

**Serve Shanghai Eco-municipality**

**Construct Modern Eco-island of Chongming**

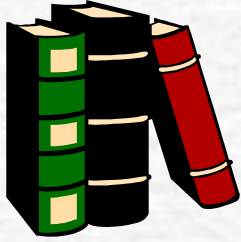
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# 1. Background

# 1.1 National Strategy



## ❑ Scientific Outlook on Development

- Proposing Subject: Third Plenary Session of the 16th CPC
- Connotation: To advocate a people-oriented, all-round, harmonious and sustainable development in a civilizing way in respects of production, life and ecology.
- Fundamental requirements: Realization of five overall plans (balance between urban and rural, different regions, economy and society, human and nature, domestic and external)

## ❑ Resource-saving and environmental-friendly society

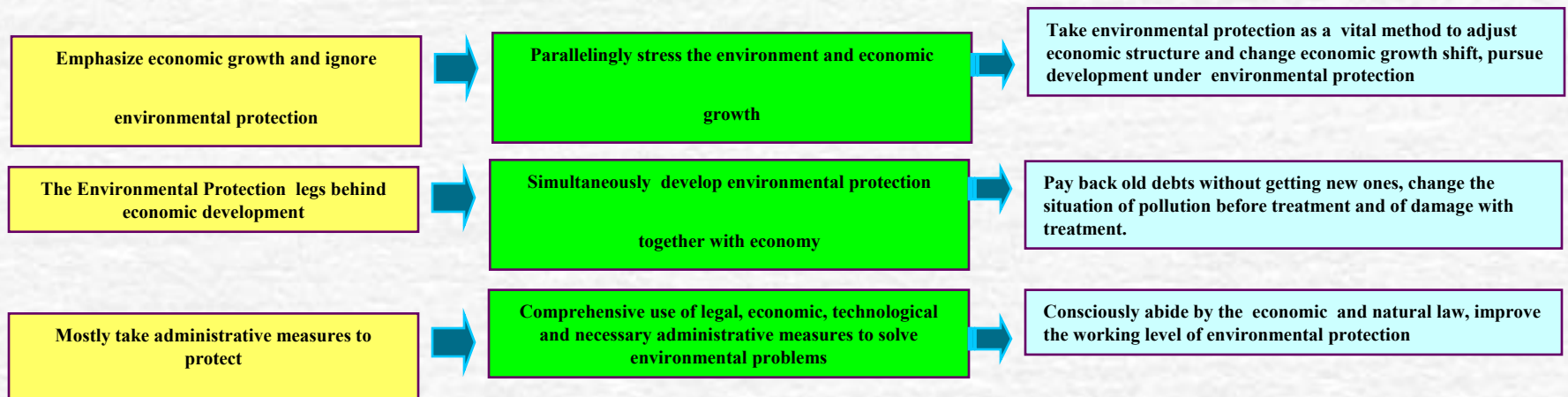
- Proposing subject: Fifth Plenary Session of the 16th CPC
- Connotation : The thrifty resource consumption, efficient resource utility and circular economic development; founded on environmental loading capability, ruled by nature law and initiated by environmental culture and eco-civilization.
- Fundamental requirements: Essential alternative of economic growth shift

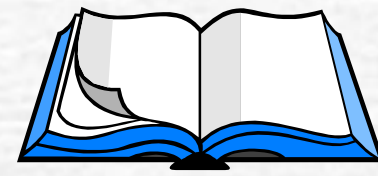
## ❑ *State Council's Decision on the Implementation of the Scientific Outlook on Development and Acceleration of the Environmental Protection*

- December, 2005, National Publicized Document No.39, 2005
- Place environmental protection in a more important strategic position, lead the work of environmental protection with the Scientific Outlook on Development, harmonize socio-economic development with environmental protection, effectively solve prominent environmental problems, and establish and improve the long-term effective system for environmental protection.

## 6th National Environmental Protection Conference

- Premier Wen Jiabao pointed out in April 2006 at the meeting of the 6th National Environmental Protection Conference
- To fulfill the environmental protection in modern situation, the key is to accelerate the realization of "three changes."





