China, People's Republic of: Wuhan Wastewater and Stormwater Management (formerly Wuhan Wastewater and Stormworks Management)

**Project Name**: Wuhan Wastewater and Stormwater Management (formerly Wuhan Wastewater and Stormworks Management)

**Project Number**: 37597-013

**Country**: China, People's Republic of

**Project Status**: Closed

**Project Type / Modality of Assistance**: Loan

**Source of Funding / Amount**: Loan 2240-PRC: Wuhan Wastewater and Stormwater Management (formerly Wuhan Wastewater and Stormworks Management)

- Ordinary capital resources: US$ 100.00 million

**Strategic Agendas**
- Environmentally sustainable growth
- Inclusive economic growth

**Drivers of Change**
- Governance and capacity development
- Knowledge solutions

**Sector / Subsector**
- Water and other urban infrastructure and services - Urban flood protection - Urban policy, institutional and capacity development - Urban sewerage

**Gender Equity and Mainstreaming**
- Some gender elements

**Description**

The overall impact of the Project is to enhance the urban environment, and improve public health, and quality of life for the urban and suburban residents and business in Wuhan City. The outcome of the Project is improved management of surface water resources in Wuhan Municipality by (i) improving and expanding wastewater services in the urban area of Wuhan and the suburban area of Caidian and Dongxihu; (ii) supporting integrated approaches to basin-wide pollution prevention and control, improving water quality of rivers and lakes in Wuhan and in downstream reaches of the Yangtze river; (iii) reducing flooding in Qiaokou District and Yangsigang and Luojia road storm water drainage areas in Wuhan; (iv) increasing the efficiency and management capacity of the two IAs; and (v) improving cost recovery through a better tariff structure, with gradual increases to achieve full cost recovery.

The Project includes 9 major activities grouped into 4 components or outputs; (i) municipal wastewater management in urban Wuhan; (ii) municipal wastewater management in suburban Wuhan; (iii) stormwater management; and (iv) institutional development involving targeted capacity building in wastewater and stormwater management. The Project supports the Government’s 10th and 11th Five-Year Plans, to improve living conditions and health in the PRC cities, and promote their sustainable economic development.

**Project Rationale and Linkage to Country/Regional Strategy**

Wuhan is strategically located at the confluence of the Yangtze and Han rivers, in central PRC. Wuhan has abundant water resources including many rivers and lakes which together take up about one-quarter of the urban and suburban areas. Despite the abundant water resources, rapid economic growth and continuing urbanization over the last 25 years in Wuhan have resulted in inadequate urban infrastructure, and placed pressure on overloaded facilities. Water quality in Wuhan section of the Yangtze river has decreased significantly over the last 15 years mainly due to the wastewater discharge from the city. In 2004, about 2.0 million m³/day of wastewater was generated, but the four existing wastewater treatment plants (WWTPs) have capacity to treat only 26% of this quantity. Surface waters have been seriously polluted: 56% of the rivers and 89% of the lakes in Wuhan have been polluted. Accordingly, WMG is implementing the city’s strategic wastewater master plan to meet national environmental targets and achieve a wastewater treatment rate of 80% by 2010. The wastewater master plan includes the phased and coordinated construction of WWTPs, and sewer networks using local funds, and assistance from ADB, World Bank, and bilateral sources. The ongoing ADB Wuhan Wastewater Management Project (WWMP), approved in 2003, together with other ongoing wastewater treatment projects will increase Wuhan's WWTP capacity to 70% of the wastewater generated by 2008. The proposed Project is not a stand alone investment, but is an integral part of the basin-wide Yangtze water resources management initiative, the Wuhan city urban development plan, the Wuhan wastewater master plan, and the Wuhan stormwater drainage master plan. The proposed Project will provide the critical required 10% capacity for the city to achieve its target of 80% of the wastewater generated by 2010.

The built-up areas in Wuhan are mostly below the average flood level of the Yangtze and Han rivers. Protected by flood control bunds, during wet seasons storm water is discharged to the rivers by pumping. Distinct seasonal variation and heavy summer rains place particular stress on Wuhan’s urban drainage system, and combined sewer overflows also become major sources of water pollution. Aging and inadequately maintained drainage network and under capacity pumping stations result in frequent flooding in the urban area. Wuhan is served by a mixture of wastewater, storm water and combined sewer networks and its urban and suburban areas face a serious and growing deficit in infrastructure, service and environment. WMG is accordingly planning a comprehensive urban drainage and flood control program through 2010.

