

**Better City, Better Life**

# **Solid Waste Management in Shanghai**



**September, 2012**

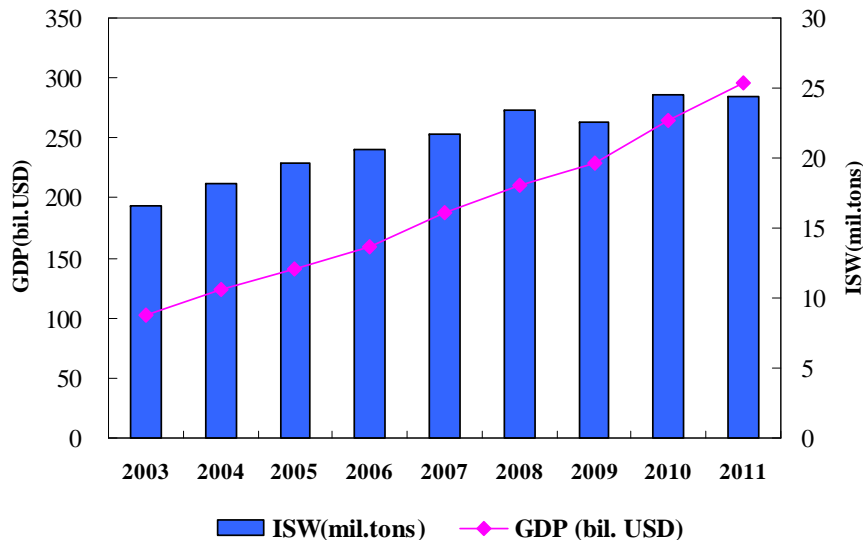
# City Profile

- Eastern coastal city, situated at Yangtze River Delta
- largest economic center, trade port and industrial city in China.
- Provincial-level municipality, consisting of 16 districts and 1 county
- Area: 6340 km<sup>2</sup>; residents: over 23 million
- GDP: 295.3 billion USD ; Per capita GDP: 12,780 USD in 2011