## 1.2 Orientation of Shanghai

### □ Shanghai's *11th Five-Year Plan*

- develop a circular economy, construct a resource-saving and environmental-friendly city
- advocate awareness of resource-saving and environment protection; apparently improve resources utility and reduce waste discharge; stress the basic treatment, mechanism and efficiency, promote the environmental protection and eco-construction.

### □ Shanghai's Suggestions for Implementation of the State Council's *Decision*

- August 2006, the Shanghai Publicized Document No.21, 2006
- Put even greater emphasis on environmental protection **(to optimize economic development, protect people's health and the promote social harmony)**, adhere to a scientific development and modern industrializing road, and properly solve the current and long-term environment issues, further consolidate the rule of law and policy guide, strengthen social responsibility for environmental protection.
- put forward a subjective " to 2010, Shanghai will basically build the framework of **eco-municipality system**"

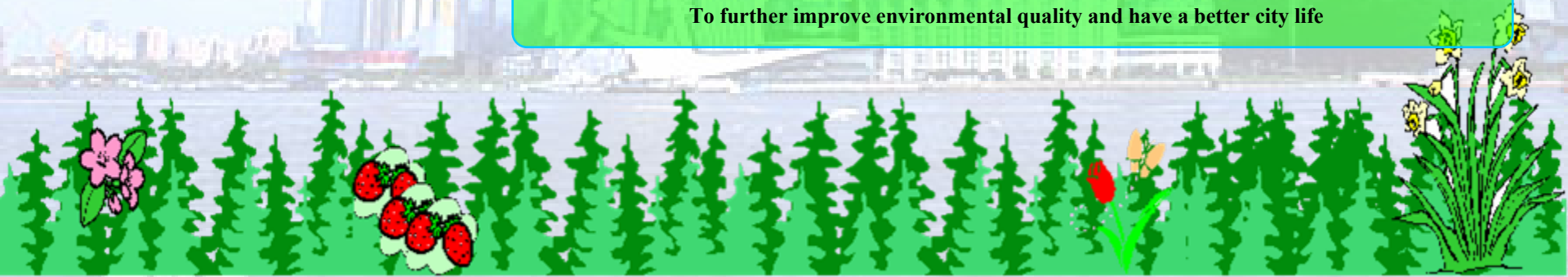
- Details for basically build the framework of eco-municipality system --- *"11th Five-Year"* plan of Shanghai's environmental protection and eco-construction

To make environmental infrastructure basically perfect and city development more harmonious

To put environmental pollution under effective control and urban environment in greater safety

