

Experiences of JICA in Environmental Management focusing on pollution control

6th October, 2012

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Outline

1. Essence of the experiences on industrial pollution control in Japan
2. Ube city method for environmental management
3. Experience on application of Ube city method to China

Industrial pollution control in Japan *Essence of its success*

Special circumstances in Japan

- (1) It coincides with rapid economic growth, which could make investment in pollution control.
- (2) Strong initiative by Local government, commitment by the mayor and qualified staffs, and highly educated citizens.
- (3) Enterprises cooperated with local government in pollution control, under the strong management leadership, with technology innovation, i.e. at the oil shocks 1970s.

Ube city method for environmental management

- Yamaguchi prefecture, Western Japan
- Population: 175,000 in 2012
- Challenges by the most polluted city by falling dust in 1950s
- Ube city has developed unique model to control pollution and then to create environmental friendly city

Basic Principles of the method

Social aspects;

- Awareness of autonomy to protect their own health in the community
- Sense of mutual trust and common bonds among government, business, academia and civil society

Basic Principles (2)

Environmental aspects;

- Pollution source control through a consultation based on the scientific data
- Prevention measures and voluntary activities for environmental protection, rather than imposing fines to violators
- Information disclosure on environmental pollution

Social Background

- Coal industry developed based on abundant coal reserves since 1880s.
 - Cooperative group was formed in 1886, and managed the coal mining areas under their own rules.
 - Under the rules of the cooperative group, the financial returns by the coal was used to construct social infrastructures like schools, libraries and parks.
- Beginning of awareness of autonomy among society

Social Background (2)

- Coal mining management was executed under homey atmosphere, where the leader had absolute power for decision making, salary was all equal regardless of the kind of work, foods are provided and eat together.
- Beginning of sense of mutual trust and common bonds

Contents of Ube city method

In 1951

- Establishment of **Dust /Soot Control Committee** by Ube city
- Chairman: Mayor
Members: Business circle 4 persons
Government 4
Academic circle 2
City council member 4

- **Started scientific and comprehensive survey on dust pollution**

- coal quality/quantity, boiler specification, dust control technology, etc. in the major factories
- measurement of dust/soot concentration at 10 points
- epidemiological survey to identify the relationship between air pollution and health

- **Information disclosure on the result of the survey**

- falling dust 55 ton/kg/month (world record!)
- more dust due to high ash content (40%) and low calorie
- introduction of dust collector is more effective than change of combustion method

- Committee requested the major factories to submit reports to explain about operation of the dust control measures, **but...**
- Some of the **first runner factories** tackled pollution control pro-actively

- In 1956

New technology on cement product innovated:

higher cohesive power and water resistance cement, by mixing burner ash from garbage incinerators

→ Strong demand in dam and submarine construction

→ The financial returns reinvested in installing dust collectors

- In 1957

The Summit meeting among mayor, business and academic circles, to set the standard of dust concentration in the exhaust gas from the plant chimney

- In 1960
 - Falling dust 16 ton/km2/month vs 55ton in 1951
 - Conversion of fuel from coal to oil
 - Started SO2 control

- In 1970

Focused on **more comprehensive environmental pollution control**, including water, waste, noise, odor and vibration

→re-organizing of Air pollution control committee, **Environment pollution control council** was established.

8 members from business, academia, civil society and municipal government.

- In 1994

Focused on **more environment friendly or green growth city**, rather than on pollution control

- **recycle plaza for education**
- **zero-emission** among different kinds of plants, utilizing wastes from one plant as materials for another plant (Ammonia, Cement, Glass, Sewage , and so forth)

- In 1997

Ube city received **UNEP Global 500 Award**.

→ Starting point for international cooperation to support other countries in Asia to promote environmental pollution control and recycle society or green city

Application of Ube city method in China

Environmental protection management project in Anshun city under JICA Partnership Program

<JICA Partnership Program: JPP>

- Introduced in 2002 to support and cooperate with the projects formulated by Japanese NGOs, local governments, or universities who are working in developing countries, in order for JICA to utilize their knowledge and experiences in ODA.
- JICA implements the projects in collaboration with those partners based on their proposals, including providing funds.
- No official request from the recipient government is necessary.

Project Background

- Request from the environmental department of Guizhou province to Ube city in 2008
- Ube city conducted preliminary survey about environmental situation in Anshun city
- It was found out that;
 - Industry structure is similar to that of Ube city
 - Awareness of environmental issue is relatively high in Anshun city

Project outline

(1) Objectives

To strengthen environmental administration by establishing the suitable management system in Anshun city, applying the Ube city method

(2) Outputs

- To understand Ube city method
- To learn voluntary pollution prevention at plants / factories
- To learn waste separation and recycle

(3) Main activities

- Training in Ube city (20 trainees from both Anshun city and Guizhou province) by lectures, site visits and discussions with various stakeholders
- Dispatch of experts from Ube city to discuss how to apply Ube city method to Anshun city

(4) Cooperation period

Aug. 2009 – Mar. 2011

Outcome and Impacts

- Permanent consultation organization like Environment Council in Ube city composed of the representatives from local gov., business & academic circles and civil society **could not established** in Anshun city.
- **Instead**, Anshun city gov. has been organizing Environmental Protection Committee twice a year since 2009. The Committee is headed by vice mayor and composed of 60 representatives from local gov., business circles and experts.

- **Target Pollution Control Declaration** was agreed between Anshun city local gov. and major factories. Environmental Protection Committee reviews the contents and its implementation.
- In 2010, 3 environmentally good standing enterprises were awarded by local gov.
- In the EIA process, new mechanism to hear from relevant households and to acquire experts review was developed.

- Tailing debris (10,000 ton/year) from coal mining site has been recycled as law materials for brick factories. And other Zero-emission among various factories are under attempt.
- Ube city method has been well understood among stakeholders in Anshun city.
However, it will still take time to change their behavior as understood.
(comments by a local gov. official of Anshun city)

Conclusion

1. **Key words** for successful environmental management: collaboration among stakeholders, scientific approach, preventive measures including environmental friendly production process, and information disclosure
2. **Japan model** could be applied in other countries, but requires understanding of different backgrounds and trust building each other.

Thank you for your attention!

