



UNDP Project Document

**United Nations Development Programme, China Office
Department of Science, Technology and Education, MOA**

Drinking Water Safety and Water Resource and Environment Protection in Rural China

Project Title: Drinking Water Safety and Water Resource and Environment Protection in Rural China

Award ID: 00107506 **Project ID:** 00107794

Executing Partner: Ministry of Agriculture

Start Date: January, 2018 **Closing Date:** January, 2020

Date of Inception Workshop: October, 2017



Briefing

The project aims to improve the awareness of healthy drinking and water resources protection among rural community residents, to optimize the drinking quality and conditions of rural communities and promote safe drinking in rural areas, thus to explore a sustainable development mechanism of safe drinking in rural areas through 1) demonstration; 2) awareness enhancement, advocacy and promotion; 3) establishment of a sustainable development mechanism that can effectively support the Action Plan for Water Pollution Prevention and Control issued by the State Council, the National Sustainable Agricultural Development Plan (2015-2030) and the UN 2030 Agenda for Sustainable Development.

Results of participating the United actions Development Assistance Framework 2016 - 2020/CPD、RPD (GPD) : More people enjoy a cleaner, healthier environment as a result of improved environmental protection and sustainable green growth.
Indicative outputs: China's actions on climate change mitigation, biodiversity and chemicals across sectors are scaled up, funded and implemented.

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|-------------------------|--------------|
| Total resources needed: | US\$430,000 |
| Donor: | US\$430,000 |
| Fund: | US\$ 430,000 |

Agreed by (signature) ⁰¹:

| UNDP | Implementing partner(s) |
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| Print title: | Print title: |
| Date: | Date: |

I Challenges for Development

The safety of drinking water concerns the fundamental of people's livelihood. The problem of safe drinking has existed for a long time in the rural area of China, where the residents live scattered all around, water supply facilities are dispersed as the result of limited natural conditions and lagging social, economic development. High-quality drinking water is a necessity of people's daily life, and the quality of drinking water has a direct relationship with people's health, this will cause various harmful effects to human bodies if the quality of drinking water fails to meet the standard. Food is the first necessity of the people, however, water is a crucial part of it. Thus the access to safe drinking water is the most basic need of human livings as well as an essential way to improve the living quality of people in China.

In June 2016, on the National Conference on Sanitation and Health, President Xi Jinping emphasized that people's health should be put as the priority of strategic development, therefore, we should concentrate on the popularization of healthy living, optimization of health services, improvement of health care, construction of a healthy environment, and development of health industry. We will speed up the establishment of a healthy China to ensure a well-rounded protection of people's health. Besides the National Conference on Sanitation and Health, the CPC Politburo held a meeting for review and approval of the Outline of the Plan for 2030 Healthy China. In the meeting, President Xi Jinping pointed out that a good ecological environment is the foundation of human survival and health. According to the concepts of green development, we should enforce the highly structured ecological environment protection systems; establish sound monitoring, investigation and risk-evaluation systems on environment and health. We should also focus on the prevention and control of air, soil and water pollution, accelerate land afforestation around the country and efficiently solve the prominent environmental problems that are affecting people's health. At the same time, actively taking part in global health governance, while fulfilling China's commitment to the United Nations 2030 Agenda for Sustainable Development is a crucial measure. The strategy-focused areas of United Nations Development Programme (UNDP) are closely consistent with the 17 Sustainable Development Goals of the United Nations 2030 Agenda for Sustainable Development, with emphasis on the task of ensuring access to clean water and sanitation for all. By 2030, we will achieve universal and equitable access to safe and affordable drinking water in all of China. This can be achieved by improving water quality with the reduction of pollutant, increasing efficiency of water usage, ensuring a sustainable supplication

of fresh water, and protecting and restoring water-related ecosystems. Other necessary measures are; boosting support for water use efficiency, wastewater treatment, and water recycling and reuse technologies as well as enhancing the participation of local communities in improving water and sanitation management.

China has issued a series of relevant policies to ensure rural drinking water safety and quality improvement. The Article 17 of Opinions of The State Council on Implementing the New Concept of Development and Accelerating the Modernization of Agriculture to Realize Comprehensive Well-off, also known as the central government's "No.1 Central Document" for 2016, proposes to strengthen the protection of rural drinking water sources, implement safe rural drinking water consolidation project to promote the extension of urban water supply facilities to the surrounding rural areas, promote rural living environment management and construction of beautiful livable countryside.

In recent years, China has built a large number of rural drinking water projects, which ensures the safety of drinking water for rural residents. However, the problem of rural water pollution and the damage to its source have become increasingly prominent, which have become the major factors affecting the safety of rural drinking water. Therefore, with the increasing demand for drinking water, three major drinking water industries have emerged including barreled water, water purifier, and dual water supply businesses. These three industries conduct further processes of tap water and act as a supplement to tap water industry. Nevertheless, farmers in China's rural areas, especially in remote mountain areas, still maintain weak consciousness of healthy drinking water. Additionally, even though we have set up a significant amount of safe drinking water projects in recent years, inadequate supervision of reliable drinking water stations has remained an unsolved problem. In consequence, the main issues that currently exist in China's safe drinking water project are as below:

1. Water quality does not meet standards in some rural areas of China, such as high fluoride water, brackish water, and drinking water pollution.

The safe drinking water directly concerns the health and life safety of the people. China's rural areas are still faced with the problems of unqualified drinking water to different extents, which are seriously threatening public health, especially in remote and impoverished rural areas. A large number of people encounter drinking water scarcity or unsafe drinking water issues due to the lack of low-cost water purification equipment.

(1) Water-related endemic diseases. The endemic water-related diseases are mainly about high-fluoride water and brackish water. The high-fluoride water is distributed primarily in the north, northwest, northeast areas and Huang-Huai-Hai plain. Drinking high-fluoride water may lead to fluorosis. Endemic fluorosis is an epidemic disease that can be widely found in China, excluding Shanghai, Hainan, and Taiwan. There are more than 6 million people residing in high-fluoride water areas, with more than 1.7 million patients suffering from dental fluorosis. At present, more than 70 million people in China are drinking high-fluoride water. The long-term effect of drinking high-fluoride water is seriously harmful to human health, as it brings a heavy burden on people's lives since general drug treatment has no significant impact on disease treatment.

(2) Water source pollution and secondary pollution of tap water. In China, there is severe pollution in drinking water sources; especially with lesser qualified water resources that meet the drinking water standards. As existing techniques and technologies of tap water production equipment are unable to remove all these pollutants, a massive amount of contaminants remain in the water which is mainly derived from the complex and old piping systems. It is also difficult for most water plants to completely solve the secondary pollution of the water pipelines in the short term. China's brackish water is mainly distributed in the northern and eastern coastal areas and more than 38 million people are drinking brackish water in rural areas. Brackish water has a bitter taste thus it is difficult to drink directly and will cause gastrointestinal disorders as well as weaken the immune system in the long term.

2. Lack of sustainable development mechanism for safe drinking water

In recent years, the health problem caused by drinking water in rural areas has become a vital livelihood problem, which has a high impact on the physical and mental health of local citizens. How to solve those issues and improve the drinking water safety in rural areas has become an urgent task faced by all levels of government and relevant departments. The following challenges remain in China's rural drinking water construction, management and water resources protection mechanism:

(1) The government's responsibility in the construction and management of safe drinking water and environmental protection of water resources is not clear. First, influenced by the concept "environment protection relies on the government", the rural safe water conservancy construction projects and water resources and environmental protection are overburdened by the government. The investment relies heavily on the limited fund from the government and the results of construction and conservation are unsatisfactory. Secondly, under the current financial, taxation and assessment system, the local

government lacks the inherent motivation and power for the protection and improvement of water environment and seriously neglects the actual needs for safe drinking water management and water resources protection. Thirdly, supervision capacity in rural primary environmental protection sectors are inadequate, and the low level of management and specialization is an obvious problem.

(2) The incomplete mechanisms of rural safe drinking water construction and price management. At present, China's water price, sewage charges standards are too low to reflect the scarcity of water resources and environmental costs, so the pricing mechanism cannot be fully useful in guiding water conservation and the protection of water environment. The current economic policies on water price, taxation, finance and foreign trade cannot completely reflect the requirements of environmental protection or give strong regulating and incentive effect to water pollution preventions and ecological protections.

(3) The lack of regulation and maintenance mechanism of rural drinking water facilities. For the average operation, the pipe network should be set up a certain number of control valves, vent valves, fire hydrants and other ancillary facilities. Pipelines can easily get damaged as they've been laid underground or in the open air, suffering from the erosion by rain or other swages. Once the pipe network loses pressure, underground sewages nearby will be inhaled to pipe network and thus causes pollution.

3. Rural residences' weak awareness of healthy drinking water and lack of relevant knowledge

The awareness of safe drinking water is poor in China's rural areas, as the public lacks the scientific knowledge and consciousness of environmental protection. Since farmers in China are not aware of the potential hazard of disqualified water on health, they pay little attention to the safety of drinking water. They still hold the view that drinking water is only a basic need for life and do not connect the quality of drinking water with the health conditions. In the case of economic backwardness in rural areas, the weak awareness of safe drinking water has led to the lack of basic knowledge of drinking water quality. Besides, factors such as backwardness of safe drinking water awareness and working in agriculture has led to the poor hygiene conditions of public and domestic hygiene. Farmers generally do not know the relation between healthy drinking water and sanitation and discharge garbage and fluid sewages at will. This case also generates the phenomena that the clean rate of household courtyards and kitchen hygiene is extremely low and the locations and sanitary conditions of toilets are not good either. These

deep-rooted thoughts and outdated lifestyles have brought serious potential troubles to rural drinking water. Therefore, there is an urgent need to carry out education on drinking water and health for rural residents, to upgrade rural residences' self-care and health level and improve rural drinking water quality.

With the deepening of marketization and urbanization, the rural labor forces began to shift to the non-agricultural sector in large scale and thus has formed a large number of semi-floating families. As the men leave for work, women are left to shoulder the responsibility of industrial and agricultural production, domestic work, child rearing, caring for the elderly and carry the responsibilities of other major tasks, additionally their significant role in the family. As the scale of women left behind in rural areas continues to expand, the situation "men go out with women left behind" of modern Chinese rural family has become a social phenomenon that cannot be ignored. Large-scale rural women groups have not only challenged the sustainability of the current rural family collaboration model but also put forward new requirements for rural health care, pension, social security, primary education, infrastructure construction and policies of women's rights. The time allocation pattern has also changed. Women not only bear most of the housework but also spend more time in family business and wage labor and the total labor time is even not less than men. The change in the way of labor supply has brought economic income, which is conducive to the advancement of women's family status; on the other hand, the burden on women has increased, and thus has a negative impact on their welfare. Because women not only have the responsibility of caring the elderly and raising the children but also participate in agricultural and sideline production, wage labor, family communication and other marketing and social activities, there is a huge contradiction between the limited energy and heavy production and housework of the women who are left behind.

