

**PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE**

Report No.: AB5231

Project Name	Zhejiang Qiantang River Basin Small Town Environment Project
Region	EAST ASIA AND PACIFIC
Sector	Sanitation (50%); water supply (25%); solid waste management (25%)
Project ID	P116656
Borrower(s)	People's Republic of China
Implementing Agency	Zhejiang Project Management Office (PPMO), Foreign Economic Liaison Division, Zhejiang Construction Commission
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1. Key development issues and rationale for Bank involvement

Socio-Economic and Urban Development Trends in Zhejiang Province. Located in the southern wing of the Yangtze River Delta, Zhejiang Province has experienced rapid economic and demographic growth over the past decade. From 1995 to 2007, the Province's GDP has increased at an annual rate of 14.9%, one of the highest provincial growth rates in China. In 2007, with only 1% of the nation's land area and 3.8% of its total population, Zhejiang's GDP reached 1.88 trillion Yuan, accounting for 7.6% of China's total GDP. Its GDP per capita was 37,411 Yuan (US\$4,883), ranked 4th in China, after Beijing, Shanghai and Tianjin. In line with its strong economic development, Zhejiang's urbanization has also increased rapidly at an annual rate of 2.1%, much higher than the national average. Zhejiang is now one of the most urbanized regions in China with 57.2% of the population living in cities and towns in 2007¹, up from 22% in 1978. It is expected that by 2020, the urbanization rate of Zhejiang Province will reach 72%, corresponding to an annual increase in urban population of 1-1.2% percentage points. 5 to 6 million people are expected to be added to the urban population over the same period.²

¹ China's average urbanization rate in 2007 was 44.9%.

² Zhejiang Province Urban System Plan (2008-2020).

Special Role of Small Towns in Zhejiang Province. A distinct feature of Zhejiang's urbanization trajectory has been that small towns³, although relatively small in scale compared to cities and at the lowest level in the urban hierarchy, have played a very important role in the province's development. Led by dynamic small and medium sized enterprises, small towns in Zhejiang have been the major engine of local economic growth, and key absorber of rural surplus labor and migrants. 64% of Zhejiang Province's gross industrial output value was produced in small towns and villages in 2005, and 70% of the Province's migrants resided in small towns in 2000.⁴ In 2004, Zhejiang's 763 small towns housed 60% of total registered population and 30.3% of total urban population, both at levels higher than the national average.⁵ While fully recognizing the benefits of agglomeration economies and the role of larger cities—Zhejiang has designated three areas as priority urban agglomerations, the Hangzhou Bay area, Wenzhou-Taizhou coastal area, and the Jinhua-Yiwu region—Zhejiang's 11th Five Year Plan's aim "to promote the development of small towns based on the specialized economy" remains one important pillar of the province's socio-economic development strategy.

Urban Environmental Infrastructure Services in Small Towns. Concomitant with Zhejiang's strong economic growth, environmental pollution pressures have build-up but the provision of urban environmental infrastructure services has not kept pace with the overall economic development. Zhejiang's larger cities, such as Hangzhou, Ningbo and Shaoxing have made good progress in beginning to address urban environmental management challenges, with markedly increased urban environmental infrastructure service coverage rates. However, small towns are significantly lagging behind. For example, the wastewater treatment coverage rate in small towns is currently only 26.2%, compared to 73% for cities (including county towns) and truly "sanitary" solid waste disposal facilities hardly exist.⁶ One of the reasons for lower access rates is the much weaker financial position of small towns and the resulting lower public infrastructure investment rates. For example, fiscal revenue per capita in the project county level city/county was only 5% to 40% of the provincial capital, Hangzhou.⁷ In addition to the low environmental infrastructure service provision rates, small and medium sized enterprises in small towns, key to Zhejiang's economic development, have also been major sources of pollution.

Weak Institutional Capacity in Small Towns. The institutional capacity of small towns in terms of managing urban environmental infrastructure is also extremely weak. Small towns are only now beginning to introduce basic infrastructure institutional reforms, with solid waste entities not corporatized, wastewater services provided, if at all, in a highly fragmented manner, and revenues from tariffs and fees not sufficient to cover even operating and maintenance expenditures. For example, wastewater tariffs are as low as RMB 0.35-0.5/m³ and solid waste fees, if applied, only inconsistently collected. Some private sector participation in infrastructure exists but mainly in form of "BOT arrangements" for wastewater treatment plants, often with mixed results. Environmental governance and the technical capacity in small towns to plan, operate and maintain environmental facilities is also very weak. Even in big cities the challenges of operating urban environmental infrastructure cannot be underestimated with about 40% of wastewater treatment

³ "Small towns" refer to statutory towns including county seats, as defined in "Advice on How to Promote Small Towns Development" by State Council, July 2007. Towns in Zhejiang are relatively small, with an average population of 36,772. Nevertheless, there still 35 towns whose population exceeded 100,000, with 4 towns exceeding 200,000.

