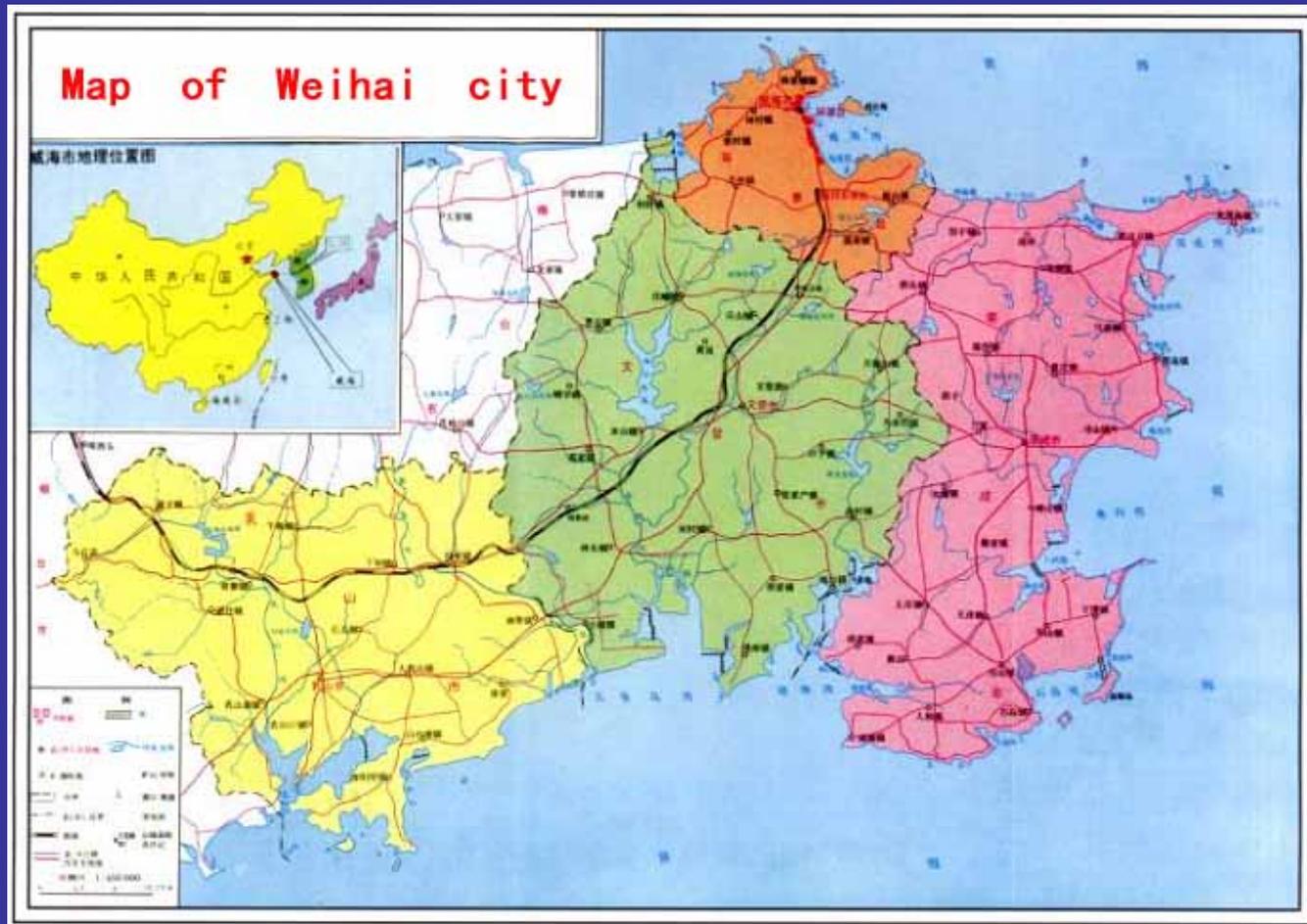


**INTRODUCE MARKET MECHANISM INTO
URBAN WATER MANAGEMENT ESTABLISH
PUBLIC-PRIVATE PARTNERSHIP**

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1. Background



- Weihai is located in the eastern tip of Shandong Peninsula
- In 1987, Weihai was founded as a prefecture level city. Three lower level cities are under its jurisdiction; the total area is 5436 square kilometers, with a population of 2.47 million
- In 2007, compared with the foundation of Weihai city in 1987, the developed urban area grew from 13.1 to 109.0 km²; the urban population grew from 233,000 to 632,000; GDP grew from 3.42 billion yuan to 158.35 billion yuan. The GDP growth rate is 21 % annually.

- Weihai is a water shortage area, the annual available water resource is only 548 m³ per capita, 1/16 of the world average
- But along with the rapid development of urban and industry, the water demand increases rapidly. In the central city, the supplied running water was 6.90 million tons in 1987, increased to 63.30 million tons in 2007.
- Making the situation even worse, the scarce water resource faces severe pollution because the increased wastewater discharges from human and industrial activities.
- During 1999 and 2000, Weihai experienced a severe drought; the precipitation was 316 and 460 mm, only about 1/2 of the annual precipitation. The whole city faced a severe water shortage problem.

2. Description of the initiative

2.1 Collect pollutants discharge fee, force the industrial structure reform

- China has the law of pollutant discharge fee. But in practice, it lacks enforcement. Weihai reinforce the environmental supervision, installed on line monitoring equipments, the collected pollutant discharge fee increased 6.7 times from 1999 to 2007.