The implementation of the project will improve the construction of safe drinking water and promote industrial upgrading in rural China. This project will adhere to the coordination of government and market while focusing on reform and innovation. The project will additionally adhere to comprehensive promotion of the rule of law and implement the most stringent environmental protection system, and adhere to the implementation of responsibilities of each stakeholder and conduct strict assessment and accountability. This implementation will promote the involvement of public community for water-saving and water cleaning while increasing the vocational skills of women left behind in regards to operation and management of drinking water safety-related industries, and increasing their income by increasing their non-agricultural employability. As a result of applying these implementations, women

do not have to rely on extending working hours to obtain more wage, and ultimately develop a new mechanism of water pollution prevention and control with "government guidance, enterprise implementation, market-driven, public participation," to achieve tripartite win of environmental, economic and social benefits, and build a beautiful China with "blue sky, green mountain and clean water".

II Strategy

1、 Project concept

Through an effective and sustainable integrated approach, this project will be in line with the “safe drinking water project”, “beautiful countryside construction” and “international projects related to the conservation of ecology, resource and environment” implemented by the Chinese government. Meanwhile, the project is aiming to promote public awareness of healthy drinking water in rural areas, to build up a virtuous circle mechanism that guarantees the safe drinking water projects are under the management of people responsible and related organization with sufficient funds, as well as to promote and popularize the concepts of sustainable conservation & utilization of water resources. The guiding principles are as below:

(1) To ensure the sustainability of the drinking water safety and health

According to water resources and water quality of different areas, different water purification equipment will be set up to fully meet the requirements of both quantity and quality of rural drinking water with a combined consideration of current and long-term benefits. In areas with suitable conditions, some safe drinking water projects with high standards will be built up to ensure the safety of domestic water and health of people, and make sure of the sustainable use of water resources following the concept of scientific development. In diverse rural areas, we need to design altered approaches to water quality improvement and testing for various water quality conditions, while also use actual and sustainable methods to conduct prevention and monitoring and control the main factors that are influencing farmers' drinking water quality.

(2) To ensure the sustainability of project implementation and benefit sharing

The scale and standards of the drinking water construction projects should be determined according to the needs of overall construction of new socialist countryside and the affordability of farmers. The funds should be sufficient, the auxiliary facilities should be completed, and the quality standards should be met. When choosing the project plan, we should fully listen to the public's opinions and optimize the project implementation plan and construction methods of the supporting projects democratically. Benefit sharing of the outcomes of rural safe drinking water project is one of the highlights of this project. Farmers are not only the major participants in this project, but also the protectors of drinking water resources, and thus the beneficiaries of the project outcomes. They could share the interests and benefits from the outcomes of the project through the participation and operation of drinking water related industries.

(3) To ensure the project's safety management and positive operation

As rural drinking water projects in China are numerous, small in scale and widely distributed as well as the management awareness of the public is weak; the post-construction management is difficult. In order to ensure the long-term operation of the construction project, it is necessary to clarify the management method of the project, determine the management authorities and its personnel, establish a consumer-involved self-management mechanism according to the type and scale of the project. To guarantee the safety of rural drinking water and to provide qualified water service, we need to establish managing, operating and socialized service systems of the project which meet the requirements of local economic development, match the general characteristics of rural drinking water programs. The service systems should have defined property right with management in place and integrated responsibilities and rights. The systems should also be in favor of arousing the enthusiasms of all parts and the sustainable use of the project.

2、 Project objectives

This project will overcome barriers that hinder rural drinking water safety to improve water quality, reduce pollution, significantly promote the efficiency of water use and ensure the sustainability of safe drinking water supply through pilot demonstration, the rise in awareness of healthy drinking water, advocacy and promotion, and the establishment of sustainable development mechanism. The project aims firstly to enhance the consciousness of healthy drinking water of residents in rural communities and water resources conservation. Secondly, optimize the rural drinking water quality and conditions in

the project area, effectively promote the work of safe drinking water in rural areas and explore the sustainable development mechanism of safe drinking water in rural areas as to improve the living quality of farmers.

3、 Project components

By concept and objectives of the project and concentrating on the obstacles that hinder the drinking water safety in rural areas, the project will emphasize on overcoming the problems related to the weak health awareness of rural drinking water safety. The project will benefit the Chinese government in the development and promotion of safe drinking water industries in rural areas. The project will focus on the establishment of sustainable development mechanism, pilot demonstration, advocacy and promotion, and the enhancement of awareness to carry out the work.

Component 1: Pilot demonstration

Component 1 will pilot practical models on safe drinking water in rural areas. Different water quality improvement and testing scheme for different water qualities in various regions will be designed. Efficient and sustainable methods will be adopted to prevent and monitor the water quality change, and the predominant factors affecting the drinking water quality of rural residents will be controlled. The pilot demonstrations, mainly aiming to solve the problem 1, will design appropriate water quality improvement and examination programs according to various quality conditions of water in different rural areas as well as use effective and sustainable methods to prevent, monitor and control the main factors influencing farmers' drinking water quality. Component 1 focuses on the successful experience from benefit alternative compensation mechanisms form “Conservation and Sustainable Utilization of Wild Relatives of Crops” project jointly implemented by MOA and UNDP. Component 1 will collect information influencing the conditions of rural drinking water, and raise the attention of local stakeholders on factors that hinder the safety of rural drinking water through strengthening the participation of agricultural communities and other key stakeholder groups. Through investigation, the project will use the substitution and compensation methods to improve the participation of the farmers in local communities in the safe drinking water project. In the process of the selection of demonstration mode, component 1 use development monitoring, control and management methods to reduce the negative impact on rural drinking water quality and conditions. With the participation of agricultural

communities and enterprises, we demonstrate the technical mode selected by cooperating with institutions, non-governmental organizations, and agricultural support agencies.

Component 2: Establishment of a sustainable development mechanism

Component 2 will tackle the fundamental need for a decision-supporting and comprehensive and systematic policy environment to build sustainable incentive and benefit-sharing mechanisms based on market and non-market. Component 2 will support the formation of an exchange platform for policies, strategies, regulations, and apparatuses among relevant departments, to identify gaps and contradictions in the building of sustainable development mechanisms for rural safe drinking water projects, mainly overcoming the problem 2. Component 2 will refer to the successful experience of UNDP-MOA “Conservation and Sustainable Utilization of Wild Relatives of Crops” project on the market and non-market sustainable incentive mechanism and benefit sharing mechanism, to investigate the establishment of sustainable drinking water industry in rural areas based on market and non-market based incentives. It will build a sustainable rural drinking water incentive mechanism and a benefit-sharing mechanism to encourage farmers to engage in safe drinking water business, water resources, and environmental conservation and utilization. And resolutely implement the concept of ecological poverty alleviation, and insist on the concept of scientific development and green development, take target poverty alleviation and reduction as a basic strategy. The basic aim of water resources protection and utilization, and ecological poverty alleviation is to "eliminate poverty, protect the environment, alleviate poverty through industry development, improve people's livelihood, harmonize people and land", with focus on use of water resources and ecological and environmental protection in special poverty-stricken areas, then build an ecological poverty alleviation system of environment - farmer-industrial with regional characteristics, and establish an ecological industry system of natural-economic-social that suit for China's reality. Component 2 will emphasize gender equality and recognize the important role that women play in rural production activities, focusing on the leading role of project outcomes in rural poverty alleviation and new rural construction. It increases the skills and awareness of women left behind in the operation and management of safe drinking water-related industries, so the remaining women do not have to rely on extending working hours to obtain more income, thus alleviating the contradiction faced by the women left between the heavy housework and labor production. The project will support market analysis, market development and build up related

marketing strategies and industry chains to ensure that the economic, social and environmental achievement of the project can benefit all stakeholders.

Component 3: Publicity and awareness enhancement

Component 3 focuses on capacity building of stakeholders such as government departments, administration organizations, research institutions, local communities, and farmers. The television, radio, TV programs, networks, science posters, brochures, public welfare activities and a series of public information are going to be used to enhance the community awareness of rural safe drinking water among all stakeholders, intending to solve the problem 3. Different training and education methods will be used to promote stakeholders, especially government departments, research groups, farmers and relevant enterprises to be committed to the awareness-raising of the rural safe drinking water, to create a good atmosphere of safe drinking water in rural areas. Also it will learn successful experience of farmers' participation in training and practices from the Climate-Smart Staple Crop Production Project, Phasing-out Methyl Bromide in Agriculture Sector, Market Transformation of Energy Efficient Bricks and Rural Buildings. Also, the participatory training or educational services will be provided for the establishment of a new concept of rural drinking water. Component 3 encourages farmers to establish management mechanism to plan, manage and assess the rural safe drinking water project and to play its social value through self-maintenance. Component 3 also encourages organizing exchange visits, sharing information among government departments, scientific research groups and farmers to absorb advanced foreign knowledge and shares the project results and experience. The outputs of component 3 will provide basis for activities of component 1 and 2.

Project Cooperation Strategy

To overcome the obstacles of public awareness and the ability of information dissemination, the project will design and implement activities to enhance public awareness, in particular for the project stakeholders defined in the project design. It proposes UNDP to participate in the project promotion and to strengthen the advocacy effect using its information platform and network media. Activities with the participation of UNDP in regards to public relation and information dissemination will be designed. The project will exploit its advantages in information spreading and networks related to rural drinking water safety and act as a supplement to the enhancement activities of public awareness on healthy drinking water organized by the Chinese government and international organizations. Based on the lessons

learned from those related projects, this project will strengthen information exchanging and knowledge sharing activities.

In order to effectively overcome the funding barriers, the co-financing of the project was studied in project design and will be combined with the project design to improve the co-financing. The project has identified the main stakeholders in the project design, and the impact of its project and its future role in the implementation of the project were also analyzed. The survey discovered and summarized the current situation and crucial desires, including co-funding capacity and feasibility analysis. According to the survey, component 3 will carry out a series of technical support and capacity building activities for technical enterprises and local enterprises. The expected results of the project implementation will include the establishment of an efficient business partnership between local administrative agencies and safe drinking water promotion groups.

The successive completion of this project requires effective cooperation among different agencies at all levels. National and international partners will cooperate and enrich the project contents. The cooperation strategy for the project includes the following three functions: (a) worldwide coordination and implementation functions; (b) internal coordination and implementation functions; and (c) technical and commercial functions.