⁴ Source: Zhejiang Province Urban System Plan (2008-2020) and Zhejiang Province Census 2000.

⁵ In 2003, the slightly less than 20,000 statutory towns account for about 690 million people, about 50% the Chinese population. In 2006, these towns housed 26% of China's total urban population. Source: Small Town in China: Trends and Options, World Bank EASIN, April 15 2009 and MoHURD.

⁶ Source: Zhejiang Construction Department Statistical Yearbook 2008.

⁷ Fiscal revenue per capita in Hangzhou city proper was 16,519RMB in 2007; while among the project CLC/counties, it ranges from only 867RMB (Qujiang District), to 6,658RMB (Wucheng District).

plants in Zhejiang's cities not functioning properly—a statistic that could well be higher in small towns once investments in infrastructure have been made.⁸ These facts are symptomatic of the overall challenges of providing urban infrastructure service provision in China, which are likely to be more acute the lower down in the urban hierarchy services are provided.

The Qiantang River Basin in Zhejiang Province. The Qiantang River, also known as the “mother river” of Zhejiang Province, is the largest river and one of the most important water sources in Zhejiang. With a total area of 48,080 km², the Qiantang River Basin covers five municipalities/prefectures, including Hangzhou, Quzhou, Jinhua, Shaoxing and Lishui, and consisting of 27 counties/ cities/ districts and 188 towns. With a total population of 15 million, the Qiantang River Basin accounts approximately for 30% of Zhejiang's total population and 30% of its GDP. The economic development in the basin is geographically concentrated in the lower part, such as Hangzhou and Shaoxing, with the upper part comparatively less developed. This is in line with the overall regional development pattern in Zhejiang. Adjacent to Shanghai in the north, the Hangzhou Bay area is the most dynamic region in the province. With 51% of Zhejiang's population, this region produced 66% of the province's GDP. In 2004, GDP per capita reached RMB 33,690, 1.3 times of the province's average. By contrast, cities in the mountainous hinterland, including Jinhua, Quzhou and Lishui, produced only 13% of Zhejiang's GDP with 21% of the province's population. GDP per capita in 2004 was RMB 16,105, only 62% of the province's average.

Environmental Pollution in Qiantang River Basin. The water quality of Qiantang River is being threatened by rapid economic development, population growth, and continued urban expansion. The most recent Zhejiang Environmental Status Report (2008) found that 73% of the Qiantang River have Class I to III water quality with only 62% of the monitored river water quality meeting its stipulated quality standard. The equivalent pollution loads from industrial, domestic and non-point sources are 45%, 36% and 19% respectively.⁹ Given that the larger cities in the Qiantang River Basin already have much higher urban environmental infrastructure service coverage rates, increasing sustainable service provision in small towns constitutes a key “next generation” challenge for urban environmental management in Zhejiang—together with continuing to address the difficult challenge of industrial pollution control. In the Qiantang River Basin, the gap in environmental investments is especially large in small towns along the middle and upper parts, including in Jinhua and Quzhou Municipality, reflecting their comparatively lower level of economic development. Overall, 123 out of 188 towns in the Qiantang River Basin do not have wastewater treatment facilities.

Zhejiang's Response to Environmental Problems in the Qiantang River Basin. The Provincial Government has fully recognized these challenges. It has put in place various provisions *inter alia* in the 11th Five Year Plan (2006-10) for Qiantang River Basin, the Eco-Province Construction Plan, and the Environmental Protection “811” Action Plan (2008-2010) to improve its urban environmental infrastructure. The overall provincial strategy is to prioritize environmental protection in the Qiantang River Basin, i.e. the government announced that “the pollution control objectives of Qiantang River Basin should be higher than in other areas, the progress should be faster than in other areas, and the effectiveness should be better than in other areas”. The goal is to reach 100% of the required standard for water quality in Qiantang River by 2020.¹⁰ Specifically the targets are to, by 2020, increase sewage treatment rate in small towns from currently less than 30% to 75%, and in counties to 85%, in cities to 90%; to increase solid waste collection and treatment

⁸ Source: Summary of Zhejiang Ecological Construction Master Plan, 2003.

⁹ Qiantang River Basin Water Pollution Control and Ecological Protection Planning Report, 2006 (data for 2004). The major pollutants of Qiantang River are COD, ammonia nitrogen and total phosphates.

