Existing Problems, Their Causes and Proposals in Land Reclamation Implementation of Hebei Province

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Abstract. At present, the existing problems in land reclamation project implementation process of Hebei Province are lack of regulatory agencies and regulations, sufficient funds and effective security funds, advanced reclamation technology and high reclamation economic benefit, effective information management system. The recommendations and measures to solve the problems include to set up on-line supervision system, to know and analyze the reclamation project progress and area, to obtain a special fund through various channels, to establish an effective capital guarantee system, to strengthen land reclamation project in technical research work, and to carry out information management system of land reclamation, etc.

Introduction

As the global population, resources and environment problem increasingly prominent, the “sustainable development” has become a common concerned theme all around the world. To strengthen land reclamation and realize the sustainable utilization of land resources, as one of the important content of sustainable development strategy, has received widespread attention from all over the world.

It is the basic state policy of China that “cherish, rational use of land, and effectively protect the cultivated land”, land reclamation is one of the fundamental measures to protect the land. Do a good job in the work of land reclamation is an important measure of implement the scientific concept of development, adhere to the strictest arable land protection system and implement the sustainable use of land. It has a very important significance to restore and improve the ecological environment, develop circular economy, promote the construction of new socialist countryside, build a conservation minded society, and promote the overall coordinated and sustained social and economic development[1]. The number and size of damaged land caused by production and construction and natural disasters are increasing year
by year, the problem is more and more outstanding, which has already caused the great attention of China at all levels.

In Hebei Province, land resources are particularly valuable because too many people with few land. With the promulgation and implementation of national laws and regulations and government attaches great importance and vigorously promote, the work of land reclamation has made some achievements in Hebei Province, but there are still some problems need to be solved urgently in the implementation of land reclamation project.

Land reclamation is different from land management. The character of land reclamation is wide distribution, difficult, high investment and long time span. Land reclamation is a difficult and complicated work which the condition is varied and the policy is strong. It is a system engineering which consists of comprehensive protection of arable land, soil and vegetation restoration, engineering technology, ecological environmental governance and public management. The work is very difficult, so we need to study and manage the land reclamation activities from a strategic height. Land reclamation is a systematic work with the implementation of the reclamation project as the core, and with the policy, capital, management as the guarantee. The implementation of land reclamation project is directly related to the effect of reclamation. Therefore, it has important practical significance to analyze and study the implementation of land reclamation project.

**Statistics and Analysis of Land Reclamation Schemes About Production and Construction Projects In Hebei Province**

**General Situation of Land Reclamation Scheme**

According to preliminary statistics, from January 2010 to October 2014, a total of 383 land reclamation schemes have been examined and approved by the Province. There are 32823.70 hectares reclamation area of the involved responsibility, of which 9557.73 hectares are arable land, and there are 3.038 billion yuan static funds involved. Both in the area of land reclamation and the total static capital, it has been very considerable.

**The Maturity Situation of Land Reclamation Scheme**

According to preliminary statistics, by the end of 2014, based on the reclamation years in those land reclamation schemes, there are 182 plans should be completed on time. There are 12665.56 hectares reclamation area of the involved responsibility, of which 2453.82 hectares are arable land, and there are 1.06 billion Yuan static funds involved.

There are 65 categories of road-building reclamation schemes, including the construction of highways, railways and other temporary land. There are 9073.85 hectares reclamation area of the involved responsibility, of which 1219.38 hectares are arable land, and the investment amount is 868 million Yuan.

The reclamation scheme of provisional damaged land caused by wind farms construction is 89. There are 2005.51 hectares reclamation area of the involved responsibility, of which 88.6 hectares are arable land, and the investment amount is 132 million Yuan.

The reclamation scheme of provisional damaged land caused by mining is 2. There are 2005.51 hectares reclamation area of the involved responsibility, of which 88.6 hectares are arable land, and the investment amount is 132 million Yuan.

The reclamation scheme of provisional damaged land caused by other reasons is 26, including thermal power plants, pipelines, photovoltaic power generation and so on. There are
1559.74 hectares reclamation area of the involved responsibility, of which 1126.00 hectares are arable land, and the investment amount is 58 million Yuan.

The Completion of Land Reclamation Scheme Implementation

Through investigation, the Province has organized and implemented 82 land reclamation schemes which have already expired (of which 22 had accepted). The area of implemented reclamation is 2106.67 hectares, and the reclamation rate is only 16.63%. Zhangjiakou, Chengde, Shijiazhuang have a more clearly understand about the implementation of land reclamation scheme. Baoding has a more clearly understand about the fee collection of land reclamation scheme. Most of the other city don’t have a clearly understand about the implementation and fee collection of land reclamation scheme.