III Results and Partnerships

Expected Results

Component 1: Pilot demonstration

Output 1: Demonstration project sites

Activity 1.1: The research of the rural safe drinking water demonstration model. The building and management of the rural safe drinking water project are going to be funded by UNDP, implemented by MOA. Meanwhile, the Ministry of Water Resources, the Chinese Medical Association, the Chinese Center for Disease Control and Prevention, and other relevant departments are responsible for providing technical guidance, supervision, management, and dissemination to the project. The local government will cooperate with the stakeholders to implement the project. The input from the public will be mainly labor-based, and the investment of social capitals are encouraged and guided. The research and selection of the mode should make an overall plan and be implemented step by step. Also, they should focus on the scale development and actual benefits, combine the prevention and control to ensure the water quality with emphasis on supervision, promote the concept of high-quality water use and water conservation to be deeply rooted among the people. It should insist the ideas of sustainable development including government leading, farmer participation, expert guidance and supervision from the public. This project plans to develop the models as follows:

- 1) The coordinated mode of poverty alleviation and safe drinking water in traditional agricultural areas. The model will promote the production of smart crops in traditional agricultural areas, especially in poor areas. It will improve mechanical and utilization efficiency of the inputs such as chemical fertilizers, pesticides, and irrigation water, while reducing the threats to rural drinking water and ecological water environment caused by agricultural productions. In the model, it will also cooperate with the local government to leverage local poverty alleviation funds to improve and maintain local rural drinking water facilities; via the information exchange platform of healthy drinking water. Additionally, it will promote the publicity and sales of high-quality agricultural products with native characteristics, thereby enhancing the local drinking water quality and residents' health situations. In the meanwhile, it will solve the problems of improving the local farmers' livelihood.

Ye County of Henan Province is a large agricultural county, but also one of the provincial poverty-stricken counties. Due to the geographical reasons, issues of rural safe drinking water in Ye County are mainly hard water, bitter water, and salt water. In addition, due to geological structure of groundwater, the iron and manganese content in groundwater exceeded the standard, besides, and due to the long-term improper use of chemical fertilizers in agricultural production and random discharge of domestic sewage, nitrate content in groundwater also seriously exceeded the standard. These are common in many places of Ye County. In recent years, Ye County has built some rural drinking water safety projects that firmly concentrates on the service for rural areas, which benefit farmers and strengthen agriculture. However, the problem is that drinking water for farmers in the area with certain water quality still cannot be adequately resolved, which severely has affected the health of rural residents and implementation of targeted poverty alleviation.

The project is intended to carry out the following activities in Henan Province: 1) to organize a symposium on poverty alleviation through safe drinking water industry, to explore the direction of industrial poverty alleviation, and to help the local poverty alleviation in terms of health, ecological and industrial through the replication and promotion of successful experience and mode of safe drinking water related industries; 2) to solve the problem of local groundwater quality, it will carry out training on healthy drinking water and healthy life, inviting experts on rural safety drinking water to pass on the knowledge of healthy drinking water to enhance farmers awareness of drinking water, living sewage treatment and prevention and control of agricultural non-point pollution; 3), visit the project area of CSSCP project in Yexian, learning its advanced concepts, experience, and green, ecological, sustainable production way to guide more farmers reduce the pollution of production and living water environment through the green agricultural production, to create a healthy atmosphere of safe production and safe living, and to improve local drinking water quality and water resources protection.

- 2) The promotion of the suburban health drinking water model in Beijing. The model targets the high-income rural residents in the outskirts of Beijing. In these areas, the public promotion and the marketed incentive mechanism are combined to actively advocate the concept of healthy drinking water. It also works in enhancing local farmers' health. Through cooperation with local government and related enterprises, it is possible to promote and the utilization efficiency upgraded construction of safe drinking water project. This project will solve relevant challenges

including over-exploitation of water resources, water shortage around the big cities, water resource pollution, secondary pollution of tap water, etc.

With the rapid urbanization and industrialization of rural areas in Beijing, the contradiction between supply and demand of water resources has become increasingly prominent. Water resources, especially groundwater resources have been polluted to various extents, and suburban water resources in Beijing are facing the double pressure of shortage and pollution, posing threats to drinking water. Some of the secondary water supply units lack management units and the design of the water tank does not meet health standards. In some areas, preventive facilities of drinking water are insufficient; there is also some public drinking water without health permits, and water management staff work without a health certificate, with the lack of disinfection equipment. The content of carbonate is too high, and drinking water is severely polluted by heavy metals and microbial, leading to local residents' increasing morbidity of nephritis and urinary stones. The above problems make people worry about the drinking water safety in suburbs of Beijing.

The project will carry out the following key activities in the suburbs of Beijing: 1) held seminar with the theme of safe drinking water in Beijing suburbs, giving the double pressure of water shortage and pollution in suburbs of Beijing, to invite relevant experts to have a study on rural safety drinking water supervision and management (2) to organize training on safe drinking water and water source conservation in Beijing suburbs, to promote public awareness of drinking water through experts lecturing, video broadcast, distribution of popular science posters and brochures, then promote public awareness of safe drinking; 3) To organize discussions between local government and business to explore market-based and non-market-based rural safe drinking water incentives and benefit-sharing mechanisms.

- 3) The healthy and safe drinking water model of the ecologically vulnerable areas. The model focuses on the ecological vulnerable areas of Beijing, Tianjin, and Hebei to carry out the conservation of ecological environment of water resource, and the construction and improvement of rural drinking water projects. The water quality and water resources in ecologically fragile areas are facing the serious challenges from the ecological damage, environmental pollution, and human disturbance in natural and socio-economic aspects. It needs to refer to relevant domestic and international experience in prevention and management from a multi-dimensional view to

protect the water ecological environment of the water sources and effectively reduce the non-point source pollution caused by agriculture and animal husbandry as well as industrial wastewater pollution. It is crucial to develop a comprehensive management model of rural drinking water improvement and ecological environment conservation of water sources in the ecologically fragile areas of metropolitan areas. This will solve problems including the safety of drinking water for farmers, environment conservation of water sources, increase in agricultural output, farmers' poverty alleviation and many other vital issues.

Beijing-Tianjin-Hebei Region is one of the most dynamic economic regions of China, Beijing-Tianjin-Hebei integration has risen to national strategy. To protect the water environment, balance ecological and development, is the current important issue of Beijing-Tianjin-Hebei coordinated development, the region is also one of the areas in the country facing water supply and demand contradiction, while lack of water has led to many problems of drinking water sources water quality control and environmental management. The main problems of drinking water safety in Beijing-Tianjin-Hebei area include water quality safety, water quantity safety, water treatment process safety, and imperfect city water supply network and supervision system. Therefore, it is urgent to study the general idea of improving drinking water safety and put forward countermeasures for improving the safety status of drinking water in Beijing - Tianjin - Hebei Region.

- 4) The ecological environment conservation model of water source based on agricultural non-point pollution reduction. The model will focus on the core water source areas in the South-to-North Water Diversion Project of Danjiangkou Reservoir in Hubei province to conduct control and reduction of agricultural non-point pollution. Following the principle of "plant production, animal transformation, microbial reduction", the model will vigorously develop ecological agriculture, pollution-free organic agriculture, standardized agriculture, and perform harmless treatment of agricultural production waste relying on science and technology. With strengthened supervision, the model will gradually control and reduce the use of fertilizer and pesticides, continuously promote the improvement of agricultural, ecological environment, and strive to achieve coordinated development of ecological and agricultural production in the area.

Across Hubei and Henan provinces, Danjiangkou reservoir is the core water source of the middle line of South-to-North Water Diversion Project. In recent years, the total nitrogen of the water

source in the Danjiangkou reservoir area exceeds the standard. As the dam of Danjiangkou becomes higher, the water flow that reaches of the Hanjiang River has slowed down, consequently, the water exchange performance has been deteriorating and the nutrient in the submerged soil has dissolved out while the content of nitrogen and phosphorus in water has increased. In addition, due to farmland runoff pollution, domestic wastewater, scattered livestock and poultry breeding, cage culture and many other reasons, the eutrophication in reservoir area has aggravated, and water quality in some region has deteriorated. Therefore, the rural drinking water difficulty and drinking water insecurity in Danjiangkou reservoir area have become the obstacles for the targeted poverty alleviation and socio-economic development of the city.

The project aims to carry out the following activities in Hubei Province: 1) to organize a symposium with the theme of water resources, environmental protection and sustainable use, to analyze the problems existing in the pollution and treatment of the main water sources in rural areas, and to clarify the objectives to solve the barriers of rural drinking water; 2) to organize training on water source environmental protection, to enhance awareness of local governments, villagers and local enterprises that related to water resources and environmental protection; 3) held workshop between local enterprises and government to discuss the construction of benefit sharing and sustainable mechanism for rural safe drinking water industry. 4) Development of publicity materials on safety water conservation.

Activity 1.2: Construction of the demonstration sites based on the research and selected modules in four areas.

| Project's demonstration areas and models | |
|---|--------------|
| Models | Areas |
| The coordinative model of poverty alleviation and safe drinking water in traditional agricultural areas | Henan |
| The model of healthy drinking water promotion in the outskirts of big cities | Beijing |
| The healthy and safe drinking water model of the ecologically vulnerable areas | Hebei |
| The ecological environment conservation model of water sources based on agricultural non-point source pollution reduction | Hubei |

Activities 1.3: Establish quality monitoring mechanism of drinking water, which includes: first, establish the quality monitoring networks or system of drinking water safety. Second, through technical training,

improve the monitoring technology and risk management ability of water quality.

Component 2: Establishment of a sustainable development mechanism

Output 2: Strengthened policy environment and development of the sustainable sharing mechanisms of incentives and benefits.

Activity 2.1: To provide suggestions for the development of supervision of rural safe drinking water. Through activity 2.1, more scientific management advice will be provided for the development and improvement of relevant social and economic policies of rural drinking water projects to promote the sustainable development and improvement of rural safe drinking water projects in China.

Activity 2.2: To explore the market-based and non-market based incentive mechanism of rural drinking water. Influenced by traditional Chinese culture, farmers are willing to respond to the call from the government. The government should fully play a leading role in the selection of safe drinking water demonstration areas, guide the social enterprises to participate and promote the new safe drinking water model. The participation of social enterprises allows rural safe drinking water industry to follow the marketing operation, and to explore a series of models which enterprises participate in the supervision.

Activity 2.3: To investigate the sustainable social benefit sharing mechanism of rural drinking water industry. The publicity of rural safe drinking water concept and the benefit sharing of safe drinking water project are both the highlights of the project. Farmers are the main participants in the rural safe drinking water project and the conservators of drinking water resources, so they should also be the beneficiaries of the project's achievements, and they can benefit from sharing the results of the project by participating in safe drinking water-related industries. Activity 2.3 will eliminate the risk factors for rural drinking water quality, which only favor the short-term economic benefits and neglect the sustainable development, by establishing a elementary environment for obtaining financial or other benefits from rural safe drinking water and the conservation projects. This activity demonstrates the importance of farmers' active participation in project's implementation and management, as well as the importance of women in conservation and sustainable utilization. It will also provide local employment opportunities for rural women left behind, and reduce life difficulties of women who are forced to work out by the living pressure, alleviate huge contradiction between women's limited energy and heavy production activity and intensive housework. This action will ensure that at least 50% of those involved in safe drinking water project management and industry operation are women, particularly in the management and operation of safe drinking water industry.

Component 3: Advertisement and awareness enhancement

Output 3: Farmers' awareness of safe drinking water in the project area efficiently get strengthened, and the project results are fully disseminated and promoted.

