

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC3727

Project Name	Zhuzhou Brownfield Development Project (P147381)
Region	EAST ASIA AND PACIFIC
Country	China
Sector(s)	General industry and trade sector (50%), General agriculture, fishing and forestry sector (20%), Solid waste management (30%)
Theme(s)	Pollution management and environmental health (70%), Urban Economic Development (20%), Environmental policies and institutions (10%)
Lending Instrument	Investment Project Financing
Project ID	P147381
Borrower(s)	People's Republic of China
Implementing Agency	Development and Reform Commission of Zhuzhou
Environmental Category	A-Full Assessment
Date PID Prepared/ Updated	25-Sep-2014
Date PID Approved/ Disclosed	26-Sep-2014
Estimated Date of Appraisal Completion	01-May-2015
Estimated Date of Board Approval	15-Dec-2015
Concept Review Decision	Track II - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

1. China's socio-economic development since the 1980s has been remarkable, making the country the second largest economy in the world; however, China's growth has been capital and resource-intensive at the cost of environmental and health impacts. To achieve a more sustainable growth going forward, China faces a tough challenge in shifting the economy onto a more balanced path, which requires the country to address among other strategic issues, the issues of natural resource depletion, pollution and environmental degradation. These topics are placed high on the new government agenda, and are included in the 12th Five-year Plans and long-term development strategies of national and local governments.

2. Poor industrial planning and inadequate pollution controls in the past have made land contamination a serious issue in China. In urban areas, China's industrialization and modernization

process, started in the 1950s', has left a legacy of vast polluted industrial and commercial areas. Rapid urbanization in recent years has resulted in the need to redevelop industrial land once occupied – and contaminated – by old industries, which have helped bring the issue of the remediation and redevelopment of contaminated lands (often referred to as brownfields) to the forefront. Brownfields pose two categories of problems: firstly, their environmental and public health risks; and secondly, they form obstacles to urban and local economy development, particularly if ultimately they remain unused. The Chinese national government and also the local governments in some Chinese cities have begun to take actions to control land contamination, mainly with a focus of remediating polluted lands for the purpose of urban (re-)development.

3. Zhuzhou City represented such a case where brownfield sites left from old industrial sites need remediation and redevelopment. Zhuzhou is located at the mid-low reach of the Xiang River in the eastern part of China's Hunan Province. The municipality has a population of 3.96 million and a GDP of 176 billion RMB (2012). Its Qingshitang industrial area has held major (national) industries since the early 1950s and has been exposed to industrial emissions and discharges since then. The industrial area includes a population of more than 6,000 people. Further statistics and poverty data from Zhuzhou and this area will be collected under Project preparation studies. In addition, the city --being the largest transport hub in mid-south China-- is a strategic geographic location with solid opportunities for economic and urban development.

Sectoral and Institutional Context

4. Industrial restructuring, urban upgrading, and rising environmental awareness have made brownfield remediation and redevelopment an urgent need for China. In the past decade, hundreds and thousands of old industrial polluting enterprises have been shut down, suspended, or relocated out of cities due to cities' needs for building modern and greener metropolitan, obtaining land for high-return development, and meeting public demand for cleaner ambient environment. However, site contamination, such as heavy metals, organic contaminants, and persistent organic pollutants (POPs), has become a roadblock to redevelopment owing to environmental and health risks (soil, groundwater, surface hazardous and non-hazardous waste, ongoing dumping); liability concerns; lack of experience with integrated remediation approaches; and high upfront costs. Both owners/ authorities and developers face these issues. The abandoned or delayed remediation and redevelopment of brownfields sites in urban areas also has profound economic and social impacts on local communities and businesses such as poor living conditions, lack of employment opportunities and tax resources, and even social instability.

5. In recognizing these problems, the national and local government authorities have taken actions to investigate land contamination status across the country, to formulate policy and regulatory frameworks and to pilot many remediation and redevelopment projects. However, the legal and institutional framework for brownfield remediation remains relatively underdeveloped and fragmented, and many challenges remain for adequate site remediation. The Bank worked with NDRC, MOF and several local governments in 2010 to carry out a technical assistance on brownfield remediation and redevelopment, which reviewed international experiences on regulatory framework and brownfield situations in China. Based on issues identified through the technical assistance, the central and local governments requested further technical assistance and financing support from the Bank.

