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Construction of Rural Grass-roots Water Conservancy Service System in the Context of Institutional Changes

Ning WANG*

Kunming University, Kunming 650214, China

Abstract At present, it is urgent to solve problems of reforming and improving grass-roots water conservancy management mode in rural areas and improving rural water conservancy public service ability. Through analyzing institutional changes of grass-roots water conservancy management in rural areas, this paper discussed current situations and outstanding problems in grass-roots water conservancy services in rural areas of Kunming City. On the basis of current situations and problems, it came up with policy recommendations from reform of management institutions, reform of personnel system, construction of human resources, development of rural water use cooperation organizations, and improvement of fund input mechanism, to build rural grass-roots water conservancy service system.

Key words Institutional changes, Rural areas, Grass-roots water conservancy service system, Policy recommendations

1 Introduction

In recent years, with advance in reform of township government organizations, there are great changes in rural grass-roots water conservancy service organization structure and management mode. Most township water conservancy stations have been incorporated into township agricultural integrated service departments. As a result, grass-roots water conservancy management service system is too simple and weak. Current situations of water conservancy grass-roots management service institutions and current urban and rural economic social development show great contrast, which is not suitable for function improvement of water conservancy infrastructure. Management and service functions are difficult to put in place, leading to serious problems of management, resource, and project shortage of water. These seriously restrict management and service of water conservancy and water resources and also restrict agricultural and rural economic development. At present, it is urgent to solve problems of reforming and improving grass-roots water conservancy management mode in rural areas and improving rural water conservancy public service ability. Taking Kunming City in western area as an example, we analyzed existing problems in management mode, and came up with policy recommendations, in the hope of improving rural grass-roots water conservancy service ability and increasing management efficiency, and ensuring benign operation and full play of efficiency of grass-roots water conservancy service system.

2 Institutional changes in rural grass-roots water conservancy management

Before the 1980s, rural water conservancy in China was always managed by rural collectives with guidance of agricultural scientific

and technological personnel of county-level government in farmland water conservancy construction and irrigation management. Funds for farmland water conservancy construction were allocated by superior authorities, and daily funds were paid by collectives. Both financial expenditure of government and operation cost for rural water conservancy of grass-roots organizations were relatively low. After implementation of rural reform and household contract responsibility system, enthusiasm of farmers for agricultural production was greatly improved. However, with households contracting land, original village collective management mode for rural water conservancy projects becomes not adapted to individual household operation mode. Collective action ability is weakened. As a result, there comes problem of "collective organization" in name and vacancy of owners, and construction and maintenance of rural water conservancy projects are out of management^[1]. To solve these problems, Ministry of Labor and Personnel and Ministry of Water Resources jointly issued *Standard for Personnel System of Grass-roots Water Conservancy and Water and Soil Conservation Management Service Institutions* in 1986, which clearly stated that township water conservancy management station is management department assigned by county bureau of water conservancy, forming the grass-roots water conservancy service and management system with rural township water conservancy station as major form.

Since the 21st century, China has launched a new round reform of rural administrative management system, and many local areas made reform and merger of "seven stations and eight offices" of township agricultural services and established new integrated agricultural service institutions which are directly administered by township government. At that time, about 60% township water conservancy stations were merged or decentralized to towns for management. With agricultural tax was cancelled in 2006, China's rural reform entered the comprehensive reform stage with reform of township organizations, rural compulsory education and county and township financial management system as major content^[2]. Re-

form of taxation expenses in rural areas, especially implementation of township integrated auxiliary reforms, makes management functions and responsibilities of grass-roots water conservancy management organizations change accordingly, and construction and management of rural grass-roots water conservancy service system face new challenges.

Especially since October 2013, the Third Plenary Session of the 18th Central Committee of the Communist Party of China strengthened objective of ecological protection and restoration and set forth the deployment of "establishing integrated ecological progress system", to further accelerate establish and improve grass-roots water conservancy service system. Besides, with rapid advance of rural industrialization and urbanization, object and goal of rural water conservancy service have great changes. Farmers have less and less dependence on agricultural income, and the difficulty in collecting agricultural water charges is higher and higher. This poses higher objectives and requirements for rural grass-roots water conservancy management services.