By the end of 2014, the number of land reclamation schemes which have already expired account for 47.5% of the total number which have been approved by the Province from January 2010 to October 2014. The scheme number of road-building and wind power construction accounts for 85% of the number of maturity schemes, and the proportion of investment account for a lot, reaching to 94%. The focus of the management and implementation of the whole land reclamation management is more quantity and large amount of investment. The statistical data of the past five years shows that the actual number of the investment, the fee collection of land reclamation scheme, the proportion of land reclamation, and the project completion percentage are all at a low level.

The Problems and Reasons in Land Reclamation Project Implementation in Hebei Province

Through investigation and comprehensive analysis about the project status and management of land reclamation in Hebei, we know that problems existed in land reclamation project implementation can be summarized in five main areas.

The Laws and Regulations of Land Reclamation Have Not Been Well Enforced, and the Management Mechanism and The Regulatory Agency Are Not Perfect

For a long time, due to the impact of the key and center work of land and resources management, the land reclamation management is often overlooked. In Hebei Province, the implementation of land reclamation project has not yet formed a complete supervision system and a unified standard. There is no daily tracking about the implementation of land reclamation project, and we cannot master the specific implementation of it, so we cannot supervise and guide it in time.

At the same time, these aspects, such as: unperfected organization structure, staffing less, lack of technical strength, the coordination and cooperation among the relevant departments is not enough and so on, seriously affect the exercising administration and management according to law of the land reclamation work. On the other hand, in the process of carrying out land reclamation, there are a lot of technical issues need to be completed by a certain organization. However, Hebei Province lacks of such specialized agencies or the functions are not prominent.

Insufficient Capital of Land Reclamation and Lack of Effective Capital Guarantee

Some production and construction projects, not only destroyed the state of the earth’s surface, but also changed the fundamentals of the land (topography, hydrology, etc), some
even damaged the agricultural infrastructure of the original land. For this reason, the implementation of land reclamation is an arduous and long-term work, not only need a scientific reclamation program, but also requires a strong financial support. But in the specific implementation of the land reclamation project, land reclamation funds not in place timely, it has seriously hampered the smooth implementation of the land reclamation project.

Normally, the main source of land reclamation capital is the government investment, compensation of local enterprises and local public participation. From the standpoint of the government, the government put the number of reclamation funds is inextricably link to the level of economic development. In recent years, the economic development is very rapid in Hebei Province, however, various industries need a lot of construction funds, so the invest funds of land reclamation is very limited. From the enterprises standpoint, the enterprise always take the pursue profits as its goal and do not have a strong sense of social responsibility. In addition, land reclamation really need to invest a lot of money, the economic benefits of reclamation is relatively low and effect is also relatively slow, so the enterprise often do not pay attention and reluctant to invest a lot of money on land reclamation. From the public standpoint, the production and construction activities often bring a certain degree of influence on the surrounding natural environment and social environment and directly or indirectly affecting the normal life of local people to some extent, so the land reclamation is a good thing for local residents. However, due to people’s lives is not rich, the ability of raise land reclamation funds is limited[2].

In addition, even if a certain land reclamation funds was raised from the government and enterprises, due to lack of institutions and personnel who is responsible for land reclamation and effective capital guarantee system and other reasons, land reclamation funds are not earmarked, what is more, corrupted by corruptionists or be diverted for other purposes. These reasons make the land reclamation funds lack of guarantee. There are no clear special funds and method of raising funds about the funding sources of land reclamation caused by historical and natural disasters .The result is not form a complete chain of funding. What restrict the development of land reclamation work is capital guarantee not in place. All these reasons bring a lot of difficulties to the implementation of land reclamation work[2].

Focus on the Schemes Only, but Ignore Scheme Implementation and Poor Implementation of Some Schemes

The supervision and restriction mechanism land reclamation is not perfect, and national policies about land reclamation are not well publicized and implement. The local government has not established supporting measures corresponding to the national land reclamation policy, the land and resources department has no basis when supervise and manage the land reclamation work. The land and resources department of some county (city) does not pay enough attention, the work of supervise and manage land reclamation lag behind the project. The parts of land reclamation obligors are not according to the land reclamation plan which has been reviewed and adopted when they do the job.

