

KITAKYUSHU INITIATIVE FOR A CLEAN ENVIRONMENT PILOT STUDY PROPOSAL in Wendeng, Weihai (China)

1. Objective:

To establish an overall plan for wastewater management in Weihai, decrease wastewater pollutant load and increase the quantity and quality of treated wastewater through the following tasks:

1. Establishment of a long-term vision for wastewater management in Wendeng, as a model area for Weihai;
2. Implementation of policies to decrease wastewater pollutant load;
3. Development of a plan for the construction and management of a wastewater treatment plant using Public-Private Partnership (PPP) methodology.

2. Environmental Background and Issues:

Along with the rapidly development of urbanization and industrialization in Weihai, the volume of wastewater discharged also increased rapidly. Though the government of Weihai has invested 312 m yuan, established 6 sewage treatment plants since 1985, the treatment capacity reached 235 thousands tons per day, but still hard to meet the treatment demands. More seriously, the big construction and running cost become a heavy burden of Weihai municipal government.

From the early of 1990's, the government tried to use market mechanism, collect some treatment fees from the factories, hotels and individuals, but still can't balance the budget. Because all the sewage treatment plant owned by the government, lack the stimulate mechanism, the efficiency of the treatment plants is very poor. The water pollution control is still a tough task for Weihai government.

Wendeng city is under the administration of Weihai municipal government. The population in urban area is 200 thousands. In 2000, they constructed a sewage treatment plant, use the secondary treatment method. Its capacity is 40000 tons per day. Total investment is 500 m 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 1000 staffs, the processing capacity is more than 300 m pieces of pig's hide annually. Its financial benefit is good. In 2001, the profit and tax reached 40 m yuan, No 1 in Chinese hide industry. But it is a big water pollution resource, discharge 4000 tons wastewater per day. The concentration of pollutants are high, COD 2500mg/L, BOD 1000mg/L, SS 1500mg/L. In 1998, the company invested 10 m 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.

In order to solve the problem thoroughly, must follow the polluter pay's principle, establish a good partnership between government, public and private. Weihai decided to take Wendeng wastewater treatment system as the model of PPP (public and private partnership) project.

Through negotiation, the local government, the sewage treatment plant, the tannery and the monosodium glutamate company reached a general agreement:

- (1) The sewage treatment plant, the tannery and the monosodium glutamate company establish a joint venture to construct the second phase of the sewage treatment plant,
- (2) The total investment of the second phase of the sewage treatment plant is about 40 m yuan. The sewage treatment plant takes the land as investment. The two company share the investment left according their discharged wastewater volume.
- (3) According the cost, plus a reasonable profit, the government, the joint venture, the public and other stake holders jointly establish a treatment fee collection method and level.
- (4) After 15 years, the joint venture transfer the second phase of the sewage treatment plant to the sewage treatment plant.

3. Pilot Study Under the Kitakyushu Initiative

Under the Kitakyushu Initiative, this pilot study will be implemented in Wendeng, as a model area for Weihai. The main issues for Weihai are summarized as follows:

- (1) Rapid increase in the volume of wastewater;
- (2) Poor efficiency of technology, management and administration of wastewater management;
- (3) Shortage of human resources and budget for wastewater management;

Tasks for the pilot study will be as follows:

(1) Establishment of a long-term vision for wastewater management in Wendeng

Wendeng will make plans and set targets for wastewater management according to forecasts of wastewater pollution (quality and quantity), i.e. development of a sewerage system, promotion for water conservation and water recycling, conservation of the quality of river, etc.

(2) Implement policies to decrease wastewater pollutant load

A. Promotion of saving and recycling water by residents

Weihai has a successful practice in the area of water conservation and water recycling. This experience can be transferred to Wendeng to increase the awareness of residents regarding water issues.

B. Promotion of CP (Cleaner Production) for industries

Introduction of CP to factories and promotion of effective production and energy saving techniques.

(3) Develop a plan for the construction and management of a wastewater treatment plant using Public-Private Partnership (PPP) methodology

A. Design wastewater treatment plant to meet demand

- Capacity
- Technology

- Construction and running costs
 - Bidding process
 - Other
- B. Establish clear division of duties and responsibilities
- Duties
 - Risks
 - Investments
 - Benefits
 - Other
- C. Design appropriate support techniques
- Setting treatment fees
 - Process for collecting fees
 - Other
- D. Capacity building
- Technical experts
 - CP experts
 - Environmental education experts
 - Factory inspectors
 - Other

4. Division of roles

(1) Weihai (Municipal government, EPB)

- i. Designation of a liaison officer to work closely with the ESCAP secretariat in the preparation and the organization of the pilot project;
- ii. Conduct of the pilot project for development of a comprehensive wastewater management plan in the Municipality, i.e. Establishment of a long-term vision for wastewater management, introduction of means to decrease wastewater pollutant load; Development of a proposal for the construction and management of a wastewater treatment plant using Public-Private Partnership (PPP) methodology in a pilot area (Wendeng district of Weihai) in combination with the promotion of public participation, local coordination and capacity building.
- iii. Preparation of the inception, mid-term review and final evaluation reports on the implementation of the pilot project, with the assistance of other concerned institutions in the region, such as the Institute for Global Environmental Strategies (IGES) of Japan.

(2).ESCAP

- i. Provision of overall guidance to Weihai municipal government in the conduct of the pilot project, as necessary
- ii. Co-ordination for ensuring the result of the present pilot project to be integrated into the activities at the regional level for the implementation of the Kitakyushu Initiative for a Clean Environment
- iii. Provision of lump sum cost contribution not exceeding US\$3,000.00 to Weihai municipal government, which, together with the own contribution and contributions from other sources, would cover costs for the activities

(1) IGES

- i. Coordination of the project in the areas of information gathering, intercity cooperation, proposals to donor community for grant assistance and training, and technical and policy consultation
- ii.

5. Budget

Description	Amount (USD)
Weihai government will undertake the following activities: examination the current sewage treatment system, monitor the environmental quality, tour study to other cities who has a success practice, host work shop, do the feasibility study for the sewage treatment system reform.	27,000
ESCAP donation in lump sum for the following activities	3,000
IGES will provide funding in kind, by providing secretariat facilities and experts	
Communication / Miscellaneous	
Grand Total	30,000