

City Report of Weihai

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1. City in Brief

The city of Weihai is located at the eastern tip of Shandong Peninsula, bearing a long history, was inhabited as early as the middle of the New Stone Age. The Ming government, in the year of 1398, established Weihai Wei, as a military base, to prevent invaders. In 1987, Weihai, a prefecture level city was founded. Weihai covers a gross area of 5,436 km², with a population of 2.47 million. In 2005, compared with the foundation of Weihai city in 1987, the developed urban area grew from 13.1 to 82 km²; the urban population grew from 233,000 to 462,000; and GDP grew from 3.42 billion to 116.98 billion. But the environmental quality has almost remained the same. In 1987, the average of COD in the coastal sea area was 0.81mg/l, SO₂ in the atmosphere was 0.057mg/m³, and PM₁₀ was 0.077mg/m³; in 2005, COD was 1.05mg/l, SO₂ was 0.026mg/m³, and PM₁₀ was 0.063mg/m³. All of these figures are far below the limits set by national standards.

Weihai was awarded the title of the “1st National Sanitary City in China”, is one of the first “National Model Cities for Environmental Protection,” “National Garden City,” and a “National Excellent Tourism City.” The city has also twice got Dubai International Award for Best Practices to Improve the Living Environment by UN. In 2003, Weihai received the “UN-Habitat Scroll of Honor Award.”

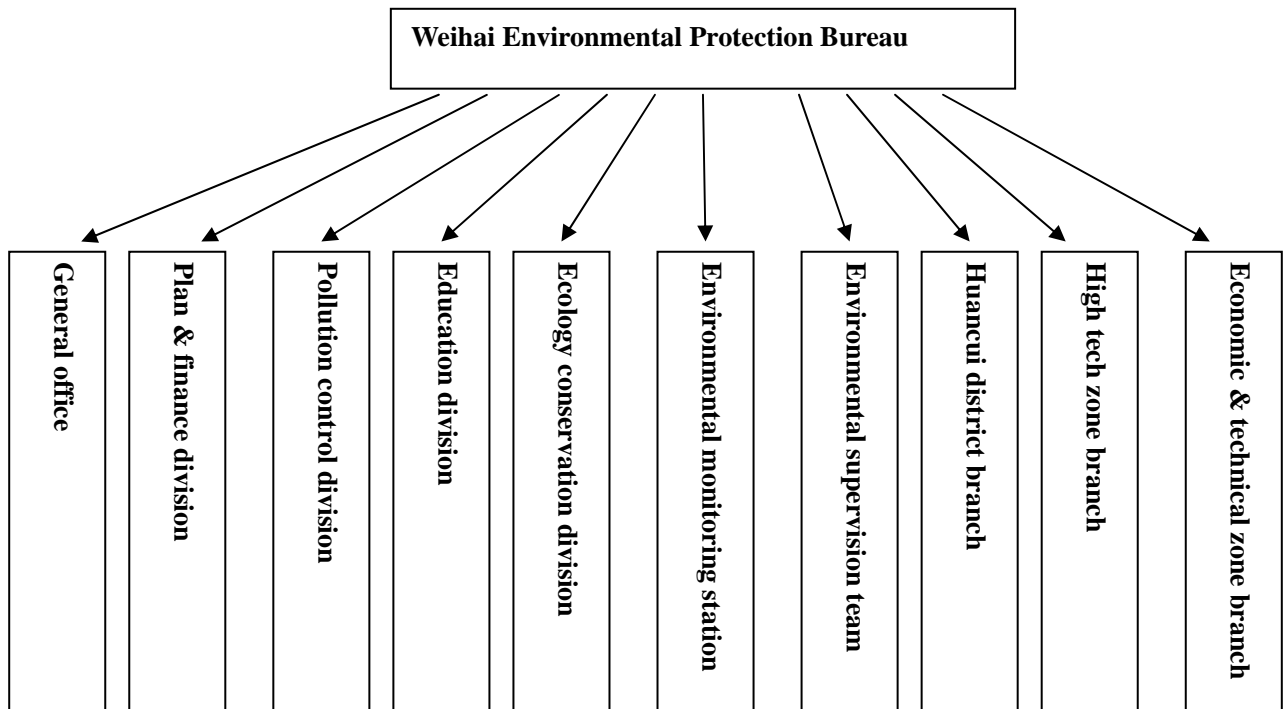
2. Government Structure

The government of Weihai is set up according the national regulations; all of its leaders must be elected by the municipal people’s congress. Now, the mayor is Dr. Song Yuanfang, being responsible for the social and economic development of Weihai together with his subordinates. The financial budget of the city is made by the municipal government and approved by the people’s congress. The financial sources include local revenue, non-tax income and the transferred payment from the central government.