First, the parts of the production and construction units do not have strong sense of responsibility about land reclamation. They believe that the land reclamation program is merely a file when they apply for construction land or mining rights, do not pay attention to the implementation of land reclamation schemes, do not take measures to implement land reclamation schemes timely, cannot consciously fulfill the legal obligations which is “who destroyed, who reclamation”.
Second, although there are land reclamation schemes, but some of the production and construction units do not strictly in accordance with the preventing and controlling measures made by land reclamation schemes when they are building the construction. These have resulted in the increase of the actual reclamation task and the difficulty of reclamation project. For example, some construction units do not follow the requirements of stripped topsoil before the construction, the problem of lack of topsoil resources occurs during this process of reclamation, it leads to the result that the quality of reclaimed land cannot meet the requirements[3].

Third, the land and resources department of the city (county) cannot fully grasp the implementation of the expired program, so they are not sure whether the land reclamation obligations completed the task of reclamation. If the land reclamation obligors are changed or disappeared, they do not perform the land reclamation obligation. It will cause losses to the country, and increase the burden on the government and the department of land and resources.

**Lack of Innovation of Reclamation Technology, and Poor Benefit of Reclamation**

In the production and construction project, the destruction of land is extremely serious because of the dig, the pressure and the collapse. We want to restore the land to its available state by taking engineering, physics, chemistry, biology and other remediation measures. In fact, it is a very difficult system engine, needing the strong technical measures. Technology is very important in the implementation of land reclamation project, what kind of techniques be chosen is very important to the quality, quantity and future profit after land reclamation.

Hebei Province is still using the traditional reclamation techniques in land reclamation, scientific and technological content of these techniques is relatively low. The research of land reclamation technology mostly stays in the basic way of application. The land reclamation project which has been completed is a single-purpose, and the relevant departments did not analyze the situation of land destruction, local natural environment and reclamation conditions according to the principle of regional planning. They did not carry out an ecological reclamation of comprehensive, coordinated and controlled soil erosion with the guidance of principle of ecological economics. All the reasons make that the ecological environment of the reclamation area has not been improved obviously and the overall economic and environmental benefits of reclamation are poor. In addition, engineering reclamation technology has been adopted in the most of reclaimed land, and other technologies, such as chemical, biological technology, have been used very rarely. In the engineering reclamation, the destruction of the land structure is further aggravated by the use of large machinery. Even after the reclamation, the land cannot reach the goal of cultivation because of the nature of the soil has changed.

**Lack of a Unified Information Management System for Land Reclamation**

In the information management of land reclamation, Hebei Province is still in the initial stage and does not establish a scientific, digital, systematic management system. This leads to the result that Hebei Province does not know about many aspects of the land reclamation work in detail, does not have a clear understand about the base, and cannot master the dynamic situation timely, etc. These cause a certain degree of abeyance and waste, and the department cannot master the basic conditions of the damaged land and a series of problems after reclamation, such as the progress of land reclamation, the damage situation of land, the management and protection of land reclamation and so on. Implementing the information
management of land reclamation will be an important step in the development of land reclamation in Hebei Province.

**Suggestions and Measures to Solve the Problems**

In the coming practice of land reclamation, the department need to supplement the relevant theory and improve the practical operability, comb the difficulty and doubt, research the solutions and measures of the specific problem, and formulate relevant technical standards and specifications. All of this can provide technical support and reference for the development of land reclamation work in Hebei Province.

**Further Improve the Laws and Regulations of Land Reclamation**

If we want to improve the relevant laws and regulations of land reclamation, we must take the following measures. Firstly, we must formulate and promulgate regulations or rules about the operation of land reclamation which matching with the “land reclamation stipulation”, such as “Land Reclamation Fund Management”, “Land Reclamation Incentive Regulations”, “Management on Utilization of Reclaimed Land”, “Management on Assess of Land Reclamation or Destruction”, “Management on Examination of Land Reclamation” and so on. In order to ensure land reclamation work implement scientifically, rationally and orderly, we must control the whole process of land reclamation and take a dynamic supervision of all aspects. Secondly, we should gradually define the leading organization of land reclamation and the reclamation responsibility of relevant departments. Thirdly, the responsibility, right and benefit of the parties of land reclamation should be defined, this is conducive to increase the enthusiasm of land reclamation work and formulate uniform standards. More concretely, we should punish the individual and unit who cannot quality and quantity accomplish their reclamation task timely and award those who positive participate in reclamation and complete with a high quality. Finally, we must restrict the period of the right to utilize reclaimed land and formulate the range of application and the use of condition about the institution of land utilization[4].