Activity 3.1: The awareness of healthy drinking water and relevant policies publicity will be raised through various media channel like TV, internet, science posters, and brochures. As part of the education and awareness-raising of the project, national, provincial and local organizations will develop and use awareness-raising materials (including printed advertisement materials, documentary making, international media and school education). Through establishing information exchange platforms at all levels, the access to information is provided for key stakeholders. Activity 3.1 will focus on raising consciousness of the importance of rural safe drinking water at all levels. The project will make a variety of awareness-raising materials for agricultural communities, farmers' organizations, institutions and the private sectors, and distribute them to enterprises, associations, communities and schools in the project area so that the concept of safe drinking water in rural areas will be deeply rooted.

Activity 3.2: To organize rural health care public welfare activities, promote safe drinking water and health promotion activities through rural public health care in rural areas.

Activity 3.3: A symposium will be held to discuss the feasibility and detailed implementation plan of the construction of rural safe drinking water project. In addition, Eco-System Rural Safe Drinking Water Theme Forum will be organized, which provides a platform for information sharing between demonstration sites, relevant governmental management agencies and stakeholders. This platform will store R&D information, guidance and tools for the project, and lay the foundation for exchanging experiences on rural safe drinking water as well as for organizing the relevant forum.

Activity 3.4: The establishment of workshops will help direct local governments, villagers and local enterprises to understand and master the advanced technology of construction and upgrading of rural safe drinking water industries. The farmers, cooperatives, agricultural technology departments, and the private sectors in the demonstration sites are trained and supported to build partnerships and enhance their skills to support the establishment of relevant management and marketing departments of rural safe drinking water industry. Agriculture and environmental protection agencies, research organizations, non-governmental organizations and farmers' organizations are trained to use the guidelines, manuals, and methods to establish incentive mechanisms to facilitate the development and upgrading of safe drinking water industry in rural areas.

Activity 3.5: Through international training or overseas study tours, the advanced foreign experiences will be learned, and the international platform is used to share the project results. Through the various forms of international exchanges or the introduction of foreign experts, traditional Chinese concepts ingrained in government officers, scientists, technicians and the public get changed by integrating with external innovative advanced techniques and experience. The new concept indicates that the application of the R&D of the project is not only for simple drinking water safety, but also for combining several influential factors including the rural drinking water quality, farmers' health. With considering shifting the enthusiasm and creativity of the government, enterprises, farmers organizations and farmers to participate in technology research and development.

Project benefits

At the end of the project, the health water stations will cover four counties in China's rural areas with a cumulative radiation area of nearly 600,000 hectares. By 2019, a total of approximately 500,000 people in the project area will be able to obtain safe and affordable drinking water. The problem of the low employment rate of women will also get solved. The projects' achievements and safe drinking water concept will benefit the rural population of about 1 million people, and bring social and economic benefits over 10 million yuan. The project will also provide two recommendations for the relevant policies about the development of safe drinking water industry to improve the livelihood of 1,000 needy families, and solve the problem of employment of 1,000 women.

National benefit

The safeguarding work of rural safe drinking water is the fundamental benefit of the broad masses and also a major guarantee for the development of comprehensive national strength. By driving the demonstration towards the relevant enterprises and local governments, the farmers' participation promotes the healthy drinking water concept and project. The national benefit is the organic unity of project benefit, publicity benefit, policy benefit and mechanism benefit. Through this project's implementation, the farmer's demand for healthy drinking water will be expanded to mobilize more enterprises to participate in rural health drinking water project and evoke more local governments to build platforms for healthy drinking water with the purpose of improving the farmers' living quality. Through the website, newspapers, television, training of farmers and relevant local management staff, the awareness of rural drinking water quality and water conservation will raise, which effectively support the "State Council Water Pollution Control Plan" and "National Agricultural Sustainable

Development Plan (2015-2030).

Global benefits

By implementing the project, China's rural health problems caused by water will be solved. The effective improvement of environmental-benefit and conservation awareness will certainly conserve the rural drinking water resources, and establish green development consciousness in China's rural areas. The implementation will support the Chinese government to fulfill the "Paris Agreement" and solve the problem of rural poverty. Additionally, the project's model, technique, and mechanism will be shared as the experiences of safe and healthy drinking water for the people from "the Belt and Road" countries through UNDP international platform to effectively support the United Nations "2030 Agenda for Sustainable Development".

Technical sustainability

1. Improve the practical capacity of key stakeholders in the implementation of the project through a series of technical support.
2. Project results and experience benefit the major stakeholders.
3. Local farmers get educated in safe drinking water concept and knowledge from extensive training activities, resulting in creating the atmosphere of the safe drinking water in the demonstration and promotion areas.
4. The project will repeatedly be tested and improved during the implementation in the demonstration and promotion sites, which provides an opportunity for local governments, technical institutions and enterprises to improve their management and procedural capabilities.
5. The project focuses on the development of a sustainable promotion mechanism that includes easy-to-access technical manuals, guidelines, and safe drinking water standards and concepts, providing methodological guidance and equipment support for subsequent promotions and execution governed by local administration.

Risks Evaluation

While ensuring the effectiveness of project design and implementation, the successful application of the project also depends on the risk forecast. Key risks that limit the project performance are shown as

follow:

- Effectiveness of Organizing and collaborating with key stakeholders on such a large, complex project;
- Acceptability of safe drinking water in rural areas;
- The technical effectiveness of water purification equipment.

To reduce the first risk, the project will set up an expert group of the national project office and set up a local project steering committee. At the same time, various initiatives will be taken to strengthen stakeholders' collaboration.

Table of the project risk and mitigation strategies

| Risk description | Levels of the risk | Mitigation strategy |
|--|--------------------|--|
| Awareness and funds | | |
| Public acceptability to healthy drinking water is low | Moderate | Awareness raising for targeted groups and information dissemination activities |
| The market is less receptive to the concept of safe drinking water | low | Choose an area with high degree of market acceptance to establish demonstration sites and promotional points; through technical assistance, activities to improve product quality |
| The participation of financial institutions in the implementation of the project is weak | low | With the assistance of the local government to conduct a detailed investigation of the project point and give financial support; especially for local financial institutions, such as rural credit cooperatives |
| Policy and institutional | | |
| Poor collaboration among key decision makers | Moderate | In the project design phase, to ensure the active participation of all key stakeholders; project steering committee, all key partners at the central and local levels |
| Lack of technical capacity for project implementation | low | The establishment of a technical steering committee composed of relevant experts involved in project activities; extensive training for local stakeholders; other capacity-building and technical support activities |
| technical aspect | | |
| Cannot verify the actual rural drinking water quality improvement results | low | To ensure accurate baseline data; to establish a complete monitoring and evaluation plan at the demonstration and promotion points and to implement effectively; to carry out local partner training and capacity building |

overall evaluation

low

The risks mentioned above have been evaluated with corresponding solutions. As the survey reveals, even though the average risk level is low, the potential risk of institution aspect, especially the cooperation between institutions, has already been disclosed.

Stakeholders' participation

Key Partners

Project will undertake the following activities to ensure that the project work is synergized with on-going national and provincial level activities, as well as to benefit from the expertise available in the region:

Strengthen the linkage with fundamental water projects by developing inter-agency partnerships nationally and internationally. These will include MOA, NDRC, Ministry of Water Resources, Chinese Medical Association, China Center for Disease Control and Prevention, the enterprises and other national administrative agencies and their local branches. The detailed list of stakeholders identified during the design phase is listed in Table below. The project will work with local financing institutions to provide support for serving related activities.

This project will collaborate with non-governmental organizations about funding and implementing agencies to expand the coverage and impact of the project.

Project's key stakeholders

| Category | Institution/Organization | Branch/Department |
|--------------------|--|---|
| Central Government | MOA | Dep. of Science, Technology and Education; Rural Energy and Environment Agency |
| | Ministry of Water Resources | China Irrigation and Drainage Development Center |
| | National Health and Family Planning Commission | |
| | China Women 's Federation | |
| | CASS | |
| Provincial | Hebei | Agriculture Department / Agriculture |

| | | |
|-------------------------------------|---|--|
| Government | Henan | Commission |
| | Chongqing | |
| | Beijing | |
| | Anhui | |
| Local Government | County, township and village in the above provinces | Agriculture Bureau, Water Resources Bureau |
| Technical and Academic Institutions | China Irrigation and Drainage Development Center | |
| | Chinese Medical Association | |
| | China Association for Science and Technology | |
| | Rural Energy and Environment Agency | |
| Private Sector | Rural small businesses Local drinking water operators rural residents | |

During the design phase, consultative meetings with various stakeholders (see the list above) and key market players revealed that the private sector is willing to integrate the concept of safe drinking water into rural drinking water renovation project under specific conditions, including: (1) Having the government take the leadership in program planning, construction, financial incentives, and support. (2) Having a demonstration program to show the benefits of the rural drinking water renovation project. The role of the government will, therefore, be pivotal in encouraging the participation of other stakeholders in this project. The Ministry of Agriculture has strongly supported this project from the beginning and will work in close cooperation with other relevant ministries as the executing agency. Furthermore, as the project will need the support of a wide range of stakeholders within the market, it is expected that the project will coordinate closely with the following stakeholders:

1. Chinese Medical Association and National Health and Family Planning Commission will provide advice on drinking water and human health-related knowledge, making science posters of safe drinking water, and organize related training and other activities.
2. China Irrigation and Drainage Development Center, Ministry of Water Resources will recommend the project areas and investigate local water quality.
3. The Central Academy of Social Sciences will strengthen the enabling policy framework to explore the construction of sustainable incentives and benefit-sharing mechanisms based on market and non-market.

4. The private sector will provide the equipment to improve the rural drinking water and to provide drinking fountains to ensure that farmers have access to healthy high-quality drinking water regarding the impact of the water in various areas.

5. Agricultural Broadcasting School and Farmers Daily will participate in media promotion activities and carry out public awareness -raising activities through its network resources throughout China's rural areas.

6. As the project influence expands, other stakeholders will also participate in the project.

Knowledge

Production and publication of policy research, roadmap, technical and economic research, a database for model patterns and promotional materials. The project results will be published in project related areas through existing information sharing networks and forums.

The project will identify and participate in science, policy or any other networks where relevant and appropriate, which may be useful for project implementation, but must draw lessons from the relevant lessons. The project will identify, analyze and share lessons learned, which will facilitate the design and implementation of similar projects in the future.

Innovation, sustainability, and potential for scaling up

Innovation: The project approach itself is innovative. Based on the chief national plans initiated by the Ministry of Water Resources, the project will promote the impact of national projects in addressing the main cross-sectoral barriers identified in China's rural drinking water safety projects. The project implementation will be implemented via synergetic program approach to ensure the linkages and communication between the project and the relevant national and provincial projects by sharing best practices; lessons learned and expertise.

