

Study on the Present Situation and Countermeasures of Operation and Management of Rural Drinking Water Safety Project

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Abstract: Water is the source of life and has always been a vital natural resource. People's physical and mental health and quality of life are directly related to drinking water safety. At the same time, drinking water safety is also related to the development of rural economy and has an important impact on the construction of new countryside. In the construction of new countryside, it is necessary to improve the safety of drinking water by strengthening the operation and management of rural drinking water safety projects, and take corresponding effective solutions to ensure the absolute safety of rural drinking water in combination with existing problems. This paper launches relevant discussions on this.

Keywords: rural drinking water; safety engineering; operational guidance

Since the 18th National Congress of the Communist Party of China, the CPC Central Committee with Comrade Xi Jinping at its core has placed tackling poverty in a prominent position in governing the country, made tackling poverty as the key task of the first century-long struggle goal, and incorporated it into the "five in one" overall layout and "four comprehensive" strategic layout, and made a series of major arrangements and arrangements for it. By launching the tackling poverty in an all-round way, the problem of absolute poverty that has plagued the Chinese nation for thousands of years will be solved historically, and the results of tackling poverty will attract worldwide attention. The quality level of "two worries" has been significantly improved, and the outstanding problems of "three guarantees" have been completely eliminated. The income level of the poor has been greatly improved, and their ability to lift themselves out of

poverty has been steadily enhanced. The production and living conditions in poverty-stricken areas have improved significantly. During the period of poverty alleviation, large-scale drinking water safety projects have been carried out in rural areas all over the country, which has greatly improved the rural drinking water safety index, and the party and government departments have also strengthened the management and supervision of poverty alleviation project assets. However, the frequent rural drinking water safety problems in reality also show that there are still defects in the operation and management of drinking water safety projects in rural areas at this stage. How to take effective measures to solve the problems in rural drinking water safety operation and management is very critical.

1 Rural Drinking Water Safety Problems in the Operation and Management of the

Project and the Main Reasons for the Problems

1.1 Lack of Understanding of Rural Drinking Water Safety Project Management, Publicity is not in Place

The rural drinking water safety project is not a verbal work, but a real achievement. Nowadays, although many rural areas have started to carry out drinking water safety management projects on a large scale, it actually has little effect, wasting a lot of energy and manpower and material resources. The main reason for this phenomenon is that in the process of carrying out drinking water safety management, too much emphasis is placed on construction, while management is neglected. After the infrastructure construction of drinking water safety projects is completed, enough power is not invested to manage the facilities, or improper management leads to the facilities. And in the formulation of management system, there are many problems. It is a common problem that management system is superficial. In the actual management process, many management rules and regulations have not been well implemented, and illegal operations often occur, which has caused serious problems in drinking water safety management, which fully shows the lack of understanding of drinking water safety engineering management in some rural areas. In addition, the lack of necessary publicity on drinking water safety is also a big problem. The management of rural drinking water safety projects requires the participation of the whole people. However, in fact, many rural areas have not effectively publicized the management of drinking water safety projects, which leads to the inability of the masses to participate in the management process. For example, in the process of setting water prices, few people participate, and even most people do not understand the process

of setting water prices at all. The fairness and openness of the government's policies on public product management are not well reflected, and most of the water price disputes are caused by the people's incomplete participation, and these contradictions and disputes will also affect the development of post-drinking water safety project management.

