



Overview of 'Eco-cities' Development in China

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OUTLINE

1. Background of eco-cities construction
2. Current situation of eco-cities development in China
3. Central government action for eco-cities construction



1. Background of Eco-cities construction

- Urbanization
- Industrialization
- Economy increases
- Shortage of natural resources and energy
- Environmental pollution
- Demand of high quality life

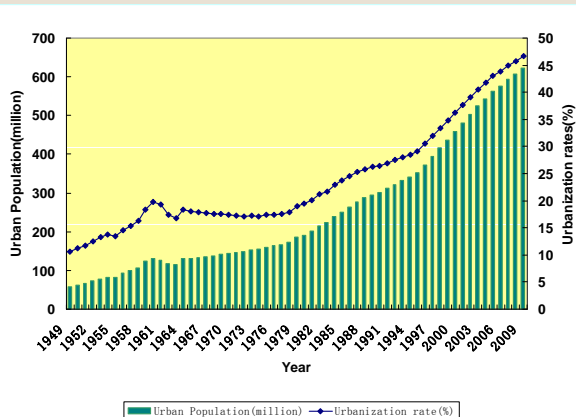


Urbanization rates

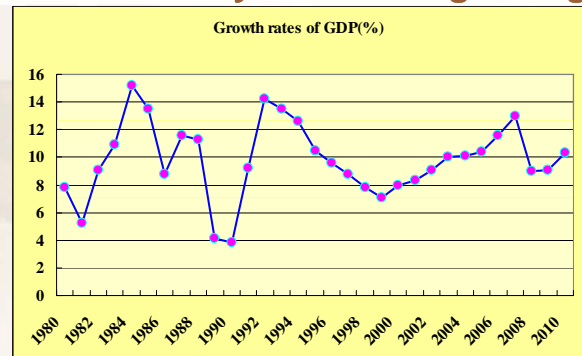
- The country's urbanization rate was 46.6%, China's urban population reached 622 million people at the end of 2009,
- urbanization rate was 10.6% in 1949.
- 70 percent of China's population will live in urban areas by 2050.



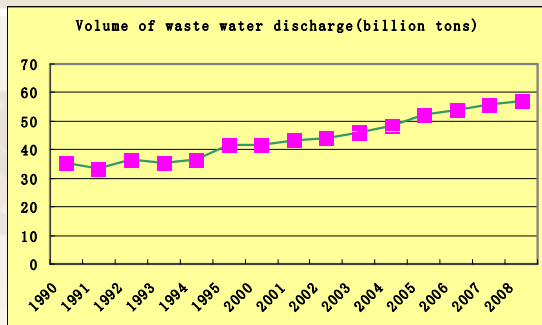
China's urbanization rates



China economy is still fast growing



The volume of wastewater discharge



2. Current situation of eco-cities development in China

Reach a consensus on eco-city, two ways to construct eco-city

- (1) Local government
- (2) Eco-city construction program by international co-operation



Reach a consensus on eco-city

- Eco-city become the consensus on city's planning and construction in China.
- It become the new Model of city's development.



(1) Local government

- Over 100 cities plan to construct eco-cities.
- First city: Yichun, Jiangxi Province, in 1988;
- Eco-city construction should include:
 - Eco-economy
 - Eco-environment
 - Eco-culture



Yichun: livable city of China



Hangzhou



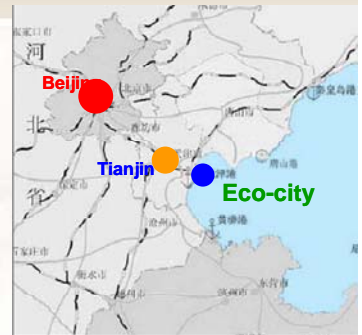
(2) Eco-city construction program by international co-operation

- Set up a new eco-city
- China-Singapore Tianjin Eco-city,
- Beijing “Sino-Fin Ecological Valley”
- Caofeidian International Eco-city



China-Singapore Tianjin Eco-city

- Objectives of Eco-City
- Platform for mutual learning and joint development of a model for sustainable development
- Broaden & deepen Singapore-China partnership