¹⁰ Water Pollution Control and Ecological Conservation Plan of Qiantang River Basin, Zhejiang Environment Institute, 2006.

rate in small towns to 90%, counties 95%, cities 100%¹¹; and quality of water supply in small towns should reach 100% safety standard.¹² One specific provision in the Environmental Action Plan calls for the construction of wastewater treatment facilities in all remaining 123 un-served towns in the Qiantang River Basin by 2010.

Rationale for Bank Involvement. The World Bank to date has implemented two urban projects in Zhejiang Province, one of which, the Zhejiang Urban Environmental Project, is still ongoing and expected to close in FY11.¹³ These projects have focused on improving urban environmental infrastructure and protecting cultural heritage in the larger cities in Zhejiang province, including in Hangzhou, Ningbo, Shaoxing, and Wenzhou. As mentioned above, Zhejiang has made good progress on enhancing environmental protection in most of its larger cities. Service coverage rates are increasing and institutional reforms are progressing steadily with service providers fully corporatized, and in the case of Ningbo, regional consolidation of the wastewater service provision gradually increasing. It is therefore a natural progression to address, through the new Bank project in the province, the next generation of urban environmental infrastructure challenges, namely those pertaining to small towns. It is also reflecting a more general trend in the Bank's urban portfolio in China which is increasingly focusing on small towns (i.e., Sichuan Small Towns Project), urban-rural integration (i.e., Chongqing urban rural integration project), and new country side development (i.e., Ningbo new country side development project).

International Experience and Lessons Learned. The Bank has significant experience in assisting small towns in developing urban infrastructure. For the water supply and sanitation sub-sectors, a recent Bank guidance note highlights, in particular, the institutional management challenges associated with small town service provision. It points out that “towns of 2,000 to 50,000 merit particular attention because they fall within a ‘management gap’: neither the community-based management models effective in rural areas, nor the utility models that work in urban centers are likely to work.” It recommends that it is essential to “clarify key actors’ roles, consulting with users, defining service levels based on user preferences and willingness to pay, confirming investment sources, phasing in investments incrementally to reflect demand, analyzing costs and revenues realistically, identifying professional support, establishing systems for monitoring progress, and allowing for periodic review and revision of the business plan.”¹⁴ In addition, and more broadly, the recent WDR on economic geography points to lessons learned on importance of ensuring an integrated relationship between the larger cities and small towns—including through the promotion of regional integration and the provision of basic services—as well as on the importance of small towns as the “connective tissue between urban and rural areas”.

Consistency with Country Partnership Strategy. The project will support three of the five Country Partnership Strategy themes: (ii) reducing poverty, inequality, and social exclusion; (iii) managing resource scarcity and environmental challenges; (v) improving public and market institutions. It will also support the objectives of China's 11th Five-year Plan (2006-10) which aims to create a “harmonious society” that balances economic growth with distributional and environmental concerns. In addition, by focusing urban infrastructure investments in small towns the project contributes to urban-rural integration, with small towns forming a critical link in China's transition from a predominantly rural to urban society.

¹¹ Special Study of Construction of Environmental Infrastructures of Small Towns in Qiantang River Basin, 2007.

¹² Notice on Effectively Strengthening Urban and Rural Drinking Water Safety, Zhejiang 2006.

¹³ There are also two Bank urban projects focusing on Ningbo Municipality. The Ningbo New Countryside Development Project and the Ningbo Water and Environment Project.

¹⁴ World Bank Water P-Note (#12): Town Water Supply and Sanitation: Challenges, Solutions, and Guidelines, 2008.

2. Proposed objective(s)

Project Development Objective. The proposed project development objective is to narrow the gap in sustainable urban environmental infrastructure service provision between small towns and large urban centers in Zhejiang Province. This will be achieved by supporting investments in wastewater, water supply, and solid waste in ten selected small towns located in the Qiantang River Basin. In addition, the project intends to enhance the institutional capacity in the selected small towns to manage urban environmental infrastructure in a sustainable manner.

Progress towards meeting the PDO would be measured through a variety of indicators to be developed during project preparation including on increased access to services and reduced urban pollution loads, as well as indicators on institutional sustainability (i.e., operating efficiency rates, cost effectiveness, and cost recovery rates, etc.).

