TRACER STUDY OF PFS INTERVENTIONS IN YANGZHOU, CHINA

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Background of CDIA Intervention

Yangzhou is located at the confluence of the Yangtze River and the famous Beijing-Hangzhou Grand Canal in Jiangsu Province of China. Because of its strategic location, Yangzhou became the center of salt business in ancient China and served as an important transportation hub between China's north and south regions.

Box 1: Project Overview

PFS period	Nov 2008 – Mar 2010
Focus sectors	Urban upgrading; wetland rehabilitation; water supply
CDIA supported activities	PFS on urban upgrading of Old City center; PFS on rehabilitation of water bodies/wetlands; PFS on water treatment plant; Linking of PFSs with potential financiers
L2F Status	Funded by LFIs

Yangzhou has a total land area of 6,634 sq km and a total population of 4.5 million. It is not only a scenic city with a beautiful landscape but also a city with a rich cultural heritage. Located in and around Yangzhou is the oldest canal in China, historical sites of the ancient city in the Tang and Song Dynasty and private gardens dating back to the Ming and Qing Dynasty. With numerous manmade gardens and beautiful natural sceneries, Yangzhou is rich in tourism resources that attract millions of visitors both from China and abroad.

In line with its Eco-City Plan and ongoing efforts to balance economic growth with environmental protection, the Yangzhou City government submitted an application for technical assistance to CDIA in September 2008 to develop economically sustainable solutions to urban upgrading and heritage conservation, rehabilitation and development of wetlands and construction of water treatment plant. With the approval of the city application in October 2008, CDIA dispatched three consulting teams to work with Yangzhou City Government during the period November 2008 to March 2010.

As part of its internal monitoring and evaluation processes, CDIA conducted the tracer study in Yangzhou City from June 19 to 22, 2017 to track progress, effectiveness and results of its completed interventions. Following is a summary of the tracer study findings.

Urban Upgrading and Redevelopment Project

Progress of Implementation as of June 2017

Fig. 1: Ancient residential houses reconstructed by YFCC in Shuangdong area.

From March to December 2009, CDIA provided technical assistance to the city of Yangzhou to identify and suggest sustainable approaches to the city's urban upgrading scheme and help the city maintain the character of the traditional settlement in the urban center. Working closely with the Yangzhou Construction Bureau (YCB), the CDIA consulting team prepared the PFS for three demonstration projects aimed at introducing new concepts and designs for urban upgrading and redevelopment. The final PFS report recommended the following: Project I located in Dongguan Erxiao (1,500 sqm, Shuangdong area) – development of four model houses and a small neighborhood café in combination with an open space; Project II located in Sanhesimei (5,317 sqm, Shuangdong area) - development of

approximately 35 new residential houses, new parking areas, open spaces and re-use of the famous pickles factory as future cultural and community center; and Project III located in Wanglumen (5,644 sqm, Na Hexia area) – mixed-use development of historic building of Wanglumen including hotel and various shops and public art gallery, reconstruction of historic garden and development of 20 residential buildings.

After PFS completion in December 2009, the city government entrusted the detailed planning and implementation of the demonstration projects to the Yangzhou Famous Construction Company (YFCC), an entity founded in 2006 under the supervision of the YCB responsible for the renovation and upgrading of old buildings in the historic old city center. For the detailed planning, YFCC mobilized the technical support of local experts on heritage building conservation including those from the academe. Progress of implementation of the 3 demonstration projects is as follows:

- Project I – three single storey residential buildings have been built according to the traditional Asian architecture in line with the CDIA suggestion to showcase these buildings as architectural models in the Shuangdong area. YFCC is considering the possibility of utilizing one of the buildings as a boutique hotel in line with the recommendation of CDIA to allow commercial use of the upgraded heritage structures.
- Project II – The old pickles factory built in 1950s was completely demolished while some 20 houses and a small restaurant are due for demolition. While no structure has been built in the area, YFCC with the help of local architects has already prepared a re-development plan for the property which includes: a) small commercial/shopping area for tourists; b) open space with garden; c) a small replica of the pickles factory; and d) provision for parking.
- Project III – Renovation of the historic Wanglumen building and reconstruction of the historic garden has been ongoing since 2016. When completed in 2018, YFCC plans to lease the building to a company based in Shanghai which will use the heritage structure to showcase the history of salt trading in old Yangzhou.

Total project investment by YFCC is estimated at USD45 million including the cost of land and relocation. YFCC expects to recover its investments over the next 10 years via real estate developments outside of the old city.

Except for some deviations from the CDIA recommendations, the urban upgrading and redevelopment demonstration projects in the old city of Yangzhou are generally being implemented as envisioned in the final PFS report. Project implementation plans including deviations from PFS plans were decided by the city after careful evaluation by local heritage conservation experts and in close consultation with local residents who have good knowledge about the previous land uses and structures in the area.

Fig. 2: Ongoing reconstruction of the historic Wanglumen garden in Na He Xia area.