Under Weihai municipal government there are more than 30 departments. They are the Committee of Development & planning, the Committee of Economy & Trade, the Bureau of Education, the Bureau of Public Security, the Bureau of Science & Technology, the Bureau of Supervision, the Bureau of Civil Administration, the Judicial Bureau, the Bureau of Finance, the Personnel Bureau, the Bureau of Labor & Social Security, the Bureau of Land & resources Administration, the Committee of Construction, the Bureau of Transportation, the Bureau of Irrigation Works, the Bureau of Agriculture, the Bureau of Forestry, the Bureau of Sea & Fishery, the Bureau of Foreign Economic & Trade, the Bureau of Culture, the Bureau of Sanitation, the Committee of Family-Planning, the Bureau of Audit, the Bureau of Environmental Protection, the Bureau of Statistics and the Bureau of Tourism.

3, the environmental protection administration

The Environmental Protection Bureau is responsible to the mayor directly. Under the bureau, the organization is as follow:



The responsibilities of the Environmental Protection Bureau are:

- 1) Developing environmental protection plan;
- 2) Carry out the environmental laws, policies and regulations that issued by the national and provincial government;
- 3) Issue environmental regulations on behalf of the city government;
- 4) Issue the environmental permit for new project;
- 5) Supervision the environmental performances of the enterprises and other organizations;
- 6) Collect discharge fees from the enterprises that cannot meet the national pollutant discharge standard;
- 7) Monitor the environmental quality;
- 8) Response the environmental claims from the public.

4, Environment in Urban Policy Making

Weihai, as a newly developing coastal city, enjoys many preferential policies and a unique location, a rapid development of the city and economy was obvious. Weihai, at its beginning, was struggling with the question of whether to continue with the old way—conducting treatment after pollution occurs—or learning the lessons from developed countries, and explore a new way. Weihai has paid great attention to environmental protection, discovered a sustainable development path for the economy and society, created an eco-city. Weihai has successfully explored its options in this regard,

We asked two famous universities in China, Tongji and Tsinghua, to cooperate in developing

the general plan of Weihai, which was considered about the landscape, resources, transport conditions, weather, and economic and social development level. According to the general plan, the urban area was divided into CBD, residential, education & culture, and industrial districts; priorities of industrial development were selected up on analysis of our comparative advantages. According to the general plan, the urban construction department, environmental protection department, industry department, and other departments created their own plans to insure that the general plan will be carried out. In the last 18 years, Weihai rejected more than 300 medium and large scale projects with a total investment about USD 800 million that did not fit the developmental plans of Weihai; even though numerous projects have been rejected, but because the environment has been kept clean, so economic growth has remained sustainable.

5, Current Status and Challenges of Environmental Administration

1) Air pollution

Like the cities in other developing countries, Weihai is facing the heavy pressure from air pollution.

One is the high coal consumption. In China, more than 70% of the energy comes from coal, most of the coal its sulphur content is higher, so the SO₂, dust and NO_x are always the main issue of the air pollution. These years, we encouraged the people to use clean fuel, but the total coal consumption still grows rapidly. We constructed a Power Station and 4 Heating & Power Plants, the total coal consumption from 0.69 million tones in 1987 to 3.27 million tones in 2001, 4.7 times higher. Now in China, we have policies and regulation to force, to encourage the factories especially the power station to use the low sulphur coal, like collecting sulphur emission fee, total sulphur emission controlling, large power station must has desulphur facility etc., but it does not work well. It is hard to find an available technology that can meet the situation in China. So the total SO₂ emission slowly goes high. This situation is hard to be changed in near future.