Sustainability: Sustainability is at the core of rural safe drinking water and water conservation projects based on policy environment strengthening, and the establishment of incentives and benefit-sharing mechanisms in the context of new rural construction. The mutual linkages of the three components support sustainable outcomes in some ways. Policy, advocacy, regulation and strategic reform will ensure that the project is likely to be part of a future national or provincial long-term rural development

plan. Strengthening cross-sectoral coordination will increase efficiency and effectiveness, and in turn, support the sustainable dissemination of project results.

Potential for scaling up: The scaling up of the project's approach and results will support transformation in the development field of China's rural drinking water industry. In the project, the results, methods, and lessons obtained from the demonstration site will be scaled up at the provincial level. The project results will also be integrated within the framework of the project to be applied in different geographical regions, institutions and agricultural communities to support China's broad and long-term sustainable development. The integration of the three components is based on a strengthened theoretical and practical framework that promotes awareness enhancement at all relevant stakeholder levels through sustainable cross-sectorial partnerships and government mainstreaming guidance.

IV Project Implementation Arrangements

Given the past experience with the UNDP-supported project, UNDP seeks to implement an innovative management approach based on a partnership where accountability and responsibility for managing and achieving project outputs are equally shared among the partners. The organizational structure is shown in Fig.:

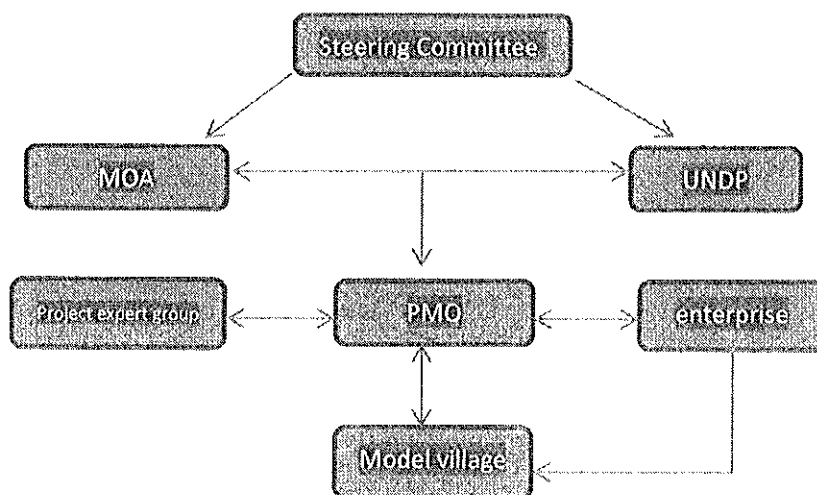


Fig.: Project Organizational Structure

Arrangement for Project Implementation

The management structure of the project will be as follows: The executing agency for the project is the Ministry of Agriculture. Project Management Office will also be set up by the Ministry of Agriculture, which is responsible for the coordination and implementation of the project. The director of PMO serves as the secretary of the steering committee. The project is a national project implemented by the Chinese government. The Chinese government will take full responsibility for ensuring that project activities are carried out by the approved project documents.

UNDP-China is responsible for the regulation of the implementation of the project. Working in conjunction with the various project partners, UNDP-China will be accountable for monitoring and evaluation, including organizing project reviews, approving annual implementation work plans and budget revisions, monitoring the progress, identifying problems, suggesting actions to improve the project performance, and facilitating timely delivery of project inputs. All functions will be carried out

in line with the standard of UNDP. And UNDP China will also provide support from the country office for all the activities of the project as agreed with the implementation partners of China.

As the implementing partner for this project, China's MOA will appoint a National Project Director (NPD) to be in charge of overall responsibilities, including those of planning, coordination, administration and financial management of the project with support from UNDP-China. The NPD will be responsible for the achievement of the project objectives and the reporting of all projects, including the submission of Annual Work Plans (AWP) and financial reports. He/She will ensure the delivery of the project outputs and the judicious use of the project resources. This process will ensure that expected outputs are delivered using the most efficient and cost-effective implementation strategies and procedures. The NPD will also be a member of the PSC. As the project's implementing partner, the MOA will also provide in-kind contribution to implementing the project.

A Project Management Office (PMO) will be established by UNDP-China, together with the MOA. The PMO will be responsible for the day-to-day management of all the project activities including those on capacity building, sub-projects demonstration, and dissemination activities at provincial and national levels. PMO will be managed by a PMO Director, who will be supported by two staff members.

Professionals from the national government and other relevant stakeholders from the private sectors and the society will manage and coordinate the implementation of the activities to some extent.

Project Implementation

The project implementation period is two years. Considering the obtain of funding for UNDP grant needs a certain amount of time, the project is expected to start in the third quarter of 2017, and will end in 2019.

V Results Framework

| Intended Outcomes as stated in the UNDAF/Country [or Global/Regional] Programme Results and Resource Framework: | | | | | | |
|--|-------------------|-------------|----------|------|---|---------------------------------|
| Safety of Drinking Water and Protection of Water Resource Environment in Rural China | | | | | | |
| Outcome indicators as stated in the Country Programme [or Global/Regional] Results and Resources Framework, including baseline and targets: | | | | | | |
| Applicable Output(s) from the UNDP Strategic Plan: | | | | | | |
| Project title and Atlas Project Number: Drinking Water Safety and Protection of Water Resource Environment in Rural China | | | | | | |
| EXPECTED OUTPUTS | OUTPUT INDICATORS | DATA SOURCE | BASELINE | | TARGETS (by frequency of data collection) | DATA COLLECTION METHODS & RISKS |
| | | | Value | Year | | |
| | | | | | Year 1 | Year 2 |

| | | | | | | | |
|---|---|--|---|---|-----|-----|--|
| <p>Output 1: Demonstration project sites</p> <p>Activity 1.1: The research of the rural safe drinking water demonstration model</p> | <ul style="list-style-type: none"> The research report of rural safe drinking water model | <ul style="list-style-type: none"> Project Progress Report Mid-term evaluation report and terminal evaluation report | 3 | 2 | 50% | 50% | Local government support for the project |
| <p>Activity 1.2: Construction of rural safe drinking water demonstration project sites</p> | <ul style="list-style-type: none"> The research report of rural safe drinking water model No less than 3 safe drinking demonstration sites will have been built at the end of this project. | <ul style="list-style-type: none"> | 3 | 2 | 50% | 50% | |

| | | | | | | | | |
|---|--|---|---|---|-----|-----|------|--|
| <p>Activity 1.3: Establish quality monitoring mechanism of drinking water</p> | <ul style="list-style-type: none"> No less than 3 local governmental institutions participate in the project management | | 3 | | 50% | 50% | 100% | |
| <p>Output 2: Investigation of the sustainable development mechanism Activity 2.1 Providing the suggestions for the development of rural safe drinking water regulation.</p> | <ul style="list-style-type: none"> Research report of the supervision and management regulation of rural safe drinking water* 1 | <ul style="list-style-type: none"> Project Progress Report Baseline investigation and technique report Mid-term evaluation report and terminal evaluation report | 1 | 2 | 25% | 75% | 100% | |

| | | | | | | | | |
|---|---|---|---|---|-----|-----|--|--|
| <p>Activity 2.2 To investigate market-based and non-market based rural drinking water incentive mechanism.</p> | <ul style="list-style-type: none"> The mode research report of the incentive mechanism of rural safe drinking water based on market and non-market*1 | <ul style="list-style-type: none"> Project Progress Report Baseline investigation and technique report Mid-term evaluation report and terminal evaluation report | 1 | 2 | 50% | 50% | | |
|---|---|---|---|---|-----|-----|--|--|

| | | | | | | | | |
|---|--|---|---|---|-----|-----|------|--|
| <p>Activity 2.3: To investigate the sustainable social benefit sharing mechanism of rural drinking water industry.</p> | <ul style="list-style-type: none"> The research report of the sustainable social benefit sharing mechanism for rural safe drinking water industry * 1 | <ul style="list-style-type: none"> Project Progress Report Baseline investigation and technique report Mid-term evaluation report and terminal evaluation report | 1 | 2 | 25% | 75% | 100% | |
| <p>Output 3: Farmers' awareness of safe drinking water in the project area is</p> | <ul style="list-style-type: none"> Science poster*1 The brochures of safe drinking water *1 | | 1 | 1 | 50% | 50% | 75% | |

| | | | | | | | | |
|---|---|--|--------------|---|-----|-----|-----|--|
| <p>effectively strengthened and the project results are fully disseminated and promoted</p> <p>Activity 3.1 The awareness of healthy drinking water and relevant policies advertisement will be raising through TV, internet, science posters and brochures.</p> | <ul style="list-style-type: none"> From the project beginning, people whose awareness raised by the media will be involved no less than 30,000 | | 30000 people | 2 | 50% | 50% | 50% | |
| <p>Activity 3.2: To organize rural health care public welfare activities</p> | <ul style="list-style-type: none"> People who benefit from the public health care welfare activities are no less than 500 | | 500 | 2 | 25% | 75% | | |

| | | | | | | | | |
|--|--|--|------|---|---|------|--|--|
| <p>Activity 3.3: A symposium will be held to discuss the feasibility and specific scenario of the rural safe drinking water project construction.</p> | <p>At the end of the project, the seminars will be held for three times at least</p> | | 3 | 2 | | | | |
| <p>Activity 3.4: The establishment of workshops will help direct local governments, villagers and local enterprises to understand and master the advanced technology of rural safe drinking water construction and upgraded industries.</p> | <p>At the end of the project, the workshop will involve no less than 1000 people</p> | | 1000 | 1 | - | 100% | | |

| | | | | | | | | |
|---|---|--|----|---|--|--|--|--|
| <p>Activity 3.5: Through international training or overseas study tours, foreign advanced experiences will be learned and the international platform is used to share the project results.</p> | <p>No less than 50 people participate in the international organization</p> | | 50 | 2 | | | | |
|---|---|--|----|---|--|--|--|--|

VI Monitoring, Evaluation Plan and Budget

Monitoring and reporting

Project monitoring and evaluation will follow the procedures established by the United Nations Development Programme, and will be implemented jointly by the project team and the Ministry of Agriculture together with the UNDP office in China. The monitoring and evaluation program includes the following tools: a start-up report, quarterly and annual assessment report, and a final assessment. The following sections provide an overview of the main components of the monitoring and evaluation program and the estimated costs of the projects under the program. The monitoring and evaluation program will be detailed and summarized in the project start-up report, which will also provide a set of well-developed evaluation indicators and approaches. Beyond this, based on the results framework for the project, monitoring and assessment responsibility of the staff will be identified and clarified.

Inception

During the first month after the signing ceremony, we will hold a kick-off meeting. The attendees will include the relevant government leaders, providers of the supporting fund, the representatives of the United Nations Development Programme China office, and all members of the signing ceremony and project team. The main purpose of the project inception is to consolidate and deepen the aims and objectives of the project among all stakeholders and to define the first annual work plan for the project on the basis of the results framework. On this basis, we will identify the annual work plan and develop accurate and measurable indicators of achievement based on the desired project results.

