

# KITAKYUSHU INITIATIVE NETWORK AND WEIHAI ENVIRONMENTAL PROTECTION

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Since the launch of the Kitakyushu Clear Environment Initiative program, Weihai actively participate most of the activities of Kitakyushu Initiative Network, learned a lot of experiences of successful practice from the cities of the network, gotten a lot of constructive suggestions from the experts in UN ESCAP, IGES and other cities, that helps very much for the improvement of environmental protection in Weihai. In the same time, Weihai is more open to the outside of the world, more entrepreneurs come here for investment, more visitors come here for tourism, Weihai's economy goes faster, Weihai's environment is getting better.

## **1, The Improvement of Weihai Opening to Outside of the World**

Weihai is a fledging city, located in the eastern tip of Shandong Peninsula, its area is 5436Km<sup>2</sup>, with the population of 2.45M. After China opening to the out side of the world, Weihai developed very fast. From 1987 to 2002, GDP from 2.56billion RMB grew to 73 billion RMB, the growth is 18.2 % annually; urban population from 71,000 grew to 300,000, increased 5.6 times; developed urban area from 13.1Km<sup>2</sup> grew to 43.6Km<sup>2</sup>, enlarged 2.4 times. Though the economy, urban and population developed rapidly, but the environmental quality remains the first class of the country. In 1990, the city got the honor of National Sanitary City, number 1 of China. In 1997, got the honor of Environmental Protection Model City, first cohort (only 6 cities) of China. In 1995 and 2000, two times got the award of the Best Example for Improving Living Environment in the World from UN Human Living Center. Now all the three town level cities under Weihai jurisdiction got the award of Environmental Protection Model City. In 2003, Weihai got the UN-HABITAT Scroll of Honorary Award. We can proudly say that Weihai is famous in environmental protection in China. But until Weihai became the member of Kitakyushu Initiative Network, a few foreigners know Weihai about its environmental protection.

On March 2001, Weihai, under the recommendation of China Environmental Protection Administration, attended the Seminar on Kitakyushu and Dalian Environmental Cooperation that was held in China-Japan Friendship Center for Environmental Protection, Beijing. During that seminar, IGES introduced the program of Kitakyushu Clear Environment Initiative program. We fund the program is very good. After China's reform and open to the outside of the world in early 1980s, the economy grow very fast, in the same time, the environmental challenge is getting serious, especially in the cities. During the last two decades, China has done a lot work in environmental protection, but the international cooperation mostly remains in the national level. This program focuses on the cooperation of the local governments. That is good, because the law, the policy, must be carried out by the local governments. Now China is in its reform period, the local governments have more power and more flexibility than other time and other county, so the information exchange and cooperation with the cities in the Asia & Pacific region is more useful.

Weihai totally support this program.

On November 2001, Weihai was invited to attend the First Meeting of Kitakyushu Initiative Network that be held in Kitakyushu, Japan. In that meeting, Weihai learned a lot of experience of successful practice from other cities, especially Kitakyushu. Weihai gave a presentation about water pollution control. The cities in this region began to know what we have done on the environmental protection. Since that meeting, Weihai became the member of Kitakyushu Initiative Network.

On March 2002, we invited the experts from IGES and the Policy Research Center on Economy and Environment, SEPA, China, do some investigation about Weihai, let them see what happened in Weihai. They have given several constructive suggestions that are very useful for Weihai.

On July 2002, Weihai Municipal Government cooperated with China Environmental Foundation and IGES, held the Seminar on Cities Competing for Global 500 in Weihai. Mr. Qu geping, the director of environment and resources committee of CPPC and Mr. Akio Morishima, chair, board of directors, IGES, attended the seminar and gave a speech. More than 70 participants came from Kitakyushu, Ube, Dalian and other Chinese cities attended the seminar. That makes more people know Weihai that is the base for Weihai to compete for Global 500.

On November 2002, Weihai attended the Kitakyushu Initiative Seminar on Public-Private partnership for Urban Water Supply and Wastewater Treatment held in Beijing. Weihai gave a presentation in the seminar; share the latest experience with Beijing, Bangkok, Ho Chi Minh and other cities.

On February 2003, Weihai attended the Kitakyushu Initiative Seminar on Urban Air Quality Management held in Bangkok, Thailand, gave a presentation about Weihai's experience. The air pollution control action taken by Bangkok is very impressive to us. What is the situation today in Bangkok, may be the situation tomorrow in Weihai, we must do something now.

