

Discussion on Introducing External Funds for Water and Soil Conservation

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Abstract: Introducing external funds for water and soil conservation has a very important role in promoting ecological environment construction in water loss and soil erosion areas. It can not only complement lack of funds for erosion control and accelerate soil conservation steps, but also accompany the introduction of advanced technologies and methods, so that the management of water and soil conservation projects will become more standardized and regulated. The adoption of the World Bank Reimbursement System should integrate local conditions, domestic planning investment management manners. And establishing a new kind of water and soil conservation specialized teams oriented to market economy is an effective organized way to carry out soil erosion control in large scale, high standard and fast speed.

Keywords: water and soil conservation, World Bank loan, reimbursement system, specialized team

As a basic national policy, a key to harnessing rivers and an essential component of ecological environment construction, the water and soil conservation has increasingly drawn extensive attention and supports in the whole society; in addition, as a strategic measure of global sustainable development, it has also gained much attention from the international societies. With the deepening of reform and opening up in our country, the first project of utilizing external fund from international monetary organization – Shanxi/World Bank Loess Plateau Water and Soil Conservation Project took place in 1994. After 7 years of implementation, the project has greatly promoted the water and soil conservation work in the whole province, and realized breakthrough in traditional thought, and obviously accelerated the steps of controlling over soil erosion and improving ecological environment.

1 Necessity of introducing external funds for water and soil conservation

The party and governments pay close attention to water and soil conservation work across the country, instruct that sufficient funds must be raised through various channels, and external funds should be used, so that to step up the speed of soil erosion control. The water and soil conservation work needs big investment, has long period of benefits, produces significant social benefit and a certain economic value. This indicates that introduction of external funds is very important in the province with serious soil erosion to carry out water and soil conservation development.

1.1 Complementing shortage of water and soil conservation funds

Shanxi Province is located on the Loess Plateau, with its hilly areas accounting for 80% of its total. Soil erosion area in the province covers an area of 108 thousand km², making up 70% of the whole province; annual soil erosion is 2,920 t per km², and in some serious areas, it could reach as high as 20 thousand t per km². All poor counties in the province are situated in the areas with intense soil erosion. The soil erosion has constituted a great menace to the survival and development of human beings. In order to curb soil erosion and improve survival environment, through more than 40 years of efforts and struggle, people in the province had only controlled about 32% of soil erosion areas. The reasons for the slow pace of controlling work are mainly due to financial difficulties of local governments. They cannot set aside sufficient money for water and soil conservation work. Moreover, local masses are poor, therefore it is difficult for them to raise some money for the conservation work. In order to accelerate soil erosion control work, we must raise money as soon as possible, and adopt various channels to introduce

external funds, so as to complement the problem of fund shortage.; meanwhile, we must integrate reality, focus on the aim of Poverty Alleviation and Environmental Protection

1.2 Introducing advanced practical technology from abroad

The introduction of external funds is surely accompanied by the introduction of advanced science and technology. There are many advanced water and soil conservation technology abroad. For one thing, we can learn the technology from experts abroad by direct contacts, for the other thing, we can get it through technology transfer. Especially, the experts from the World Bank go to and fro throughout the world, and are very familiar with international advanced water and soil conservation technology. We can learn and introduce the advanced technology through the implementation of the World Bank projects. During the Bank project implementation in our province, the software such as COSTAB, FARMOD, JIS and so on have been extensively applied in soil conservation works involving economic benefit analysis, engineering budget, sub-watershed planning, project investment plan, material procurement, etc., so that the working efficiency and preciseness have been greatly improved, and the manpower, materials and financial resources saved, and the technical contents of the project implementation increased.

1.3 Enhancing project management levels

One of the important aspects for the introduction of external funds projects is to introduce advanced project management methods besides introducing external funds. In the past, we often paid much attention to construction but neglected management and protection of the projects. When control work over a mountain or a watershed was accomplished, it implied the overall end to the project, seldom tracing and supervising the project management and benefits. In the respect of project management, the World Bank is reputed as global model. During the World Bank project implementation in our province, in order to timely and precisely reflect the project implementation, according to the requirement of the World Bank, we set up a monitoring system involving various levels and channels; in the project areas, 119 typical households were selected for tracing investigation and grasping dynamic information among different groups of households; and also 14 watersheds with representatives were selected to monitor vegetation coverage and silt dynamic change, so as to ensure the project progressing smoothly.