Another is the vehicle emission. These years, the private car grows very fast. In Weihai, from 1987 to 2001, the annual growth rate of the vehicle is 21.7%. In China, the main problem of the vehicle emission is not only the number of vehicle, but also the poor vehicle condition. Though the emission standard is not as strict as west countries, but most of the vehicle still cannot meet it. Some of the car outdated already, but still running in the road, that caused more traffic accident, also polluted the air very seriously. For this issue, China is just starting, still has a long way to go.

2) Water pollution

Weihai is located in the eastern tip of Shandong Peninsula and no external water comes from. The annual precipitation in Weihai is 770mm, but because the landscape is mountain and hill, so most of the rain water running into the ocean directly. Weihai is a water shortage area. The main water resources of Weihai are Gushan Reservoir and Mishan Reservoir.

In the early 1980s, Weihai has the preferential policies that the central government offered to the coastal opening cities to attract foreign investment. So the economy, the urban construction and population developed very fast. In the same time, the waste water discharged along the coastline grew high, that cause a serious pollution for the ocean water, in some

points, COD, OIL can not meet the standard of the environmental function zone.

Weihai decided to use the central treatment method to control the water pollution. The first sewage treatment plant began to operate in 1985. The capacity of the first phase is 5000 tons per day. The second phase is 10,000 tons per day. That began to operate in 1990. The process is primary sedimentation, aeration, second sedimentation; it is a classical secondary treatment method. Its total investment is 12mRMB.

The second sewage treatment plant began to operate in 1995, the capacity is 80,000 tons per day, the process is grid chamber, rough screen, fine screen, storage, and ocean outfall. In 2005, we decided to add the secondary treatment process in this plant. The total investment is 120mRMB.

The third sewage treatment plant began to operate in 2000, the capacity of the first phase is 10,000 tons per day, and its investment is 50mRMB. The planning capacity is 50,000 tons per day. The process is ORBAL ditch.

In household level, we encourage people to use water-saving equipment, change the screw tap to one action tap, the volume of the urinal must less than 6 L, some householders even storage the water after wash hands or vegetable for running urinal. From this year, using the water-saving equipment in household has become a law that must be followed from house designing.

In factories, we do not permit them to establish higher water consumption project, all of them must use clear product process. The water must be recycled, reused as much as possible. In 2002, the heating-power station invested 50mRMB, change the supplying steam method to circulated hot water for heating, which can save 0.5m ton water every year. Now the water reuse rate in Weihai is 81.4%.

Now Weihai Municipal Government try to use the market mechanism, absorb foreign and private investment, establish joint venture or use BOT, TOT method, to construct and run waste water treatment plants, to increase the efficiency of investment and management, to improve the relationship of private, public and the government.

5. Environment Indicators

5.1. Land Use

a. Total surface area as of December 2004		km ²	5436
b. Forest area			
	Forest area in 2000	km ²	1565.6
	Forest area in 2004	km ²	1891.7
	% change since 1990	%	6
	% of land area covered by forest in 2000	%	28.8
	% of land area covered by forest in 2004	%	34.8
c. Agricultural land			
	Agricultural area in 2000	km ²	1721.89
	Agricultural area in 2004	km ²	1649.69
	% change since 2000	%	31.68
	Agricultural area as a % of total land area in 2004	%	30.35
	Arable land in 2004	km ²	
	Land under permanent crops in 2004	km ²	
	Land under permanent pastures in 2004	km ²	

(Source: Weihai Statistic)

5.2. Waste

a. Municipal waste collection			
	Latest year available		
	Municipal waste collected	1000 tones	217
	Population served by municipal waste collection	%	100
	Municipal waste collected per capita served	kg	1.3
b. Municipal waste treatment			
	Latest year available		
	Municipal waste collected	1000 tones	217
	Municipal waste landfilled	%	100
	Municipal waste incinerated	%	
	Municipal waste recycled/composted	%	
c. Hazardous waste generation			
	2000	1000 tones	0.9
	2004	1000 tones	1.0
	2005	1000 tones	1.0

(Source: Weihai Statistic)