- Before 2000, Weihai has 4 pulp & paper mills and 4 ethanol factories; they consumed a lot of freshwater and discharged a lot of waste water, put big pressure on the environment. Until 2001, we gradually shut down all of them.
- During the approval process, the relative departments of Weihai municipal government insisted on the principal of non-pollution and efficient water use, and refused to issue permit to polluting industry though it might make a big contribution to the local revenue.

2.2 Using pricing mechanism, encourage water saving

- Before 1978, China had a planned economic system. The residents enjoyed subsidies for most living cost, include water.
- After the economic reform, China follows market principle, let the beneficiaries pay the cost. In 1999, the water price for the residents was only 1.20 yuan per ton, now is 2.85 yuan that including 1.70 yuan for water supply, 0.8 yuan for sewage treatment and 0.35 yuan for water resources.
- Now at household level, most people use water saving equipment
- More factories use clean product process. 3 heating & power stations invested 150 million RMB, changed the heating system from supplying steam to circulated hot water that can save 1.5 million ton water every year. Now the industrial water reuse rate is 93.14%.
- The entire municipal infrastructure maintenance, like irrigation of grassland and trees, road wetting, use recycled water.

2.3 Using BOT method, absorb private company invest in the sewage treatment plant

- In the early 1980s, Weihai decided to establish district sewage treatment system
- When we constructed the No1 sewage treatment plant in 1985, No2 sewage treatment plant in 1995 and the first phase of No3 sewage treatment plant in 2000, all the investment came from the government revenue.
- When we expanded the No2 and No3 sewage treatment plants in 2005 and 2006, we used the BOT method
- In 1999, the sewage treatment rate in Weihai was 59.99 %, increased to 83.56 % in 2007.

