

Ex-Ante Evaluation

1. Name of the Project

Country:	Republic of Peru
Project:	Rural Amazonia Water Supply and Sanitation Project
Loan Agreement:	March 30, 2012
Loan Amount:	3,210 million yen
Borrower:	Republic of Peru

2. Background and Necessity of the Project

(1) Current State and Issues of the Rural Water Supply and Sanitation Sector in Peru

Located in a tropical climate with a high rainfall, the Amazonian region in Peru has abundant water resources. Nevertheless, the basic infrastructures of water supply and sanitation facilities have not been settled sufficiently so far, which is partly due to the low recognition of the importance of such infrastructures by local residents.

Particularly in rural villages, the connection rate for water supply and sanitation facilities has been under extremely low level, approximately 10% in 2008. There still remain many communities using untreated surface water and groundwater for drinking, and discharging wastewater and excrement around residential areas without any treatment.

The poor sanitary conditions caused by the abovementioned situation have given rise to various health-related problems to local residents, such as diarrhea, skin infections, malnutrition and parasites, which forms a vicious circle of poverty particularly in rural areas in the Amazonian region.

Under such circumstances, the development of water supply and sanitation facilities are an urgent issue for improving the living conditions and sanitary environment for local residents.

(2) Development Policies for the Rural Water Supply and Sanitation Sector in Peru and the Priority of the Project

While the inexistence of integrated national development plan that extends across different sectors in Peru, “Plan Bicentenario” (the Bicentennial Plan), which states Peru’s national vision to be achieved until 2021, mentions that the expansion of basic services to the public is one of the most important tasks to be improved by 2021. The Bicentennial Plan also refers to the necessity of increasing public investment to expand access for the poor and the destitute to the basic infrastructures such as water supply, sanitation, solid waste management, electricity and communication.

The National Sanitation Plan 2006-2015, the development plan for water supply and sanitation sector in Peru set by the Ministry of Housing, Construction and Sanitation (MVCS), also puts high priority on modernization of management in the water supply and sewerage system, improving the sustainability and quality of water supply and sewerage services, improving the financial circumstances of the public corporation for water supply and sewerage, and expanding water supply and sewerage facilities. The national plan also highlights, in the rural area, to meet the urgent demand for basic water supply and sanitation facilities while promoting the participation of citizens in the decision-making process for services, and systemizing and strengthening water users associations.

The second presidency of Alan Garcia (July 2006 - July 2011) implemented the program called “Agua Para Todos (Water for All)” based on the National Sanitation Plan, positioning the

improvement and expansion of water supply and sewerage services as one of the most important policies of the government.

The government of Ollanta Humala, inaugurated in July 2011, continues putting the highest priority on the improvement and expansion of water supply and sewerage services. In the policy announcement at the end of August 2011, the government has declared targets for the water supply and sanitation sector to be achieved by year 2016: improve the water supply and sewerage connection rates in rural areas to 57% for water supply (38.8% as of 2010) and 45% for sewerage (21.3% as of 2010); and improve the access to sanitation services (spread of latrines) in rural areas to 66% (22% as of 2010). As the present connection rate for water supply and sanitation facilities in rural villages in the Amazonian region is extremely low, at approximately 10%, the development of water supply and sanitation facilities in rural areas of the Amazonian region is an urgent task for achieving the targets set by the government. Consequently, the present government recognizes the Project as this project which takes important role to achieve the abovementioned targets.

Also, the Multi-Annual Macroeconomic Framework (MMM) set by the Ministry of Economy and Finance (MEF) which correlates the development plans for each sector for the period 2012-2014, includes a basic policy of improving access to water supply, sanitation and electricity infrastructure in impoverished areas for the purpose of achieving social inclusion and poverty reduction.

Under such circumstances, it is expected that the development of water supply and sanitation infrastructure in impoverished areas will continue to be addressed as a top-priority issue for the Peruvian government.

(3) Japan and JICA's Policy and Operations in the Water Supply and Sanitation Sector

The government of Japan has put three priority areas for ODA assistance directed at the Republic of Peru: poverty reduction and the correction of disparities; the development of economic and social infrastructure for sustainable development; and action for global-scale problems. Improvement of water supply and sanitation is one of the highest priority development issues in poverty reduction and the correction of disparities, which demonstrates the consistency of the project with Japanese ODA policy to Peru.