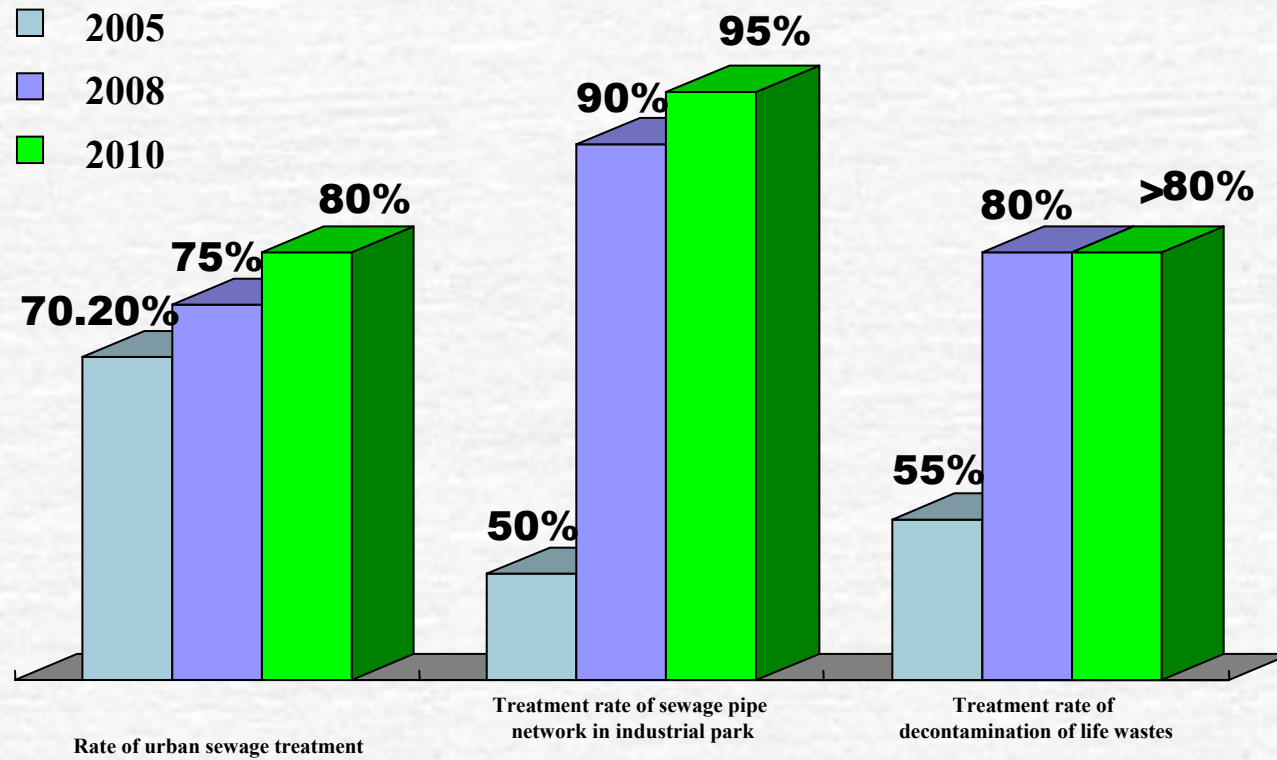
To constantly improve environmental supervision system and make the city management more scientific

To further improve environmental quality and have a better city life



# Indicator of general target in "11th Five-Year" Plan

Environmental quality is to be further improved, city life is to be more comfortable



**Indicator of environmental protection in "11th Five-Year" Plan**

**Environmental pollution is to be further controlled, city environment is to be more secure**

To reduce the total COD discharge by 15%

To reduce SO<sub>2</sub> discharge by 26%



## Indicator of environmental protection in "11th Five-Year" Plan

To constantly improve environmental supervision system and make the city management more scientific

- To elevate environment supervision so as to make 95% of all the enterprises stabilize their emissions up to standard
- To make sure the supervision on vehicles equal to or no less than 80%
- To reduce the water consumption rate of 10,000 GDP by 16%
- To invest 3% of the city GDP to environmental protection
- To thoroughly fulfill "Dust Control Area"



## Indicator of environmental protection in "11th Five-Year" Plan

To constantly improve environmental supervision system and make the city management more scientific

- To bring 90% or more water up to standard in source area
- To keep the rate of good atmospheric quality over 85%, to reduce intensity of SO<sub>2</sub> by 10% and the amount of dust falling by 20%
- To rectify the black and stinky river courses and continuously improve the river water
- To effectively treat Wujin District and basically satisfy the environmental quality demand of function regions
- To bring the percentage of greenery coverage up to 38%
- To build Pudong New Area into a National Model District for Environmental Protection, Minhang into a National Advanced District for Eco-Construction and Chongming into a National Advanced County for Eco-Construction

Construction of National model  
City  
of environment protection



## 1.3 Chongming's objectives

- In 2002 the eighth CPPCC of Shanghai put forward a proposal-- to actively prepare for Chongming's development" and consequently began to draft *The master plan for development of Chongming three islands*
- In 2004, president Hu Jintao visited Chongming and considerably affirmed the plan for eco-islands construction, in the meanwhile, he instructed practical implementation and better islands should be done under the guide of Scientific Overlook on Development.
- In July 2005, with the ratification of State Council, Changxin and Hengsha were allotted to Chongming county, therefore dynamic interaction of Chongming three islands was formally triggered.