1.4 Promoting development of management personnel

In order to ensure external funds project to progress smoothly, we must learn what we do not know or understand before, the project promotes us to transform traditional methods and thinking, to acquaint with international society, and to joint with international society. All this process must been accompanied by development of various personnel. During the process of the Bank project implementation in our province, all key technical staffs in project offices at various have participated training and study tour on project management and practical technology at home or abroad, resulting in a great number of personnel acquainted with technology and management.

2 Achievement analysis on world bank water and soil conservation project in shanxi province

The World Bank water and soil conservation project in Shanxi Province started its preparation work in 1991, passed appraisal by the World Bank in November 1993, and formally implemented on October 3, 1994. The project implementation period is 8 years, with a total investment of 517 million yuan, of which the World Bank provides a loan of 37 million US dollars. The project covers three areas – HeBaoPian area, Weifen River watershed and Xinshui River watershed, with a total area of 5,052 km², involving 67 townships in 8 counties – Hequ, Baode, Xingxian, Xixian, Puxian, Daning and Jixian counties. Through 7

years of implementation, production, ecological and living conditions, and management levels have significantly changed, setting up a demonstration model for the whole province.

2.1 Soil erosion effectively curbed, deliterious ecological environment obviously changed

Through only 7 years' treatment, the project has totally accomplished soil erosion control area of 76,400 ha, of which, terracing 32,593 ha, beach land development 100 ha, check dam construction 139, key dam construction 9, creating dam-land 300 ha, orchard construction 6,337 ha, nut plantation 5,206 ha, grass planting 400 ha, nursery construction 7 with a total area of 60 ha. Totally completed a treatment investment of 518 million yuan, of which the World Bank provided 37 million US dollars, domestic counterpart funds 209 million yuan. The whole project area has become a soil conservation comprehensive treatment area in large scale, in which soil erosion has been effectively controlled, ecological environment significantly improved, land using patters gradually tended toward proper. Control degrees of various sub-watershed have reached over 60%, comprehensive measures can annually preserve 7.3 million tons of sedimentation, stop runoff of 515million m³, vegetation coverage reached from 20% to 35%. For example, conditions in Cijinshan Watershed, Kuangou Watershed, Wucheng Watershed, etc, Pianguan County, have changed significantly in comparison with the past, and also attracted lots of people to come here to learn, to interview, etc.

2.2 Accelerated the pace of poverty alleviation

Control Local Water and Soil Resources, Develop Local Economy, Make People Well-off. Highlighting the construction of terracing as a main breakthrough to reform slope land, we have changed the practice of extensive tillage in the past to intensive farming manner, per capita grain production reached 500 kg from 330 km before the project implementation, essentially solved feeding problems in the project area. Moreover, large-scale economic forest construction considerably increased farmers' income, per capita annual net income reached 2,400 yuan, up 8 times over the past, and a great number of farmers have gotten rid of poverty and become well off. Such as the villager Yuan Shuhai in Yuanjiali Village, Baode County, in the year 2,000, net income of his family reached 4,600 yuan due to the project implementation.

2.3 Appeared many control models

In HeBaoPian project area, they organized specialized teams and mechanical construction teams to carry out the project throughout the whole year in coordination with masses' seasonal construction; for the key project component with high content of technology and the key watersheds, control work will be carried out by the specialized teams which have received technical training. In Linfen Prefecture, various project counties have all adopted the control model "accomplish planning at once, reach control standard at once, complete loan contracts at once".

3 Exploring new mechanism, extending new measures

Introducing the World Bank loan is an unusual practice in water and soil conservation in China. How to joint with international management and how to integrate the World Bank reimbursement system with domestic fund management models are a new subject to all of the project management staffs. During the project implementation, we must focus on reality, and, according to the new characters, new requirements of the external funds project, we must boldly renovate, constantly reform, explore and perfect the water and soil conservation external funds project operation mechanism, so as to ensure the project to go smoothly and fulfill the project predetermined target.

