

PROJECT HISTORY IN SOLID WASTE MANAGEMENT

Technical Assistance

Technical Assistance for the Shanghai Municipal Solid Waste Project

Client: The Shanghai Municipal Government of the People's Republic of China

Project Location: City of Shanghai, China

Project Execution Time Frame: 2003 - 2004



===== Improvement Project =====

- The Shanghai Urban Environmental Project (SHUEP) partially funded by a \$700 million adaptable program loan (APL) from the World Bank has been initiated in 2002 and will run beyond 2010.
- Phase II of the project (2003-2008) is focused on solid waste management and disposal. The Shanghai City Appearance and Environmental Sanitation Administration Bureau (SCAESB), a unit of the Shanghai Municipal Government, applied for a USTDA (United States Trade and Development Agency) Technical Assistance Grant, and the team Sadat International, Inc. (SII) / Ecology and Environment, Inc. (E&E) was selected to assist them in the preparation of the project for application of the second installment of money from APL.

- Shanghai Municipality is located at the East front edge of the Yangtsejiang River Delta. It has an approximate 18 million people (inhabitant population of 14.64 million and floating population of 3.50 million). It is a major economic and commercial centre in China and has the reputation of being at the forefront of China's economic reforms.
- Since the reform and opening to the world, Shanghai has achieved substantial progress in becoming an international economic, financial, trade and shipping center and has entered a new level in economic development, urban construction, social services, living standards and cultural and ideological progress. These have laid solid foundations for speeding up Shanghai's development in various areas, including the environmental sector.

===== **Services Provided** =====

1. Objectives

The specific objectives of the solid waste management (SWM) services were as follows:

- ❑ Change the role of the Municipality of Shanghai from being a service provider to being a service regulator and facilitator by transferring the responsibility for supplying collection, transportation, treatment and disposal services to social capital participating organizations.
- ❑ Recover the cost of providing municipal SWM services form user charges levied on all waste generators.
- ❑ Maintain the waste disposal quantities at the 2002 level by implementing a reduction, recycling and resource recovery (RRR) strategy supported by source separation of waste, and introduction of appropriate market based instruments.
- ❑ Introduce more environmental friendly and cost effective SWM systems in the city and its surrounding districts in steps with other infrastructure developments

2. Sites and Facilities

Within the SWM project, various sites and facilities were studied as follows:

- 4 landfill sites in rural areas
- 2 large waste transport stations
- 2 waste separation centers
- 2 composting plants
- 2 waste incineration and power generation plants

- Removal of over 100 open dumps
- 1 food waste treatment plant
- 1 bulky waste treatment plant
- 1 non-hazard industrial waste treatment plant
- Domestic waste collection and transportation system in the rural areas
- Hospital waste collection and treatment plant

3. Technical Assistance

SII / E&E technical assistance focused on the following main tasks:

- Review and update the SWM strategic plan in accordance with the Reduce – Reuse – Recycle and Recovery Strategy concept.
- Ensure that the proposals fit in with Shanghai’s Tenth Five Year Plan
- Confirm needs and correct timing for the components.
- Compare and evaluate options for each component.
- Technically review the preferred option.
- Carry out financial and economic analyses for each component in accordance with World Bank Requirements. Develop a financing plan and flow of funds mechanism. Perform socio-economic survey and an affordability analysis
- Review the current institutional arrangements for each component.
- Identify necessary institutional capacity building, technical assistance, and training needs associated with the implementation of the identified Market Based Instruments (MDI).
- Review SWM charging as practiced in China and internationally. Assist SCAESB in the preparation of specific proposals for a SWM charging system and the development of a detailed and practical implementation plan.
- Advise SCAESB on a program of publicity and public awareness to gain public acceptance to the principle of domestic SWM charging.
- Ensure that the Environmental Assessments and the Resettlement Action Plans satisfy both Chinese and World Bank requirements.
- Review the environmental management policies and regulations in force in China in general and in the Municipality of Shanghai in particular, identify strengths, problems, and shortcomings.

- Review of existing command and control and economic instruments in use in Shanghai, identify strengths, problems, and shortcomings
- Prepare a comprehensive project implementation plan for each component, including detailed cost estimates, contract packaging for both national and international bidding, and a tendering and implementation schedule.