6. China lacks a specific and comprehensive law to address the prevention, control and legacy issues of land contamination. Absence of such an overarching law also contributed to unclearly

defined duties and responsibilities among relevant government departments, and overlapping or gaps in management procedures. Since 2004, the Ministry of Environmental Protection (MEP, formerly SEPA) has issued various documents requiring effective prevention, control and remediation of soil pollution left from former industrial sites. In past three years, more inter-ministerial coordination was seen in dealing with this issue. State Council, National Development and Reform Commission (NDRC), Ministry of Industry and Information (MII), Ministry of Land and Resources (MLR) and Ministry of Housing, Urban and Rural Development (MOHURD) issued several other documents to address inventory, assessment, risk control, transfer of land use rights, land use planning for brownfield remediation and redevelopment. At local level, several industrialized provinces/cities, such as Beijing, Chongqing, Zhejiang and Shenyang, have issued similar regulations based on their own economic development patterns, natural conditions and soil types. However, given the magnitude brownfield problems in the context of development, these documents are no substitute for a national law. The draft “Soil Pollution Prevention and Control Law” has been under review at National People’s Congress since 2012. The GEF funded China (POPs) Contaminated Sites Project under preparation by the Bank will support China’s efforts to develop a national regulatory framework for management of soil pollution and contaminated sites.

7. China also needs to build technical capacity to deal with brownfield remediation and redevelopment in a systematic and integrated manner. National Environmental Quality Standard for Soils has been undergoing an update since 2009. International experiences show that setting cleanup standards, i.e. “how clean is clean”, and linking them to planned land use are crucial for remediation technology and costs. Due to weak regulatory enforcement and driven by booming land market, many brownfield cleanups have been carried out simply through excavation followed by ex-situ treatment in the country. Follow-up monitoring and maintenance is often missing. MEP has drafted several technical guidelines/specifications for environmental investigation, environmental monitoring, risk assessment, and remediation technologies for contaminated sites, which are expected to be issued soon. These technical guidelines borrow experiences from high-income countries. However, each brownfield site has its own contamination type and levels, liability issues, and local socio-economic conditions. Remediation cost can be sensitive to any of these factors. Therefore, an integrated technical framework is much needed.

8. China has put more and more emphasis on financing brownfield remediation and redevelopment in the past three years. The State Council and relevant ministries set out principles for and developed several programs to financing brownfield remediation and redevelopment. These include “polluters pay”, attracting investors/developers who will benefit from investing in brownfield redevelopment, and providing grant to eligible projects. In early 2011, the State Council issued “Twelfth-Five Year Plan for Comprehensive Heavy Metal Pollution Prevention and Control,” which put much focus on heavy metal contaminated land. The plan included a list of key areas and projects that can receive financial support from central government.

9. Driven by the national level heavy metal pollution control plan, Hunan province issued an Implementation Plan for Heavy Metal Contamination Prevention and Treatment for Xiang River Basin, which listed Zhuzhou Qingshitang industrial area as a top priority for site remediation. The Implementation Plan was budgeted CNY50.5 billion and set out several key tasks including restructuring of heavy metal related industries, reduction of heavy metal discharge, and remediation of legacy sites. According to this Implementation Plan, central government will finance 30% while the remainder will be matched by each level of local governments and enterprises. About CNY19.5 billion was earmarked for legacy contamination projects.

10. Qingshuitang industrial area, which has an area of 47km², is located in the northern part of Zhuzhou City by the Xiang River on its north side. It's part of Zhuzhou's Shifeng District as well. The Qingshuitang industrial area started to house industries in the early 1950s during the first and second Five Year Plan of People's Republic of China. A 16km² area in Qingshuitang industrial area holds more than 90% of its industries. This area is called Qingshuitang Core Area and has a mix of land uses, including heavy industry, light industry, commercial activities, utilities, residential area and agriculture. Long time industrial operations have led to serious soil contamination to this area. According to available soil contamination investigation results, the area's soil is contaminated with heavy metals primarily from metallurgical activities. Exposure paths have been – and still are to a certain extent – airborne emissions, waste disposal, wastewater discharge and sludge deposits, soil contamination at manufacturing sites and ground water pollution through infiltration of pollutants.

11. Qingshuitang Core Area is earmarked for redevelopment. The Zhuzhou Municipality has adopted a spatial zoning plan in 2013, namely the Regulatory Planning for Qingshuitang Core Area that includes new land use and urban planning aspects. This planning foresees a mix of logistics activities, manufacturing of railway equipment, production of sports equipment, commercial activities and recreation including the development of an eco-park around a constructed lake-wetland area. Many industries in the area have been shut-down and in time all heavy industry should disappear. However, at least in the next decade, some large industries such as the main lead-zinc smelter complex will remain active the Qingshuitang core area.

Relationship to CAS

12. The proposed project is consistent with the city's master plan, the regulatory planning for Qingshuitang Core Area and with the Bank's County Partnership Strategy (CPS) for 2013-2016 (Report No. 67566-CN) dated October 11, 2012, and is in line with the Strategic Theme One of the CPS, Supporting Greener Growth. The proposed project could contribute to several outcomes under this theme: demonstrating pollution management, sustainable natural resource management approaches, and enhancing urban environmental services. It is also expected that the proposed project will contribute to China's efforts to better management and redevelopment of brownfields.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

13. The proposed project development objective is to support site remediation in Zhuzhou's Qingshuitang core industrial area with the aim to reduce public exposure to contaminated land and to control site contamination in a manner that enables the safe redevelopment of the area.