**Impact**

Improved urban environment, public health, and quality of life for urban and suburban residents and businesses in Wuhan.

**Project Outcome**

**Description of Outcome**: Better management of surface water resources in Wuhan Municipality (contributing to the achievement of MDG 7, target 10).

**Progress Toward Outcome**: In progress

**Implementation Progress**

**Description of Project Outputs**

1. Improved and expanded wastewater services in urban areas of Wuhan;
2. Improved and expanded wastewater services in the Caidian and Dongxihu suburban areas;
3. Reduced flooding in the stormwater drainage areas of Qiaokou District and Yangsigang and Luojia road;
4. Increased institutional capacity of Wuhan Drainage Company and Wuhan Urban Construction Foundation, the two implementing agencies.
Status of Implementation Progress (Outputs, Activities, and Issues)

100% Physical completion achieved by end 2013. Project completion review is scheduled mid 2014.

Geographical Location

Anqing Shi, Caidian, Changqing, Dongshihu Qu, Hankou, Hanyang, Huangpu, Luojiagang, Wuchang, Wuhan, Wuhanshi

Safeguard Categories

- Environment: A
- Involuntary Resettlement: A
- Indigenous Peoples: C

Summary of Environmental and Social Aspects

Environmental Aspects: The Project will improve the urban environment and surface water quality in Wuhan and in the Yangtze River Basin. It will target substantial improvements in wastewater management and will have significant positive effects on water pollution control in the Wuhan reach of the YRB. More reliable potable water will be provided to Wuhan residents, as a result of improved raw water quality. The Project will have an overwhelmingly positive environmental impact, and any environmental risks during construction and the life of the Project can be mitigated through measures in the SEIA.

Involuntary Resettlement: The Project will affect people through (i) permanent acquisition of land for the wastewater treatment plants (WWTPs) and pumping stations; (ii) temporary use of land for wastewater collection systems, WWTPs, and stormwater drainage; and (iii) demolition of houses and nonresidential buildings. Residential requirements have been carefully considered and incorporated into the project design. All project components were planned to minimize disruption in residential areas and villages, and maintain village cohesion. The Project will require the (i) the permanent acquisition of 62.5 hectares (ha) of land, the temporary acquisition of 26.0 ha, and the dismantling of 39,288 m² of residential housing and 29,794 m² of enterprises, institutions, and commercial shops. The compensation for permanent land loss is based on the PRC Land Administration Law (1998) and the State Council Decision to Deepen Reform and Strictly Enforce Land Administration (28 November 2004).

Indigenous Peoples: Not applicable.

Stakeholder Communication, Participation, and Consultation

During Project Design: Consultations with stakeholders, including various levels of governments, implementing agencies, and beneficiaries were undertaken.

During Project Implementation: Consultations with stakeholders, including various levels of governments, implementing agencies, and beneficiaries were undertaken.

Business Opportunities

Consulting Services: About 24 person-months of international consultants, and 150 person-months of domestic consultants will be recruited to support WPMO, and IAs in project implementation and capacity building. The consultants will be recruited in accordance with the ADB’s Guidelines on the Use of Consultants.

Procurement: ADB-financed goods, works and services will be procured in accordance with the ADB’s Guidelines for Procurement. Major contracts will be tendered through international competitive bidding or international shopping, depending on the contract amount. Civil works contract to cost $10 million or less per package will be procured under local competitive bidding. In accordance with ADB’s Guidelines for Procurement, foreign contractors may participate in local competitive bidding contracts.

Responsible ADB Officer: Niu, Zhiming

Responsible ADB Department: East Asia Department

Responsible ADB Division: PRC Resident Mission

Executing Agencies: Wuhan Municipal Government

* Ms. Yu Jingling, People’s Republic of China

Timetable

- Concept Clearance: 29 Aug 2005
- Fact Finding: 24 Nov 2005 to 09 Dec 2005
- MRM: 10 Mar 2006
- Approval: 26 Jun 2006
- Last Review Mission: -
- PDS Creation Date: 31 Mar 2006
- Last PDS Update: 21 Mar 2014

Loan 2240-PRC

Milestones

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Financing Plan

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