

Overall Rating
A

A Foundation for Sustained Growth



15 China
Beijing No.9 Water Works Expansion Project

Construct water supply facilities to provide stable and safe water and to meet the future demand

Loan Amount / Disbursed Amount 14.680 billion yen / 12.161 billion yen
Loan Agreement December 1996
Terms & Conditions 2.1% interest rate, 30 year repayment period (10 year grace period), General untied June 2004
Final Disbursement Date
Executing Agency Beijing Municipal Administration Commission (<http://www.bjmac.gov.cn/pub/guanwei/>) (Chinese Only)



Project Objectives

The objective of this project was to improve the water supply situation, by increasing water supply capacity by 500,000m³/day in Beijing through the third expansion of Beijing No.9 Water Works and developing related water transmission and distribution facilities, and thereby improve the water supply/demand situation and contribute to meeting the future water demand of Beijing.

Effectiveness and Impact

Rating **a**

The initial plan for water supply in Beijing was a maximum of 3.01 million m³/day and an average of 2.1 million m³/day. Actual achievements in 2006 were 2.41 million m³/day and 2.01 million m³/day respectively, which were below the initial plan. It is thought that this is due to the relocation of factories to the outskirts of Beijing, which reduced industrial water demand, in addition to water conservation realized by consumer awareness and an increase in water fees.

In the future, demand is expected to grow since water from wells will be replaced by piped water and household and office water needs will increase as the Beijing population grows. Thus an increase in water demand is expected to turn upward in the near future. The facilities constructed in this project have a 76% facility utilization rate (2006), so it is regarded as being utilized sufficiently. Also, a beneficiary survey in Beijing (367 residents, 100 enterprises) confirmed improvements in water quality, water pressure, water flow, etc. This project is believed to have made certain contributions to a stable water supply for Beijing. Therefore, this project has largely achieved its objectives, and effectiveness is highly satisfactory

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. At the time of appraisal, it was consistent with the National

Water supply and facility utilization rate of No.9 Water Works as a whole

	2002	2003	2004	2005	2006
Water supply capacity (1,000 m ³ /day)	1500	1500	1500	1500	1500
Maximum water supply (1,000 m ³ /day)	1304	1343	1276	1369	1383
Average water supply (1,000 m ³ /day)	925	951	873	913	988
Facility utilization rate (maximum) (%)	86.9	89.5	85.1	91.3	92.2
Facility utilization rate (average) (%)	61.7	63.4	58.2	60.9	65.9

Source: Beijing Water Supply Group Company

Ninth Five-Year Plan and at the time of ex-post evaluation, with the National Tenth Five-Year Plan.

Efficiency

Rating **b**

Comparing actual project cost and duration to the plan (excluding the water distribution pipe extensions), project costs were almost as planned, but the project period was much longer than planned (128% of planned period), therefore the evaluation for efficiency is moderate. Both the actual cost and duration of this project exceeded the plan, mainly because pipe laying construction work was added to the project scope to meet the new demand which arose after the project started. The additional works were conducted together with the construction of Beijing 4th and 5th Ring Roads and this can be evaluated as a flexible and appropriate measure taken to meet the city's rapid development.

Sustainability

Rating **a**

No major problem has been observed for capacity of the executing agency, the operation nor its maintenance system, therefore, sustainability of this project is high.

Also, as the host city of the Beijing Olympics, the plan is to supply the Olympic Village with "drinkable water" from the No.9 Water Works improved by this project. In addition, to improve the operation and maintenance, training is now conducted for the technical staff.

Conclusion, Lessons Learned, Recommendation

In light of the above, this project is evaluated to be highly satisfactory. As a lesson learned from this project, for projects which develop water supply facilities, measures such as water conservation are important factors in planning demand forecasts, etc. Thus such factors should be integrated into the project at the planning stage.

Third-Party Opinion

Success of this project has important significance as the first step to resolve water shortages, which is one of the most important issues for Beijing. Also, the experiences from implementing this project are being utilized for implementation of the succeeding projects.

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