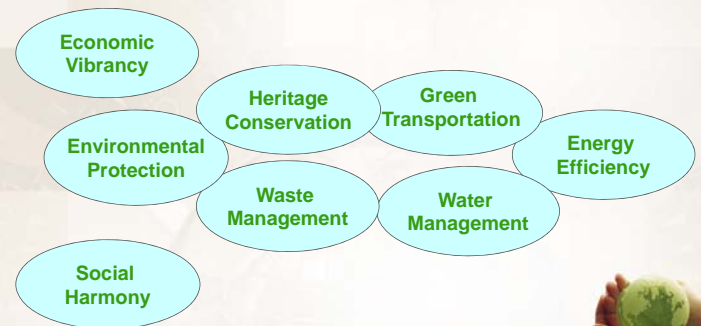
Key Performance Indicator (KPI) Framework

- ❖ KPIs to guide planning & development of Eco-City
 - Higher of Singapore & Chinese standards
 - Take into account local conditions & constraints
- 26 KPIs under 3 broad categories
 - Ecological and Environmental
 - Social
 - Economics



Holistic Master Planning

Comprehensive planning approach incorporating best ideas from China and Singapore



Development Timeframe

- 1st Phase of Development
 - 3 km² Start-up area (3-5 years)
- Subsequent Development
 - From South to North
 - From West to East
- Completion of Eco-City
 - 10 - 15 years



3. Central government action for eco-cities construction

- Comprehensive Management and Quantitative Evaluation of Urban Environment
- National Model Cities of Environmental Protection
- Eco-model Area



Comprehensive Management and Quantitative Evaluation of Urban Environment

- On 13 July 1988, the environmental protection commission of the state council issued “Decisions on comprehensive management and quantity evaluation of urban environment”;
- the evaluation measures started on 1 January 1989 ;
- The evaluation measures include four aspects: environmental quality, pollution control, environmental construction and environmental management.



National Model Cities of Environmental Protection

- The Environmental Protection Agency launched the activity of national model cities of environmental protection (NMCEP) in 1997;
- The assessment index includes socio-economic, environmental quality, environmental construction and environmental management measures;
- A review system would ensure the cities' continuous improvement;



National Model Cities of Environmental Protection

- According to statistics from the MEP, the economy of NMCEP cities increased steadily, the average growth rate increased by 53.41%, the growth rate of per capita GDP was 26.7%, the growth rate of the economy and per capita GDP of NMCEP cities are respectively 1.5 and 3.5 times of Chinese average levels, and the growth rate of environmental protection investment improved by 18.1%.



Eco-model Area

- **Eco-model Area includes eco-provinces, eco-cities and eco-counties.**
- The MEP recommends performance standards for eco-cities, co-counties, and eco-provinces.
- Indicators include Economy, environment and social
- At eco-city level: 28 indicators
- At eco-province level : 22 indicators



Economic indicators

- Per capita GDP,
- Annual per capita rural income,
- Energy and water consumption per unit of GDP,
- Compliance rate for clean production industries.



Environmental indicators

- Proportion of forest cover,
- Proportion of protected areas,
- Air and water quality,
- COD (per CNY10,000),
- SO2 (per CNY10,000),
- Municipal and industrial solid-waste treatment rates,
- Noise pollution,
- Per capita urban green space,
- Level of investment in environmental protection.



Social indicators

- Urbanization rate,
- Gini ratio (at province level),
- Public satisfaction with the environment,
- And so on.



Eco-provinces for pilot

- Till now, there are 14 Eco-provinces for pilot, as follows:
- Hainan(1999), Jilin, Heilongjiang, Fujian, Zhejiang, Shandong, Anhui, Jiangsu, Hebei, Guangxi, Sichun, Liaoning, Tianjin and Shanxi.
- There are 500 counties to begin to construct eco-counties for pilot.



Eco-counties

- 11 counties(districts) have reached the standards of eco-counties: Zhangjiagang, Changshu, Kunshan, Jian, Minhang District of Shanghai, Miyun county and Yanqing of Beijing, Rongcheng, Yantian District of Shenzhen.



The demand of named Eco- by MEP

- Eco-provinces: over 80% eco-cities
- Eco-cities: over 80% eco-counties
- Eco-counties: over 80% eco-villages



Thanks !