JICA has provided ODA Loans for 13 projects for the water supply and sanitation sector, the total amount of which reaches around 125.3 billion yen. JICA has also assisted the strengthening technical and management capacities of the public corporations in charge of water supply and sewerage service through technical cooperation.

(4) Other Donors' Activities

Regarding the assistance for policy formation in the water supply and sanitation sector, the Inter-American Development Bank (IDB) has, through the Second-Generation Sanitation Sector Reform Program (a policy program loan), cooperated with Kreditanstalt für Wiederaufbau (KfW), and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), in supporting capacity building for the MVCS, the ministry in charge of water supply and sanitation sector, as well as institutional improvements in public corporations in charge of water supply and sanitation service.

Regarding the assistance for the water supply and sanitation sector in coastal areas and urban areas, JICA, KfW and the World Bank have co-financed Northern Lima Metropolitan Area Water Supply and Sewerage Optimization Project (I), through which cooperate in optimization and rehabilitation of the degraded water supply and sewerage pipe network in the northern Lima metropolitan area.

Regarding the assistance for the water supply and sanitation sector in mountainous areas, the IDB has implemented projects for the development of water supply and sanitation facilities especially

targeting the southern mountainous regions, through the program called the Programa de Mejoramiento y Ampliación de Servicios de Agua y Saneamiento en Perú (Program for the Improvement and Expansion of Water and Sanitation Services in Peru, PROCOES), commissioned by the Spanish Cooperation Fund for Water and Sanitation in Latin America and the Caribbean. Through technical cooperation, IDB is also providing support for the construction of a model that promotes water supply and sanitation connections in rural areas in the mountainous areas.

The World Bank provides assistance for the development of water supply and sanitation facilities and the improvement of existing system in the mountainous regions through the program called Programa Nacional de Agua y Saneamiento Rural (PRONASAR).

Regarding the assistance for the water supply and sanitation sector in the Amazonian region, the World Bank has provided assistance through PRONASAR, but there is no overlap with the candidate communities covered by this project.

(5) Necessity of the Project

Regarding the development of water supply and sanitation infrastructure for the Amazonian region, although earlier initiatives such as PRONASAR have been implemented, connection rates remain low.

Also, prompt improvement of the living conditions and sanitary environment for residents of the Amazonian region is consistent not only with the development issues of Peru but also with Japan and JICA's assistance policy.

Therefore the necessity of JICA's support for this project is high.

3. Project Description

(1) Project Objective

To improve coverage and quality of water supply and sanitation services by constructing, rehabilitating and expanding water supply and sanitation facilities, thereby contributing to the betterment of the health and life quality of the rural populations in the Amazonian Area.

(2) Project Site/Target Area

Three departments in the Amazonian region (Loreto, Amazonas and San Martin)

(3) Project Components

- 1) Construction and improvement of water supply and sanitation facilities
- 2) Community empowerment
- 3) Consulting services (pre-investment studies, detailed design, construction supervision, strengthening of the executing agency, etc.)

(4) Estimated Project Cost (Loan Amount)

5,311 million yen (loan amount: 3,210 million yen)

(5) Schedule

It is scheduled to be carried out between March 2012 and July 2015 (41 months in total). The project will be completed when each facility starts operation.

(6) Project Implementation Structure

- 1) Borrower: Republic of Peru
- 2) Executing Agency: Programa Nacional de Saneamiento Rural

3) Operation and Maintenance System: Water users association in each community

(7) Environmental and Social Consideration/Poverty Reduction/Social Development

1) Environmental and Social Consideration

① Category: FI

② Reason for Categorization: The project is designed to provide financing to financial intermediaries. Sub-projects cannot be specified prior to JICA's approval for financing, and they may have environmental impacts under the "Japan Bank for International Cooperation Guidelines for the Confirmation of Environmental and Social Considerations" (established in April 2002).