According to the Deputy Director of YCB, Mr. Xue Bing Kuan, the key factors that contributed to the success of old city upgrading and redevelopment initiatives were: i) existence of legal and policy framework for urban upgrading and heritage conservation; ii) high public awareness on the importance of heritage conservation; iii) establishment of appropriate institutional mechanisms; and iv) sustained financial support from the city government.

Intervention Results

Promoting new approaches to urban upgrading. According to key city officials, the CDIA intervention in Yangzhou introduced new concepts and fresh ideas on urban re-development that contributed to the enhancement of Yangzhou's urban upgrading strategy. As pointed out by the YCB Deputy Director, "the integration of open spaces in old city redevelopment and adoption of participatory approaches in planning of urban upgrading projects are examples of good practices that were introduced to the city by the CDIA consultants."

Enhancing the living environment in the Old City. The urban upgrading project has contributed to the improvement of the living environment as a result of the rehabilitation of public infrastructure within the old city center. In particular, residents and visitors in the Shuangdong area are now benefiting from well-paved walkways, clean public toilets, solid waste collection system, upgraded water supply lines and improved drainage system. Prior to the upgrading project, streets were often flooded during the rainy season and residents found it difficult to walk or ride bicycles through the dilapidated pavements. In some areas, public toilets emitted foul smells due to poor water supply and drainage facilities.

Fig. 3: Ongoing reconstruction of the historic Wanglumen mansion

Integrating social benefits to heritage conservation. When fully restored, the historic mansion and garden of Wanglumen is not only preserved as a heritage site but re-used as a place for learning as YFCC plans to lease the property to a Shanghai-based company interested in showcasing the historic salt trading period of Yangzhou. This will be an added attraction in the Old City with the potential of increasing tourist arrivals and business opportunities for Yangzhou residents.

San Wan Wetland Park Development Project

Progress of Implementation as of June 2017

From November 2009 to March 2010, CDIA provided technical assistance to the city of Yangzhou in preparing the PFS for the San Wan wetland park development project. The project is a key component of the city's long-term plan for the rehabilitation and improvement of the Ancient Canal in Yangzhou which includes utilization of the wetlands ecosystem to abate the pollution in the area, improve the water quality in the Ancient Canal and enhance the environment of the surrounding area.

Fig. 4: One of several view decks for visitors to appreciate the San Wan wetlands

The final PFS report recommended two schemes for the development of the San Wan wetland park: a) development of the East Park into an "eco-village park" showcasing the integration of nature and agriculture inside an urban environment; and b) development of the West Park into a "wetland park" having an ecological core zone with limited public access. Within the planning area of 75 ha, the PFS recommended the following land uses: 1) commercial areas – 7.5 ha, 2) promenade – 12.5 ha; 3) standard parks – 9.1 ha; 4) wetland park – 20.3 ha with an eco-core zone of 7.6 ha; 5) agricultural village with farmer shops – 16.6 ha.

After the CDIA intervention in 2010, YCB continued to perform its function of coordinating the detailed planning with relevant city bureaus (e.g., Planning Bureau, etc.) and marketing of the wetland park development project to potential investors. A Dutch engineering firm was commissioned by the City Planning Bureau to prepare the Master Plan and detailed feasibility study of the wetland park.

Fig. 5: One of several boardwalks built in the unrestricted zones of the wetland park

In 2014, a joint venture company (JVC) composed of the City Construction Group headed by the Deputy Mayor and a private entity assumed the responsibility for the development of the wetland park via an international competitive bidding supervised by the Yangzhou Planning Bureau. This JVC has a total capitalization of 6 billion RMB (USD900 million) with 50-50 sharing between the City Construction Group and the private entity. Total investments by the JVC in the project are estimated at 2.5 billon RMB (USD375 million).

As of June 2017, Phase 1 of the wetland park development project is 70% completed. At full development, this 100 ha wetland park will be able to realize three development objectives: a) providing the city residents with recreational space; b) re-introducing a nature-like environment within the city; and c) offering sustainable business opportunities to local people.

Fig. 6: Pedestrian walkway built along the bank of the Ancient Canal

Presently, the park receives 10,000 visitors per week mostly local residents attracted by the diverse activities that they can do within the park such as walking through the promenade along the ancient canal, bird watching in the wetlands, use of sports facilities, learning about wetland ecosystems, etc. Entry to the wetland park by the public is free of charge.

Phase 2 of the project will commence in 2018 in another 100 ha city property adjacent to the Phase 1 area. Included in the plans for Phase 2 are: agricultural village, commercial establishments, hotel and other income-generating enterprises that will enable the JVC to recover its investments.

Intervention Results

Rehabilitating the wetlands ecosystem in Yangzhou. Over time, the project will contribute to the full rehabilitation of the wetland ecosystem in the vicinity of the Ancient Canal through reduction of discharge of untreated wastewater to the canal and reduction of solid pollutant loading along the canal banks. Eventually, the project will contribute to the improvement of the living environment not only of residents in the periphery of the wetland park but also of the entire city population.

