

Overall Rating
A

A Foundation for Sustained Growth



16 China

Guiyang Water Supply Project

Construct water supply facilities to improve the water supply/demand situation and meet the future demand

Loan Amount / Disbursed Amount 5.5 billion yen / 4.797 billion yen
Loan Agreement December 1996
Terms & Conditions 2.1% interest rate, 30 year repayment period (10 year grace period), General untied
Final Disbursement Date September 2004
Executing Agency Ministry of Construction (<http://www.cin.gov.cn>) (Chinese Only)



Project Objectives

The objective of this project was to improve the water supply situation, by constructing water supply facilities in Guiyang using Hongfeng Lake as a water resource, and thereby relieving the tightening water supply and demand situation as well as contributing to meeting the future water demand in Guiyang.

Effectiveness and Impact

Rating **a**

The initial plan for water supply in Guiyang was an average of 520,000m³/day, and a maximum of 680,000m³/day. The actual water supply in the year 2000 was below plan, at 460,000m³/day, and 530,000m³/day, respectively. In addition, the Western Suburbs Water Purification Plant developed by this project had a low facility utilization rate (39% average in 2006). This is due to the relocation of factories to the suburbs which reduced demand for industrial water use, in addition to water conservation measures by factories, companies, and residents. In the future, increased demand is expected in the new economic districts, and over the long term it is thought that this project will contribute to meeting future demand growth. Since the water distribution pipe network in Guiyang has deteriorated, water pressure needs to be controlled. This is one of the reasons for the low facility utilization rate. The city is currently planning to lay new pipes, and future improvements can be expected. Results of a beneficiary survey conducted in Guiyang confirmed that development of water supply facilities improved water quality, water flow, and water pressure, and also resolved the serious problem of frequent water outages. This project can be said to have made certain contributions to securing a stable water supply for Guiyang. Therefore, this project has largely achieved its objectives, and effectiveness is highly satisfactory.

Actual water supply of the Western Suburbs Water Purification Plant

	2001	2002	2003	2004	2005	2006
Water supply capacity (1,000m ³ /day)	0	200	200	400	400	400
Maximum water supply (1,000m ³ /day)	0	143	137	223	220	230
Average water supply (1,000m ³ /day)	0	45	102	153	173	155
Facility utilization rate (maximum) (%)	0	71.6	68.6	55.6	55.0	57.8
Facility utilization rate (average) (%)	0	22.5	50.1	38.3	43.3	38.8
Degree of dependence on this purification plant (%)	0	26.5	25.4	42.0	41.5	46.9

Source: Guiyang Water Supply General Company

Relevance

Rating **a**

This project has been highly relevant with the national policies both at the time of the appraisal and at the time of the ex-post evaluations.

Efficiency

Rating **b**

Project costs slightly exceeded the plan (109% of planned cost) and the project period was almost as planned, therefore the evaluation for efficiency is moderate.

Sustainability

Rating **a**

No major problem has been observed for capacity of the executing agency, the financial situation, the operation nor its maintenance system, therefore, sustainability of this project is high. From the financial aspect, fees remain low, therefore net income is low, but the city government emphasizes the public aspect of water supply projects, and plans to continue providing budget support, so no particular problems are anticipated.

Conclusion, Lessons Learned, Recommendation

In light of the above, this project is evaluated to be highly satisfactory. As a lesson learned from this project, economic support from foreign agencies is essential for projects with a strong public aspect. Also, for projects for which there is a strong need, it is important to provide aid in a timely manner.

Third-Party Opinion

This project has partly resolved the problems of water shortages and outages in Guiyang. In the future, it is necessary to renew the water distribution facilities in order to improve the water supply network, and attract demand from the development of industrial and commercial zones.

Name of Specialist: Mr. Xie Yingxia (academia)
 Graduate, Tsinghua University (Environmental Science and Engineering).
 Currently Director of the Project Planning Department of China Academy of Urban Planning & Design. Specializes in environmental engineering and infrastructure planning.