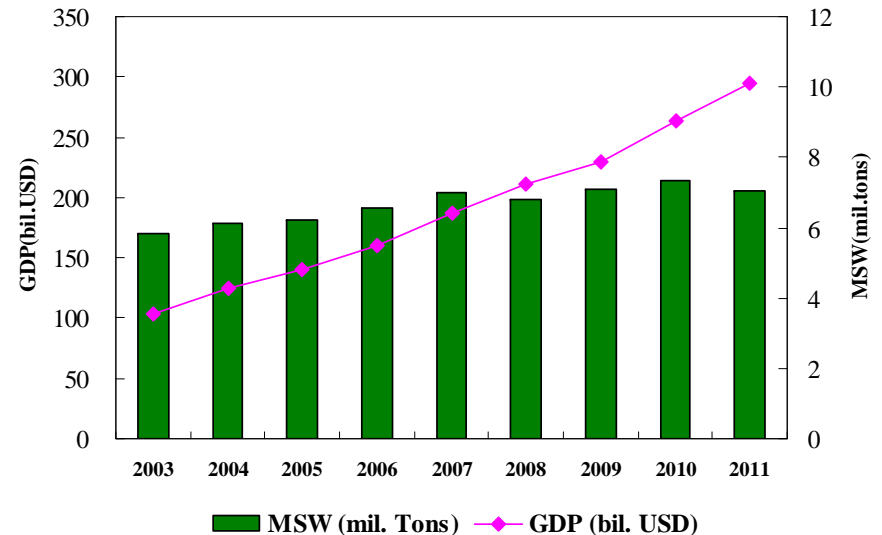


# Waste Generation in Shanghai

- **Generation of Industrial Solid Waste from 2003 to 2011**



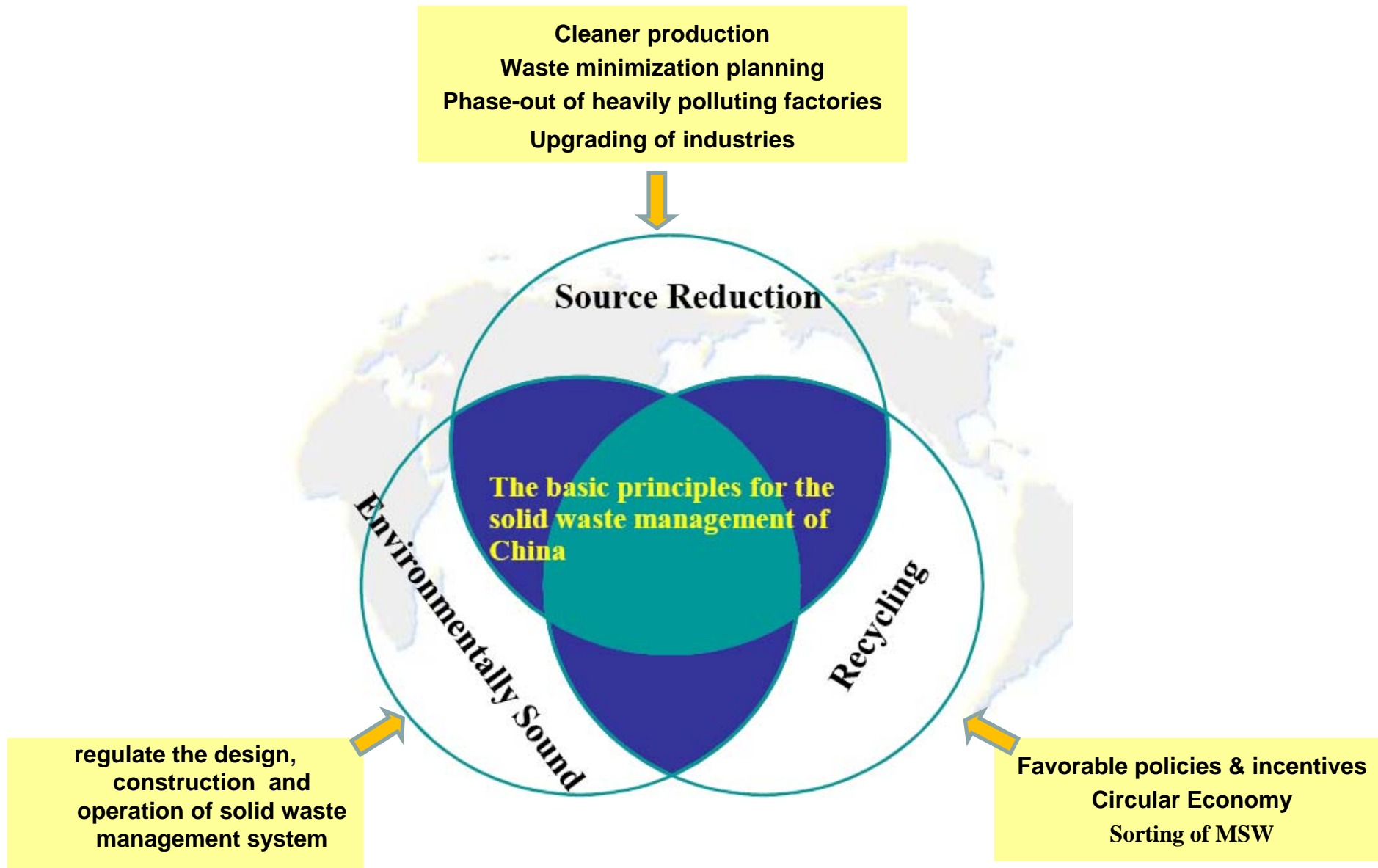
- **Generation of Municipal Solid Waste from 2003 to 2011**



## In 2011

- **ISW (IHW included): 24.42 mil. Tons (Smelting slag, coal ash, desulfurization gypsum)**
- **MSW: 7.04 mil. Tons**
- **IHW: 0.56 mil. tons**
- **Medical Waste: 23, 000 tons**