Providing residents and tourists with free access to a wetland park with diverse uses. When fully completed, residents and tourists will enjoy the clean and green spaces created within the park. Apart from enjoying the beautiful sceneries, visitors will have the opportunity to appreciate nature through bird watching and promenading along various types of walkways built with the entire park. Young people will have access to not only to sports and recreational facilities but also to “living museums” carefully designed for children to enjoy and learn at the same time.

Reaping benefits from eco-tourism. In the near future, residents will benefit from the accelerated development of eco-tourism industry. As the wetland park gains popularity among tourists in China and abroad, new business opportunities linked to public parks and eco-tourism will develop thereby contributing to growth of the local economy. In addition, the value of land and properties in the vicinity of the park will increase with improved environmental conditions along the Ancient Canal.

Water Treatment Plant Project

Progress of Implementation as of June 2017

In October 2008, the city of Yangzhou requested technical assistance from CDIA for identifying appropriate sources of medium or long-term financing for completion of Water Treatment Plant of the Yangzhou Yancheng Water Industry Company (YYWIC) owned by the city government. At that time, the city was having difficulty of obtaining low-cost financing from the central government as public funds were being prioritized for the urgent reconstruction of the areas affected by the Sichuan Earthquake. However in February 2009 while the CDIA intervention was ongoing, the central government deployed through state-owned banks a large stimulus package for municipal infrastructure spending in response to the financial crisis. With the availability of stimulus funds, the existing bank creditors of YYWIC have expressed interest in extending additional funds for completion of the project. With short-term funding problems already addressed, the CDIA consulting team recommended the following financing options for YYWIC: a) refinancing YYWIC's bank debt with multilateral or bilateral concessional loans; b) strengthening of YYWIC's capital position by issuing equity shares YYWIC to local, national or international private sector institutional investors; and c) issuance of medium-term bonds by YYWIC.

Fig. 7: Covered maintenance platforms within the Water Treatment Plant

Construction of the water treatment plant (WTP) was completed in 2010 using short-term funds obtained from local financing institutions. In the same year, the WTP became fully operational together with associated assets comprising of water intake and pumping station and raw water supply pipeline. Currently, the WTP is operating at 250,000 cum/day and supplying the domestic water needs of about 800,000 people or about one-fifth of city population living in the outlying villages of Yangzhou City.

Because of the government policy to integrate the operations of water supply and wastewater treatment companies, the management of the YYWIC was taken over by the Changjiang Water Affairs Co. in 2014. Presently, this company has an annual revenue stream of USD150 million with annual net profits amounting to USD12 million. The company has about 1,200 employees to support the operations of eight water treatment plants and two wastewater treatment plants. The company is currently one of most profitable water companies in Jiangsu Province. In 2019, the company plans to enter the equities market to strengthen its capitalization in line with one of the key recommendations of the PFS prepared by CDIA in 2010.

Intervention Results

Providing access to clean water to residents in the expansion areas. The project was intended to supply the water requirements in the expansion areas located in the suburbs of Yangzhou. Since completion of the project in 2010, the new WTP has been supplying clean water to about one-fifth of the city population particularly those residing in the periphery of the city. In addition, the water company provides 5 cum/month of free water to some 2,000 poor households as part of its corporate social responsibility.

Demonstrating efficient ways of operating WTP. The Changjiang Water Affairs Co. has been cited as one of the most profitability water companies in Jiangsu Province. Key factors contributing to company's profitability are: i) good management practices; ii) low water leakage rate; and iii) low operation and maintenance cost of its water treatment plants. Several officials from other cities in China have visited Yangzhou to learn from the experiences of Chiangjiang Water Affairs Co.

Fig. 8: Sedimentation tanks of Water Treatment Plant

Arresting depletion of ground water in expansion areas. With the completion of the project, households and businesses previously relying on wells for their water requirements have been connected to the city water supply network. This has a positive effect on the environment as residents abandon their water wells thereby arresting the depletion of groundwater in expansion areas.

Conclusion and Lessons Learned

Overall, the findings of this tracer study show that significant progress has been made by the city of Yangzhou in implementing the three projects whose preparation was supported by CDIA from 2009 until 2010. Factors contributing to the realization of the projects envisaged in the PFS include: i) good project preparation work done by CDIA which mobilized the active participation of relevant bureaus of the city; and ii) effective follow-up project preparation and linking-to-financing activities by the city.

Key lessons learned from the Yangzhou experience include: i) importance of creating implementation structures with clear roles and responsibilities in project implementation; ii) value of using local knowledge in detailed planning of urban upgrading and heritage conservation projects; and iii) importance of having a clear policy and legal framework to guide planning and implementation of urban upgrading and redevelopment initiatives including regeneration of natural heritage areas such as canals and wetlands.