3 Current situations and existing problems in rural grass-roots water conservancy services in Kunming City

Through years of efforts, Kunming City has achieved considerable successful experience in reform of water conservancy management system and water conservancy management stations undergo management by townships and street offices and merger of seven stations and eight offices. However, the reform at early stage considers active factor of market excessively and neglects many problems that can not be solved by market regulation mechanism in objective condition (especially mountainous areas), leading to management and service functions of rural grass-roots water conservancy projects failure to be brought into play, serious weakening of grass-roots water conservancy management and services, repetitive construction and use and little attention to management and maintenance becoming normal situation, outstanding problem in "the last kilometer" of end project, and widespread conflict of "no coverage of government management, weak management of the collective, and no management power of the masses". Firstly, there are serious problems of damage, collapse, destruction and aging in water conservancy projects. Only 46% small reservoirs and dams in Kunming City have full water storage capacity, while many water conservancy projects are aged or extend service. Secondly, water ecology lacks effective management and maintenance, leading to deterioration of water ecology and serious water waste. Thirdly, water conservancy projects and water use scale are large, and existing water conservancy management and service team fail to keep up with. Only 19.7% water conservancy projects have management and maintenance personnel basically satisfy demands of management and maintenance. Fourthly, agricultural water consumption in Kunming City accounts for more than 63% of total water consumption in the whole city, while water use coefficient of agricultural irrigation is only 0.51. Planned management of water re-

source use, transmission and distribution of water, water conservation management, and water price control are all lacking fundamental conditions. Fifthly, it is difficult to promote modernization construction of rural water conservancy, which is extremely unfavorable for comprehensive development of water conservancy undertaking of Kunming City. These problems are mainly resulted from defects of current rural grass-roots water conservancy service system.

3.1 Diversified nature of organizations is not favorable for standardized management

In Kunming City, there are 4 different natures of water conservancy management stations, including 2% public participation management institutions, 78% full allocation institutions, 5% differential allocation institutions, 1.5% independent institutions, and 37% townships include water conservancy personnel into agriculture (integrated) service center management. Water conservancy management stations are mainly engaged in public welfare management and service of water conservancy, so it is required to give prominence to public welfare and specialization characteristics and set up special public welfare organizations. At present, arrangement of county-level water conservancy management institutions in Kunming City is not appropriate. The same work brings different benefits, authorized nature and establishment of organizations are difficult to ensure normal implementation of works, and it is difficult to comprehensively perform water conservancy management and service functions.

3.2 Management system is mainly undertaken by townships, which is not favorable for river basin management

At present, counties (cities and districts) of Kunming City implement "block oriented" management system, there is no grass-roots water conservancy management service organizations with river basin as unit or trans-township blocks as units, and 85% water conservancy projects are directly managed by townships. As for ecological protection and restoration of river basins, strict management of water resources, and scientific allocation of water supply, there is no scientific planning and distribution with river basin as geographical factor. In addition to few personnel in township (town and street office) water conservancy management stations, wide area of management, many non-water conservancy affairs, and sharp reduction in time for water conservancy work, they fail to focus on specialized function of water conservancy projects, which will influence performance of water conservancy functions and lead to difficulty in effective implementation of water conservancy management and service. For example, there are urgent and prominent problems of propaganda of water conservancy policies and regulations, patrols of water ecology, water resources, and water conservancy projects, coordination of water use order, mediation of water affair dispute, and statistics of terminal water conservancy projects. These are most outstanding problems in rural grass-roots water conservancy management and services.

3.3 Water conservancy projects have high volume of asset management and existing organizations can not bear such heavy load

Total amount of fixed assets of grass-roots water con-

servancy projects in Kunming City exceeds 4.59 billion yuan. At present, about 1749 people are working at water conservancy undertaking and per capita amount of fixed assets management is about 2.61 million yuan. Due to insufficient funds and weak personnel support system, rural small water conservancy facilities are managed by village collectives for many years, works, technologies and management are very weak, and entrusted management remains in a vacant position. To improve rural water resource management and service ability, they have established non-governmental water use association. However, there are no specialized personnel of water conservancy technology and management. Besides, there are no basic conditions for rural water conservancy facility management and maintenance and no entity qualification and status for assuming relevant responsibilities. They basically have no work funds and no ability of undertaking rural grass-roots water conservancy cause. In Kunming City, there are about 550 water use associations, but only 25.7% can bring into play their functions.

3.4 Workers of water conservancy projects have low level of specialization Among workers of water conservancy projects, 23.3% hold intermediate and above professional title, 24.3% hold junior professional title, and the rest workers have no professional title. In age structure, 34.1% workers are older than 45 years old, 41.2% workers are 35-44 years old, and 22% are younger than 34 years old. Grass-roots water conservancy works are heavy, conditions are poor, and wages are low. Working intensity is not proportional to salary and treatment. Besides, employment and incentive and allocation mechanism is not well established. Thus, it is difficult to attract and hold talents, leading to imbalance of talent structure, old problem of personnel, and scarcity of technical personnel, which seriously restricts play of functions of rural grass-roots water conservancy management.

3.5 Operation funds of water conservancy organizations are greatly insufficient Water conservancy management stations in townships (towns and street offices) basically perform complete public welfare functions, and operation funds should include personnel wage, business funds, and facility operation and maintenance funds. The finance implements two lines of revenue and expenditure. However, most counties require firstly collection of water charges, then allocating personnel and operation funds. Some areas take management method of "allocating the full amount received". Due to difficulty in collection of agricultural irrigation expenses, operation funds of water conservancy management stations are in short. Some areas have high mountains and steep slopes, but little gentle land, water conservancy facilities are situated in mountain valleys. Insufficient funds lead to traffic, communication and office infrastructure of grass-roots water conservancy falling behind and not suitable for demands of water conservancy management and services.