1.2 Drinking Water Safety Project Management System is not Perfect, the Division of Responsibilities is not Clear

Drinking water safety project is a huge project. The effective operation of the project needs the support of a large number of posts, and at the same time, it also needs a set of perfect management system. However, in the actual management process, it is often found that the management system is not perfect and the division of responsibilities is not clear. Some rural areas have a coping attitude towards the management of drinking water safety projects, only to achieve the task indicators of their superiors, and they have not really paid attention to the management of drinking water safety. Therefore, in the process of formulating management systems, they have not been fully considered and verified, resulting in an imperfect management system, which is difficult to form constraints on practical work. Over time, people will reduce their obedience and awe of rules and regulations, and often make some behaviors that violate rules and regulations in the actual work process, which has brought great benefits to the management of drinking water safety projects. Secondly, the management of rural drinking water safety project has been divided into many different jobs, and each job is responsible for the corresponding management content and management system. Under the joint operation of many jobs, the actual effect of drinking water safety project can be

ensured. However, in actual management, there is no effective division of responsibilities, which leads to conflicts in the management content of many jobs, and there is no good cooperative relationship between different jobs, but mutual resistance and stumbling, which seriously reduces work efficiency.

1.3 Rural Water Supply Engineering Technical Force is Weak, Lack of Professional Technical Management Personnel

The rural drinking water safety project not only needs management talents, but also needs a large number of technical talents. The rural water supply project has a huge engineering system, and the operation and maintenance of these systems are inseparable from the support of technicians, and the requirements for the level of technicians are relatively high. Therefore, in order to make the rural water supply project system run effectively, a large number of technical talents must be invested. However, compared with urban areas, the economic construction foundation in rural areas in China is relatively weak, the economic and material conditions are poor, and the wages and benefits are generally lower than those in urban areas. Therefore, it is difficult for rural drinking water safety projects to absorb professionals with professional knowledge and technology, which is the fundamental reason for the lack of technical talents. Moreover, the operation of drinking water safety projects itself requires a lot of funds, so the funds are very limited, which further limits the ability to absorb technicians and cannot equip more professionals. In order to ensure the operation of the engineering system in the absence of talents, some rural areas often choose managers from village cadres or village organizations, but these people do not have professional management ability and knowledge, and they can only basically

complete some low-tech chores in the whole work process, such as taking care of equipment and simple operation, which are the basic work in rural drinking water safety projects. For some difficult technical work such as maintenance and troubleshooting, it can't be handled in time, which will increase the damage of mechanical and electrical equipment and pipelines to a certain extent, increase the investment in later maintenance, and shorten the service life of this part of mechanical and electrical equipment and reduce the work efficiency.

2 Effective Measures to Strengthen the Operation and Management of Rural Drinking Water Safety Projects

2.1 Increase Publicity and Education, Improve the Awareness of Drinking Water Safety Management

The rural drinking water safety project needs the participation and support of the masses, and in order to achieve such an effect, it is necessary to attract the masses by increasing publicity and education and raise their awareness of participation. Rural cadre units can establish and organize farmers' water use associations, so that the people can gain the right to know, participate and supervise in water use, so as to increase the people's sense of responsibility in water use. At the same time, they should also unite government units and functional departments at all levels to open publicity meetings in rural areas, add publicity columns, distribute leaflets, enrich publicity channels and give full play to their propaganda role. Carry out the propaganda activities of rural drinking water safety project construction and long-term management in a multi-level and multi-form manner, such as popularizing the knowledge of drinking water health and safety, improving the average cognitive level of drinking water safety,

correcting some people's wrong water use methods and improving the quality of water use. Through this method, it can provide a mass basis for the operation and management of rural drinking water safety projects and pave the way for the follow-up management.

2.2 Standardize the Management System, Clear Job Responsibilities

A complete management system is the key to ensure the effective operation and management of rural drinking water safety projects, so as to achieve management according to regulations. Rural water supply units should formulate measures for the implementation of water supply management, standardize the management of water use in villages and towns according to the actual situation, and require water supply units to handle everything in accordance with the system when participating in management. From a practical point of view, there are a lot of problems in the management of rural drinking water safety projects, which are ultimately caused by the imperfect project management mechanism. Many leaders ignore the importance of the management system to the whole project operation, do not put the standardized management system at the front of the work, do not invest enough managers in formulating the management system, and lack substantive management content, mostly at the theoretical level, which cannot truly reflect the value of the management system. In the process of building a new countryside, government units constantly improve their loyalty to rural water safety projects. In order to meet the requirements of new rural construction for drinking water safety, it is necessary to further build a perfect project management mechanism. For management units, it is necessary to achieve ideal management effect through hierarchical management, achieve clear and transparent management, simplify