- In October 2005, “ The master plan for development of Chongming three islands” was officially put into force by the municipal government, which stated the construction direction of general targets, functions, industries, population and infrastructures on the three islands. It also claimed the islands would be constructed into a modern eco-island featuring a beautiful and harmonious environment, the thrifty use of natural resources, and the coordinated social and economic development.
- In December 2006, the tenth CPPCC of Chongming county proposed to establish National Advanced Eco-county during the eleventh Five-year Plan. In May 2007, Eco-county Construction Plan was ratified, which was guided by the principle of Eco-protection Priority, Infrastructure First, composed of constructive tasks of six portions, and integrated by important implementation project in eight fields.



## **2. Chongming's significance in Eco-municipality construction of Shanghai**

## 2.1 Superior geo-position—important strategic space for sustainable development in Shanghai

❖ **Important geo-strategic position:** Chongming islands are located at the estuary of Yangtze River, a “T” shaped combination of the axis of China's coastal development and that of the Yangtze River economic development.

❖ **major advantages in development strategy:** It is clearly stated in *Master Plan of Shanghai Municipality* that Chongming is the important strategic space in Shanghai’s sustainable development in 21st century and it will become the new strategic center after the development of Pudong New Area.



**With construction of Yangtze Tunnel and Bridge, Chongming Islands function as an “island bridge”, directly penetrating to the hinterland of northern Jiangsu. They are encountering new opportunities under the metropolis radiation effects cocked by Shanghai in the Yangtze River Delta.**

## **2.2 High environmental quality—effectively releases the eco-environmental pressure of Shanghai Municipality**

- ❖ **Atmospheric quality steadily remains between the first and second level.**
- ❖ **Above-ground water quality keeps between the second and third level**
- ❖ **Regional noise stands up the standard of function region**
- ❖ **Soil quality is always in a superior state.**

**Chongming islands, at present, are not developed in large scale, therefore it is the best suburb county in terms of environment with famous pure water, rich soil and clean atmosphere.**



## 2.3 Rich land resource—make abundant storage for sustainable development of Shanghai Municipality

- ❖ **Relatively low population density** : The Chongming islands cover the total area of 1,411 square kilometers, about 25% of Shanghai, while the city's total population is only 5% of it;
- ❖ **Continual increase of land resources**: Since the sediment carried by Yangtze River deposit at the estuary, Chongming Islands' coast is constantly extending outward. Area of Chongming Islands has doubled in recent 50 years.

**It seems even more precious for Shanghai who has contradiction of dense population and land shortage with economic development.**





## 2.4 The abundant bank line resources

-- an important reliance for Shanghai port economic development

The total length of bank line is about 284kms. There is good deep-water bank line respectively on the south of three islands, which is quite up to standard of international big port. But they are mostly in spare condition.

Deep-water bank line {

- About 27kms in Chongming—Bai Maosha North Waterway and New Bridge Waterway bank line
- About 20kms in Changxing—Between Panshi Port South Islands and Xizheng Port, 4.5 Kms have been used including cross-river project and estuary facilities as planed.
- About 2kms in Hengsha—locating in south islands

**Under the condition of limited bank line resources of the city, Chongming Islands' resources make it possible to develop bank line economy and modern shipment industry, which will exert great effect on the establishment of international shipping center. In the meantime, it can also provide an arena for shipbuilding, submarine cable, and offshore oil platforms.**

## 2.5 An important function of the eco-service

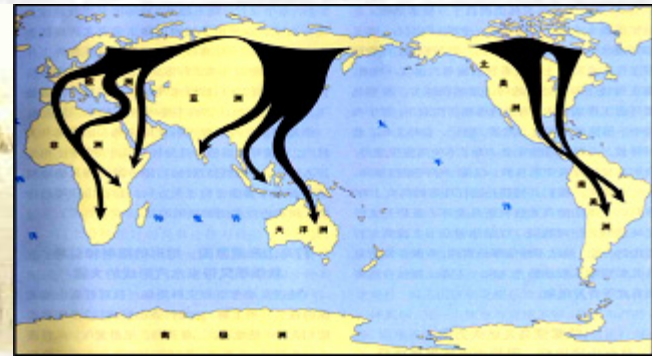
-- indispensable guarantee for Shanghai municipality's eco-security