Key Results (From PCN)

14. The key development impact indicators could include: (a) contaminated land remediated for sustainable redevelopment [ha, core sector indicator], (b) number of people living in the project area with potential risk of exposure to site contamination [number]; (c) improved capacity in remediating contaminated land [persons trained]; (d) establishment of institutional management arrangements for land remediation and redevelopment.

15. The intermediate outcome indicators are likely to include some or more of the following: (a1) reduction of heavy metals at specific sites, (a2) possibly, reduction of heavy metals in groundwater at certain hotspots, (a3) dump sites closed (core sector indicator), (a4) persons living in the project area and potentially exposed to contaminated sites among residents, farmer, (a5) persons

potentially exposed to contaminated sites among workers; (b1) safe removal and disposal of industrial waste, (b2) soils/sediments treated, (b3) water management works built; (c1) knowledge center for site remediation and urban redevelopment operational, (c2) new remediation guidelines prepared and published, (c3) spatial zoning plan for Qingshuitang Core Area updated.

III. Preliminary Description

Concept Description

16. The proposed project involves a section of the Qingshuitang Core Area. The proposed project envisages the remediation of around 7.5km² within the core area, adjacent to some major industrial complexes. Project interventions will mainly consist of remediation works, such as soil and groundwater cleanup or containment, and waste dump removal or in-situ management. Where needed, the proposed project will support some additional activities, such as demolition of structures at remediation sites and related basic infrastructure, e.g. access roads for remediation works and infrastructure for water management (run-off water and drainage water) at remediation locations.

17. The proposed project costs are estimated to be around US\$350 million (US\$150 million World Bank loan and US\$200 million from counterpart funding).

18. Component 1. Remediation of Contaminated Plots in the proposed project Area (approximately 75% of project budget). Under this component all remediation activities will be implemented as defined in the Feasibility Study Report (FSR). Within the present project area of 7.5km², the FSR will determine plot by plot which remediation approach is most suitable and cost effective, based on current use and contamination levels; risks from contamination; and future destination of the plot according to the functions approved development plan.

19. This approach will result in an order of magnitude of 100 plots with a set of 5-10 different remediation models/approaches. Some plots will not need any cleanup work; other plots will only require relatively low-disturbing interventions (e.g. removal of materials) without impacts on ownership or need for demolitions/resettlements. At the end of the spectrum of remediation approaches will be certain plots that require substantial works to achieve full restoration. This approach ensures full tailoring of remediation to specific site characteristics but also flexibility to change from one remediation and restoration approach to another if e.g. the future land-use destination of a plot would change.

20. In addition, a former quarry at the site has been suggested for development and sanitary disposal of certain waste categories of removed materials from the remediation of a number of waste disposal sites within the proposed project area. This will be further examined during Project preparation, including its potential for continued operation as industrial waste disposal facility after the proposed project implementation period.

21. Component 2. Associated Investments of Remediation Works (approximately 20% of project budget). This component includes investments associated to the remediation works under Component 1 that are required to enable the remediation of certain plots or to make sure that the remediation is sustainable. Examples of such association investments and activities are:

- demolitions;
- water management works (run-off water, drainage systems);
- access roads to facilitate remediation and site restoration;

- activities to support relocation of manufacturing plants; resettlement and compensation of workers.

22. Component 3. Capacity Building and Knowledge Management (approximately 3% of project budget). The FSR will identify needs for institutional capacity building to develop skills for management, remediation and restoration of contaminated (former) industrial sites. Since the proposed Project will build know-how and develop capacities that are new in China, particularly tailoring remediation to specific circumstances, risks and future use, there is interest to start a knowledge center for urban redevelopment and site remediation in Zhuzhou. The purpose is to deepen and share the developed expertise across the country. This concept of this center will be further developed in the FSR. In addition, the spatial zoning planning that was adopted by Zhuzhou in 2013 will be reviewed with further detailing and tailoring to remediation concepts. A technical assistance component to support refining of the planning, including its long-term environmental impacts will be supported by the proposed project.

23. Component 4. Project Management (approximately 2% of project budget). The objective of this component is to manage project resources in accordance with the proposed project's objectives and procedures as outlined in the proposed project Implementation Manual (PIM) which will be developed during project preparation. The proposed project will finance the following sub-components: (i) Project Management; and (ii) Establishment of a Monitoring and Evaluation system.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04	x		
Forests OP/BP 4.36		x	
Pest Management OP 4.09		x	
Physical Cultural Resources OP/BP 4.11			x
Indigenous Peoples OP/BP 4.10		x	
Involuntary Resettlement OP/BP 4.12	x		
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

V. Financing (in USD Million)

Total Project Cost:	350.00	Total Bank Financing:	150.00
Financing Gap:	0.00		
Financing Source			Amount
Borrower			200.00
International Bank for Reconstruction and Development			150.00
Total			350.00

VI. Contact point

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