**Raise Money for Land Reclamation by Multi-Approach and Establish an Effective System of Fund Guarantee**

The department should establish land reclamation fund in three levels that include the province, the city and the county. The source of fund not only include land reclamation fee charged, extracted from the minerals transaction, but also can be extracted from the land reclamation fee, agricultural development fund, forestry afforestation fund and others relevant. Another important form to raise funds is deal with the land property right after reclamation flexibly and favorably, so that it can attract social capital to participate in land reclamation in the form of joint management, shares, cooperation lease and others[5].

Meanwhile, the department should supervise and check the situation of funds deposited, so we can find out the current situation and the base. We should strictly implement the regulations of “three-way custody”, the payment of funds should be submitted to the Provincial Department of Land and Resources as a record. We also should strictly enforce the safeguard measure of land reclamation funds. The departments of land and resources at various levels should supervise the obligor of land reclamation to include land reclamation funds in the production cost or total investment of the construction projects, and ensure that the land reclamation funds are in place. The departments should also supervise the obligor of
land reclamation to accurately report the use of land reclamation funds and the implementation of land reclamation project before December 31 of each year, and strengthen the supervision of the use of land reclamation funds[5].

**Increase the Implementation of the Reclamation Scheme**

The land reclamation project which is related by the reclamation project mainly is prediction, does not implement to the specific plots. In order to strengthen the operability of the reclamation project and facilitate the inspection, acceptance and supervision of the late construction, we can improve the work from the following aspects[6].

Firstly, the primary work is ecological reclamation in the early stage of reclamation. For the damaged land which generate in the early days of the mining, ecological reclamation should be carried out first. By doing this, we can maximally reduce the destruction to environment and soil erosion, prevent from the deterioration of ecological environment, provide ecological environment support for the implementation of the follow-up reclamation project.

Secondly, the department needs to prepare the detailed design of the land reclamation scheme. Reclamation plan is a leading planning, cannot be specific guidance the construction of reclamation project in late stage[6]. After the reclamation project was completed, the reclamation obligor should carry out detailed engineering design according to the actual situation of the damaged land.

Thirdly, according to the detailed design of the reclamation project, the engineering measures should be implemented to each block for the part of taking reclamation systems engineering[6]. The department needs to prepare the corresponding large scale map, such as the layout of water conservancy project renovation (new build), the layout of road engineering in the field, etc. Only the project is implemented to the drawings, it can be implemented to the specific land. So, the inspection and supervision on the late reclamation project could be more convenient.

**Strengthen Technological Innovation in the Implementation of Land Reclamation Project**

In the implementation of land reclamation project, the technical level of land reclamation will directly determine the quality and effect of land reclamation. In Hebei Province, if we want to fundamentally improve the status of land reclamation and widely and effectively promote the development of land reclamation project, we must tackle the research work of land reclamation technology. For example, according to the principles of ecology and ecological economics, the technical staff studies the ecological agricultural reclamation technology which is beneficial to improve the efficiency of agricultural production. They study the technology of solid waste filling with production and living waste and the microbial reclamation technology which is low cost, high efficiency and good efficiency. Of course, there are irrigation and water conservancy, soil fertility and other technical research[7]. At the same time, we can refer to foreign advanced systems, such as the United States, Germany, the United Kingdom and Australia, etc[8]. We also can refer to the reclamation experience of other domestic province (city), such as Jiangsu Province, Shanxi City, Chongqing City,

**The Establishment of Online Monitoring System to Carry Out Land Reclamation Information Management System**

Using the national “a map” and other technical means, to speed up the construction of land reclamation monitoring system and land reclamation regulatory information platform, in a
timely manner to grasp the administrative area of land resources and land reclamation project progress[9]. Project leadership team and the project commitment unit should regularly check the implementation of the project. To check the contents of the main system implementation, the implementation schedule, project quality, the use of funds management and data archiving[10]. Localities should establish a system in order to supervise the land reclamation project implementation and urge obligor to complete the reclamation on time. At the same time, the obliges should report the information of the project to superior departments.

Meanwhile, we should increase the penalties for violations. In the implementation of the reclamation project, if we found the following situations: false new arable land of project, lied about the completion of the project, withheld or misappropriated funds, etc, we should investigate and affix the responsibility of the responsible person. The responsible person who has caused serious damage and influence owing to his bad behavior should be given disciplinary punishments. The responsible person should be transferred to judicial organs for handing if they constitute a crime.

References