❖ Rich natural resources : the forest coverage rate reaches 17%, the tidal wetlands more than 300 square kilometers, and nearly 10 million mu of reed pond; The unique geographical location gets it great potential for exploration of renewable clean energy.

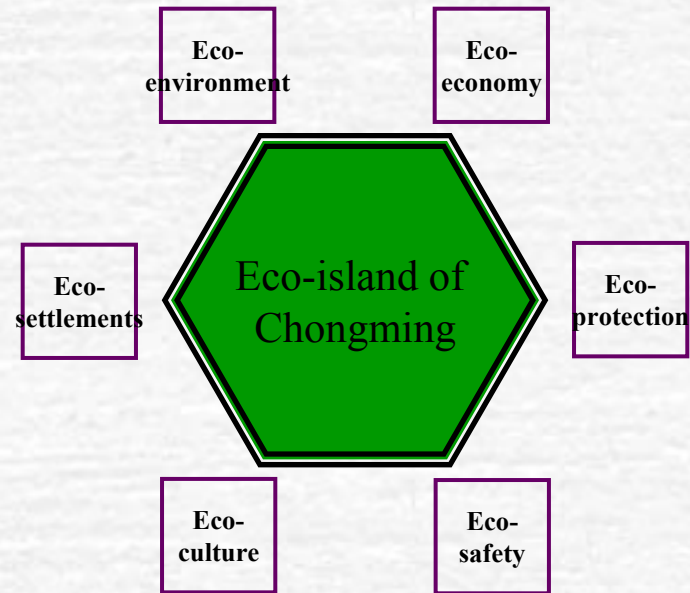
❖ The rich bio-diversity: Areas like east and north beach of Chongming are habitat of many migrant birds and conserved bio-species.

❖ Powerful eco-services: Eco-loading capacity of Chongming takes up a quarter of the city, while its eco-footprint is only 4%.

**Furnish with an important guarantee for releasing the pressure on the city's ecology, provide an important value of the eco-services for the Shanghai area, the Yangtze River Delta region and even the whole country, make great sense to the global biodiversity conservation.**



### 3. Main concerns in the construction of Chongming eco-island



# 3.1 Eco-protection and the utility of resources



- focuses
1. Water resources (freshwater resources, eco-demand, drinking-water source)
  2. Land Resources (enough eco-space, functional orientation, classified protection)
  3. Bank line resources (priority on the protection of ecology, intensive use of bank line, rational utility of life bank line)
  4. Wetland Resources (priority on protection, restoration and reconstruction, biological safety)
  5. New energy sources (sun, wind, biomass)



## 3.2 Industrial development and ecological economy

**Eco-tendency of Industry is an important aspect of eco-island construction and eco-economy is the essential factor to realize the leapfrogging development of Chongming**

Focuses:

1. Construction of modern industrial system. "two highs two lows" – high technology, high attached value, low consumption, low pollution; Matching System; Intensive development
2. Traditional agricultural transformation and industrial extension. The scale agriculture, eco-agriculture, cycular agriculture, industrial extension from the first to second and third times
3. The combined effect of modern service Industry
4. The brand enhancement of eco-tourism



## 3.3 Pollution prevention and eco-environment

**In eco-island construction, pollution prevention at this stage is the key task and foundational work as well**

Focuses :

1. Energy-saving and discharge reduction, control on the total amount of pollutants

Sources of industrial pollution : Water -254 , the atmosphere-202,

2. Environmental infrastructure construction

Five major urban sewage treatment plants, life wastes decontamination plants

3. Rural Environmental Protection

Treatment of rural decentralized life pollution, treatment of key water course, movement of 10000-River treatment