The team would also like to explore options to use the supported projects as ‘demonstration projects’ for sustainable small town infrastructure service provision, especially in the area of institutional, operational and financial sustainability, to be replicated elsewhere in Zhejiang Province. This could be done by through structuring an IST component (see below) to include an evaluation of various Bank and non-Bank financed small town urban infrastructure investments in Zhejiang with lessons learned shared among a larger number small towns across the province

3. Preliminary description

Project Selection. Zhejiang Province originally received 57 expressions of interest for the participation in the World Bank project, with a total investment amount of RMB 3.8 billion. The Provincial Government and the World Bank reviewed the proposals and narrowed the scope as summarized below and further detailed in Annex 1. The selection criteria included in particular, a thematic focus on urban environmental infrastructure; project location in the middle and upper part of Qiantang River Basin; counterpart implementation capacity; congruence with project implementation schedule, and project county ability to repay the World Bank loan.

The selection process ensured that the project is in line with Zhejiang’s environmental strategy. By locating all project components in Qiantang River Basin, and focusing investment on wastewater, solid waste, and water supply in small towns, the project contributes to the province’s strategy of scaling-up environmental infrastructure provision and improving the water quality of Qiantang River by reducing pollution loads. In addition, the project also supports Zhejiang’s urbanization strategy. By aiming to support underserved small towns in Zhejiang, the project targets the less advanced upper and middle part of Qiantang River Basin, such as Quzhou and Jinhua Municipalities, and the less developed counties and towns in the lower part of the Basin, such as Jiande City and Tonglu County in Hangzhou Municipality. As a result, the project contributes to the province’s goal of balancing regional development and promoting rural-urban integration.

Proposed Project Investments. The preliminary project design contains eleven sub-projects in ten project county level cities, districts, towns across four municipalities: Hangzhou, Shaoxing, Jinhua, and Quzhou. The corresponding total project cost is RMB 1.30 billion (or USD 207 million), corresponding to the agreed Bank loan of US\$ 100 million and a targeted World Bank loan financing percentage of about 50%. The proposed projects fall into the following sub-components:

- *Component 1: Urban Environmental Infrastructure Investments (US\$ 207 million).* The sub-sectors covered include wastewater, solid waste, and water supply, with the specific details as follows.
 - *Wastewater.* There are seven wastewater components located in Longyou County, Quijiang District, Jiande City, Tonglu County, Fuyang City, Youbu Town/ Lanxi City¹⁵ and Pan'an County. Together they would increase wastewater treatment capacity by 60,000 m³/day and the length of pipe network by 300 km. Total investment cost is estimated to be RMB 855 million;
 - *Solid Waste.* There are two solid waste components located in Jiangshan City and Meichang Town of Jiande City which would increase solid waste disposal capacity by 800 t/day. Total investment cost is estimated to be RMB 255 million;
 - *Water Supply.* There are two water supply components located in Zhuji City and Wucheng District of Jinhua City which would increase water supply capacity by 90,000 m³ /day and the length of pipe network by 190 km. The total investment cost is estimated to be RMB 240 million;
- *Component 2: Institutional Strengthening and Capacity Building (US\$ XX million--tbd).* The institutional strengthening and capacity building component is still being developed. Given the weak capacity in small towns, strong project implementation support will need to be provided. In addition, options will be explored to include an IST component on building institutional, operational, and financial capacity to manage urban environmental infrastructure in a sustainable manner. The team also plans to discuss options for linking infrastructure investments to the broader environmental protection agenda, including in the area of industrial pollution control.

Project Implementation. The implementation arrangements at the provincial level are the same as those for the existing Zhejiang Urban Environmental Project. The Provincial Leading Group is headed by the Vice Secretary-General of Zhejiang Provincial Government, and comprises all key Provincial Government agencies. The PPMO is housed at the Provincial Construction Commission. In most project cities and counties the implementing agency is the local government owned Urban Development Infrastructure Company (UDIC) or, if applicable, the local water and wastewater utility. During project preparation, institutional arrangements will be carefully scrutinized to explore the potential for enhanced institutional capacity. In small towns this is likely to include regional consolidation of service provision, where possible. Specifically, opportunities will be explored for existing water, wastewater, and solid waste companies in nearby towns or larger cities to extend their services to cover the components under the project.

4. Safeguard policies that might apply

Environmental Assessment (OP/BP 4.01)
 Natural Habitats (OP4.04)
 Indigenous People (OP/BP 4.10)
 Physical Cultural Resources (OP4.11)
 Involuntary Resettlement (OP/BP 4.12)

¹⁵ The Youbou Town/ Lanxi city has, in addition to a wastewater component, some cultural heritage investments, such as the restoration of bridges in a historic town. Depending on the ultimate scope of the cultural heritage investments, cultural heritage may be added as a separate sub-project component and it would become part of the project concept.

Safety of Dams (OP 4.37)

5. Tentative financing

Source:	(\$m.)
Borrower	107
International Bank for Reconstruction and Development	100
Total	207

6. Contact point

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