The specific aims of the project inception are to:

- i. Introduce the project team members to UNDP China, who will support the project implementation process;
- ii. Assign roles; UNDP China will provide supportive service in person and take related supplemental responsibility;

- iii. Demonstrate the monitoring and assessment requirements of the UNDP report, particularly the plan for implementing assessment of the annual report and related materials, as well as midterm and final evaluations; and
- iv. Propose work plans.

The kick-off meeting also provides the opportunity for information such as budgeting, budget auditing and mandatory budget carry-over of the UNDP project to be delivered to project team members. If necessary, the duties of staff and structure of decision-making can be reconsidered to clarify the responsibilities for all parties in the implementation process.

Monitoring responsibilities and related activities

The project management team will develop a detailed schedule for the project evaluation meeting by negotiating with project implementation partners and stakeholder representatives. The schedule will be covered in the start-up report of the project, and will include:

- i. an initial timetable for the meeting of the project steering committee, and
- ii. project-related monitoring and evaluation activities.

The project management department conducts daily monitoring on the progress of the project according to the annual work plan and related indicators of the project. The project management department will report to the UNDP office in China, advising of any delays in the implementation process or difficulties that are being faced, so that timely support can be provided and remedial action can be taken.

The impact of the project will be measured with tracking tools for management effectiveness and other indicators provided in the framework and in Table 5, in accordance with the schedule developed at the project start-up meeting. Representatives from the UNDP office in China will hold quarterly meetings with the partners responsible for the implementation of the project or, if necessary, regular meetings to achieve periodic monitoring of the project's progress. This will keep the parties informed of the changing situation and help to solve problems with the implementation of the project in a timely manner, ensuring the smooth progress of the project activities.

Project Reports

The project management team works with members of the United Nations Development Programme to jointly develop and submit the following reports, which will form part of the monitoring process. The first six reports are mandatory and closely related to project monitoring. The remaining reports are more versatile, and the frequency and nature are different depending on the project, so these reports should be determined as needed throughout the project implementation process.

- 1. Project inception report:** This report will be prepared just after the kick-off meeting, covering a two-year detailed work plan following the module given by UNDP to clearly explain activities and the indicators of progress in detail. During the first year, those activities and indicators will successfully guide the performance of the project. The work plan includes time for project site visiting, assistance from the UNDP China office or regional coordination units and advisory bodies, as well as a meeting schedule for policy makers. The report will also develop a detailed budget plan for the implementation of the project in the first year, which will be made on the basis of the annual working plan. The plan also includes initiatives designed to effectively evaluate project performance and monitoring and evaluation requirements for a period of 12 months. In addition, the kick-off report will also include a detailed work plan on assignment, responsibilities, coordinate actions and feedback mechanisms of the project. In addition, a description on the latest progress of the establishment of the project and starting activities will be included, as well as an introduction to the changes in external conditions that may affect project implementation. The report will be finalized and then distributed to project partners, who shall propose questions and leave comments on the contents of the report within one month after receiving the report. Before the distribution of the report, UNDP China will assess the full report.
- 2. Annual evaluation report:** Project management staff are responsible for drafting this report, and the contents should also be shared with the project steering committee. As a self-assessment tool for the project management group, it does not require lengthy and cumbersome preparation. As a minimum requirement, the annual assessment report includes at least one annual progress report on the Atlas (ATLAS) standard format, which reports on the latest developments for each element of the project and summarizes the current outcomes with reference to the project's previously issued annual objectives. The report can be used at

any time to facilitate communication between the project management group, project steering committees and partners. The annual assessment report is prepared annually, prior to the meeting of the project steering committee, and will summarize the results and evaluate the performance of the project, based on the annual work plan, with the aim of facilitating cooperation among all partners in the project to achieve the desired results. The annual assessment report shall consist of the following components:

- i. project risks and issues;
- ii. progress of the project as compared to previously established indicators and objectives, and
- iii. work performance.

3. Quarterly progress report: The quarterly progress report mainly describes the progress of the project, submitted quarterly by the project team to the United Nations Development Programme China Office.

4. UNDP ATLAS Monitoring Report: The report is a mandatory joint report with the key purpose of summarizing the cost of the project. This monitoring report should be handed in just after the submission of each quarterly report. The project management group should also submit the report to the project steering committee for evaluation. The report should include the following:

- i. a question log for the discovery and follow-up of all problems arising in the project actualization process. The project management group will be responsible for the detection and follow-up of these problems and should assign someone to deal with them to ensure that all project issues are properly addressed;
- ii. a risk log keeping track of risks during the implementation of the project, assisting to detect potential project risks and establish corresponding measures. The project management team will use the ATLAS format to record and update the risk log; and
- iii. a log summarizing experiences and lessons learned. When implementing the project, experiences and lessons learned will be recorded in the log in order to learn lessons

from both successes and failures, and all positive and negative behaviors. The project management group is in charge of the maintenance and update of these logs.

5. **Project final report:** During the last three months of the project implementation phase, the team will draft a final report of the project. This comprehensive report will summarize all of the activities, outcomes and outputs of the project, lessons learned, objectives (fulfilled or not), structure and system implementation. The report is also a clear statement of all activities undertaken during the project. It will also make recommendations on measures to be taken in the future, with the aim of ensuring the sustainability and popularization of project activities.
6. **Regular thematic report:** This report is optional. At the request of UNDP, the project team will draft a regular thematic report at any time, focusing on specific issues or areas of project activities. UNDP will make a request in writing to inform the project team that a thematic report needs to be drafted, and will clearly identify the activities or issues that need to be mentioned in the report. These reports can be used to document lessons learned and any negligence in specific areas, or as a puzzle diagnosis exercise to assess and overcome any obstacles and difficulties faced. UNDP will, as far as is possible, avoid requiring the submission of a thematic report and, when necessary, UNDP will set a reasonable deadline for the project team to prepare the report.
7. **Technical report:** The technical report details the specific field analysis of the entire project or the specialized information of the system. As part of the project start-up report, the project team will prepare a report detailing the activities in the important areas of the project implementation and its scheduled deadlines of the technical report. If necessary, the report can be modified and updated, and its contents are included in the subsequent annual project report. The technical report may also be drafted by an external consultancy that conducts a comprehensive and professional analysis of clearly defined project frameworks or research areas of the project site. These technical reports will represent the substantive contribution of the project to specific areas in a timely manner and may be used to assist in the dissemination of important information and best practices at global, national and local levels.

- 8. Project publication:** Project publication is an important way to promote the project's results and outcomes. These papers can be published in journals, multimedia and other platforms, with written material scientifically analyzing or introducing the activities and outcomes of the project. These publications can take technical reports as a prototype, depending on the correlation of the technical report with the subject of the publications and its scientific value. In addition, these publications can be a series of technical reports and a summary or compilation of documents of other research materials. The team will decide whether some technical reports can be officially published or not, and make a plan for the selected articles with the UNDP, government departments and other stakeholder groups to publish them in a coherent and easily identifiable layout. Emphasis of the report should be placed in the summary and the spread of lessons obtained with large potential for popularization.
- 9. Independent assessment, audit and financial reporting:** An independent final assessment is conducted three months before the end of the final project. The assessment is intended to understand the progress of the project and to identify a correction plan when necessary. It focuses on the effectiveness, efficiency and timely schedule of project implementation with highlights of what issues should be addressed, and summarizes the initial experience in the design, administration and management of the project. The late-evaluation will also focus on the impact and sustainability of the project outcomes, including the development of capacity and the contribution to the achievement of global environmental objectives. The late-evaluation should also make recommendations on the follow-up work of the project. The scope of its assessment and investigation is determined by the UNDP China Office under the guidance of UNDP.

Learning and knowledge sharing

The results of the project will be disseminated nationwide through a large number of existing information-sharing networks and forum activities. The project will be involved in UNDP network and will continue to be involved in more technology, policy support and other types of networks. It will also draw lessons from others' practice to benefit the application of our project. The project will discover, analyze and share lessons learned, which will benefit similar projects in the future in the design and implementation process. At the same time, the summaries and analysis cumulated from

these lessons will generate a continuous learning loop. The project will regularly share such lessons. UNDP will provide a format and assist the project team in the classification, filing and reporting of these lessons in accordance with it.

Audit clauses

In accordance with the regular process of *The Planning and Finance Manual*, the Government will provide the notarized financial statements on a regular basis to the project resident representatives and an annual audit of the financial statements relating to the financial status of UNDP. The implementation of the audit will be governed by the Financial Regulations, Regulatory and Auditing Policies of UNDP, and the auditors should be legally accredited by government auditing departments or commercial auditors signed by government departments.

VII Multi-Year Work Plan

All anticipated programmatic and operational costs to support the project, including development effectiveness and implementation support arrangements, need to be identified, estimated and fully costed in the project budget under the relevant output(s). This includes activities that directly support the project, such as communication, human resources, procurement, finance, audit, policy advisory, quality assurance, reporting, management, etc. All services which are directly related to the project need to be disclosed transparently in the project document.

| EXPECTED OUTPUTS | PLANNED ACTIVITIES | Planned Budget by Year | | RESPONSIBLE PARTY | PLANNED BUDGET | | |
|----------------------------------|---|------------------------|----------|-------------------|----------------|--------------------|--------------|
| | | Y1 (USD) | Y2 (USD) | | Funding Source | Budget Description | Amount (USD) |
| Component 1: Pilot Demonstration | Activity 1.1: The research of rural safe drinking water model | 2,500 | 2,500 | MOA | Third party | Expert* | 5,000 |
| | | 10,000 | 10,000 | MOA | Third party | Sub-contract | 20,000 |
| | Activity 1.2: Demonstration construction, build a sound system for drinking water safety monitoring and supervision | 5,000 | 9,000 | MOA | Third party | travel expense | 14,000 |
| | | 10,000 | 10,000 | MOA | Third party | Sub-contract | 20,000 |
| | | 3,000 | 3,000 | MOA | Third party | Expert* | 6,000 |
| | | | | | | | |

| Activity 1.3: Establish quality monitoring mechanism of drinking water | | 10,000 | 5,000 | MOA | Third party | Sub-con tract | 15,000 | |
|--|---|-----------------------|--------|------|-------------|---------------|--------|--------|
| | | Sub-Total of Output 1 | | | | | | 80,000 |
| Component 2: Establishment of a sustainable development mechanism | Establishment of a sustainable development mechanism | 10,000 | 10,000 | MO A | Third party | Sub-con tract | 20,000 | |
| | | Sub-Total of Output 2 | | | | | | 20,000 |
| Component 3: Advertisement and awareness enhancement | Activity 3.1: Enhance public awareness and the relevant policies of healthy drinking water through TV, internet, science posters, brochures | 15,000 | 15,000 | MO A | Third party | Sub-con tract | 30,000 | |
| | | 2,500 | 2,500 | MO A | Third party | Expert* I | 5,000 | |
| | | 2,500 | 2,500 | MO A | Third party | Expert* I | 5,000 | |
| | | 10,000 | 10,000 | MO A | Third party | Sub-con tract | 20,000 | |
| | Activity 3.3: Conduct a symposium | 10,000 | 10,000 | MO A | Third party | sub-con tract | 20,000 | |
| | Activity 3.4: Workshop | 10,000 | 10,000 | MO A | Third party | sub-con tract | 20,000 | |