4. treatment of Agricultural pollution

## 3.4 Urban construction and ecological human settlements

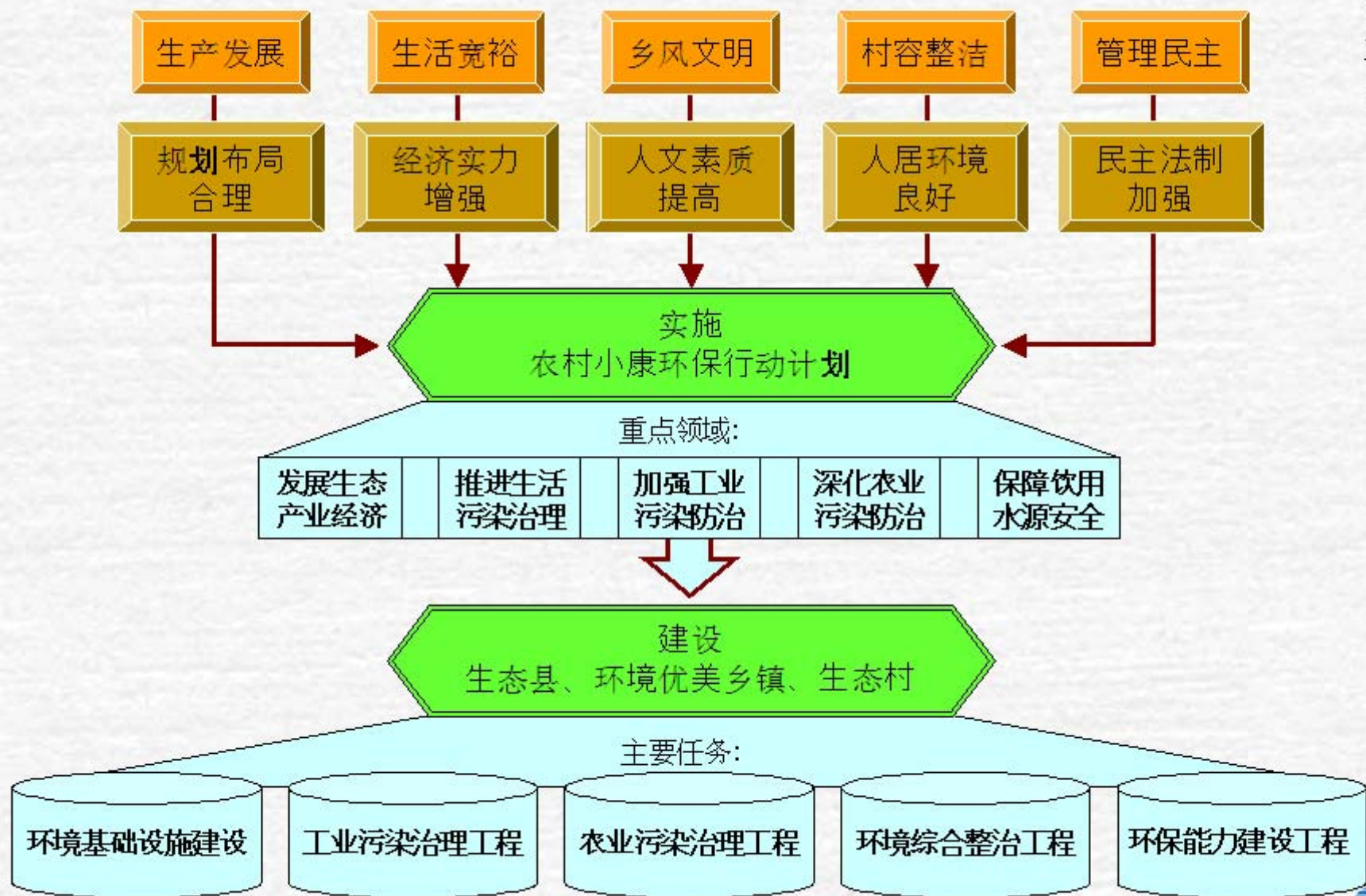
- Academicians Wu Liangyong put forward the systematical theory of “science of human settlements” in 1990s
- Settlements environment : A comprehensive concept, generalization of living environment of human
  - **Broad understanding: Including major systems of nature, human, society, housing and support**
  - **Narrow understanding: Including hard environment like residential, transportation, infrastructure and air ,water, greenery coverage, sanitation and soft environment like family atmosphere, interpersonal relationship, settlements harmony, security attribution and social order and so on.**
- Improvement and enhancement of human settlements are impetus to push Chongming’s eco-island construction
  - **Maslow's Need-Hierarchy Theory, to introduce talents, promote development, improve taste...**
- Eco- human settlements, making the core elements and a decisive factor in Chongming’s eco-island construction
  - **Development and extension of vitality, progress and prosperity of society, peaceful and harmonious life**

