

### **Box 8: Affordability Analysis and Measures in the People's Republic of China: Wuhan Wastewater and Stormwater Management Project**

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The Wuhan Wastewater and Stormwater Management Project for the People's Republic of China is a major urban infrastructure initiative that aims to improve the urban environment, public health, and quality of life for urban and suburban residents in Wuhan, the capital of Hubei Province. The expected outcomes of the project are (i) improved and expanded wastewater services in Wuhan and suburban areas; (ii) integrated approaches to basin-wide pollution prevention and control; (iii) improved water quality in nearby rivers and lakes; (iv) reduced flooding in stormwater drainage areas; (v) more efficient and better-managed implementing agencies; and (vi) better cost recovery through gradual increases in water and wastewater tariffs.

Because the project supports increases in wastewater tariffs, an affordability analysis was carried out during the project design phase and the socioeconomic survey carried out at the same time included questions on willingness of households and businesses to pay higher tariffs. Affordability of water and wastewater tariffs was analyzed based on citywide official income data. For all income groups, the combined full-cost tariffs were estimated to be less than 2% of total income (less than 3% of income for the poorest households). The proposed tariffs were, therefore, considered affordable. However, to mitigate the impact of the tariff adjustment, the relevant municipalities provide assistance to people living below the official poverty line through the minimum living security scheme. In addition, the Wuhan Drainage Company finances monthly cash rebates to poor households, which will be adjusted as the tariff increases. Poor households also receive a monthly water tariff subsidy.

Although the existing tariff subsidies for poor households are expected to offset the adverse impacts of tariff adjustments on the poor, the project includes additional measures to ensure that wastewater services are affordable for poor households. These measures, which are included in the design and monitoring framework and supported by detailed covenants in the project agreement, include

- (i) maintenance of wastewater tariff subsidies and periodic evaluation of these subsidies to ensure that wastewater services are affordable to poor households; and
- (ii) measures to ensure that poor households have equal access to wastewater and stormwater benefits.

The covenants in the project agreement require the Wuhan municipal government to

- (i) undertake a review of the regulation on tariff regimes prior to the midterm review of project implementation, including (a) recalculation of minimum cost recovery tariffs based on actual project costs, (b) affordability and willingness-to-pay surveys, (c) financial/economic benefits, and (d) extension of the price escalation mechanism to household and commercial users and other potential fees, such as charges to encourage water conservation and sound environmental behavior;
- (ii) review the impact of water and wastewater tariff adjustments on the poor and maintain and adjust the water tariff subsidy to protect the basic living standards of the urban poor; and
- (iii) hold a public hearing on any tariff increase with key stakeholders, including representatives of the poor, and cultivate public support for tariff reforms through public information and participation programs, including presentations at public meetings and news releases.

Sources: ADB. 2006. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the People's Republic of China for the Wuhan Wastewater and Stormwater Management Project*. Manila; ADB. 2006. *Project Agreement (Wuhan Wastewater and Stormwater Management Project) between Asian Development Bank, Hubei Provincial Government, and Wuhan Municipal Government*. Manila.