they will leave behind abandoned land and a large amount of solid waste, which will affect the environment. Therefore, farmers should promptly reclaim their homestead after demolition, convert it into farmland, and restore the ecological environment.

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