Focuses:

1. Population control and rational layout
2. Urban construction and improvement of service functions
3. New socialist countryside construction
4. Ecological model Construction : **beautiful- environment towns, eco-villages, ecological communities**



崇明县社会主义新农村建设框架示意图





## 3.5 Social harmony and eco-culture

**Eco-culture is the one with harmonious coexistence of human and nature, continuous survival and stable development, it is concrete reflection of material and spiritual civilization in natural and social relations, it is original drive to impel eco- civilization.**

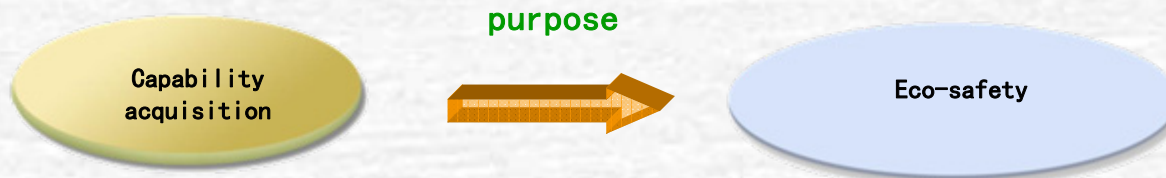
- ❑ Core elements : **The impact on value tendency and behavior regulation**
- ❑ Embodying aspects: **Decision-making, management system, social habits**
- ❑ Guiding modes : **View of value, morality, productive shifts, consumption behavior**

**Focuses :**

- 1. Institutional Culture : Green government, public participation, tracking assessment ...**
- 2. Cognitive Culture : Education advocacy, training and exchanges, ecological awareness ...**
- 3. Material Culture : Ecological landscape, cultural facilities, cultural heritage, traditional specialties**
- 4. Spiritual Cultural : Green consumption, green production, environmental-friendly, environmental ethics**

## 3.6 Capacity building and eco-safety

**improve eco-safety system, maintain social stability, bio-safety and environmental safety, meet the requirements of modern eco-island construction capacity building eco-safety protection**



Focuses :

1. Establishment of eco-safety warning and control system
2. Construction of Security System of urban lifeline
3. Construction of monitoring capacity in environmental protection
4. Construction of Pollution Emergency System



## 4. Issues to be discussed





## 4.1 Standard of world-class eco-island

- Standard of world-class eco-island's sustainable development indicator system of international organizations and countries
- Assessing indicators of national eco-province, eco-municipality and eco-county
- Island—eco-island, connotation, theory system and assessing standard

## 4.2 Environmental pressure after the fulfillment of Yangtze Tunnel and Bridge

- **Close vs. open: With the entry of great flow of people and goods, how to control population?**
- **Protection VS development : With the increased human activities, balance of islands eco-system broken, how to avoid the threaten of natural habitats?**
  - **Characteristics VS development : Islands unique features, in the process of rapid urbanization, how inherit and develop?**

## 4.3 Contradiction between eco-service function and the regional developing right

- **Effective method -- ecological compensation**
- **With the shortage of eco-compensation, how to balance?**

**Thanks!**