③ Other: Environmental impact assessment (EIA) reports will be prepared for each sub-project at the same time as the detailed design once the support of the main consultant has been received, and approval will need to be obtained from the Dirección Nacional de Saneamiento (National Sanitation Directorate, DNS) within the MVCS prior to implementation. Furthermore, based on the "Japan Bank for International Cooperation Guidelines for the Confirmation of Environmental and Social Considerations" (established in April 2002), the executing agency is required to determine the category of each sub-project and undertake appropriate environmental and social considerations, and JICA will confirm the results thereof when giving its consent for the sub-projects. The sub-projects classified as Category A will not be excluded from the scope of the Project.

2) Promotion of Poverty Reduction

This project provides direct support to impoverished regions in the areas of water supply and sanitation. It is expected that improving water supply and sanitation services will lead to a decrease in the incidence of diarrhea among children, a decrease in infant mortality, and a decline in morbidity.

3) Promotion of Social Development (gender perspective, measures for infectious diseases including HIV/AIDS, participatory development, consideration for persons with disabilities, etc.)

The participation of project beneficiaries will be promoted through the institutional strengthening of water users associations.

(8) Other Schemes and Collaboration with Other Donors

None in particular

(9) Other Important Issues

None in particular

4. Targeted Outcomes

(1) Quantitative Effects

1) Performance Indicators (Operation and Effect Indicator)

Indicator	Baseline (Actual value in 2010)	Target (2017) [2 years after project completion]
Incremental number of households having connections of water supply	0	45,174

Incremental number of households having connections of sanitation	0	39,081
Quality of drinking water in target communities (% of communities with residual chlorine level over 0.5 ppm)	To be set by diagnostic work ¹	100
(Reference indicators ²)		
Coverage of water supply in rural Amazonian area (1,500 communities in total) (%)	10 (2008)	40
Coverage of sanitation in rural Amazonian area (1,500 communities in total) (%)	10 (2008)	35
Incidence rate of diarrhea	To be set by diagnostic work	To be set by diagnostic work

2) Internal Rates of Return

Given that the target communities have not yet been determined, the economic internal rate of return (EIRR) will not be calculated at the time of assessment. However, with regard to the water supply component, based on the conditions indicated below, sub-projects with an EIRR of at least 10% will be selected as sub-projects to be covered by this project.

This project has strong public characteristic in nature; although water supply and sewerage charges will be levied, it is expected that these charges will be kept in relatively low level. Thus, the financial internal rate of return (FIRR) cannot be calculated.

EIRR

Cost: Initial investment cost, operating and maintenance costs

Benefits: Reduction in willingness to pay (WTP) and the costs needed to treat diarrhea (outpatient costs, medicine costs)

Project life: 20 years

(2) Qualitative Effects

Improvement in the sanitary conditions of residents, improvement in groundwater contamination, and improvement in the satisfaction levels of residents with regard to water supply and sanitation services.

5. External Factors and Risk Control

Any deterioration in the political or economic situation and any natural disasters in Peru or in the vicinity of the target area.

6. Results of Evaluations and Lessons Learned from Past Projects

(1) Results of Evaluations of Similar Past Projects

According to ex-post evaluations of similar projects in the water supply and sanitation sector, it has been learned that, in projects undertaking the development of small-scale infrastructure in rural areas, it is important to establish proper operation and maintenance systems and to set aside enough funds in order that facilities can be operated and maintained in a smooth manner once operations have started.

¹ The diagnostic work will be undertaken as a part of community empowerment activities after the beginning of the project.

² The indicators for monitoring the level of impact set by Peruvian government which include uncontrolled factors outside the project. They will be monitored for reference to watch the progress of the project.

(2) Lessons for the Project

Given that this project is targeted at the rural areas of the Amazonian region, for the sake of proper operation and maintenance, a component for strengthening community organization will be established, and support for institutional strengthening will be provided in targeted communities, including support for operation and maintenance systems. Furthermore, in this project, a system is expected whereby local government will provide financial and technical support to the water users associations charged with operation and maintenance. Therefore, through activities for strengthening community organization, support will also be provided for building the capacity and establishing systems of local government.

7. Plan for Future Evaluation

(1) Indicators to Be Used

- 1) Number of households with new connections to a water supply
- 2) Number of households with new connections to sewerage
- 3) Percentage of communities covered by this project, where the value of residual chlorine in drinking water is at least 0.5 ppm (%)
- 4) EIRR (%)

(2) Timing

Two years after project completion.