4 Recommendations

Construction of rural grass-roots water conservancy service system

in Kunming City should give prominence to decisive role of water ecological protection and restoration in water conservancy reform and development and construction of grass-roots water conservancy service system. Besides, it is recommended to strengthen public welfare function of water conservancy projects, and stick to the principle of "adapting to economic and social development and optimizing public welfare institution resources" combining with direction and objective of "promoting reform of institutions by classification". In addition, it is recommended to make innovation on system for water conservancy development of Kunming City, speed up reform and construction of rural grass-roots water conservancy service system, and make scientific and reasonable allocation of water conservancy public welfare institutions, to promote healthy and rapid development of social public welfare undertaking of Kunming City. Finally, it is recommended to build rural grass-roots water conservancy service system with township water affair station as leading part, village level water conservancy management team as foundation, and farmer water use cooperation organizations as assistance, and grass-roots specialized water conservancy service team as support.

4.1 Deepening the reform of water conservancy management stations and organizations Township water conservancy management stations are terminal of rural grass-roots water conservancy services and play irreplaceable role in the process of building new socialist countryside. Therefore, it is recommended to improve township level water conservancy management stations and straighten the management system. Besides, it is recommended to make clear public welfare function of township level water conservancy management stations, take them as category I institutions, and make beneficial exploration in management mode of water conservancy projects. From objective laws of water ecology and water resource management, it is scientific to take river basin as unit to manage water conservancy projects. In view of high standard requirement of building world-known tourist city, this is most scientific and effective mode. River basin water conservancy management stations should allocate organizations and personnel according to land area, water resource condition, and demand planning of water conservancy projects. As direct jurisdiction authority of county-level water affairs, they should guarantee effectively increasing water ecological protection, water resource efficiency and water works utilization in Kunming City. According to experience of other areas, to increase working efficiency, incorporating water conservancy management stations into township level institutional reform and integrating several water conservancy management stations to few water affair management stations with small river basins or public offices as units is a prevailing reform mode^[3].

4.2 Strengthening reform of personnel system and human resource construction It is recommended to reform existing personnel system, take administrative village (community) as unit, and establish a stable village level water conservancy management team in the whole Kunming City. Besides, it is recommended to establish water conservancy management worker recruit-

ment and examination system and select villagers and cadres with high sense of responsibility, rich experience of water conservancy and high reputation among villagers to serve as water conservancy management workers. In addition, it is recommended to improve treatment and establish post promotion mechanism for grass-roots water conservancy projects, establish and improve scientific and reasonable personnel management system, improve target evaluation and examination system, and provide refresher training opportunity, and make effort to improve management and service level and ability of grass-roots water conservancy projects. Further, it is recommended to actively implement election of chief water conservancy management worker, cultivate a good many experienced, professional and outstanding grass-roots water conservancy management workers, and encourage water conservancy management workers to be conscientious and meticulous in work, to promote improvement in overall quality of water conservancy management worker team.

4.3 Actively developing rural water use cooperative organizations and specialized service organizations It is recommended to encourage and guide farmers to voluntarily set up cooperative organizations, responsible for construction, management and maintenance of farmland, water conservancy, and portable water projects, to solve the problem of vacancy in entity of collective water conservancy management. Townships (offices) should provide financial support for water use cooperative organizations. Civil affairs department and water conservancy department at all levels should strengthen management and guidance of registration of water use cooperative organizations, and support benign operation and reasonable charging. In addition, it is recommended to strengthen study and practice of professional service organizations and water affair law enforcing teams such as specialized water conservancy management organizations, specialized flood prevention and rescue teams, drought-resistant service teams, and water conservancy scientific and technological extension service organizations, and actively explore specialized service team construction

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keep in close touch with superior authorities, and make excellent coordination and communication with frontier scientific research personnel. In addition, they should have certain theoretical and business knowledge, higher communication and coordination ability, as well as strong service awareness.

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and management mode.

4.4 Straightening out fund input mechanism Rural grass-roots water conservancy service belongs to public welfare function and nature, so the personnel wage, office funds and social security funds should be incorporated into financial budget of county government. Specifically, county-level financial department should establish and improve fund guarantee mechanism and strictly appraise grass-roots water conservancy management personnel and office fund standard, and do well in fund allocation and management. Besides, county and township government should energetically support construction of township level water conservancy management stations, actively assume construction and management funds for grass-roots water conservancy service institutions, and improve work and service conditions of grass-roots water conservancy management service organizations. For poor-stricken counties, it is required to provide preferential policies and provide suitable financial support. County-level financial department should strictly appraise subsidy and office funds standard of grass-roots water conservancy management station personnel and village-level water conservancy management station personnel, to ensure benign operation of grass-roots water conservancy service system.

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