3.1 Reimbursement system is an effective method of ensuring project funds utilizing properly

The reimbursement system means "construction at first, then get repayment", this is a kind of fund management extensively practiced throughout the world. During the project implementation, we

integrated the World Bank reimbursement system with domestic project management method, and formed a new type of reimbursement system, therefore ensured that all the project funds are used for the project construction, and prevented the project funds from withholding, speculating and diversion.

For the project engineering funds, counterpart funds will be appropriated according to the project appraisal, after acceptance checking at the end of year, calculate the accomplishment of the appropriated funds based on acceptance-checked results; for the un-accomplished fund, it will be used as next year's counterpart fund, and at the same time, deduct the next year's counterpart investment. For the World Bank loan, project construction unities will invest by themselves for the construction, then the reimbursement will be done according to their process and construction costs at fixed times.

For vegetation works, because of climatic and artificial influence, the works require many times of replanting and a long period of protection work. In order to ensure survival and preserving rates of afforestation and fruit trees, after the works are accomplished and checked, the fund should be reimbursed at once from the World Bank, but should be allocated to construction unities at different periods. For example, when the afforestation works are acceptance-checked, only 60% to 80% of investment will be allocated, then in the following third year when its preserving rate reaches over 85%, the remaining fund will be allocated.

3.2 Specialized teams' control is an effective organizational pattern for carrying out ecological environment in large scale

During the project implementation, all project areas in the province have organized market-oriented new type of water and soil conservation specialized teams. Practice indicates that the specialized teams' control is an effective organizational pattern to carry out water and soil conservation works in large scale, high standard and high speed, and is a reliable guarantee for the project to go smoothly. At present, in the whole project area has set up 60 specialized teams with more than 4,000 persons.

The new specialized teams differ from traditional specialized teams in essence. Traditional specialized teams are virtually an extension of "average ism", but the new specialized teams are, under the condition of new market, are operational entities connected with benefits. In term of macro management, the relation is that the county project offices are owners, but the specialized teams are contractors; specialized teams adopt independent budget and operation by themselves, and contract works, quality, management and protection, and provide accomplishment; county project offices disburse project funds through strict acceptance checking and supervision.

4 Suggestion for introducing external funds for water and soil conservation

4.1 Renovating thought, boldly introducing external funds

Water and soil conservation project differs from industrial projects or service production which have the characters of less investment and shorter period of return in comparison, but the project has its own advantage such as less risk, long period of benefits, low operational cost and enjoying preferential policies given by the government on tax, land utilization and so on. The project conforms to national policy on introducing external funds and is given much support from governments at various levels and also conforms to granting loan principles of international monetary organizations such as the World Bank and the Asia Development Bank. These advantages are incomparable for other kinds of projects.

4.2 Seriously do well preparatory work

Project preparatory work is critical to the success of introducing external funds. Whether international monetary organizations or foreign businessmen decide to invest will depend on the first link-project preparation work. Generally speaking, utilizing external fund projects should get approved by governments at various levels. And the feasibility study report on the project must be systematically prepared. Economic analysis, financial analysis and benefit analysis must be practicable; various technical designs should be rational and in conformity with national issued standards. The preparation

work of the World Bank project is quite complicated, all its working depth, preciseness, and scrutiny for approval surpass that of the domestic projects.

4.3 Actively broadening channels for introducing external funds

There are various ways of introducing external funds, different projects should adopt specific ways accordingly. For the regional water and soil conservation project crossing watersheds and regions with large areas and scales, should select the organizations such as the World Bank or Asia Development Bank which can provide vast amount of loans with less interest but long duration. For the sub-watershed soil erosion comprehensive control projects, should attract investment from foreign individuals and the granted funds from foreign countries. Moreover, we can even take advantages of overseas compatriots and people living in Hong Kong and Taiwan, so as to introduce external funds from various channels.