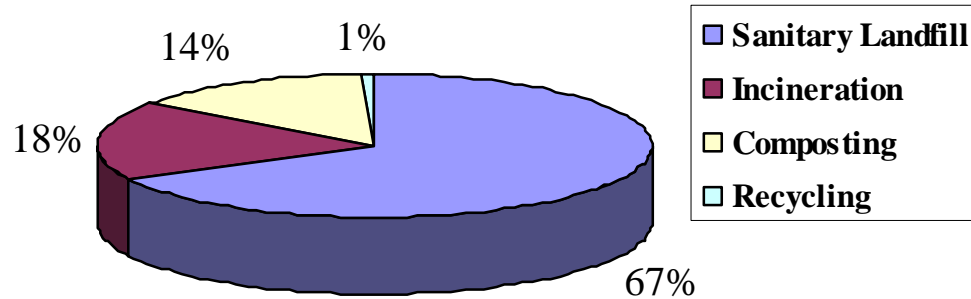
# Principles of Solid Waste Management



# Current Status of Waste Disposal in Shanghai

- In 2011, safe disposal rate of MSW is 87.6%.

MSW Safe Disposal



- MSW segregation pilot programs have covered 0.58 mil. households.
- More MSW infrastructure facilities are under designing and construction .



Landfill

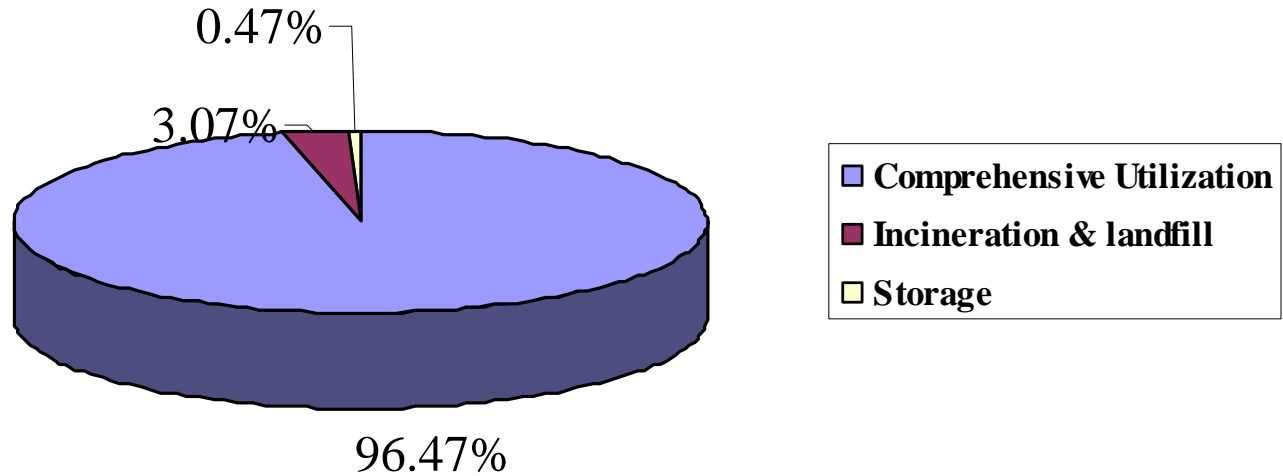


MSW Incineration Plant



- In 2011, ISW (IHW included) has been 100% disposed

### ISW Disposal



- In 2011, medical waste has been 100% safely disposed (incineration).

HW Incinerator



HW Landfill



MW transportation vehicle



- **Entire-process environmental management system on HW management has been established and improved;**

**HW management plan**

**HW transferring  
management information  
system**

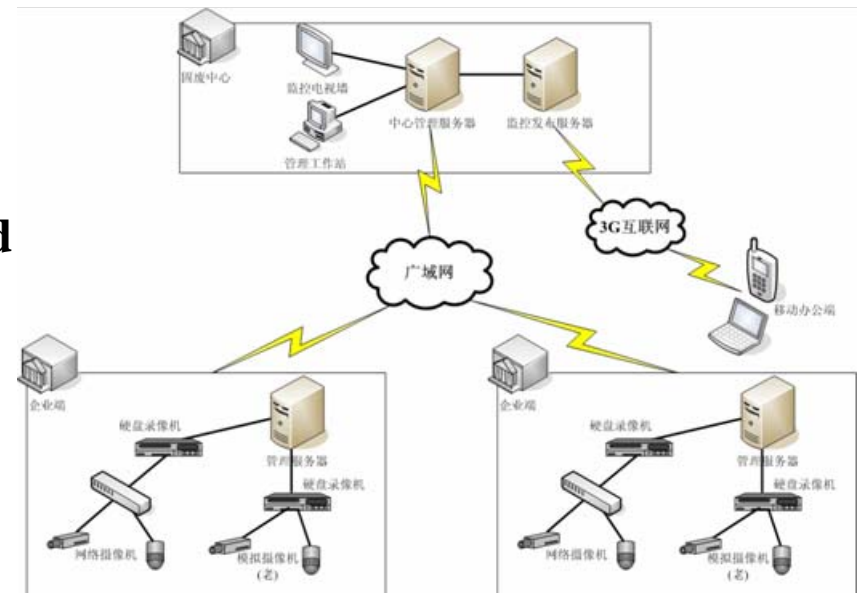
**Monitoring & supervision  
on licensed HW disposal  
enterprises**

