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Study on the Measures of Ecological Sustainable Development in Ditching and Land Reclamation Project

Yufei Xiong[1, 2, 3, 4, *]

[1]Shaanxi Provincial Land Engineering Construction Group Co., Ltd. Xi'an Shanxi 710075, China

[2]Institute of Land Engineering and Technology, Shaanxi Provincial Land Engineering Construction Group Co., Ltd. Xi'an Shanxi 710075, China

[3]Key Laboratory of Degraded and Unused Land Consolidation Engineering, Ministry of Natural Resources, Xi'an Shaanxi 710075, China

[4]Shaanxi Provincial Land Consolidation Engineering Technology Research Center, Xi'an Shaanxi 710075, China

Abstract

Hong ditch stretched is perfecting rural revitalization and ecological environmental renovation of major strategic project, to ensure the implementation of the project, to promote agricultural development, hong ditch stretched out the engineering should be combined with the regional advantages, enhance the vitality of agricultural development, improve the production level of peasants' living, and provides the basis for regional comprehensive governance, provide safeguard for the agricultural sustainable development.

Keywords

Terrace Ditch Land; Ecological; Sustainable Development.

1. Foreword

In the history, loess Plateau is the most serious area of soil and water loss, due to excessive reclamation, climate, geological changes and other reasons, the loess Plateau soil fertility has been reduced, soil and water conservation has become weak, arable land area sharply reduced. In order to promote the restoration of the ecological environment of the region, the project of returning farmland to forest was carried out in 1998, which greatly improved the ecological environment of the Loess Plateau region. However, the ecological restoration project resulted in the reduction of the cultivated land area and the prominent contradiction between man and land.

In order to guarantee agricultural production capacity, improve regional ecological environment and promote local development, combined with the existing land regulation technology, ditching and land reclamation project is of great significance to support regional industry and promote regional economic development. Therefore, based on the regional ecological sustainable development, this paper discusses the engineering development strategy of ditching land reclamation project under the corresponding background.

2. Concept and Connotation of Ditch Construction Project

Hong ditch stretched project is special for the loess plateau landform, comprehensive to dam system construction, the old dam repair, reconstruction of saline-alkali land, land development and comprehensive management of the construction of the channel management mode, make full use of modern land reclamation engineering technical measures, to strengthen the land

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engineering benefits, ensure the construction of farm land, enhance the ecological benefits of comprehensive control project work.

In the process of ditching and land reclamation project, it effectively increased the local cultivated land area, improved land fertility, greatly improved the per capita income of local residents, and better prevention and control of local soil erosion, protect the local ecological environment, and achieved better ecological and economic benefits. Therefore, ditch-building project is an effective measure to guarantee and harness ditches. However, there are still many problems in the construction process of gully construction, this paper puts forward the corresponding solutions to the problems in the gully construction project, and provides the theoretical basis for the ecological and sustainable development of the gully construction project in the loess Plateau region.

Hong ditch stretched engineering greatly changed the river valley topography, before hong ditch stretched out the project to carry out, the cultivated land mainly distributed in the river on both sides of the gentle slope or the mountains, and to treat ditch after stretched out the project, also in the flat valley between distribution with a large number of cultivated land, cluster, the collectivization of land, so as to facilitate future large-scale mechanization of farming. On the other hand, the ground water level increased significantly after the ditch-construction project, and the measurement shows that the groundwater has been improved to a certain extent after the ditch-construction project, indicating that the ditch-construction project has achieved certain results.

3. Development Status of Ditch-making Project

Hong ditch stretched out the project, mainly in yan 'an, that is, the loess plateau gully region, the region is an important agricultural production base, after effectively taken hong ditch stretched out the project, effectively increase the construction of high standard farmland area, greatly improved the level in the field of infrastructure, ecological environment surrounding the effective regulation, improve land productivity, And accelerate the rural to large-scale breeding, ecological tourism construction and other aspects of development, effectively promote the local farmers' income. Therefore, this project has great economic, social and ecological benefits, and has brought new opportunities for agricultural development in this area.

Since it started a land reclamation project in the ecological environment of loess plateau are greatly improved, and improve agricultural ecological and economic development level, but with the rapid development of economic, ecological and economic contradictions increasingly prominent, and with the continuous implementation of hong ditch stretched out the project, make the area of cultivated land quantity and quality enhances unceasingly, increasing stock of arable land, With the construction of agricultural infrastructure and technological support of agricultural industrial layout has been constantly improved and adjusted, the continuous development of rural economy has promoted the coordinated development of regional agricultural ecological environment.

4. Existing Problems of Ditch Land Construction Project

4.1. Shortage of Natural Environment Resources

For Yan 'an city, due to its inland location and less precipitation, there is a shortage of water resources in this area. For agricultural production activities that rely on water resources, the shortage of water resources is extremely serious. With the rapid development of economy and society, water use in various regions has gradually increased, aggravating the situation of insufficient agricultural water. Irrigation technology in the use of agricultural water resources

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still needs to be improved, and the utilization efficiency of water resources is still low. Therefore, how to make full use of the existing resources, improve the level of irrigation technology, and develop high-tech agriculture is one of the existing important problems.

4.2. Destruction of Ecological Environment by Traditional Agricultural Mode

In traditional agricultural development model, for the land use efficiency has reached maximum, such as pesticides, fertilizers, agricultural production technology measures, such as membrane mass in the limited land use, land fertility fell sharply, and the residue of non-biodegradable material, continuous fermentation in the river of farmland soil, soil physical and chemical properties change, reduces the soil quality, And serious threat to the ecological environment, great damage to the sustainable development of agriculture, threat to agricultural food health.