management processes and improve management efficiency; For water supply units, it is necessary to continuously improve the technologies related to drinking water safety, such as water purification and other important technologies, and continue to pay attention to and update them. In the course of work, we must resolutely implement the relevant instructions and requirements of government departments on rural drinking water safety, make every effort to improve the service level, provide people with a better service experience, and meet people's water demand; For government units, it is necessary to put rural drinking water safety in the first place, pay attention to the shortcomings in rural drinking water safety at this stage, strengthen the control and management of project construction, and withdraw from a series of policies to promote rural drinking water safety projects in a timely manner in light of the actual situation, and attract people in the process, appeal to the public to provide mass support, and lay a solid foundation for the development of rural drinking water safety project management.

In addition, it is necessary to further clarify the job responsibilities of relevant departments and posts in rural water safety project management. In order to strengthen the management effect and clarify the division of responsibilities, a rural drinking water safety management supervision institution can be established to be fully responsible for the investigation and management of the division of responsibilities of water supply units. On the basis of clarifying the responsibilities of water conservancy, finance, price and other departments related to rural drinking water safety projects, Bring the water supply projects in rural areas, towns and counties into the scope of project management, expand the scope of supervision, require the rural drinking water safety

management institutions to be responsible for the drinking water safety in the whole countryside, increase the functional posts of rural drinking water management when dividing the management areas, and uniformly manage the drinking water safety projects within the jurisdiction by full-time personnel, with full-time responsibility and clear post management responsibilities.

2.3 Strengthen the Job Training of Managers and Improve their Professional Quality

As mentioned above, the whole system of rural drinking water safety project is huge, with various management contents, high technology content in project operation and maintenance, and very strict requirements on the technical ability of staff. Therefore, in order to ensure the effective operation and management of rural drinking water safety projects, it is necessary to build a management team with strong technical ability and cultivate technical talents. First of all, in the initial stage of the operation of rural drinking water safety project, we can regularly carry out training activities related to professional technology. The main purpose of the activities is to improve the professional technical level of the staff and understand the professional technology that the post needs to master, such as the operation of the central control system, the start and maintenance of the pump, the operation and maintenance of the automatic control system of the high-level pool, and the operation of the water treatment detection system. Targeted technical training will be provided to the staff of different departments and posts, so that they can gradually improve their professional technical level at the initial stage of the project operation, cultivate their mentality and ability to continuously learn new technologies, and accumulate technical

experience, so that they can be competent for their posts, meet the job requirements, and participate in the management of drinking water safety projects smoothly and actively, which can also lay a solid mass foundation for the long-term and stable operation of rural drinking water safety projects in the future.

2.4 Adjust Measures to Local Conditions, Strengthen the Construction and Transformation of Water Supply Projects

The water supply project construction planning of rural drinking water safety projects in different regions is not feasible, but it should be developed in the direction of urban and rural water supply integration in general to ensure sufficient water and reliable water quality. In the planning process of water supply project, it is necessary to divide the water supply zones scientifically, reasonably and effectively by taking counties and towns as units, and to determine the overall layout of each divided water supply area and the overall scale of water supply, so as to provide preconditions for the effective implementation of subsequent rural drinking water safety projects. At the same time, in the construction of local water supply projects, it is necessary to follow the principle of adapting measures to local conditions and carry out water supply projects in combination with local actual conditions, and it is not possible to mechanically copy the engineering schemes of other regions. In addition, it is necessary to carry out projects related to improving water quality simultaneously, including purification process engineering of water plants and standardization engineering of supporting disinfection equipment, so as to comprehensively solve the problem that the safety and quality of drinking water in rural areas are not up to standard. For example, in plain areas (Dezhou),