During the last three years, Weihai take the international meeting as an opportunity, make a lot of friends with the international organizations and cities, do our best to cooperate with them to promote the environment. We have cooperated with Nagoya University, Japan, do some research on the Chinese environmental protection policy, especially for the small and medium enterprises. We have cooperated with Eastern Ocean University, Japan, do some research on the environmental friendly transportation system in Weihai. We take Ube, Japan, the sister city of Weihai, as a good environmental protection partner, promote the information and personal exchanges. This spring, we sent the director of Weihai Environmental Monitoring Station, stayed in Ube for more than two months, learn the advanced technology and management system. Later this year, another two person will be sending to Ube, do visiting study.

During this period, we also attended the e-course on Public-Private Partnership (PPP), Japan for Sustainability, Environmental Education that provided by or via IGES, keep contact with Kitakyushu Initiative Network through Internet.

On October 2002, Weihai was invited to give a presentation about the cooperation with

Japanese partners on environmental protection in the seminar on environmental cooperation that was held by China Environmental Protection Administration and Japanese Embassy in Beijing to celebrate the 30<sup>th</sup> anniversary for normal relationship between Chinese and Japanese governments.

Through the activities above, Weihai is getting out of the country, stepping toward the world that strongly promoted the development of the economy and environmental protection.

## **2, The Improvement of Using Market Mechanism to Establish Environmental Infrastructure**

Before the early 1980s, China is a planning economic system. After China opening to outside of the world, China gradually reform to the market economy. The financing of the urban environmental infrastructure in Weihai is just like the economic system reform in China, has experienced from planning system to market system, but a little bit earlier than the nationwide.

In 1982, when Weihai began to prepare the No. 1 sewage treatment plant, that also the No.1 sewage treatment plant in Shandong Province. In whole China, you also can use your figure to calculate the number of the sewage treatment plants that existed. In that time, the nation just think about the central planning economic system should be reformed, but has no concrete action. The whole investment of the sewage treatment plant came from the government revenue. The running cost also allocated from the government revenue.

In 1992, Weihai government began to construct No.2 sewage treatment plant. During that time, the economic reform in China has got some achievement, many foreign investors came China, joint venture or foreigner owned company were every where, private company become an important part of the economy. In this case, Weihai government think we can not let the foreigners and private take all the profit away, left the environmental problem to the local government. They should pay for the environmental pollution they caused. And during that time, the population, the urban area and economy developed very fast, the infrastructure construction need a lot of money, the government is hard to support it. So the local government asked the provincial government to permit them to collect some sewage treatment plant construction fee from the enterprises. In 1995, the Shandong provincial government gave the permission to Weihai, let us according the daily wastewater discharge volume of the enterprises, collect 700 yuan per ton. This is the first permission in Shandong Province though the collected fee can only cover 40% of the really investment.

In 1994, Weihai government fund the running cost of the sewage treatment system is a big burden and also not reasonable for the government to take whole responsibility, issued a regulation, collect some sewage treatment fee from the enterprises, not for the residents, 0.15 yuan per ton. That only covers 1/4 of the really cost, but it is a breakthrough.

In 2000, Weihai government revised the regulation for sewage treatment fee collection, raised the fee to 0.40 yuan per ton for enterprises, and expended it to residents, 0.20 yuan per ton. This is also the first case in Shandong Province. Now in Weihai, the running cost of sewage treatment is around 0.70 yuan, the government still should subsidize a lot of money to keep the sewage

treatment system running.

After Weihai open up to the outside of the world, we learned a lot of successful experience from developed countries, the experts from IGES gave a lot of constructive suggestion. In the same time, the central government and provincial government released some policies; permit foreign and private company to invest in the urban environmental infrastructure. Weihai government began searching using the market mechanism to develop the environmental infrastructure system. My mayor said publicly, welcome all the private and foreign company to invest in this field, the new project can use BOT method, the existed project can use TOT method, you can monopoly or jointly own it, choose whatever you like. In this case, many foreign and private company come to Weihai, try to catch this opportunity, some made progress.

The first breakthrough is a medical solid waste incinerator project in the end of 2001. Before that time, the medical solid waste was incinerated by the hospital individually, because the outdated technique, close to the residents, the air pollution cause a lot of complains. After a series of discussion, the government decided to allocate a piece of land, invest 0.5million yuan RMB for the equipment, issued a regulation to collect treatment fee from hospitals, 2 yuan per bed per day, let a joint stock company run it. The medical solid waste problem was solved, the government do not need to invest any more, just let the company to develop by themselves to meet the developed demand.