| | | | | | | | | |
|--|----------------------------|---------------------------------------|--------|-------------|---------------|-------------|---------------|--------|
| Activity 3.5: Through international training or overseas study tours, learn from foreign advanced experience, and use the international platform to share project results. | 40,000 | | MO A | Third party | Sub-con tract | 40,000 | | |
| | Sub-Total of Output 3 | | | | | | 120,000 | |
| | Evaluation (as relevant) | EVALUATION | 1,000 | 1,000 | MO A | Third party | Sub-con tract | 2,000 |
| | General Management Support | Expert (Project manager) | 30,000 | 30,000 | MO A | Third party | Sub-con tract | 60,000 |
| | | Expert (Project officer) | 30,000 | 30,000 | MO A | Third party | Sub-con tract | 60,000 |
| | | Assessment report, annual audit | 500 | 500 | MO A | Third party | Sub-con tract | 1,000 |
| | | Miscellaneous (office supplies, etc.) | 2,000 | 1,000 | MO A | Third party | Sub-con tract | 3,000 |
| | | Travel | 5,000 | 5,000 | UN DP | Third party | Travel | 10,000 |
| | Total | GMS | 22,000 | 22,000 | UN DP | Third party | GMS | 44,000 |
| | | Project Assistant | 15,000 | 15,000 | UN DP | Third party | Staff salary | 30,000 |
| Sub-Total | | | | | | 210,000 | | |
| Total | | | | | | 430,000 | | |

VIII Legal Context and Risk Management

Select the relevant one from each drop-down below for the relevant standard legal text:

1. Legal Context:

- Country has signed the Standard Basic Assistance Agreement (SBAA)
- Country has not signed the Standard Basic Assistance Agreement (SBAA)
- Regional or Global project

2. Implementing Partner:

- Government Entity (NIM)
- UNDP (DIM)
- CSO/NGO/IGO
- UN Agency (other than UNDP)
- Global and regional projects

IX ANNEX

Quality Assessment Report of the Project

Social and Environmental Selection model

Risk Assessment

The risks and their relief measures from marketing, economic, social, environmental and political aspects involved in the project are listed in the table below

Table

Competency assessment (TORs for key project staff)

National Project Director (24 months)

On behalf of the Ministry of Agriculture, the National Project Director is responsible for the implementation of the project to the UNDP. As the contact person and person in charge of project implementation, the National Project Director needs to ensure that inputs can be in place in time for this project. The National Project Director will also be responsible for project staff appointments, as well as the approval of allocations and expenditures.

The National Project Director will be primarily responsible for the following matters:

1. Overall responsibility for all project activities, coordinating with other government agencies and non-governmental organizations to carry out activities
2. Discussing the implementation of the project with the National Project Management Office at least once a month and assisting in the resolution of emerging issues
3. Assisting the Project Management Office in carrying out the necessary liaison for policy and legislative support from Central Government
4. Approving the annual work plan and quarterly work plans of the project, requesting the UNDP China Office proceed quarterly payments in accordance with the national execution procedures
5. Responsible for the use of funds received and submitting necessary financial reports to the UNDP China Office
6. Attending formal meetings associated with this project on behalf of the Ministry of Agriculture
7. Ensuring clear and transparent project implementation and decision-making processes so that project activities are well planned in advance, and providing the necessary financial resources, personnel and equipment support for implementing project activities at the national, provincial and pilot sites.

Deputy National Project Director (24 months)

The Deputy National Project Director will assist the National Project Director in the performance of all of its duties and functions where necessary. Mr. Wang Quanhui, Director of Division of International Exchange, Rural Energy & Environment Agency, MOA will hold the position.

Project Manager (24 months)

Under the supervision of the National Project Director and the Deputy National Project Director, the Project Manager is responsible for administrative and financial management of the project. The Project Manager and other personnel of the national project office cooperate closely with relevant agencies to ensure the successful implementation of the project. The Project Manager will work with the national project experts for establishing and promoting PMO to promote safe drinking water and promote awareness of water conservation.

The Project Manager will be responsible for the following matters:

1. Ensuring the smooth implementation of the project in accordance with the project document and national execution procedures, establishing good administrative procedures, and coordinating with personnel at provincial and project sites level to ensure that different parts of the project are oriented by a unified goal
2. Regular reporting on project progress to the National Project Director, Deputy Director and project officer from the UNDP China Office, seeking necessary help
3. Preparing TORs for project personnel, consultants and subcontractors, coordinating recruitment and selection of project personnel
4. Reviewing and assessing the project expenditures based on reimbursement applications and work plan
5. Preparing and revising the financial plan, supervising the project accountants to revise the budget

6. Leading the preparation of the annual work plan and quarterly work plan and reports, including project implementation reports (PIR) and annual progress reports (APR)
7. Facilitating work for international and domestic experts and subcontractors
8. Supervision of project personnel, and overseeing the establishment and implementation of the project personnel performance evaluation plan
9. Maintaining good communication with the Ministry of Agriculture and other ministries and departments involved in this project
10. Assisting project staff to carry out effective cooperation with the central and local government bodies, civil society and educational institutions
11. Monitoring and ensuring the timely submission of reports, including inception reports, project implementation reports, annual progress reports, technical reports, quarterly progress reports, financial reports and other reports requested by the UNDP, the Ministry of Agriculture and other regulators
12. Supervision of the project exchanges with other domestic and foreign projects on rural drinking water safety and sharing of relevant lessons learned

Competency

- Bachelor degree in mechanical or environmental protection (ideally with a master's or doctoral degree)
- At least ten years working experience in project management
- Experience in the domestic institutions associated with this project
- Ability to effectively coordinate large-scale projects involving multiple stakeholders
- Ability to manage budgets, training and project personnel at all levels as well as effective cooperation with all organizations involved in project implementation
- Strong skills in drafting documentation, reporting and presentation
- Good at MS Office
- Excellent written communication skills
- Must be proficient in Chinese and English (both oral and written)

External Liaison and Information Officer/Interpreter (24 months)

Under the supervision of the project manager, the External Liaison and Information Officer/Interpreter will be in charge of internal and external publicity of rural drinking water health and water resources protection.

The External Liaison and Information Officer/Interpreter is specifically responsible for the following matters:

1. Developing a publicity plan for the project, under the guidance and support of the Project Manager and Project Director
2. Assisting the knowledge - attitude - behavior (KAP) surveys during mid-term evaluation and at the end of the project
3. Responsible for the promotion and publicity of the project, including, but not limited to, the following activities:
 - a. Drafting quarterly and annual work plans and progress reports
 - b. Managing the design and operations of the project's publicity, ensuring the timeliness of project information and content validity
 - c. Collecting and summarizing the project's successful experiences. Edit the project quarterly newsletter (printed version), including the collection of contributions from project personnel, consultants, partners and other contributors
 - d. Establishing a knowledge-sharing approach between the national, provincial and project levels within the project, and between the Ministry of Agriculture and other relevant agencies (including commercial, governmental and administrative agencies) and related donors and government-funded projects
4. Responsible use of the internet and networking (including government agencies and other national projects) to collect information and documents related to the project,

and to ensure the exchange of information between the project and relevant government agencies

5. Act as a focal point between the project and information agencies (including newspapers, television and radio), ensuring that projects are appropriately disseminated in the media

Competency

- Bachelor degree in media or language
- Proven ability to maintain effective communication with different stakeholders and to arrange stakeholder meetings and/or seminars
- Excellent ability to communicate with different stakeholders (including government, media, private sector, university, etc.)
- Excellent computer skills, especially proficient in all Microsoft Office programs
- Excellent written communication skills in the design of promotional materials (including books, leaflets, brochures, etc.)
- Good Chinese and English translation (oral and written)

Overview of technical assistance

| Post / Services | S/ Person - Week | Expected working hours, person - Week | Responsibilities |
|--|------------------------|---|--|
| Project management | | | |
| Country / Local consultants National Project Director | Full | | <ol style="list-style-type: none"> 1. Overall responsibility for all project activities, coordinating with other government agencies and non-governmental organizations to carry out activities 2. Discussing the implementation of the project with the National Project Management Office at least once a month and assisting in the resolution of emerging issues 3. Assisting the Project Management Office in carrying out the necessary liaison for policy and legislative support from Central Government 4. Approving the annual work plan and quarterly work plans of the project, requesting the UNDP China Office proceed quarterly payments in accordance with the national execution procedures |

5. Responsible for the use of funds received and submitting necessary financial reports to the UNDP China Office
6. Attending formal meetings associated with this project on behalf of the Ministry of Agriculture
7. Ensuring clear and transparent project implementation and decision-making processes so that project activities are well planned in advance, and providing the necessary financial resources, personnel and equipment support for implementing project activities at the national, provincial and pilot sites

Deputy National Project Director

Full

The Deputy Director of the national project will assist the National Project Director in the performance of all its duties and functions where necessary, representing the national project director.

Project Manager

1. Ensuring the smooth implementation of the project in accordance with the project document and national execution procedures, establishing good administrative procedures, and coordinating with personnel at provincial and project sites level to ensure that different parts of the project are oriented by a unified goal
2. Regular reporting on project progress to the National Project Director, Deputy Director and project officer from the UNDP China Office, seeking necessary help

3. Preparing TORs for project personnel, consultants and subcontractors, coordinating recruitment and selection of project personnel
4. Reviewing and assessing the project expenditures based on reimbursement applications and work plan
5. Preparing and revising the financial plan, supervising the project accountants to revise the budget
6. Leading the preparation of the annual work plan and quarterly work plan and reports, including project implementation reports (PIR) and annual progress reports (APR)
7. Facilitating work for international and domestic experts and subcontractors
8. Supervision of project personnel, and overseeing the establishment and implementation of the project personnel performance evaluation plan
9. Maintaining good communication with the Ministry of Agriculture and other ministries and departments involved in this project
10. Assisting project staff to carry out effective cooperation with the central and local government bodies, civil society and educational institutions
11. Monitoring and ensuring the timely submission of reports, including inception

reports, project implementation reports, annual progress reports, technical reports, quarterly progress reports, financial reports and other reports requested by the UNDP, the Ministry of Agriculture and other regulators

**External Liaison and
Information
Officer/Interpreter**

1. Developing a publicity plan for the project, under the guidance and support of the Project Manager and Project Director
2. Assisting the knowledge - attitude - behavior (KAP) surveys during mid-term evaluation and at the end of the project
3. Responsible for the promotion and publicity of the project, including, but not limited to, the following activities:
 - a. Drafting quarterly and annual work plans and progress reports
 - b. Managing the design and operations of the project's publicity, ensuring the timeliness of project information and content validity
 - c. Collecting and summarizing the project's successful experiences. Edit the project quarterly newsletter (printed version), including the collection of contributions from project personnel, consultants, partners and other contributors

- d. Establishing a knowledge-sharing approach between the national, provincial and project levels within the project, and between the Ministry of Agriculture and other relevant agencies (including commercial, governmental and administrative agencies) and related donors and government-funded projects
4. Responsible use of the internet and networking (including government agencies and other national projects) to collect information and documents related to the project, and to ensure the exchange of information between the project and relevant government agencies
5. Act as a focal point between the project and information agencies (including newspapers, television and radio), ensuring that projects are appropriately disseminated in the media

Technical support [1]

Advisory consultant

Experts on water resources protection

Responsible for all technical matters of the project, including compliance with the highest scientific standards. Specifically include:

- Responsible for the finalization and supervision of consultants and subcontractor assignments and support for the selection and recruitment process;
- Coordinate the work of all consultants and subcontractors to ensure timely delivery of expected results and coherence of subcontracts;
- Responsible for the development and revision of management plans and annual work plans;
- Lead the preparation of periodic project progress reports in accordance with the requirements of the national project coordinators
- Lead the preparation of PIR, APR, the project start-up report, the technical report and the financial quarterly report, and submit it to the United Nations Development Programme, other donors and government departments;
- Record the lessons learned from the implementation of the project and provide the Steering Committee with recommendations to improve the effectiveness of project activities and to coordinate the effectiveness of the project; and
- Complete other tasks required by national project coordinators, steering committees and other project partners.