2.4 Follow the polluter pay principle, collect sewage treatment fee

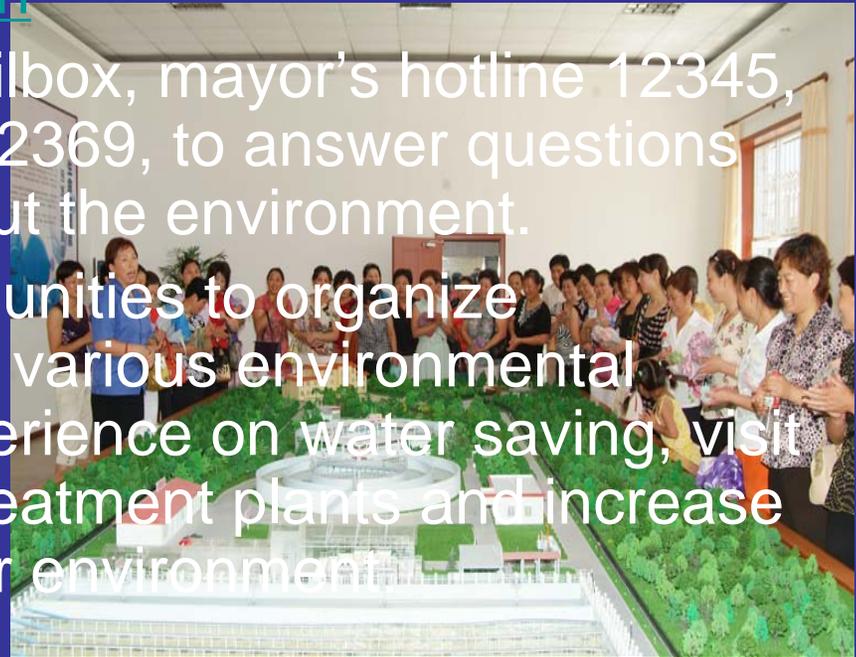
- Before 2005, in most of the cities in China, the running cost of the sewage treatment plants was covered by the government
- In 2005, the central government of China issued a regulation, orders all the cities must collect the sewage treatment fee, gradually raises it, till covers the running cost and the property depletion.
- In 2000, the Weihai government issued a regulation to collect a sewage treatment fee from beneficiaries, 0.40 yuan/t for enterprises, and 0.20 yuan/t for residents. In 2006, we raised the treatment fee to 0.8 yuan/t for resident, 1.1 yuan/t for factories.
- The Weihai Water Group collect wastewater treatment fee with the water supply fee together, If somebody refuses to pay the sewage treatment fee, he cannot get the running water.

2.5 Using market mechanism, encourage new water resource exploration

- Before the initiative takes place, because the running water price was low, the other water alternative resources can not compete with it
- After the initiative, the running water price for industrial usage has been raised from 4.00 yuan to 6.85 yuan that give the chance for water alternatives
- The first desalination station was constructed by Huaneng Weihai Power Station in 2001. The capacity is 2500 tons per day, the investment was 18 million yuan RMB, and the running cost is about 7 yuan RMB per ton. Now there are 3 desalination stations in Weihai.
- The No1 third treatment plant was constructed in 2003, deeper treat the water discharged from the second treatment plant, makes it meets the standard for most of washing, irrigation, cooling and engineering. The capacity is 10,000 tons per day

2.6 strength environment education

- We set up an environmental program on TV and radio; a column in the newspaper Weihai Daily;
- We disclose the environmental information, established a website, www.whep.gov.cn
- We opened the mayor's mailbox, mayor's hotline 12345, and environmental hotline 12369, to answer questions and receive complaints about the environment.
- We encouraged local communities to organize housewives to participate in various environmental activities, to share their experience on water saving, visit the reservoir and sewage treatment plants and increase their awareness of the water environment.



3. Impact

- In 2007, compared with 1999, the supplied water increased from 43.67 million tons to 63.30 million tons; the sewage treatment rate increased from 59.99% to 83.56 %.
- Though the urban population and GDP grew very rapidly, but the water environment remains good quality. All the rivers, the sea water, the supply water resources meet the national standard.

Weihai received the awards

- 1st National Sanitary City
- National Model Cities for Environmental Protection
- National Garden City
- National Excellent Tourist City
- the Best Practice for Comprehensive Management of the Living Environment by UN-HABITAT
- UN-Habitat Scroll of Honor Award in 2003

Thank you!