The No. 1 sewage treatment plant is over loaded now, because the expand of urban area, its location becomes a golden beach, the government decided to relocate and expand it. Several investors include foreigners are interested in this project. Now we tended to cooperate with a company based in Beijing, use BOT method to construct this sewage treatment plant. The capacity of the sewage treatment plant is 45,000T/d, total investment is about 65 million RMB, and operation period is 24 years. They are discussion on the details of the contract now.

This spring, Weihai government reformed the management of water supply and wastewater treatment system. Usually water supply and water drainage affairs were handed by different departments of the city government. It is difficult for them to cooperate with each other, but they connected with each other, depend with each other. In order to increase the efficiency, follow the success experience of Shanghai and other cities, Weihai restructured the water management system, established the Water Affairs Group. The group will take the water supply and water drainage as one system, make the water supply and wastewater treatment plant as a enterprise, using market mechanism to manage them, that will improve the management efficiency very much.

Now, Weihai government wants to reform the whole urban environmental infrastructure administration system, according the polluter payment principle, using market mechanism, establish public-private partnership, let the urban environmental infrastructure system run a sustainable development way.

### **3, The Improvement of the Public Participation in Environmental Protection**

According to the theory, public participation in environment in China is protected by the law. But in practice, the public participation in environment is just starting. Because the education and environmental awareness of the public is still in a low level; the legal sense of the public is still weak; most of the real estates owned by state or collective units, the public lack the direct responsibility to protect them, so the public participation in environmental protection is lack the motivation, its function are very limited. But along with the improvement of democracy and economic system reform in China, the public participation in environmental protection becomes more important.

In order to encourage the public participate the environmental protection, first of all, you must open the environmental information, let the public know the situation of the environment. Weihai began to monitor the quality of the environment from late of 1970s, but only the relative government officers can reach the data at beginning. Weihai began to publish the environmental quality in 1995, include the quality of air, water and noise, once a year. In 2000, we established an automatic air quality monitoring system, can get air quality continuously 24 hours a day, 365 days a year. We follow the method of the cities in developed countries, publish the air quality daily through the newspaper, TV and radio. In 2001, we began to predict the air quality for the next day, publish the data through the same way as the air quality.

Environmental science and legal education is the important way to increase the capability of public to participate the environmental protection. The young generation is the future of the country, we began environmental education from primary school, now there are three schools got the award of Green School from the provincial government because their distinguished achievement in environmental education. Most the education courses for the governmental officer and the entrepreneurs have the environmental class. The newspaper, the TV and radio, both of them have environmental program.

Listen the voice of the public, solve the problems they claimed, is important to protect the activity of the public. These years, the number of the claims from the public are increased very fast, that does not mean the environment getting worse, it reflects the increase of the environmental awareness and legal sense of the public. In Weihai Environmental Protection Agency, we have a special department and staff to answer the claims. We established a hotline, 12369, provide 24 hours service. There are also a hotline to the mayor and the director of the Environmental Protection Agency, they talk to the public directly and regularly.

Let the public take part in the environmental decision-making is a really public participation. This years, when we approve a project, if the project is large, especially has the potential affection to the nearby people, we must know the idea of them, get the approval of them first. If we want to change a policy that may affect the people's daily life, like increase the price of the water, must hold a public hearing. Though that makes a little bit complex for the work schedule at the beginning, but it makes much easy for the public to carry it out because that is their own idea. Kitakyushu, Ube and other cities of Japan, have very successful experience on public participation

in environmental protection, we will learn from them, improve the situation in our city.

#### **4, The Progress of the Pilot Project in Weihai**

In the middle of 2002, Weihai has applied a project of Kitakyushu Initiative For Clear Environment Pilot study, got approved from UN ESCAP. The main objective of the project is to establish an overall plan for wastewater management, decrease wastewater pollutant load, using market mechanism and Public-Private Partnership (PPP) methodology, increases the efficiency of the wastewater treatment.

Wendeng city is under the administration of Weihai municipal government. The population in urban area is 200 thousands. In 2000, they have constructed a sewage treatment plant, the capacity is 40,000 tons per day, total investment is 500 million yuan. Along with the rapid development of urban and industry, the volume of the discharge wastewater increased very fast these years. Now the treatment plant is full, some time is overloaded, the water discharged from the plant is hard to meet the national standard. The people lived along the down stream of the river jointly protest the pollution for their drinking water and farming. The plant needs to construct the second phase. There is a tannery in the urban area. It is a limited company, has 1,000 staff. The processing capacity is more than 300 million pieces of pig's hide annually. Its financial benefit is good. But it is a big water pollution source, discharge 4,000 tons wastewater per day. The concentration of pollutants in the wastewater is high, COD 2,500mg/L, BOD 1,000mg/L, SS 1,500mg/L. In 1998, the company invested 10 million yuan, constructed a secondary treatment plant, but because it too close to the nearby residents, they claim the heavy odor and noise strongly. The treatment plant can't run properly. The company needs to construct a treatment plant in another place. There is a monosodium glutamate company has the similar problem.