we can take advantage of abundant groundwater, adopt deep well water intake technology, build large-scale centralized water supply stations, and cover surrounding rural areas through pipe networks to realize large-scale water supply. At the same time, strengthen the protection of water sources to prevent groundwater pollution. In hilly areas (such as Tai 'an), considering the terrain fluctuation, multi-stage water lifting or sub-district water supply is adopted to reduce the difficulty and cost of pipe network laying. At the same time, pay attention to rainwater collection and utilization, and build small reservoirs as supplementary water sources. In mountainous areas (such as Mengyin, Linyi), in view of the characteristics of high water and scattered water resources, the project of "diverting water up the mountain" is implemented, and the water under the mountain is introduced into mountainous villages by building long-distance water pipelines or aqueducts. At the same time, strengthen the standardization construction of purification process and disinfection equipment in water plants to ensure water quality safety.

Table 1 Construction of Water Supply Projects in

Different Regions		
Regional type	Example area	Main strategy
flat area	Texas	Scale water supply
rolling country	Tai ' an	District water supply
mountainous area	Linyi Mengyin	draw water

2.5 Establish and Improve the Rural Water Source Protection Security Mechanism

The quality and safety of water sources are directly related to the safety of rural drinking

water, so the protection of rural water sources also needs to be included in the management of rural drinking water safety. In accordance with the overall principle of graded implementation and classified management, a series of water source safety protection work will be carried out to maintain the water source safety guarantee mechanism. First of all, we should improve the supervision mechanism of water source protection, strictly control the project contents that may affect the quality of water source, such as mining and river sand mining, and require the project construction to be carried out without affecting the quality of water source. We should stop the violation of fixed projects in time to avoid polluting the water source because of the project construction. Secondly, it is necessary to do a good job in the supervision and management of sewage outlets in towns and villages, strictly manage the purification indicators of emissions, ensure that emissions meet emission standards, strictly prohibit the discharge of substandard emissions, and solve the problem of emission pollution from the root. In addition, it is necessary to do a good job in water quality monitoring. The departments related to rural drinking water safety should formulate water quality monitoring standards, disclose information related to water source protection, encourage people to participate together, and regularly disclose information related to rural drinking water safety to the public, so as to achieve universal participation and supervision. In addition, with the rapid development of modern information technology, information technology can be introduced into rural drinking water safety management, and an information system can be established by relying on information technology to realize online real-time monitoring of water source quality, operation data and operation situation of water plants and pipe networks, so

as to achieve the effect of comprehensive supervision, and at the same time, it can also reduce the input of human resources and improve management efficiency to a certain extent.

2.6 Government Departments to Increase Financial Support for Engineering Construction

The operation and management of rural drinking water safety project needs a lot of capital investment. As a basic project of people's livelihood, its purpose is to solve the problem of rural drinking water safety. Therefore, government departments need to formulate an effective financial support system to provide sufficient financial support for the construction of rural drinking water projects, and to use the funds as much as possible. On this basis, government departments also need to further increase the input of public finance funds, and at the same time, do a comprehensive supervision and control of the use of funds, check the actual use and flow direction of each fund, avoid the occurrence of corruption and misappropriation of funds, maintain the safety of the use of funds, and eliminate the risks of drinking water safety problems caused by inadequate funds. Rural

drinking water safety project not only needs the participation and support of government departments, but also needs the common participation of people. Compared with government units, people's power is often more powerful. Government departments can appeal to beneficiary farmers to undertake some rural drinking water safety project management responsibilities as much as possible, and contribute to drinking water safety. At the same time, it can also form a leading effect and attract more people to participate.

3 Conclusion

Further strengthening the research on the operation and management of rural drinking water safety projects is the key to effectively promote the progress of rural water safety management in China. Relevant management units and government departments should pay enough attention to this, pay close attention to some existing management problems, formulate reasonable solutions in combination with the actual situation, strengthen supervision and management of rural drinking water safety in all aspects, and comprehensively improve the safety of rural drinking water.

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