Experts on safety of rural drinking water

Work closely with National Project Directors, Project Managers and Project Assistants to provide part-time technical support at all times for the achievement of Outcome 2 in the project. Specific tasks include:

- Ensure that the Ministry of Agriculture establishes effective and sustainable monitoring mechanisms for protected areas at the national and local levels,

including the establishment of a knowledge management system and to support rural safe drinking water management planning;

- Support the capacity building of project staff and project managers;
- Ensure that the project operates throughout the full use of global experience, best practices and knowledge to improve the planning and monitoring of safe drinking water in rural areas through their own experience;
- Ensure that interdepartmental collaboration and planning mechanisms meet the highest technical standards and incorporate the protection system and its objectives into development planning and sector planning processes;

Consultant

Experts on health of drinking water

Work closely with National Project Directors, Project Managers and Project

Assistants to provide part-time technical support at all times throughout the project to achieve results. Specific tasks include:

- Ensure that the Ministry of Agriculture establishes effective and sustainable monitoring mechanisms, including the establishment of knowledge management systems, at the national and local locations;
- Provide technical support for the water and health of project staff and project managers;
- Ensure the full utilization of global experience, best practices and knowledge and lessons learned from its own experience to design and promote the importance of safe drinking water;
- Ensure that interdepartmental collaboration and planning mechanisms meet the highest technical standards and provide knowledge about the health of drinking water in rural areas

Health experts

Work closely with National Project Directors, Project Managers and Project

Assistants to provide part-time technical support at all times throughout the project to achieve results. Specific tasks include:

- Provide advice to project areas on illnesses caused by chronic drinking of unhealthy water;
- Provide scientific support for the health of drinking water;
- Participate in project publicity and design with medical science, and provide strong scientific guarantee for the popularization of safe drinking water.

Media experts

Work closely with National Project Directors, Project Managers and Project

Assistants to provide part-time technical support at all times throughout the project to achieve Outcome 1 outputs. Specific tasks include:

- Complete the promotion of safe drinking water and protection of water resources in rural areas on the basis of their international experience, based on the full implementation of global experience, best practices and knowledge and lessons;
- Provide practical programmatic recommendations for the promotion of the project and to enhance communication mechanisms with the Steering Committee.
- Provide technical support for information-sharing mechanisms.

SOCIAL AND ENVIRONMENTAL SCREENING

Project Information

| | |
|------------------------------------|---|
| Project Information | |
| 1. Project Title | China Rural Drinking Water Safety and Water Resource and Environment Protection Project |
| 2. Project Number | |
| 3 Location (Global/Region/Country) | China |

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles to Strengthen Social and Environmental Sustainability?

Briefly describe in the space below how the Project mainstreams the human-rights based approach

The project does not have any activities specifically focused on mainstreaming the human rights based approach. It will, however, in general terms ensure it follows the human rights based approach, despite one identified risk, as explained below.

Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment

The project does not have any activities specifically focused on mainstreaming gender equality and women's empowerment. As such, it is not likely to improve these areas in a general way. Yet, efforts will be taken to promote gender equality and women's empowerment where possible and as follows: Throughout all its activities, the project will aim to include as many women as possible, both as recipients of various forms of technical assistance and as consultants retained by the project. In particular, six major project activities, and study tours include in their design efforts to include as many women as possible.

Briefly describe in the space below how the Project mainstreams environmental sustainability

This project's objective is to overcome barriers that hinder rural drinking water safety to improve water quality, reduce pollution, significantly promote the efficiency of water use and ensure the sustainability of safe drinking water supply through pilot demonstration, the rise in awareness of healthy drinking water, advocacy and promotion, and the establishment of sustainable development mechanism.

Part B. Identifying and Managing Social and Environmental Risks

| Risk Description | Impact and Probability (1-5) | Significance (Low, Moderate, High) | Comments | QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)? |
|---|-------------------------------------|---|-----------------|--|
| Risk 1. Public access to healthy drinking water is low | I =3 P =3 | Low | | <i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i> Awareness raising for targeted groups and information dissemination activities |
| Risk 2. The market is less receptive to the concept of safe drinking water | I =2 P =2 | Low | | Choose a high degree of market acceptance to establish demonstration sites and promotional points; through technical assistance activities to improve product quality |
| Risk 3. Cannot verify the actual rural drinking water quality improvement results | I =1 P =1 | Low | | To ensure accurate baseline data; to establish a complete monitoring and evaluation plan at the demonstration and promotion points and to implement effectively; to carry out local partner training and capacity building |

| QUESTION 4: What is the overall Project risk categorization? | | |
|--|-------------------------------------|----------|
| Select one (see <u>SESP</u> for guidance) | | Comments |
| <i>Low Risk</i> | <input checked="" type="checkbox"/> | |
| <i>Moderate Risk</i> | <input type="checkbox"/> | |
| <i>High Risk</i> | <input type="checkbox"/> | |
| QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant? | | |
| Check all that apply | | |
| <i>Principle 1: Human Rights</i> | <input type="checkbox"/> | |
| <i>Principle 2: Gender Equality and Women's Empowerment</i> | <input type="checkbox"/> | |
| <i>1. Biodiversity Conservation and Natural Resource Management</i> | <input type="checkbox"/> | |
| <i>2. Climate Change Mitigation and Adaptation</i> | <input type="checkbox"/> | |
| <i>3. Community Health, Safety and Working Conditions</i> | <input checked="" type="checkbox"/> | |
| <i>4. Cultural Heritage</i> | <input type="checkbox"/> | |
| <i>5. Displacement and Resettlement</i> | <input type="checkbox"/> | |
| <i>6. Indigenous Peoples</i> | <input type="checkbox"/> | |
| <i>7. Pollution Prevention and Resource Efficiency</i> | <input checked="" type="checkbox"/> | |

Final Sign Off

| <i>Signature</i> | <i>Date</i> | <i>Description</i> |
|------------------|-------------|---|
| QA Assessor | | UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted. |
| QA Approver | | UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC. |
| PAC Chair | | UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC. |

SESP Attachment 1. Social and Environmental Risk Screening Checklist

| Checklist Potential Social and Environmental Risks | |
|---|----------------------------|
| Principles 1: Human Rights | Answer (Yes/No) |
| 1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups? | No |
| 2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? ¹ | No |
| 3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups? | No |
| 4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them? | No |
| 5. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project? | No |
| 6. Is there a risk that rights-holders do not have the capacity to claim their rights? | No |
| 7. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process? | No |
| 8. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals? | No |
| Principle 2: Gender Equality and Women's Empowerment | |
| 1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls? | No |
| 2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits? | No |
| 3. Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment? | No |
| 4. Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i> | No |
| Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below | |
| Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management | |
| 1. 1.1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? <i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i> | No |

¹ Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

| | | |
|--|--|----|
| 1.2 | Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities? | No |
| 1.3 | Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5) | No |
| 1.4 | Would Project activities pose risks to endangered species? | No |
| 1.5 | Would the Project pose a risk of introducing invasive alien species? | No |
| 1.6 | Does the Project involve harvesting of natural forests, plantation development, or reforestation? | No |
| 1.7 | Does the Project involve the production and/or harvesting of fish populations or other aquatic species? | No |
| 1.8 | Does the Project involve significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i> | No |
| 1.9 | Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development) | No |
| 1.10 | Would the Project generate potential adverse trans-boundary or global environmental concerns? | No |
| 1.11 | Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area? <i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i> | No |
| Standard 2: Climate Change Mitigation and Adaptation | | |
| 2.1 | Will the proposed Project result in significant ² greenhouse gas emissions or may exacerbate climate change? | No |
| 2.2 | Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change? | No |
| 2.3 | Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i> | No |
| Standard 3: Community Health, Safety and Working Conditions | | |
| 3.1 | Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities? | No |
| 3.2 | Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)? | No |
| 3.3 | Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)? | No |
| 3.4 | Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or | No |

² In regards to CO₂, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

| | |
|---|----|
| infrastructure) | |
| 3.5 Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, and erosion, flooding or extreme climatic conditions? | No |
| 3.6 Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)? | No |
| 3.7 Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning? | No |
| 3.8 Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)? | No |
| 3.9 Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)? | No |
| Standard 4: Cultural Heritage | |
| 4.1 Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts) | No |
| 4.2 Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes? | No |
| Standard 5: Displacement and Resettlement | |
| 5.1 Would the Project potentially involve temporary or permanent and full or partial physical displacement? | No |
| 5.2 Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)? | No |
| 5.3 Is there a risk that the Project would lead to forced evictions? ³ | No |
| 5.4 Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources? | No |
| Standard 6: Indigenous Peoples | |
| 6.1 Are indigenous peoples present in the Project area (including Project area of influence)? | No |
| 6.2 Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples? | No |
| 6.3 Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? <i>If the answer to the screening question 6.3 is “yes” the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.</i> | No |

³ Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

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| 6.4 | Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned? | No |
| 6.5 | Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples? | No |
| 6.6 | Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? | No |
| 6.7 | Would the Project adversely affect the development priorities of indigenous peoples as defined by them? | No |
| 6.8 | Would the Project potentially affect the physical and cultural survival of indigenous peoples? | No |
| 6.9 | Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? | No |
| Standard 7: Pollution Prevention and Resource Efficiency | | |
| 7.1 | Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or trans-boundary impacts? | No |
| 7.2 | Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)? | No |
| 7.3 | Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i> | No |
| 7.4 | Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health? | No |
| 7.5 | Does the Project include activities that require significant consumption of raw materials, energy, and/or water? | No |