4.3. The Pattern of Agricultural Development is Too Extensive

Due to historical reasons, the level of agricultural development in Yan 'an area is still lower than the national average level, and there is still a certain gap with the modern agricultural development technology level. Therefore, in the process of engineering development, extensive agricultural development still needs to be improved, resulting in the unreasonable distribution of its industrial structure. The popularization of agricultural science and technology needs to be further improved, agricultural funds need to be further invested, and its management mode is still relatively backward. Overall, its agricultural pattern is still maintaining the traditional extensive development. In the future, more scientific and technological support and agricultural funds should be invested in order to build a new intensive and technology-based agricultural development model.

5. Discussion on Engineering Technology and Ecological Sustainable Development Mode of Ditching and Land Reclamation

5.1. Optimize Industrial Institutions and Promote Regional Industrial Development

For the regional industrial structure, shall establish a unified coordinate system, according to different regional resources endowment and the potential market to strengthen guidance, shape with regional characteristic industry and economic development mode optimization, overall structural layout is combined with the national development strategy overall planning, unified layout, coordinated development, the need to adapt to the modern agricultural production.

5.2. Promote New Sustainable Agricultural Development Models

On the other hand, for land management, we should strengthen the use and management of soil crop additives such as chemical fertilizers and pesticides, in the development of land saving, fertilizer saving and medicine saving technology. Fertilization techniques and methods should be used rationally, agricultural waste should be treated harmlessly, soil pollution should be regulated, and local farmers should be guided to adopt new sustainable agricultural development models to avoid further soil damage.

5.3. Rational Use of Water Resources, Improve the Efficiency of Water Resources Use

For traditional agriculture, due to the lack of related knowledge and skills, and makes the traditional agriculture to water resources is very dependent on, at the same time, low efficiency of water use in the process of using water, causing tremendous waste, while facing the shortage of water resources in yanan, need to develop the engineering water saving technology in the future, the integrated use of biotechnology, field engineering measures, such as rainwater

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resources. Make full use of the benefits of ditch-building and land-building projects, promote water-saving irrigation and medium and large scale irrigation renovation, and form a systematic water-saving agricultural development model. Avoid the consumption of large amounts of water resources, in the overall layout of reasonable allocation of water resources in the layout of various industries.

In specific irrigation, effective water resources are allocated according to the demand for water resources of different crops and the demand for different periods of the year. At the same time, the relationship between water resources and crop yield is actively discussed to ensure land yield under the limited use of water resources, avoid excessive pursuit of extensive development of land total output, and coordinate economic benefits. In this way, sustainable development of agriculture can be promoted, excessive use of water resources can be avoided, and coordinated development of various industries in the region can be promoted.

5.4. Continuously Improve the Level of Smart Agriculture

With the continuous development of information technology, modern agriculture should also pay attention to its own technical needs, and with the rise of the Internet and the continuous construction of smart city, in the development process of modern agriculture, should also focus on the construction of smart agriculture development mode, and strive to achieve agricultural automation, intelligent. In some areas, we will cooperate with enterprises to develop high-tech agriculture, establish smart agriculture parks, and promote the comprehensive development and construction of smart agriculture.

5.5. Strengthen Publicity and Improve Farmers' Awareness of Participation

In the process of implementing the ditch-building project, it is necessary to actively publicize the project policy and strive for the cooperation of local villagers to ensure the implementation of the project. For the economic losses caused by land leveling within the scope of the project, the villagers who caused the losses should be consulted and given corresponding economic compensation, so as to obtain the understanding and support of the villagers. On the other hand, in the process of engineering renovation, the construction unit and the construction unit should communicate and negotiate with the villagers to ensure that every step of construction is understood by the villagers. Finally, local villagers can be organized to supervise the project quality, so that the villagers can understand the project progress, effectively understand the project benefit, guarantee the project quality and actively maintain the project benefit.

5.6. Form a Sustainable Ecological Space Governance Model based on Green Technologies

Ditch stretched out the engineering should be combined with green development mode, actively explore under the limited capacity of ecological environment, with a low carbon equilibrium cycle and sustainable development as the goal of the governance model, follow the green development concept, through groove stretched out the project, the restoration of damaged by human activities and natural disasters ecological environment system, and effectively raise the quality of regional ecological landscape and ecological environment, Combining regional ecological environment characteristics and land suitability, we should maintain diversified biosphere, balance ecological and agricultural development, promote green ecological space governance, and strengthen the resilience of rural ecosystem.

6. Conclusion

Agricultural ditching and land reclamation project plays a very good driving role in promoting agricultural development, ensures the achievements of rural industrial structure adjustment, speeds up the development of rural collective economy and the investment of land

consolidation project, and provides financial support for the sustainable development of agricultural economy. On the other hand, agricultural ecological environment and economic development are prone to conflict, so attention should be paid to coordinating economic development and ecological environment protection in the process of development, so as to avoid damage to the ecological environment caused by economic development. The ecological environment of loess Plateau is fragile, and the ecological protection experience in this region can be summarized and replicated. In the future, it is necessary to rationally allocate agricultural ecological problems such as small industrial scale, extensive agriculture and low agricultural standards, optimize industrial structure, promote scale effect and continuously improve land utilization rate, so as to promote the rapid development of agriculture, promote sustainable ecological construction and guarantee the achievements of economic construction.

Hong ditch stretched out the project as a promotion of the construction of the loess plateau land systems engineering, and for the yenan agricultural sustainable development and ecological construction to provide effective security, and have achieved certain results, for hong ditch stretched out the engineering characteristics and the existing deficiency, needs to be ecological, efficient, modern, wisdom, etc as the focus of agricultural development and ecological construction, make full use of modern means of science and technology, Promote agricultural development and construction to ensure regional ecological sustainable development.

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