**Joint conference system on  
HW management &  
supervision among Yangtze  
River Delta**

**Communication & cooperation  
mechanism between EPB and  
health department established  
on MW management**

- **Infrastructure for HW disposal: 45 professional enterprises with the capability of 500,000 tons per year, covering physical & chemical treatment, comprehensive utilization, landfill and incineration.**
- **Collection and transportation system for medical waste covers more than 2000 hospitals and health institutions citywide**
- **70 MW transportation vehicles and nearly 9000 MW transfer containers.**

- **E-waste management**
- **EPR system established since 2009**
- **8 licensed professional enterprises with the dismantling capability of 100,000 tons**
- **Recording and reporting institution, inspection and monitoring institution established.**
- **Trade-in policy applied on TV, washing machine, refrigerator, air-conditioner and PC since 2009**
- **From 2009 to 2011, 8.85 mil. of waste home appliances and PC have been recovered and dismantled.**



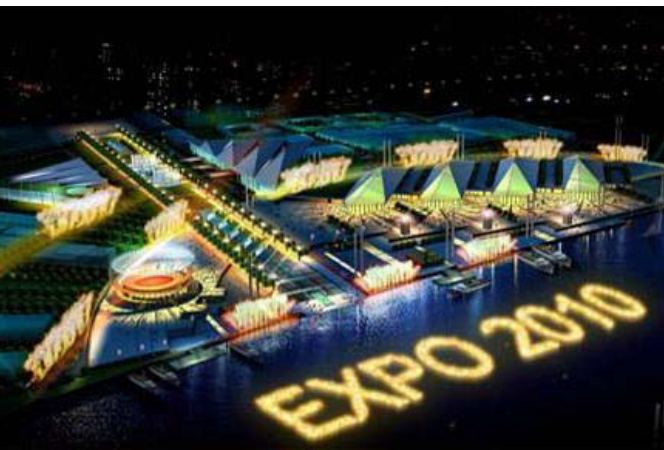


# **Challenges on Solid Waste Management**

- **Continuing growth of industrial solid waste**
  - **sludge from sewage water plant**
  - **desulfurization gypsum**
  - **denitrification catalyst**
  - **coal ash**
  - **fly-ash sourced from MSW incineration**
- **Environmental risk prevention & control in the process of HW collection and transportation**
- **Capability and layout of treatment & disposal facilities need to be improved and optimized**
- **Capacity building on whole-process monitoring & supervision, risk prevention & control need to be strengthened**
- **MSW segregation and recycling need to be greatly pushed forward**

# Outcome from Shanghai EXPO on Solid Waste Management

- Waste minimization at source: recyclable construction materials, potable water supply system (reducing 5460 tons of plastic), use of electronic information technology
- Waste segregation and recycling: Two-Bin Waste Segregation-at-source system; kitchen waste, kitchen oil and non-recyclable waste were treated separately.
- Pneumatic Conveyance System (PCS) for solid waste transportation



# Building Shanghai into a zero waste society in the future

- ❑ Waste minimization & segregation at source (MSW safe disposal rate aims to reach 95% by 2015) ;
- ❑ Professional transportation system for hazardous waste
- ❑ Improvement of solid waste treatment & disposal capability
- ❑ Enhancement of management and supervision
- ❑ Regulations & Fund



**Thanks for your attention!**