We invited the experts from IGES, Kitakyushu City and the Policy Research Center of State Environmental Protection Agency of China, came Wendeng, done some investigation. They collected some successful experience from the cities both in China and other country, gave some constructive suggestions. That opened the mind of the local government, they decided to use the market mechanism to solve this problem.

They follow the international role, held a public bidding, through competing to choose a best technology and a best company. Now there are more than 16 environmental engineering company are interested for the project, some of them come from overseas. Through the first phase competing, 4 of them go to the middle phase test of their design.

In the same time, they are searching a suitable management system for the plant. Through negotiation, The sewage treatment plant, the tannery, the monosodium glutamate company, tend to establish a joint venture to construct the second phase of the sewage treatment plant. The total investment of the second phase of the sewage treatment plant is about 40 million yuan. The sewage treatment plant takes the land as investment. The two companies share the investment left according their discharged wastewater volume. According the cost, plus a reasonable profit, the government, the joint venture, the public and other stakeholders jointly establish a treatment fee

collection method and level. They try to establish a new model of public-private partnership for the urban environmental infrastructure. The details are under discussion.

Using the market mechanism, establish a new public-private partnership for urban wastewater treatment, we are still facing some challenge:

(1), The conception change. In China, usually we say, the economy depends on the market, the environmental protection depends on the government. Now, the government realized that they can't cover everything for environmental protection, in some area also must use the market mechanism. This change takes more than ten years after China transfer to the market economy. It will be more difficult for the public and private to change the conception. Because this change can save some money for the government, but will cost more money for the public and private. So we need to increase the environmental awareness, let them know every body should pay for its pollution.

(2), The law establishment. For normal economic activities, China has the law to protect the investors' rights and interests. But for the BOT and TOT, China has no proper law to protect them. And for BOT and TOT, though the contractor signed is a company or a plant, but the really boss is the local government. If there is any conflict, it is not equal for a private or foreign investor to face a government. That is why many investors are interested in this field, but very few of them have real action.

(3), Some technique problem. Because using the market mechanism to establish the sewage treatment system is a new subject, has no much success experience, there are many technique problems need to be solve. Like how much percentage of registered capital the investors should have, what is the proper time to operate then transfer, how high the profit the investors could got, how to supervision the operation, etc. We need to study, to learn, to exchange the information and experience.

## **5, Suggestions**

Kitakyushu Initiative Network has made significant achievement in less than two years; most of the cities got some benefits from the network. But from my experience, I think the network still need some improvement. During the last two years, most of the activities were the meetings and seminars that are necessary at the beginning. We should let the people share the general information about the initiative, the network, the successful experience of the cities, meeting and seminar are the best way. But we cannot remain on this level. We should do some realistic action, let the good ideas, the good management system, the advanced technology be accepted, be used in the cities that need it. This must be done by city to city, person to person, project to project on the field. So I have some suggestions for the next step of the Initiative Network:

A, organize some tour study. One time focuses on one objective. let the cities that are very interested about this objective to participate, tour 2-3 cities that have successful experience. The time period is 8-10 days.

B, held some workshops. Invite some experts from research institute, universities or cities to

give lectures on the site that they need this kind of knowledge or experience.

C, organize the experts do some visiting study. Choose some people, stay in the city that has successful experience for 3-6 months, work with their partner together, to see, to feel, to learn how they are doing. .

D, search more donators to support this program. Environmental protection is a global issue, every country, every city has their responsibility. But the poor area the problem is more serious. The developed country, the international organizations should do more contribution to them.

E, the local government cooperation should be followed by the cooperation of enterprises. The good management mechanism, the advanced technology must be carried out by the enterprises. Enterprises are the base for the development of economy and environmental protection, without the participation of them, most of the good ideas may still remain in our mind.

The suggestion above, some were practiced already in other program and cities, like Kitakyushu and Dalian, they have given us a very good example for the information and personal exchange and project cooperation. We should follow them.

Weihai government like to take the second meeting of Kitakyushu Initiative Network as a good opportunity, learn more successful practice from KIN members, consulting with the experts come from UN ESCAP, IGES and other international organizations, improve the management and technology of environment, improve the development of economy, do more contribution to country, to the region, to the world.